



# Site Conceptual Model with Soil and Groundwater Investigation Results Report

**Former F&M Auto Service UST Site  
1839 Foothill Boulevard  
Oakland, California  
Fuel Leak Case No. RO0003077**

**RECEIVED**

*8:56 am, Apr 12, 2012*

Alameda County  
Environmental Health

**Prepared For:**

**Alameda County  
Health Care Services Agency**

**Department of Environmental Health**

**March 9, 2012**

**Submitted by:**





March 9, 2012

Ms. Karel Detterman  
Alameda County Health Care Services Agency  
Department of Environmental Health  
1131 Harbor Bay Parkway, Suite 250  
Alameda, CA 94502

Re: Site Conceptual Model with Soil and Groundwater Investigation Results Report  
Former F&M Auto Service UST Site  
1839 Foothill Boulevard, Oakland, California  
Orphan Site Cleanup Account (OSCA) Grant No. 10-701-550

Dear Ms. Detterman:

On behalf of Ms. Mary Wright, current property owner, and Mr. James Balsley, prospective property owner (the Clients), Sierra West Consultants, Inc. is pleased to submit the enclosed report for the Former F&M Auto Service UST Site. As the authorized representative of the Clients, I have examined and am familiar with the enclosed report, and to the best of my knowledge, the report is true, complete, and accurate.

Thank you for your assistance on this project. If you have questions or need any additional information, please call me at (916) 863-3220.

Sincerely,

Jeffrey C. Bensch, P.E.  
Principal Engineer

enclosure

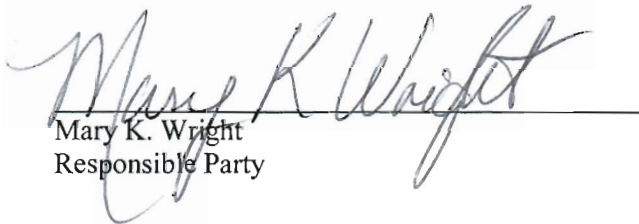
CC: Ms. Mary Wright, Property Owner  
Mr. James Balsley, Prospective Property Owner  
Ms. Marisa Rodarte, Orphan Site Cleanup Fund

March 9, 2012

Reference: Site Conceptual Model with Soil and Groundwater Investigation Results Report  
Former F&M Auto Service UST Site  
1839 Foothill Boulevard  
Oakland, Alameda County, California 94606  
  
Alameda County, Case #: RO 3077

### PERJURY STATEMENT

As the Responsible Party (RP) for this Site, I declare that to the best of my knowledge at the present time, that the information and/or recommendations contained in the attached document are true and correct.


  
\_\_\_\_\_  
Mary K. Wright  
Responsible Party

# Site Conceptual Model with Soil and Groundwater Investigation Results Report

Former F&M Auto Service UST Site  
1839 Foothill Boulevard  
Oakland, California

  
\_\_\_\_\_  
Jeffrey C. Bensch, P.E.  
Senior Project Manager



  
\_\_\_\_\_  
Brian Whalen  
Project Geologist



# Contents

<b>1.0</b>	<b>Introduction .....</b>	<b>1</b>
<b>2.0</b>	<b>Site Background and Conditions .....</b>	<b>2</b>
2.1	Site Location and Former Land Use .....	2
2.2	UST Excavation and Removal .....	2
<b>3.0</b>	<b>Soil and Groundwater Investigation.....</b>	<b>3</b>
3.1	Pre-Field Activities .....	3
3.2	Advancement of Soil Borings .....	3
3.3	Groundwater Monitoring Well Construction.....	3
3.4	Soil and Groundwater Sampling and Analysis .....	4
3.5	Monitoring Well Development and Sampling .....	4
3.6	Monitoring Well Survey.....	4
3.7	Characterization and Disposal of Investigation Derived Waste.....	5
<b>4.0</b>	<b>Data Evaluation and Site Conceptual Model.....</b>	<b>6</b>
4.1	Results of Soil and Groundwater Analysis .....	6
4.1.1	Vicinity of Former UST#1 and UST#2 .....	6
4.1.2	Vicinity of Former UST#3 .....	6
4.1.3	Vicinity of Former UST#4 .....	6
4.1.4	Upgradient.....	7
4.2	Regional Geology and Hydrology .....	7
4.3	Local Geology and Hydrology .....	7
4.4	Preferential Pathway Study .....	8
<b>5.0</b>	<b>Site Conceptual Model and Evaluation of Data Gaps.....</b>	<b>9</b>

## List of Figures

Figure 1	Site Location Map
Figure 2	Site Plan
Figure 3	UST Excavation and Sample Locations
Figure 4	Subsurface Utility Location Map
Figure 5	Soil Sample Concentration Map
Figure 6	Grab Groundwater Concentration Map
Figure 7	San Antonio Creek Watershed Map
Figure 8	Cross Section Location Map
Figure 9	Geological Cross Section A to A'
Figure 10	Geological Cross Section B to B'
Figure 11	Groundwater Elevation Contour Map
Figure 12	Well Search Results Map

## List of Tables

Table 1	Summary of UST Removal Soil Sample Analytical Data
Table 2	Soil Analytical Data Summary
Table 3	Grab Groundwater Analytical Data Summary
Table 4	Groundwater Elevation and Analytical Results
Table 5	Summary of Well Search Results

## List of Appendices

Appendix A	Alameda County Drilling Permits
Appendix B	Boring Logs
Appendix C	DWR Well Completion Reports
Appendix D	Soil Sample Laboratory Analytical Report
Appendix E	Grab Groundwater Sample Laboratory Analytical Report
Appendix F	Monitoring Well Sample Laboratory Analytical Report
Appendix G	Well Development and Sampling Field Sheets
Appendix H	Monitoring Well Survey Report
Appendix I	Waste Characterization Sample Laboratory Analytical Report
Appendix J	Waste Disposal Documentation

## 1.0 Introduction

On behalf of Ms. Mary Wright, current property owner, and Mr. James Balsley, prospective property owner, Sierra West Consultants, Inc. (Sierra West) conducted environmental investigations and prepared this *Site Conceptual Model with Soil and Groundwater Investigation Results Report* for the Former F&M Auto Service Underground Storage Tank (UST) Site located at 1839 Foothill Boulevard, Oakland, California (Site). The Site is located at the northwest corner of the intersection of Foothill Boulevard and 19<sup>th</sup> Avenue, in Oakland, California. A Site Location Map is included as **Figure 1**.

Sierra West submitted the *Work Plan for Preliminary Soil and Groundwater Investigation* (Work Plan) on September 2, 2011 to investigate the extent of soil contamination and determine whether groundwater contamination is present beneath the Site. In a letter dated October 14, 2011 Alameda County Environmental Health (ACEH) granted approval to the Work Plan, under the following conditions: modify the proposed well locations; increase the number of soil samples from each boring; and include additional information in the investigation report. Sierra West addressed the comments from ACEH in an email dated October 31, 2011, and performed the work in January, 2012. The work was conducted under a grant from the State of California Water Resources Control Board, Orphan Site Cleanup Fund (OSCF).

This report presents: Site background information, descriptions of soil and groundwater sampling and well installation, a summary of soil and groundwater analytical results, an initial site conceptual model, and an evaluation of data gaps to be resolved in future work activities.

## 2.0 Site Background and Conditions

### 2.1 Site Location and Former Land Use

The Site is identified by Alameda County Assessors Parcel Number 20-164-6, and is a rectangular lot surrounded by a chain link fence with approximate dimensions of 100 feet long by 40 feet wide. The Site is a former gasoline service station believed to have been constructed sometime during the 1950's. The service station ceased operation in 1995 and an auto detailing service operated at the property from 1997 through 2001. The property has been unoccupied since 2001 and the buildings and USTs were removed in 2011.

The southern section of the Site consisted of a small metal-framed retail building with an overhead canopy that covered a concrete pad and a dispenser island containing three gasoline pumps. The northern section of the Site consisted of a metal-framed structure that included a storage shed, an auto service garage, and a canopy that covered waste oil containers and other equipment.

There were a total of four USTs at the Site. UST#1 and UST#2 each had a capacity of 1,000-gallons, likely contained unleaded gasoline during operation of the service station, and were located at the southern end of the Site. UST#3 had a capacity of 550-gallons, likely contained leaded gasoline during operation of the service station, and was located in the central portion of the Site. UST#4 had a capacity of 100-gallons, likely contained oil during operation of the service station, and was located at the northern end of the Site. Locations of Site features, including former structures and USTs, are shown on the Site Plan included as **Figure 2**.

### 2.2 UST Excavation and Removal

The four USTs and surrounding soils were removed from March 29 to April 8, 2011. Soil samples were collected from beneath the USTs, product piping, dispenser island, and from the sidewalls of each excavation. Petroleum hydrocarbon impacts to soil were observed under each UST, and were confirmed by laboratory analytical results. Constituent concentration data was compared to the applicable Regional Water Quality Control Board, San Francisco Bay Region (SFRWQCB) Environmental Screening Limits (ESLs). Concentrations exceeding their respective ESLs were detected in three of six soil samples collected from the excavation of UST#1 and UST#2, and in one of four soil samples collected from the excavation of UST#3. Constituent concentrations were less than their respective ESLs in soil samples collected from the excavations of UST#4, the product piping, or dispenser islands. Laboratory analytical results from soil samples collected during the removal of the USTs are shown on **Figure 3**, and are summarized in **Table 1**.



## 3.0 Soil and Groundwater Investigation

### 3.1 Pre-Field Activities

Sierra West obtained drilling permits W2012-0017 through W2012-0020 from the Alameda County Public Works Agency (ACPWA) to install monitoring wells MW-1 through MW-4. Drilling permit W2012-0021 was obtained for soil borings B-1 through B-3. Copies of the drilling permits are included as **Appendix A**.

The Site specific Health and Safety Plan (SSHSP) was modified to include activities associated with drilling, well installation, and collection of soil and groundwater samples. Sierra West kept the SSHSP on-site during the field work, briefed on-site personnel, and conducted daily tailgate safety meetings.

Sierra West notified the ACPWA, ACEH, and Underground Service Alert (USA, ticket #019803) at least 72 hours prior to the commencement of field work, in accordance with State and local requirements. Additionally, Sierra West contracted Precision Locating, an independent utility locating company in Brentwood, California, to mark the locations of subsurface utilities at the Site and in the immediate vicinity of the Site prior to beginning any subsurface work. A map showing the approximate locations and depths of subsurface utilities in the vicinity of the Site is included as **Figure 4**.

### 3.2 Advancement of Soil Borings

On January 23 and 24, 2012, Gregg Drilling and Testing (Gregg), a California-licensed drilling contractor, advanced soil borings B-1 through B-3 and MW-1 through MW-4. Gregg cleared the upper five feet of each borehole location using a 2-inch diameter hand auger, then used 2-inch diameter direct-push technology to advance the remainder of each boring to a total depth of 28 feet below ground surface (ft bgs). Gregg collected continuous core soil samples from each boring, and Sierra West logged and screened the soils using the Unified Soils Classification System visual and manual methods, Munsell soil color charts, and a photo-ionization detector (PID) equipped with a 10.6 electron-volt lamp. **Appendix B** contains the boring logs for B-1 through B-3 and MW-1 through MW-4.

Grab groundwater samples were collected using a hydropunch sampler connected to the interior of the direct-push core barrel. At each location's total depth, the outer drive casing was raised approximately five feet to allow groundwater to infiltrate the hydropunch. Sierra West then collected the groundwater grab samples using a clean stainless steel bailer. Following the sampling activities, soil borings B-1 through B-3 were backfilled with neat cement grout via a tremmie pipe. Soil borings MW-1 through MW-4 were left open to be overdrilled and constructed as monitoring wells.

### 3.3 Groundwater Monitoring Well Construction

On January 24, 2012, Gregg used 8-inch diameter hollow stem augers to overdrill and install wells MW-1 through MW-4. Each monitoring well was constructed using 17 feet of blank 2-inch diameter schedule 40 poly-vinyl chloride casing, and 7 feet of 0.010-inch machine-slotted well screen. The screened interval was placed from 17 to 24 feet deep, such that a portion of it extended above the first encountered groundwater. A filter pack of #2/12 sand was placed in the annular space of each well from 16 to 25 ft bgs. A two-foot thick transition seal consisting of medium bentonite chips, hydrated in place, was placed above the filter pack, and a surface seal of neat cement grout was placed over the transition seal to approximately one foot bgs. Gregg completed each well at grade with a locking cap and traffic-rated well box set in concrete.

Well construction details are shown on the boring logs for MW-1 through MW-4, included in **Appendix B**. Sierra West completed Department of Water (DWR) Well Completion Forms in accordance with State regulations. Copies of the DWR Well Completion Forms are included as **Appendix C**.

### 3.4 Soil and Groundwater Sampling and Analysis

Sierra West collected soil samples for laboratory analysis from soil borings B-1 through B-3 and MW-1 through MW-4. Soil samples were collected from each boring at the first encountered groundwater, and from the base of the boring. Additional soil samples were collected based on evidence of contamination such as hydrocarbon odor, staining, and high PID readings. Soil samples were placed in laboratory supplied glass jars, provided by Accutest Laboratories (Accutest) of San Jose, California. Each sample was labeled, placed in an insulated ice-cooled chest, and delivered to Accutest under standard chain of custody protocols. Accutest analyzed the soil and groundwater samples for the following:

- Total petroleum hydrocarbons as gasoline (TPHg), benzene, toluene, ethylbenzene, xylenes (BTEX), methyl tertiary butyl ether (MTBE), diisopropyl ether (DIPE), ethyl tertiary butyl ether (ETBE), tertiary amyl methyl ether (TAME), and tertiary butyl alcohol (TBA) by Environmental Protection Agency (EPA) Method 8260B;
- Total petroleum hydrocarbons as diesel (TPHd) by EPA Method 8015M; and,
- Total lead for soil samples and dissolved lead for groundwater samples, by EPA Method 6010B.

Due to its proximity to the former waste oil tank, samples collected from MW-3 were also analyzed for the following:

- Oil and grease by EPA Method 1664A with silica gel cleanup;
- Cadmium (Cd), chromium (Cr), nickel (Ni), and zinc (Zn) by EPA Method 6010B;
- Chlorinated hydrocarbons, ethylene dibromide (EDB), and ethylene dichloride (EDC) by EPA Method 8260B;
- Polychlorinated biphenyls (PCBs), pentachlorophenol (PCP), polynuclear aromatic hydrocarbons (PNAs), and 1,4-dioxane by EPA Method 8270; and,
- Creosote compounds by EPA Method 3510C.

A copy of the certified laboratory analytical report for soil samples is included as **Appendix D**. A copy of the certified laboratory analytical report for grab groundwater samples is included as **Appendix E**. Laboratory analytical results for soil and grab groundwater samples are summarized in **Tables 2 and 3**.

### 3.5 Monitoring Well Development and Sampling

On January 31, 2012, Sierra West developed wells MW-1 through MW-4 by surging over the length of the screened interval, and purging groundwater using a centrifugal pump until the wells were pumped dry. Prior to and during development the pH, electrical conductivity, temperature, turbidity, and water level were monitored and recorded on field data sheets. During development, each well was pumped dry, allowed to recharge to at least 80% of the initial water level, and a groundwater sample was collected using a new disposable bailer. Groundwater samples from each monitoring well were analyzed for the compounds specified in the previous section.

A copy of the certified laboratory analytical report for groundwater samples is included as **Appendix F**. Laboratory analytical results for groundwater samples are summarized in **Table 4**. Field sheets from well development and sampling are included as **Appendix G**.

### 3.6 Monitoring Well Survey

On January 31, 2012, Virgil Chavez Land Surveying, of Vallejo, California, surveyed newly installed monitoring wells MW-1 through MW-4. The latitude, longitude, and top-of-casing measurements were surveyed based on the California State Coordinate System, Zone III (NAD83). Surveying was conducted consistent with GeoTracker requirements. A copy of the well survey report is included as **Appendix H**.

### **3.7 Characterization and Disposal of Investigation Derived Waste**

Soil cuttings and purged groundwater generated during drilling, well installation, and well development, were stored on Site in Department of Transportation rated 55-gallon drums. A composite soil sample was collected for waste characterization, and was analyzed for the full suite of constituents specified in the previous section. A copy of the certified laboratory analytical report used for waste characterization is included as **Appendix I**.

On January 31, 2012, Doulos Environmental, of Orangevale, California, removed 10 drums of soil and approximately 50 gallons of purged groundwater. Investigation derived solid waste was transported to Kiefer Landfill, a solid waste disposal facility in Sacramento County. Purged groundwater was transported to Invirotec Disposal, located in Lincoln, California. Copies of waste disposal documentation are included as **Appendix J**.

## 4.0 Data Evaluation

### 4.1 Results of Soil and Groundwater Analysis

The primary constituents of concern (COCs) in soil and groundwater beneath the Site are TPHg, BTEX, and MTBE. The soil and groundwater analytical results are summarized on **Figures 5 and 6**, and **Tables 2 through 4**. The COC concentrations are compared in the tables to their applicable ESLs, as defined by the SFRWQCB in *Screening for Environmental Concerns at Sites with Contaminated Soil and Groundwater* – Table B (May 2008) for shallow soils where groundwater is not a current or potential source of drinking water.

Based on the sample results from both the UST removal (**Table 1 and Figure 3**) and the drilling work (**Figures 5 and 6**, and **Tables 2 through 4**) contaminant impacts to soil and groundwater appear greatest in the vicinity of former UST#1 and UST#2.

#### 4.1.1 Vicinity of Former UST#1 and UST#2

As shown on **Figure 5** and **Table 2**, the highest concentrations of TPHg and BTEX occurred in shallow soil from MW-1. TPHg and BTEX exceeded ESLs at 10.5 ft bgs, but vertically decreased below ESLs by 18.5 ft bgs. In the MW-1 boring, TPHg was reported as 791 milligrams per kilogram (mg/kg) at 10.5 ft bgs decreasing to 0.6 and 0.4 mg/kg at 18.5 and 25 ft bgs, respectively. In soil samples collected from B-1 through B-3, TPHg and BTEX were detected at low-level concentrations, below their respective ESLs. B-2, placed between the former UST#1 and UST#2 locations, had concentrations of TPHg at 50.9, 31.0, and 16.2 mg/kg, at depths of 12.5, 22.5, and 28.0 ft bgs, respectively.

As shown on **Figure 6** and **Table 3**, the grab groundwater sample collected from MW-1 contained the highest measured concentrations of TPHg, TPHd, and BTEX. MTBE was also detected at a concentration of 443 micrograms per liter ( $\mu\text{g/L}$ ). The groundwater sample collected from MW-1 following well development had similar concentrations to the grab sample, however, dissolved lead was below the reporting limit of 10  $\mu\text{g/L}$  in the grab sample, but reported as 86.4  $\mu\text{g/L}$  in the sample collected following well development. The ESL for dissolved lead in groundwater is 2.5  $\mu\text{g/L}$ . The grab groundwater sample from B-2 contained concentrations of TPHg, TPHd, ethylbenzene, and xylenes that exceeded their respective ESLs, but at lower levels than observed in MW-1. With the exception of TPHd at 199  $\mu\text{g/L}$  in B-3, no other COCs exceeded their ESLs in grab groundwater samples collected from borings B-1 or B-3.

#### 4.1.2 Vicinity of Former UST#3

Soil and groundwater sample results from the MW-2 boring indicate moderate impacts occur near the former location of UST#3 (**Figures 5 and 6**, **Tables 2 through 4**). Similar to the MW-1 results, TPHg reported in MW-2 exceeded the ESL at 14.5 ft bgs, but decreased below the ESL at greater depths. In the MW-2 boring, TPHg was reported as 830 mg/kg at 14.5 ft bgs decreasing to 94.8 and <0.100 mg/kg at 20.5 and 28 ft bgs, respectively. The grab groundwater sample collected from MW-2 contained concentrations of TPHd, TPHg, and ethylbenzene that exceeded their respective ESLs. The groundwater sample collected from MW-2 following well development exhibited a similar concentration of TPHg to the grab sample, but significantly higher benzene, MTBE, and dissolved lead.

#### 4.1.3 Vicinity of Former UST#4

Soil and groundwater results from the MW-3 boring indicate that contaminant impacts are limited near the former location of UST#4. Soil samples lacked detectable COCs, and groundwater contained only relatively low concentrations of TPHg and/or TPHd, BTEX, and MTBE (**Figures 5 and 6**, **Tables 2 through 4**). Additionally, soil and groundwater samples lacked detectable Oil and Grease, EDB, EDC, PCBs, PCP, PNAs, 1,4-dioxane, or creosote compounds. Detected concentrations of Cd, Cr, Ni, and Zn are below their respective ESLs, and are likely representative of background levels.



#### 4.1.4 Upgradient

Well MW-4 was installed upgradient of the former USTs, and with one exception, lacked detectable COCs in both soil and groundwater (**Figures 5 and 6, Tables 2 through 4**). TPHd was reported in the MW-4 grab groundwater sample and the sample collected following well development, at the relatively low concentrations of 67.6 and 50.2 µg/L, respectively.

Sierra West attributes the frequent detections of TPHd to weathered gasoline because diesel was not a regular product of the former service station.

## 4.2 Regional Geology and Hydrology

The Site is located along the eastern margin of the San Francisco Bay within the East Bay Plain (Hickenbottom and Muir, 1988). The surficial deposits are mapped as Pleistocene alluvial fan and fluvial deposits consisting of poorly sorted, dense, sandy or gravelly clay, and Pleistocene marine terrace deposits (Graymer, 2000). The active northwest trending Hayward fault is located approximately 3½ miles east of the Site.

The East Bay Plain is regionally divided into two major groundwater basins: the San Pablo and the San Francisco Basin. These basins are tectonic depressions that are filled primarily with a sequence of coalescing alluvial fans. The San Francisco Basin is further divided into seven sub-areas. The Site is located in the Oakland Sub-Area, which is filled primarily by alluvial deposits that range from 300 to 700 feet thick with no well-defined aquitards (CRWQCB, 1999). Under natural conditions, the direction of groundwater flow in the East Bay Plain is east to west. Groundwater recharge in the shallow aquifer occurs by infiltration from precipitation, irrigation, and stream flow.

The Site is located in the San Antonio Creek watershed, where water is drained to the south and southwest into San Antonio Creek; more commonly called the Oakland Estuary, or the Oakland Inner Harbor. The Site does not overlie any former buried or drained creeks, and does not appear to be in a location of significance to the watershed. **Figure 7** shows the location of the Site in relation to the watershed.

The Site is located approximately 2,000 feet northeast of the Brooklyn Basin. The basin is connected to the Oakland Estuary tidal canal which connects to San Leandro Bay to the south and the Oakland Inner Harbor to the west, that connects to San Francisco Bay. The San Francisco Bay is located approximately 5 miles west and 2 miles south of the Site.

## 4.3 Local Geology and Hydrology

The Site is located on a hill that slopes to the southwest with an approximate gradient of 15%. The local geology of the Site has been evaluated using boring logs from this investigation, and from observations made during excavation and removal of the former USTs. The lithology of the site consists primarily of fine-grained clastic sediments such as silts and clays. Layers of sandy silt and sandy clay are present at approximate depths of 10 and 20 feet. A one-foot thick lens of gravelly silt was observed in the MW-4 boring at an approximate depth of 17 feet, but was not observed in any of the other soil borings. Geological cross sections showing the interpreted subsurface lithology are included as **Figures 8 through 10**.

At the time of well installation, groundwater was first encountered at approximately 21 feet deep in each boring. Following well installation, groundwater levels rose to approximately eight feet deep. Based on the difference between first encountered and static groundwater levels, and the topographical slope, the aquifer appears confined or semi-confined.

Groundwater level measurements were taken on January 31, 2012, from MW-1 through MW-4. Groundwater flow across the Site was generally to the south with a relatively steep hydraulic potentiometric gradient of approximately 0.06 feet per foot (ft/ft). A groundwater elevation contour map is included as **Figure 11**.

#### 4.4 Preferential Pathway Study

Pursuant to ACEH's letter dated October 14, 2011, preferential pathways for constituent migration were evaluated. This evaluation consists of a subsurface utility survey, a DWR well survey, and an evaluation of watershed data including: creeks, former creeks, underground culverts, and engineered channels.

Precision Locating performed the subsurface utility survey using a RadioDetection RD4-433 HCTX2 Transmitter and RD-8000-PDL Receiver. Additionally, a Fischer TW-6 metal detector was used to confirm the locations of subsurface utilities. Results of the survey show that the only utility lines to enter or exit the site are the former water and sewer lines, located in the southern corner of the Site. The water service lateral to the Site has a depth of approximately one foot, and the main pipeline under the street and sidewalk is approximately two feet deep. The sewer service lateral to the Site has a depth of approximately one foot, and the main pipeline under the street is approximately eight feet deep. No other subsurface utilities such as electric, gas, or communications were identified at the Site. The locations of subsurface utilities are shown on **Figure 4**. The petroleum hydrocarbon impacts identified in the vicinity of former UST#1 occur deeper in the subsurface than the water and sewer pipelines, therefore, these utilities do not likely serve as a conduit for constituent migration.

ACPWA and DWR provided well completion reports associated with 16 different environmental investigation sites ranging from 1,100 feet to 3,750 feet away from the F&M Auto Service UST Site. Well completion reports were also received for two privately owned water supply wells, located 3,600 feet and 4,400 feet away from the Site. Based on the results of the well survey, it does not appear that any wells are at risk of being impacted by hydrocarbons from the Site. A summary of the results from the well search is included as **Table 5**. Locations of the environmental investigation sites and privately owned water supply wells are shown on **Figure 12**.

Sierra West reviewed the *Creek & Watershed Map of Oakland & Berkeley* (Sowers, J.M., and Richard, C.M., 2009) to evaluate whether contaminant migration could be affected by the locations of creeks, former creeks, underground culverts, or engineered channels. The Site appears to be located between two former creeks that drain to the west-southwest into the Brooklyn Basin. However each of these creeks is located approximately 1,500 feet away from the Site, in the cross-gradient direction of groundwater flow. Given the relatively fine-grained nature of the subsurface beneath the Site, that inhibits long distance contaminant migration, it is unlikely the creeks would be impacted or have any effect on contaminant migration at the Site. The locations of nearby creeks and channels with respect to the Site are shown on the watershed map included as **Figure 7**.

## 5.0 Site Conceptual Model

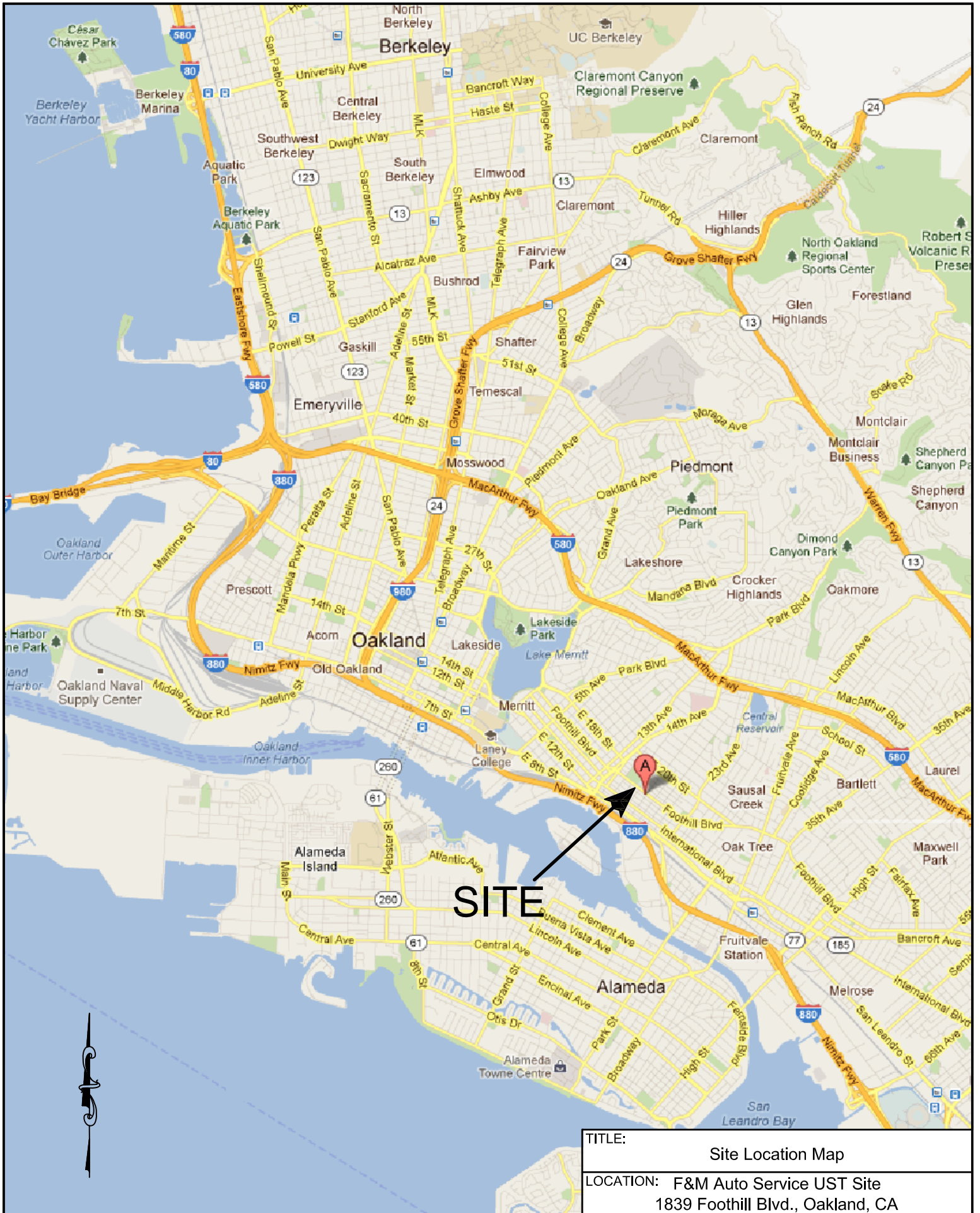
Based on the sample results from both the UST removal and the drilling work, constituent impacts to soil and groundwater appear greatest in the vicinity of former UST#1. The vertical extent of petroleum hydrocarbon impacts in soil appears defined to depths of approximately 20 feet or less. The lateral extent of constituent impacts to soil and groundwater downgradient of MW-1 remain undefined. Near the source area, concentrations of COCs in soil and groundwater indicate that vadose zone impacts may be present.

The subsurface conditions are largely fine grained alluvial deposits. Layers of sandy silt and sandy clay are present in discrete lenses between 10 and 20 ft bgs. Groundwater level measurements indicate a relatively steep hydraulic gradient that is consistent with the local topography. The extent of constituent migration is limited by the fine grained soils, although potentially accelerated by the relatively steep hydraulic gradient. Migration of constituents to water supply wells, buried utility trenches, or subsurface channels is unlikely; as is daylighting or discharge to surface waters. Ingestion of impacted soil or groundwater is also unlikely, while the potential for inhalation exposures has not been evaluated.

The extent of downgradient migration is uncertain and vadose zone impacts have not been evaluated. Additional groundwater monitoring well(s) are recommended to assess the extent of downgradient impacts in groundwater. A soil gas survey in the source area is also recommended to evaluate vadose zone impacts. An additional groundwater monitoring and sampling event is scheduled for the second quarter of 2012 and will be reported in the *Second Quarter 2011 Groundwater Monitoring and Sampling Report*.

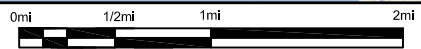
## Figures





**SITE**

TITLE:	Site Location Map
LOCATION:	F&M Auto Service UST Site 1839 Foothill Blvd., Oakland, CA



SCALE 1" = 1 mile  
(Scale is approximate)

Source: Google Maps, 2012



FIGURE:  
1



**Legend:**

⊕ - Monitoring Well



**Notes:**

- 1) Well locations based on survey data provided by Virgil Chavez Land Surveying on 1/31/2012.
- 2) Locations of USTs and former Site structures are approximate.
- 3) Former Site structures were demolished on March 31, 2011.
- 4) USTs were removed on April 6, 2011.

TITLE:

Site Plan

LOCATION:

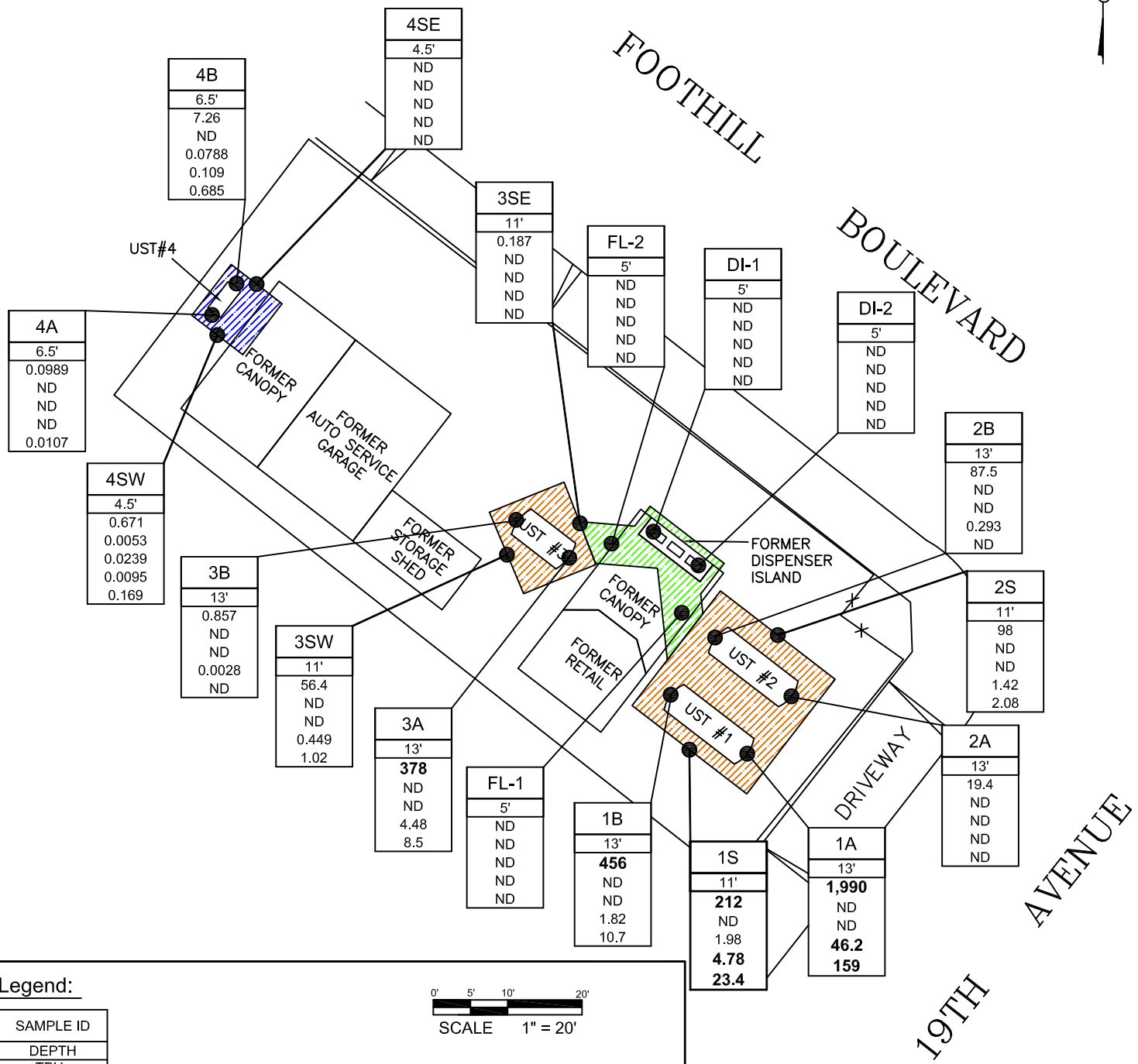
F&M Auto Service UST Site  
1839 Foothill Blvd., Oakland, CA



FIGURE:

2





**Legend:**

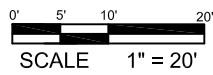
SAMPLE ID	DEPTH
TPHg	
Benzene	
Toluene	
Ethylbenzene	
Xylenes	

- Soil Concentrations in milligrams per kilogram (mg/kg).  
 - Concentrations exceeding Environmental Screening Limits presented in bold.  
 - Concentrations below laboratory detection limits presented as ND.

- EXCAVATION TO DEPTH OF 13'
- EXCAVATION TO DEPTH OF 5'
- EXCAVATION TO DEPTH OF 6.5'

**Notes:**

- 1) Site base map provided by Virgil Chavez Land Surveying on 1/31/2012.
- 2) Locations of USTs and former Site structures are approximate.
- 3) Former Site structures were demolished on March 31, 2011.
- 4) USTs were removed on April 6, 2011.



TITLE: Excavation and Soil Sample Locations  
 April 2011





LOCATION: F&M Auto Service UST Site  
 1839 Foothill Blvd., Oakland, CA

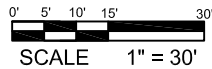


FIGURE:  
 3



**Legend:**

-  - Monitoring Well
-  - PG&E Gas Line (Approximate Depth of 3 feet)
-  - Water Line (Approximate Depth of 2 feet)
-  - Sanitary Sewer Line (Approximate Depth of 8 feet)



**Notes:**

- 1) Well locations based on survey data provided by Virgil Chavez Land Surveying on 1/31/2012.
- 2) Locations of USTs and former Site structures are approximate.
- 3) Former Site structures were demolished on March 31, 2011.
- 4) USTs were removed on April 6, 2011.
- 5) Location of subsurface utilities based on survey performed by Precision Locating on January 13, 2012. Utility location performed using RadioDetection RD4-433 HCTX2 Transmitter, RD-8000-PDL Receiver, and Fischer PW-6 metal detector.

TITLE: Subsurface Utility Location Map

LOCATION: F&M Auto Service UST Site  
1839 Foothill Blvd., Oakland, CA



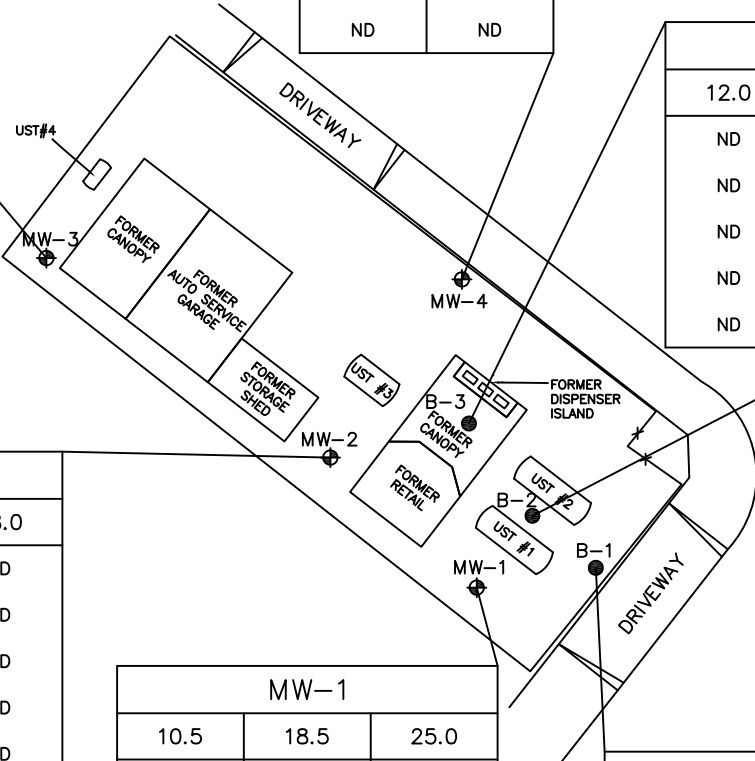
FIGURE:

MW-4	
22.0	28.0
ND	ND
ND	ND
ND	ND
ND	ND
ND	ND



B-3		
12.0	22.5	28.0
ND	0.686	0.510
ND	ND	ND
ND	ND	ND
ND	ND	ND
ND	ND	ND

MW-3	
22.0	28.0
ND	ND
ND	ND
ND	ND
ND	ND
ND	ND



B-2		
12.5	22.5	28.0
50.9	31.0	16.2
ND	ND	ND
ND	ND	ND
0.291	0.294	0.163
0.562	0.830	0.448

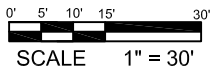
MW-2		
14.5	20.5	28.0
<b>830.0</b>	<b>94.8</b>	ND
ND	ND	ND
ND	ND	ND
2.510	ND	ND
ND	ND	ND

MW-1		
10.5	18.5	25.0
<b>791.0</b>	0.596	0.383
<b>5.94</b>	0.0032	0.0030
<b>36.2</b>	0.0048	0.0041
<b>12.0</b>	0.0012	0.0011
<b>69.8</b>	0.0050	0.0043

B-1		
11.5	20.5	28.0
0.389	0.379	ND
ND	ND	ND
ND	ND	ND
ND	0.0014	ND
ND	ND	ND

**Legend:**

- Monitoring Well
- Soil Boring



Well / Boring ID	
Depth	Depth
TPHg	TPHg
Benzene	Benzene
Toluene	Toluene
Ethylbenzene	Ethylbenzene
Xylenes	Xylenes

- Soil Concentrations in milligrams per kilogram (mg/kg).
- Concentrations exceeding Environmental Screening Limits presented in bold.
- Concentrations below laboratory detection limits presented as ND.

**Notes:**

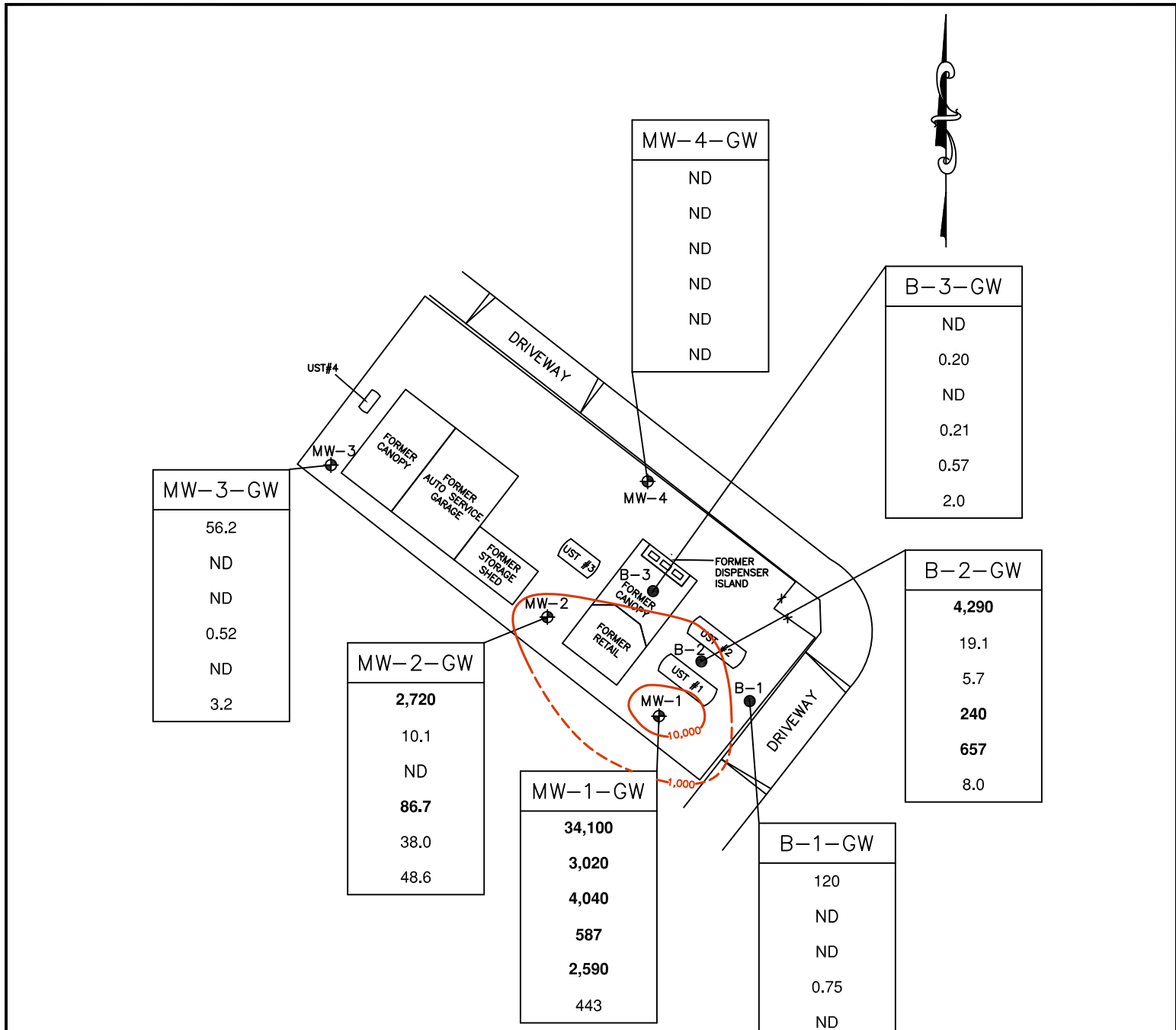
- 1) Well locations based on survey data provided by Virgil Chavez Land Surveying on 1/31/2012.
- 2) Locations of USTs and former Site structures are approximate.
- 3) Former Site structures were demolished on March 31, 2011.
- 4) USTs were removed on April 6, 2011.

TITLE: Soil Concentration Map  
January 2012

LOCATION: F&M Auto Service UST Site  
1839 Foothill Blvd., Oakland, CA

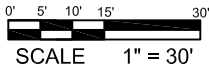


FIGURE:  
**5**



**Legend:**

- Monitoring Well
- Soil Boring



- TPHg Isocontour (Dashed where inferred)

Well / Boring ID	TPHg
Benzene	
Toluene	
Ethylbenzene	
Xylenes	
MTBE	

- Grab Groundwater Concentrations in micrograms per liter (ug/L).
- Concentrations exceeding Environmental Screening Limits presented in bold.
- Concentrations below laboratory detection limits presented as ND.

**Notes:**

- 1) Well locations based on survey data provided by Virgil Chavez Land Surveying on 1/31/2012.
- 2) Locations of USTs and former Site structures are approximate.
- 3) Former Site structures were demolished on March 31, 2011.
- 4) USTs were removed on April 6, 2011.

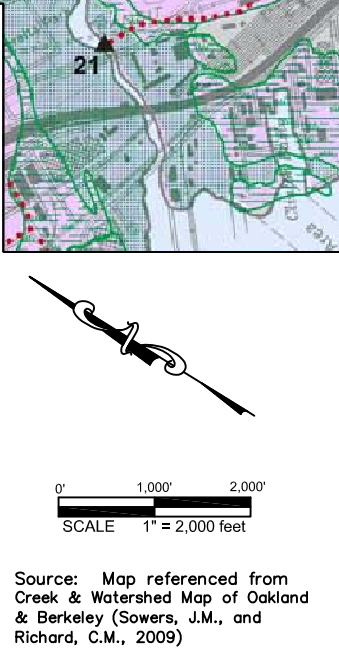
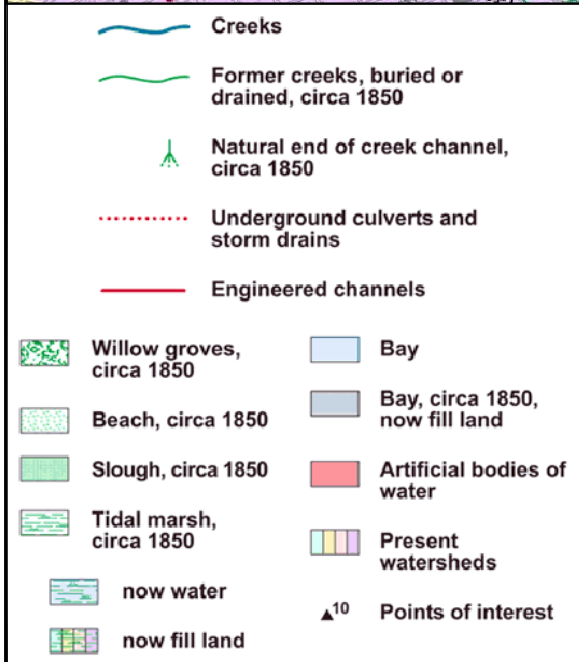
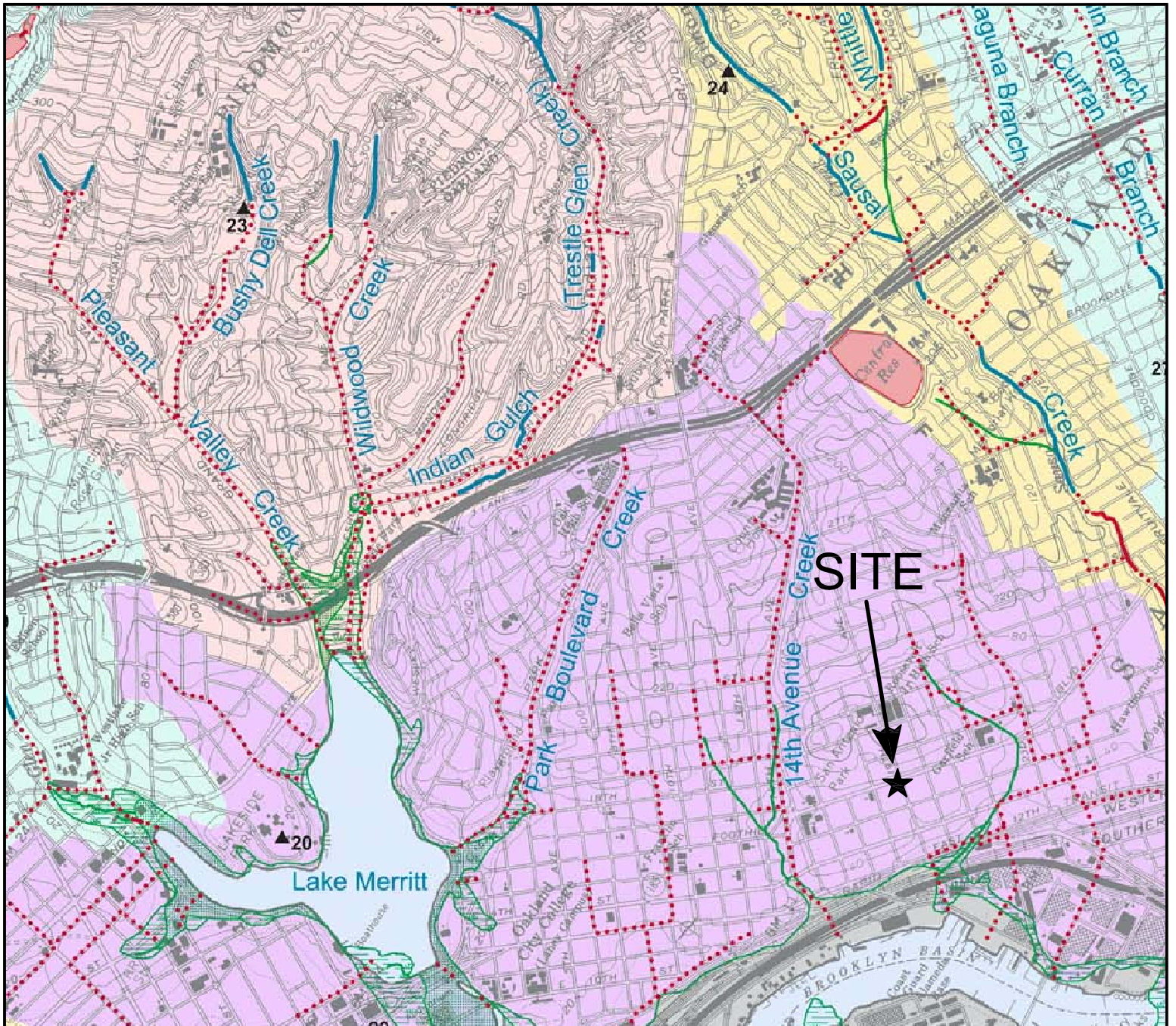
TITLE: Grab Groundwater Concentration Map  
January 2012

LOCATION: F&M Auto Service UST Site  
1839 Foothill Blvd., Oakland, CA



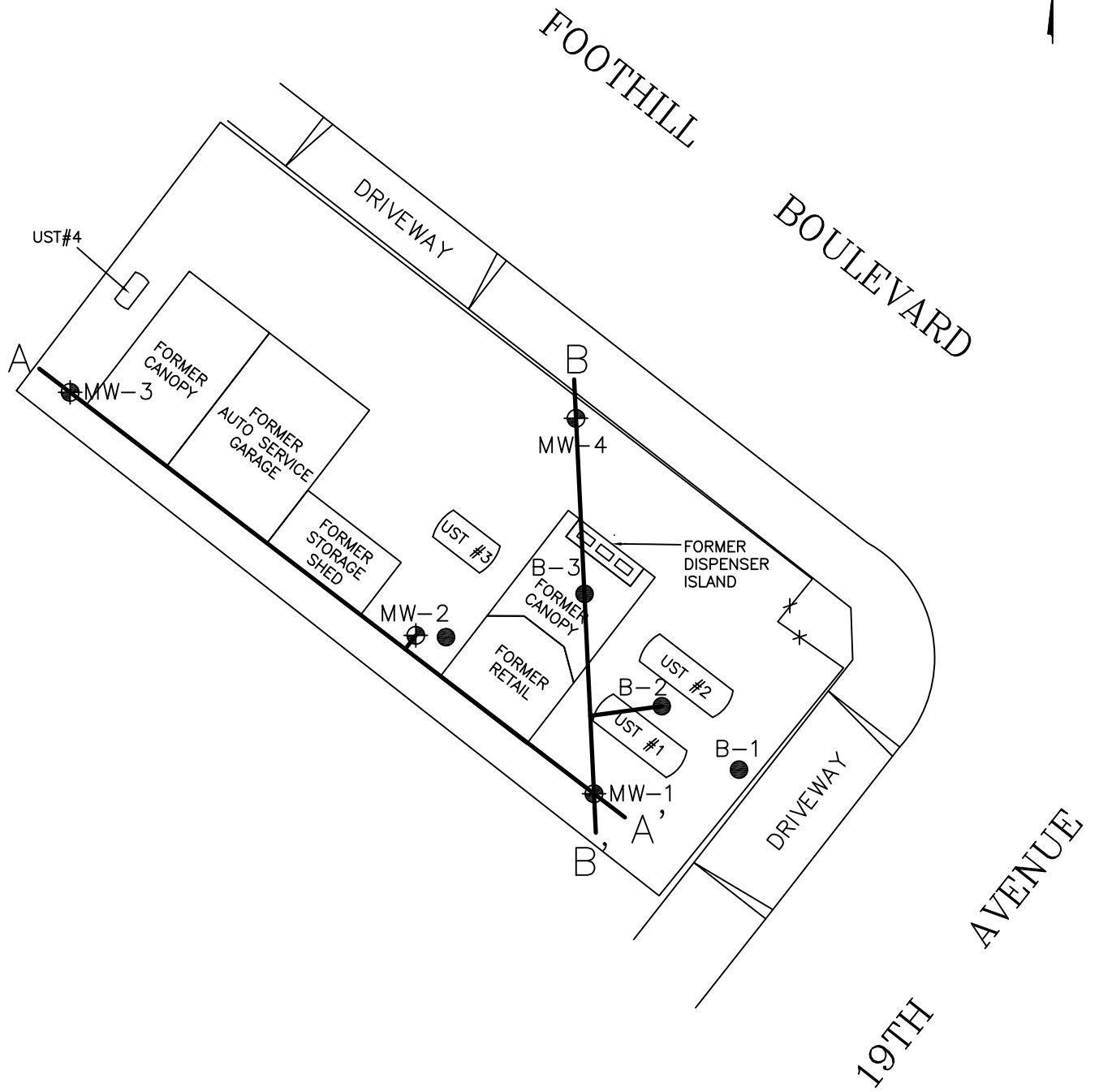
FIGURE:





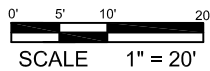
TITLE: San Antonio Creek Watershed Map	
LOCATION: F&M Auto Service UST Site 1839 Foothill Blvd., Oakland, CA	
	FIGURE: 7

Source: Map referenced from Creek & Watershed Map of Oakland & Berkeley (Sowers, J.M., and Richard, C.M., 2009)



**Legend:**

- ⊕ - Monitoring Well
- - Soil Boring



**Notes:**

- 1) Site base map provided by Virgil Chavez Land Surveying on 1/31/2012.
- 2) Locations of USTs and former Site structures are approximate.
- 3) Former Site structures were demolished on March 31, 2011.
- 4) USTs were removed on April 6, 2011.

TITLE:

Geologic Cross Section Location Map

LOCATION:

F&M Auto Service UST Site  
1839 Foothill Blvd., Oakland, CA

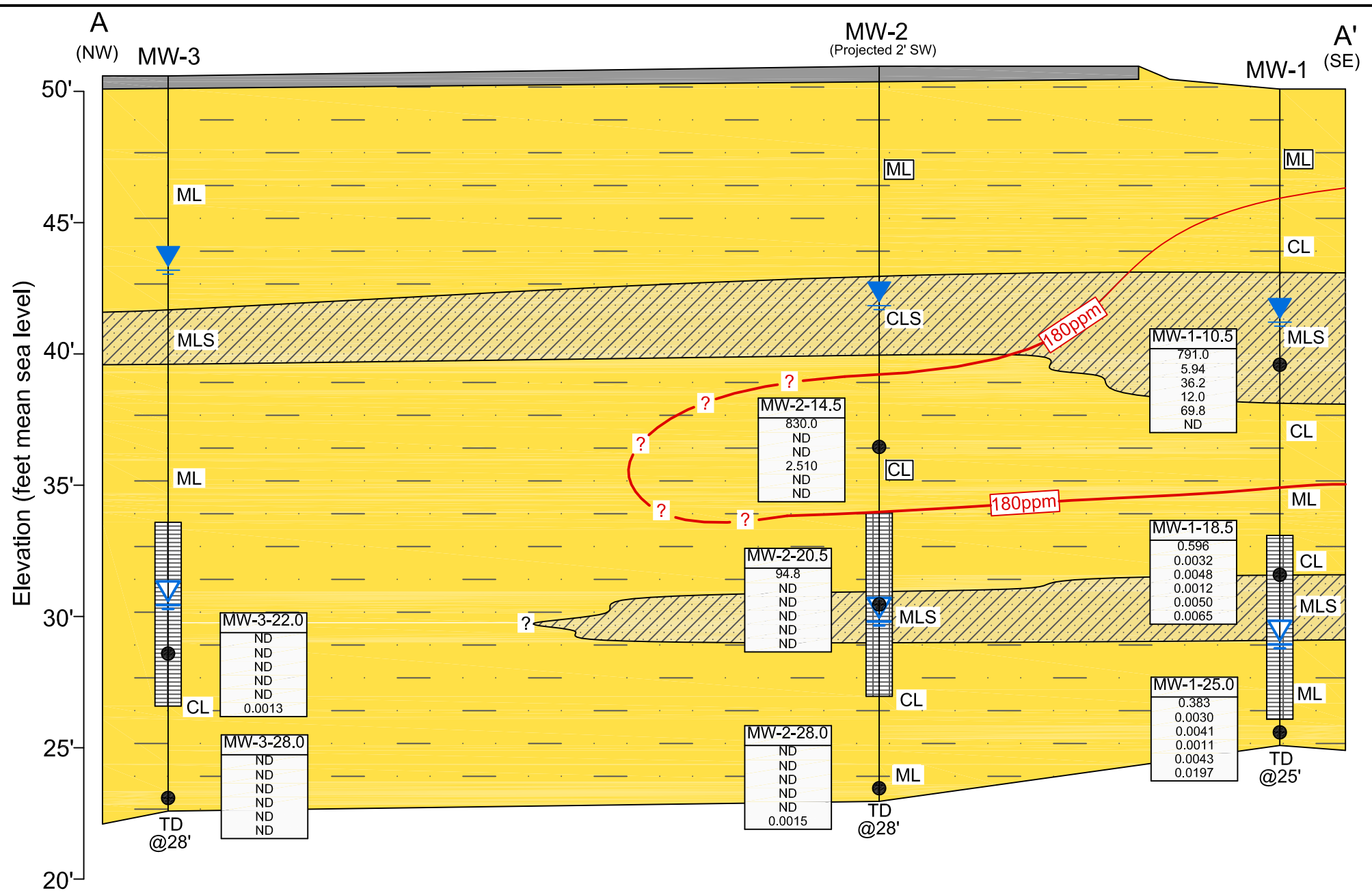


**SIERRA WEST**  
CONSULTANTS, INC.

FIGURE:

8

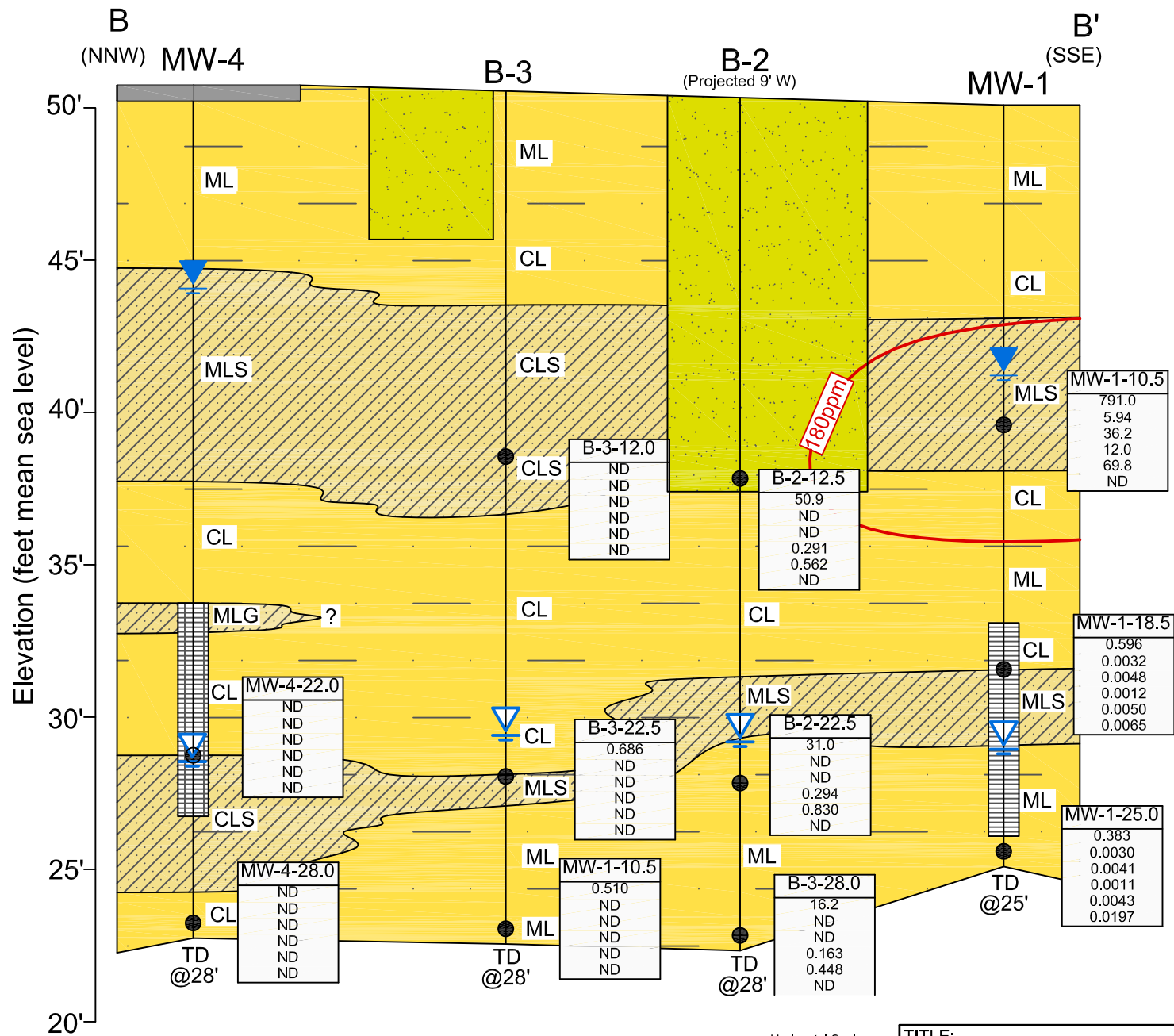




**LEGEND:**

<table border="1"> <thead> <tr> <th>Sample ID</th> </tr> </thead> <tbody> <tr><td>TPHg</td></tr> <tr><td>Benzene</td></tr> <tr><td>Ethylbenzene</td></tr> <tr><td>Toluene</td></tr> <tr><td>Xylenes</td></tr> <tr><td>MTBE</td></tr> </tbody> </table>	Sample ID	TPHg	Benzene	Ethylbenzene	Toluene	Xylenes	MTBE	<p>Soil Sample Analytical Data (Concentrations in mg/kg)</p>	Clay and Silt (CL, ML)  Sandy Clay and Sandy Silt (CLS, MLS)	<p> 180ppm TPHg Isocontour at ESL</p> <p> Approximate Water Level at Time of Drilling</p> <p> Approximate Water Level Prior to Development (1/31/12)</p>	<p>Horizontal Scale 1" = 10'</p> <p>Vertical Scale 1" = 5'</p>
Sample ID											
TPHg											
Benzene											
Ethylbenzene											
Toluene											
Xylenes											
MTBE											

TITLE: Geologic Cross Section A - A'	
LOCATION: F&M Auto Service UST Site 1839 Foothill Blvd., Oakland, CA	
	FIGURE: 9



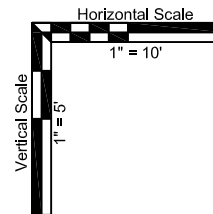
**LEGEND:**

Sample ID
TPHg
Benzene
Ethylbenzene
Toluene
Xylenes
MTBE

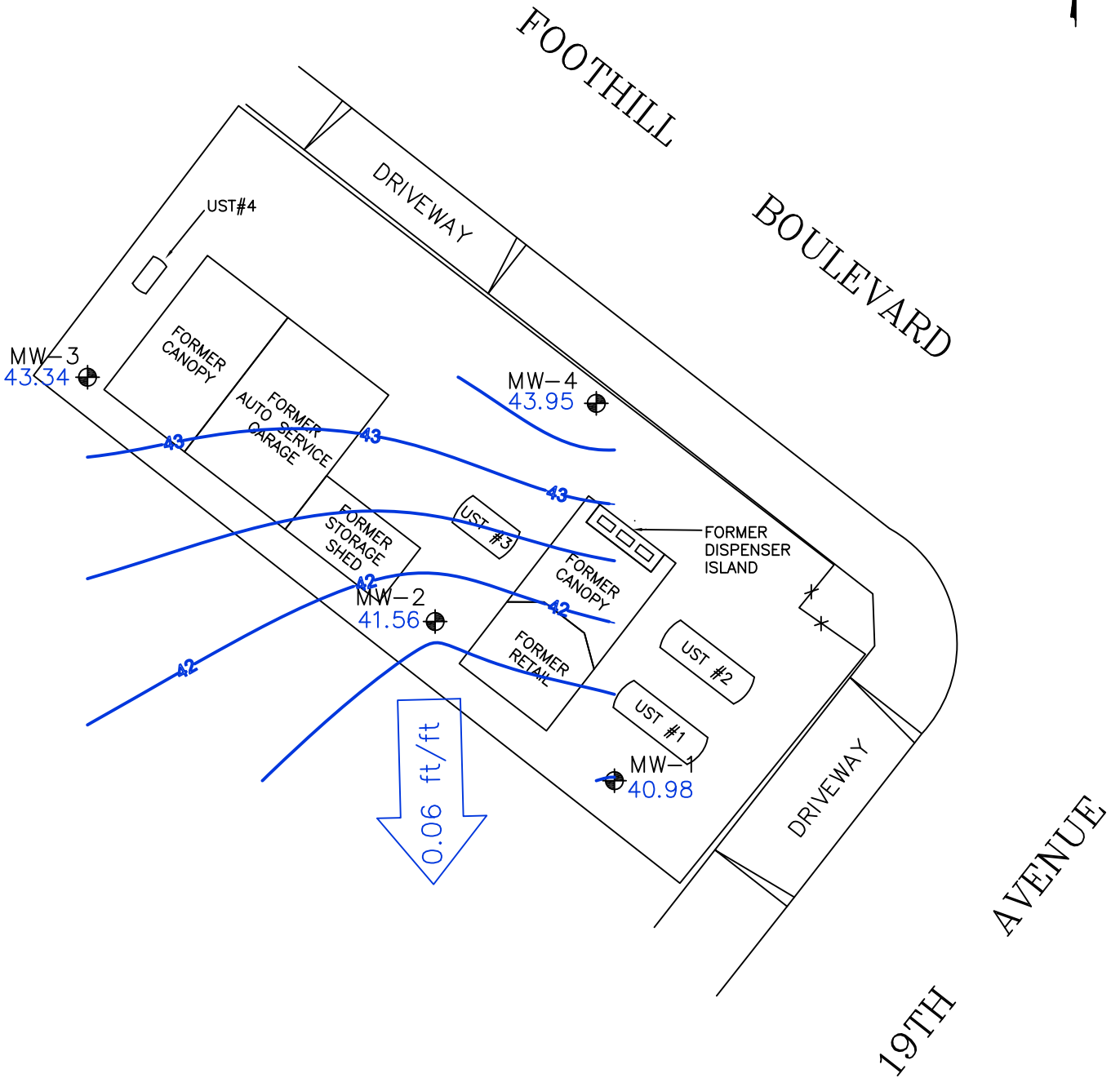
Soil Sample Analytical Data  
(Concentrations in mg/kg)

- Clay and Silt (CL, ML)
- Sandy Clay, Sandy Silt, and Gravelly Silt (CLS, MLS, MLG)
- UST Excavation Backfill (Well Graded Sand with Silt)

- TPHg Isocontour at ESL
- Approximate Water Level at Time of Drilling
- Approximate Water Level Prior to Development (1/31/12)

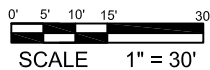


TITLE: Geologic Cross Section B - B'	
LOCATION: F&M Auto Service UST Site 1839 Foothill Blvd., Oakland, CA	
	FIGURE: 10



**Legend:**

⊕ - Monitoring Well



**Notes:**

- 1) Well locations based on survey data provided by Virgil Chavez Land Surveying on 1/31/2012.
- 2) Locations of USTs and former Site structures are approximate.
- 3) Former Site structures were demolished on March 31, 2011.
- 4) USTs were removed on April 6, 2011.

TITLE:

Groundwater Elevation Map

LOCATION:

F&M Auto Service UST Site  
1839 Foothill Blvd., Oakland, CA

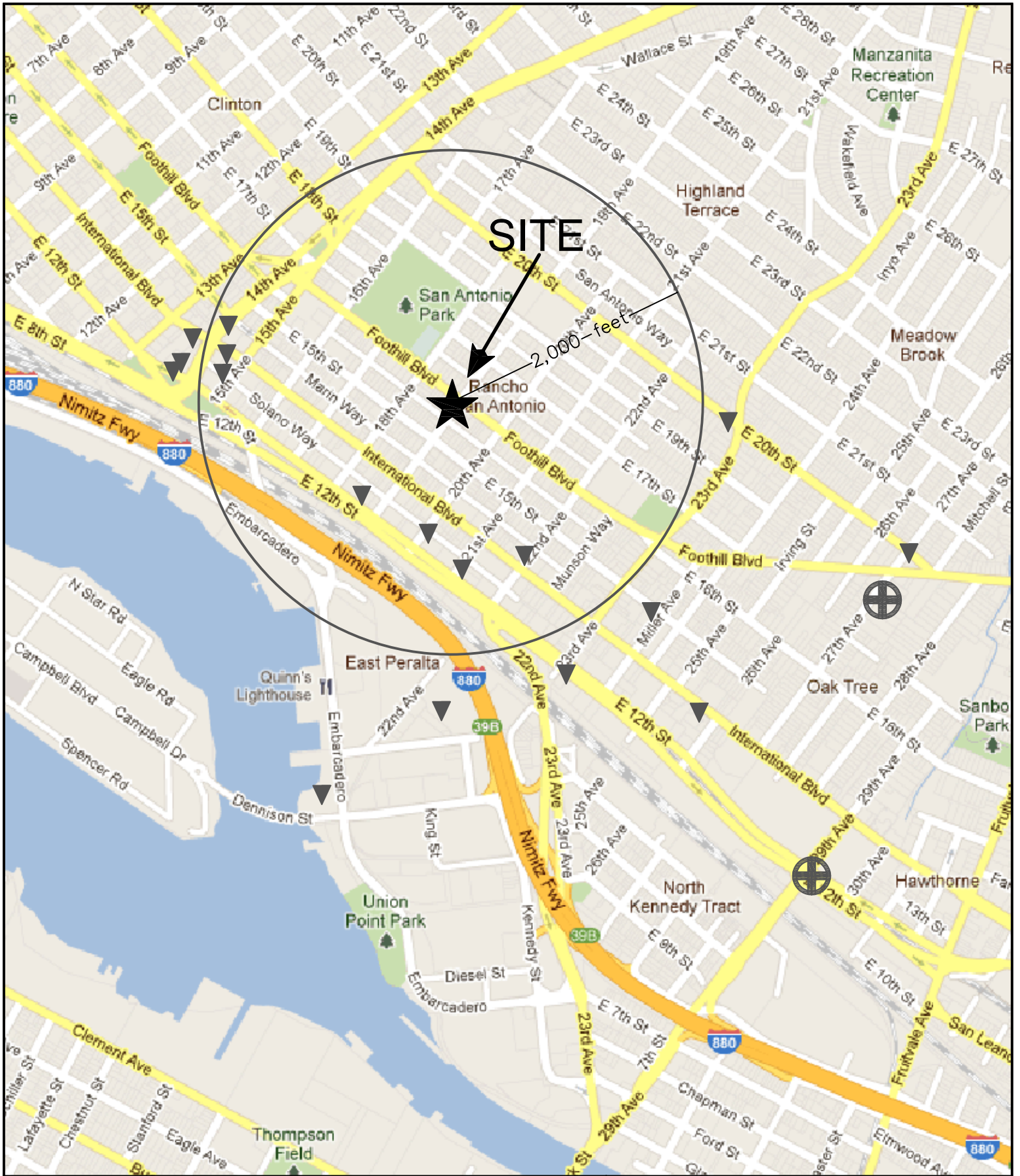


**SIERRA WEST**  
CONSULTANTS, INC.



FIGURE:

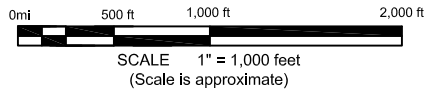
11





**LEGEND:**

-  Environmental Monitoring Well Site (one or more wells per location)
-  Private Supply Well



Notes: - Well search results from California Department of Water Resources, Alameda County Public Works Agency, and GeoTracker Database  
 - Base Map Source: Google Maps, 2012

**TITLE:**

Well Search Results Map

**LOCATION:**

F&M Auto Service UST Site  
 1839 Foothill Blvd., Oakland, CA



**SIERRA WEST**  
 CONSULTANTS, INC.

**FIGURE:**

12

## Tables

**Table 1**  
**Summary of UST Removal Soil Sample Analytical Data**  
Former F&M Auto Service Station  
1839 Foothill Boulevard  
Oakland, California

Sample ID	Date Collected	Depth	TPHg (mg/kg)	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Total Xylenes (mg/kg)	MTBE (mg/kg)	Total Lead (mg/kg)
<b>Samples from UST#1 and UST#2 excavation</b>									
1A	4/6/2011	13'	<b>1,990</b>	<7.1	<7.1	<b>46.2</b>	<b>159</b>	<4.8	71.2
1B	4/6/2011	13'	<b>456</b>	<1.5	<1.5	1.82 <sup>(1)</sup>	10.7	<0.970	28.8
1S	4/7/2011	11'	<b>212</b>	<0.500	1.98	<b>4.78</b>	<b>23.4</b>	<0.330	7.1
2A	4/6/2011	13'	19.4	<0.093	<0.093	<0.093	<0.250	<0.062	4.5
2B	4/6/2011	13'	87.5	<0.240	<0.240	0.293 <sup>(1)</sup>	<0.640	<0.160	12.0
2S	4/7/2011	11'	98	<0.240	<0.240	1.42	2.08	<0.160	6.9
<b>Samples from UST#3 excavation</b>									
3A	4/7/2011	13'	<b>378</b>	<0.910	<0.910	4.48	8.5	<0.610	9.3
3B	4/7/2011	13'	0.857	<0.0025	<0.0025	0.0028 <sup>(1)</sup>	<0.0067	0.0154	6.3
3SE	4/7/2011	11'	0.187	<0.0015	<0.0015	<0.0015	<0.0039	0.0156	3.7
3SW	4/7/2011	11'	56.4	<0.090	<0.090	0.449	1.02	<0.060	6.4
<b>Samples from UST#4 excavation</b>									
4A	4/6/2011	6.5'	0.0989 <sup>(1)</sup>	<0.0015	<0.0015	<0.0015	0.0107	<0.00099	8.2
4B	4/6/2011	6.5'	7.26	<0.072	0.0788 <sup>(1)</sup>	0.109 <sup>(1)</sup>	0.685	<0.048	37.5
4SE	4/6/2011	4.5'	<0.049	<0.0015	<0.0015	<0.0015	<0.0039	<0.00097	13.7
4SW	4/6/2011	4.5'	0.671	0.0053	0.0239	0.0095	0.169	<0.00097	40.1
<b>Samples from bottom of fuel line excavation</b>									
FL-1	4/7/2011	5'	<0.049	<0.0015	<0.0015	<0.0015	<0.0039	<0.00098	17.0
FL-2	4/7/2011	5'	<0.048	<0.0014	<0.0014	<0.0014	<0.0038	<0.00096	5.0
<b>Soil samples from bottom of dispenser island excavation</b>									
DI-1	4/7/2011	5'	<0.049	<0.0015	<0.0015	<0.0015	<0.0039	<0.00098	18.1
DI-2	4/7/2011	5'	<0.049	<0.0015	<0.0015	<0.0015	<0.0039	<0.00099	7.6
<b>Environmental Screening Limits <sup>2</sup></b>			<b>180</b>	<b>0.27</b>	<b>9.3</b>	<b>4.7</b>	<b>11</b>	<b>8.4</b>	<b>750</b>

**Notes:**

<sup>(1)</sup> = Laboratory J-Flag below reporting limit/Estimated Value

<sup>(2)</sup> = Environmental Screening Limits referenced from *Screening for Environmental Concerns at Sites with Contaminated Soil and Groundwater, Table B* (California Regional Water Quality Control Board San Francisco Bay Region, May 2008), for shallow soils on commercial land use sites where groundwater is not a current or potential source of drinking water

TPHg = Total petroleum hydrocarbons as gasoline  
MTBE = Methyl tert-butyl ether  
(mg/kg) = milligrams per kilogram

\*Values presented in bold letters are above applicable Environmental Screening Limits

**TABLE 2**  
**Soil Analytical Data Summary**  
**Former F&M Auto Service UST Site**  
1839 Foothill Boulevard, Oakland, California

SAMPLE LOCATION	SAMPLE DEPTH (feet)	SAMPLE DATE	TPHd (mg/kg)	TPHg (mg/kg)	BENZENE (mg/kg)	TOLUENE (mg/kg)	ETHYL-BENZENE (mg/kg)	XYLENES (mg/kg)	OXYGENATES					LEAD (mg/kg)
									MTBE (mg/kg)	DIPE (mg/kg)	ETBE (mg/kg)	TAME (mg/kg)	TBA (mg/kg)	
MW-1	10.5	1/24/2012	81.8	<b>791.0</b>	<b>5.94</b>	<b>36.2</b>	<b>12.0</b>	<b>69.8</b>	<5.0	<5.0	<5.0	<5.0	<4.0	5.6
	18.5	1/24/2012	<10	0.596	0.0032 <sup>1</sup>	0.0048 <sup>1</sup>	0.0012 <sup>1</sup>	0.0050 <sup>1</sup>	0.0065	<0.0050	<0.0050	<0.0050	<0.040	3.0
	25.0	1/24/2012	<10	0.383	0.0030 <sup>1</sup>	0.0041 <sup>1</sup>	0.0011 <sup>1</sup>	0.0043 <sup>1</sup>	0.0197	<0.0049	<0.0049	<0.0049	<0.039	5.5
MW-2	14.5	1/23/2012	70.60	<b>830.0</b>	<4.100	<4.100	2.510	<8.300	<4.100	<4.100	<4.100	<4.100	<33.000	7.5
	20.5	1/23/2012	7.94 <sup>1</sup>	94.8	<0.490	<0.490	<0.490	<0.970	<0.490	<0.490	<0.490	<0.490	<3.900	5.6
	28.0	1/23/2012	<10	<0.100	<0.0050	<0.0050	<0.0050	<0.010	0.0015 <sup>1</sup>	<0.0050	<0.0050	<0.0050	<0.040	6.6
MW-3	22.0	1/23/2012	<10	<0.098	<0.0049	<0.0049	<0.0049	<0.0098	0.0013 <sup>1</sup>	<0.0049	<0.0049	<0.0049	<0.039	6.1
	28.0	1/23/2012	<10	<0.099	<0.0050	<0.0050	<0.0050	<0.0099	<0.0050	<0.0050	<0.0050	<0.040	4.9	
MW-4	22.0	1/23/2012	<10	<0.100	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0050	<0.0050	<0.040	5.0
	28.0	1/23/2012	<10	<0.100	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0050	<0.040	5.0	
B-1	11.5	1/23/2012	<10	0.389	<0.0050	<0.0050	<0.0050	<0.010	0.0040 <sup>1</sup>	<0.0050	<0.0050	<0.0050	0.0135	7.2
	20.5	1/23/2012	<10	0.379	<0.0050	<0.0050	0.0014 <sup>1</sup>	<0.0099	0.0056	<0.0050	<0.0050	<0.0050	<0.040	4.2
	28.0	1/23/2012	<10	<0.099	<0.0050	<0.0050	<0.0050	<0.0099	<0.0050	<0.0050	<0.0050	<0.040	7.7	
B-2	12.5	1/23/2012	20.5	50.9	<0.320	<0.320	0.291	0.562	<0.320	<0.320	<0.320	<0.320	<2.600	1.9
	22.5	1/23/2012	3.74 <sup>1</sup>	31.0	<0.220	<0.220	0.294	0.830	<0.220	<0.220	<0.220	<0.220	<1.700	6.5
	28.0	1/23/2012	4.23 <sup>1</sup>	16.2	<0.250	<0.250	0.163 <sup>1</sup>	0.448 <sup>1</sup>	<0.250	<0.250	<0.250	<0.250	<2.000	9.9
B-3	12.0	1/23/2012	<10	<0.098	<0.0049	<0.0049	<0.0049	<0.0098	<0.0049	<0.0049	<0.0049	<0.0049	<0.039	3.5
	22.5	1/23/2012	8.06 <sup>1</sup>	0.686 <sup>2</sup>	<0.0050	<0.0050	<0.0050	<0.0100	<0.0050	<0.0050	<0.0050	<0.0050	<0.040	4.8
	28.0	1/23/2012	3.49 <sup>1</sup>	0.510 <sup>2</sup>	<0.0049	<0.0049	<0.0049	<0.0098	<0.0049	<0.0049	<0.0049	<0.0049	<0.039	4.8
<b>Environmental Screening Limits<sup>4</sup></b>			<b>180</b>	<b>180</b>	<b>0.27</b>	<b>9.3</b>	<b>4.7</b>	<b>11</b>	<b>8.4</b>	<b>--<sup>3</sup></b>	<b>--<sup>3</sup></b>	<b>--<sup>3</sup></b>	<b>110</b>	<b>750</b>

**Notes:**

- <sup>1</sup> = Estimated value.
- <sup>2</sup> = Not a typical gasoline pattern.
- <sup>3</sup> = ESL not established for this constituent
- <sup>4</sup> = Environmental Screening Limits referenced from Screening for Environmental Concerns at Sites with Contaminated Soil and Groundwater, Table B (California Regional Water Quality Control Board San Francisco Bay Region, May 2008), for shallow soils on commercial land use sites where groundwater is not a current or potential source of drinking water.

TPHd = Total petroleum hydrocarbons as diesel  
TPHg = Total petroleum hydrocarbons as gasoline  
MTBE = Methyl tertiary butyl ether  
DIPE = Diisopropyl ether  
ETBE = Ethyl tertiary butyl ether  
TAME = Tert-amyl methyl ether  
TBA = Tert Butanol  
(mg/kg) = milligrams per kilogram

\*Values presented in bold letters are above applicable Environmental Screening Limits

**TABLE 3**  
**Grab Groundwater Analytical Data Summary**  
**Former F&M Auto Service UST Site**  
1839 Foothill Boulevard, Oakland, California

SAMPLE LOCATION	SAMPLE DATE	TPHd (µg/L)	TPHg (µg/L)	BENZENE (µg/L)	TOLUENE (µg/L)	ETHYL-BENZENE (µg/L)	XYLENES (µg/L)	OXYGENATES					LEAD (µg/L)
								MTBE (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	TBA (µg/L)	
MW-1	1/24/2012	<b>4,650</b>	<b>34,100</b>	<b>3,020</b>	<b>4,040</b>	<b>587</b>	<b>2,590</b>	443	<200	<200	<200	<1,000	<10
MW-2	1/23/2012	<b>2,580</b>	<b>2,720</b>	10.1	<10	<b>86.7</b>	38.0	48.6	<20	<20	<20	<100	<10
MW-3	1/23/2012	<b>645</b>	56.2	<1.0	<1.0	0.52	<2.0	3.2	<2.0	<2.0	<2.0	<10	.. <sup>2</sup>
MW-4	1/23/2012	67.6 <sup>1</sup>	<50	<1.0	<1.0	<1.0	<2.0	<1.0	<2.0	<2.0	<2.0	<10	<10
B-1	1/23/2012	143	120	<1.0	<1.0	0.75 <sup>1</sup>	<2.0	23.2	<2.0	<2.0	<2.0	<10	<10
B-2	1/23/2012	<b>1,580</b>	<b>4,290</b>	19.1	5.7 <sup>1</sup>	<b>240</b>	<b>657</b>	8.0 <sup>1</sup>	<20	<20	<20	<100	<10
B-3	1/23/2012	<b>199</b>	<50	0.20 <sup>1</sup>	<1.0	0.21 <sup>1</sup>	0.57 <sup>1</sup>	2.0	<2.0	<2.0	<2.0	<10	<10
<b>Environmental Screening Limits<sup>4</sup></b>		<b>180</b>	<b>180</b>	<b>46</b>	<b>130</b>	<b>43</b>	<b>100</b>	<b>1,800</b>	.. <sup>3</sup>	.. <sup>3</sup>	.. <sup>3</sup>	<b>18,000</b>	<b>2.5</b>

**Notes:**

<sup>1</sup> = Estimated value.

<sup>2</sup> = Sample not analyzed due to laboratory error in sample bottles supply.

<sup>3</sup> = ESL not established for this constituent

<sup>4</sup> = Environmental Screening Limits referenced from Screening for Environmental Concerns at Sites with Contaminated Soil and Groundwater, Table B (California Regional Water Quality Control Board San Francisco Bay Region, May 2008), for shallow soils on commercial land use sites where groundwater is not a current or potential source of drinking water

\*Values Presented in bold letters are above applicable Environmental Screening Limits

TPHd = Total petroleum hydrocarbons as diesel  
TPHg = Total petroleum hydrocarbons as gasoline  
MTBE = Methyl tertiary butyl ether  
DIPE = Diisopropyl ether  
ETBE = Ethyl tertiary butyl ether  
TAME = Tert-amyl methyl ether  
TBA = Tert Butanol  
(µg/L) = micrograms per liter



**TABLE 4**  
**GROUNDWATER ELEVATION AND ANALYTICAL RESULTS**  
 Former F&M Auto Service UST Site  
 1839 Foothill Boulevard, Oakland, California

SAMPLE LOCATION (TOC Elevation) <sup>1</sup>	DATE SAMPLED	DEPTH TO WATER	GROUND-WATER ELEVATION	TPHd (µg/L)	TPHg (µg/L)	BENZENE (µg/L)	TOLUENE (µg/L)	ETHYL-BENZENE (µg/L)	XYLENES (µg/L)	OXYGENATES					LEAD (µg/L)
										MTBE (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	TBA (µg/L)	
MW-1 49.71	1/31/2012	8.73	40.98	2,220	27,800	2,750	3,470	577	2,840	507	<100	<100	<100	<500	86.4
MW-2 50.53	1/31/2012	8.97	41.56	1,120	3,390	38.8	2.8 <sup>2</sup>	7.6 <sup>2</sup>	9.5 <sup>2</sup>	116	<20	4.5 <sup>2</sup>	<20	<100	63.5
MW-3 50.59	1/31/2012	7.25	43.34	324	<50	<1.0	<1.0	<1.0	<2.0	6.1	<2.0	<2.0	<2.0	<10	14.1
MW-4 50.47	1/31/2012	6.52	43.95	50.2 <sup>2</sup>	<50	<1.0	<1.0	<1.0	<2.0	<1.0	<2.0	<2.0	<2.0	<10	<10

**Notes:**

<sup>1</sup> = Wells surveyed by Virgil Chavez Land Surveying on 1/31/2012.

<sup>2</sup> = Estimated Value

TPHd = Total petroleum hydrocarbons as diesel  
 TPHg = Total petroleum hydrocarbons as gasoline  
 MTBE = Methyl tertiary butyl ether  
 DIPE = Diisopropyl ether  
 ETBE = Ethyl tertiary butyl ether  
 TAME = Tert-amyl methyl ether  
 TBA = Tert Butanol  
 LEAD = Dissolved Lead

**Table 5**  
**Summary of Well Search Results**  
Former F&M Auto Service Station  
1839 Foothill Boulevard, Oakland, California

<b>Monitoring Well Sites</b>				
<b>Site Name</b>	<b>Site Address</b>	<b>Active</b>	<b>Distance from F&amp;M Site</b>	<b>Direction from F&amp;M Site</b>
Unknown	1832 E 12TH Street OAKLAND, CA 94606	Unknown	1,100 feet	Southwest
WILLIAM WURZBACH COMPANY	1200 20TH OAKLAND, CA 94606	Closed	1,300 feet	South
EXXON #7-7516 / CONTINENTAL AUTO SALES	2200 INTERNATIONAL OAKLAND, CA 94606	Closed	1,500 feet	South-Southeast
SHELL STATION	2142 E 12TH STREET OAKLAND, CA 94601	Closed	1,500 feet	South-Southeast
Unknown	1518 E 12TH STREET OAKLAND, CA 94601	Unknown	1,600 feet	West
General Tire	1201 14TH AVE OAKLAND, CA 94601	Open	1,700 feet	West
Davlin Paint Company	1401 14TH AVE OAKLAND, CA 94601	Closed	1,750 feet	West-Northwest
City of Oakland Cleanup Site SLT2O134140	1235 14TH STREET OAKLAND, CA 94601	Open	2,050 feet	West
Foss Lampshade Studios	1353 E 14TH STREET OAKLAND, CA 94601	Open	2,050 feet	West-Northwest
CHURCH OF GOD	1951 23RD AVE OAKLAND, CA 94606	Unknown	2,100 feet	East
MEL SENNA BRAKE SERVICE	2301 E 12TH STREET OAKLAND, CA 94601	Open	2,200 feet	South-Southeast
TAXI TAXI INC	2345 INTERNATIONAL OAKLAND, CA 94601	Open	2,320 feet	South-Southeast
KILPATRICKS BAKERY	2100 LIVINGSTON OAKLAND, CA 94606	Closed	2,525 feet	South-Southeast
STANDARD BRANDS PAINT	2530 E 14TH STREET OAKLAND, CA 94601	Closed	3,100 feet	Southeast
PORT OF OAKLAND EMBARCADERO COVE	2000 EMBARCADERO OAKLAND, CA 94607	Open	3,250 feet	South-Southwest
STOP N GO #1006	2710 FOOTHILL OAKLAND, CA 94601	Closed	3,750 feet	East-Southeast

<b>Private Supply Wells</b>				
<b>Well Name / ID</b>	<b>Well Address / Location</b>	<b>Currently In Use</b>	<b>Distance from F&amp;M Site</b>	<b>Direction from F&amp;M Site</b>
PRIVATE WELL #1	1754 27TH AVE OAKLAND, CA 94601	Unknown	3,600 feet	East-Southeast
PRIVATE WELL #2	29TH AVE & E 14TH AVE OAKLAND, CA 94601	Unknown	4,400 feet	Southeast

**Appendix A**  
**Alameda County Drilling Permits**

# Alameda County Public Works Agency - Water Resources Well Permit



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

**Application Approved on: 01/06/2012 By jamesy**

**Permit Numbers: W2012-0017 to W2012-0021**  
**Permits Valid from 01/23/2012 to 01/27/2012**

**Application Id:** 1325788374685  
**Site Location:** Former F&M Auto Service UST Site  
1839 Foothill Boulevard  
Oakland, California 94606

**City of Project Site:**Oakland

**Project Start Date:** 01/23/2012  
**Assigned Inspector:** Contact Vicky Hamlin at (510) 670-5443 or vickyh@acpwa.org

**Completion Date:**01/27/2012

**Applicant:** Sierra West Consultants, Inc. - Jeffrey Bensch  
4227 Sunrise Boulevard, Suite 220, Fair Oaks, CA 95628  
**Property Owner:** Mary Wright  
1829 9th Avenue, Oakland, CA 94606  
**Client:** \*\* same as Property Owner \*\*  
**Contact:** Brian Whalen

**Phone:** 916-863-3220

**Phone:** 510-891-1395

**Phone:** 916-863-3220  
**Cell:** 916-572-4389

	<b>Total Due:</b>	\$1853.00
<b>Receipt Number: WR2012-0009</b>	<b>Total Amount Paid:</b>	\$1853.00
<b>Payer Name : Jeffrey C Bensch</b>	Paid By: VISA	<b>PAID IN FULL</b>

**Works Requesting Permits:**

Well Construction-Monitoring-Monitoring - 4 Wells  
Driller: Gregg Drilling - Lic #: 485165 - Method: hstem

**Work Total: \$1588.00**

**Specifications**

Permit #	Issued Date	Expire Date	Owner Well Id	Hole Diam.	Casing Diam.	Seal Depth	Max. Depth
W2012-0017	01/06/2012	04/22/2012	MW-1	8.00 in.	2.00 in.	14.00 ft	30.00 ft
W2012-0018	01/06/2012	04/22/2012	MW-2	8.00 in.	2.00 in.	14.00 ft	30.00 ft
W2012-0019	01/06/2012	04/22/2012	MW-3	8.00 in.	2.00 in.	14.00 ft	30.00 ft
W2012-0020	01/06/2012	04/22/2012	MW-4	8.00 in.	2.00 in.	14.00 ft	30.00 ft

**Specific Work Permit Conditions**

1. 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.
  
2. 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.
  
3. 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

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

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.

4. Compliance with the well-sealing specifications shall not exempt the well-sealing contractor from complying with appropriate State reporting-requirements related to well construction or 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. Include permit number and site map.
5. Applicant shall submit the copies of the approved encroachment permit to this office within 60 days.
6. Applicant shall contact Vicky Hamlin for an inspection time at 510-670-5443 or email to vickyh@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.
7. Wells shall have a Christy box or similar structure with a locking cap or cover. Well(s) shall be kept locked at all times. Well(s) that become damaged by traffic or construction shall be repaired in a timely manner or destroyed immediately (through permit process). No well(s) shall be left in a manner to act as a conduit at any time.
8. Minimum surface seal thickness is two inches of cement grout placed by tremie.
9. Minimum seal (Neat Cement seal) depth for monitoring wells is 5 feet below ground surface(BGS) or the maximum depth practicable or 20 feet.
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.

---

Borehole(s) for Investigation-Contamination Study - 3 Boreholes

Driller: Gregg Drilling - Lic #: 485165 - Method: DP

**Work Total: \$265.00**

### Specifications

Permit Number	Issued Dt	Expire Dt	# Boreholes	Hole Diam	Max Depth
W2012-0021	01/06/2012	04/22/2012	3	3.00 in.	30.00 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,

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

properly damage, personal injury and wrongful death.

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

5. Applicant shall contact Vicky Hamlin for an inspection time at 510-670-5443 or email to vickyh@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.

6. 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.

---

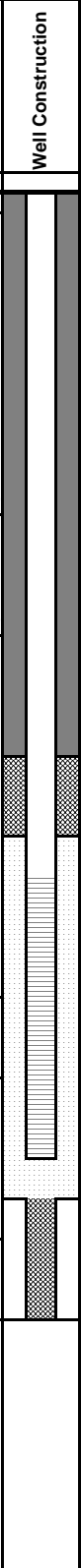
**Appendix B**  
**Boring Logs**

PROJECT NAME:	<b>Former F&amp;M Auto Service UST Site</b>	LOG OF BORING:	<b>MW-1</b>
SITE ADDRESS:	1839 Foothill Boulevard Oakland, California	BOREHOLE DIAM. (in):	8
		MONITORING WELL DIAM. (in):	2
DATE STARTED:	January 24, 2012	DRILLER/COMPANY:	Bobby Deason
DATE COMPLETED:	January 24, 2012		Gregg Drilling and Testing C-57# 485165
DRILLING METHOD:	Sampled using 2"-Diameter Direct Push Well Installed using Hollow Stem Auger	GEOLOGIST/ENGINEER:	B. Whalen Sierra West Consultants, Inc.

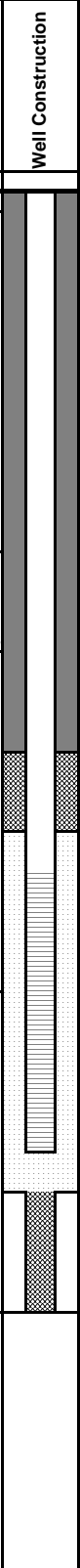
DEPTH (Feet)	Sample Interval	Recovery (%)	PID (ppm)	SAMPLE NUMBER	USCS SYMBOL	DESCRIPTION	Well Construction	DEPTH (Feet)
0	HAND AUGER		0.0		ML	<b>SILT WITH SAND:</b> 85% silt, non-plastic, soft, wet, brown (10YR 4/3). 15% fine-grained sand.		0
5	Direct Push	100%	395.2 352.8 546.8		CL	<b>CLAY WITH SAND:</b> 85% clay, low-plasticity, medium-stiff, moist, grayish brown (10YR 5/2). 15% fine-grained sand.		5
10	Direct Push	100%	1,567 581.6 1,792	MW-1-10.5	MLS	<b>SANDY SILT:</b> 70% silt, non-plastic, medium-stiff, moist, greenish gray (GLE Y1 5/5GY). 30% fine- to medium-grained sand, mostly fine.		10
15	Direct Push	100%	391.0 207.2 104.8 145.2		CL	<b>CLAY:</b> 90% clay, medium-plasticity, medium-stiff, moist, dark greenish gray (GLE Y1 4/10Y). 10% fine-grained sand.		15
20	Direct Push	100%	47.9 4.7 14.0 6.9	MW-1-18.5	MLS	<b>SANDY SILT WITH GRAVEL:</b> 60% silt, non-plastic, stiff, moist, greenish gray (GLE Y1 5/5G). 20% fine- to coarse-grained sand, sub-angular to sub-rounded, poorly graded. 20% fine gravel, sub-angular, with max. gravel size of 3/4-inches.		20
25	DP	100%	2.4 3.2 58.1 5.7 5.1 1.0	MW-1-25.0	ML	<b>SILT:</b> 100% silt, non-plastic, soft, wet, greenish gray (GLE Y1 5/5G).  @23' - Color grades to brown (10YR 5/3).		25
30						Geologist Terminated Boring at 25' - Target Depth Achieved First encountered groundwater at depth of 21'  - Well Constructed using 2-inch diameter SCH40 PVC from 0' - 17' - 0.010-inch machine-slotted SCH40 PVC screen from 17' - 24' - Neat cement seal placed from 1' - 14' - Medium bentonite chips (hydrated in place) placed from 14' - 16' - #2/12 sand placed from 16' - 25' - Completed with flush-mount, traffic-rated, bolt-down well box with twist-lock well-cap		30



<b>PROJECT NAME:</b>	<b>Former F&amp;M Auto Service UST Site</b>	<b>LOG OF BORING:</b>	<b>MW-2</b>
<b>SITE ADDRESS:</b>	1839 Foothill Boulevard Oakland, California	<b>BOREHOLE DIAM. (in):</b>	8
		<b>MONITORING WELL DIAM. (in):</b>	2
<b>DATE STARTED:</b>	January 23, 2012	<b>DRILLER/COMPANY:</b>	Bobby Deason
<b>DATE COMPLETED:</b>	January 24, 2012		Gregg Drilling and Testing C-57# 485165
<b>DRILLING METHOD:</b>	Sampled using 2"-Diameter Direct Push Well Installed using Hollow Stem Auger	<b>GEOLOGIST/ENGINEER:</b>	B. Whalen Sierra West Consultants, Inc.

DEPTH (Feet)	Sample Interval	Recovery (%)	PID (ppm)	SAMPLE NUMBER	USCS SYMBOL	DESCRIPTION	Well Construction	DEPTH (Feet)	
0	HAND AUGER ↓	100%	0.0		ML	<b>6-Inches Concrete</b> SILT: 90% non-plastic, soft, wet, very dark grayish brown (10YR 3/2). 10% fine sand.		0	
			0.0						
5			0.0						5
	Direct Push	100%	0.2						
	Direct Push	100%	0.0						
10	Direct Push	100%	0		CLS	<b>SANDY CLAY WITH GRAVEL:</b> 75% clay, low-plasticity, stiff, moist, greenish gray (GLE Y1 5/10GY). 20% sand, fine- to coarse-grained, sub-angular. 5% fine gravel, sub-angular.		10	
	Direct Push	100%	7.3						
	Direct Push	100%	112						
	Direct Push	100%	52.7		CL	<b>CLAY:</b> 95% clay, low-plasticity, stiff, moist, dark greenish gray (GLE Y1 4/5GY). 5% fine sand.			
	Direct Push	100%	5.2						
	Direct Push	100%	164.9						
15	Direct Push	100%	843.7	MW-2-14.5				15	
	Direct Push	100%	391.1						
	Direct Push	100%	30.0						
	Direct Push	100%	152.4						
	Direct Push	100%	25.1						
	Direct Push	100%	11.3			@ 19' - Soil becomes soft.			
20	Direct Push	100%	4.4	MW-2-20.5	MLS	<b>SANDY SILT:</b> 65% silt, non-plastic, stiff, moist, brown (10YR 4/3). 35% sand, fine- to coarse-grained, sub-angular to sub-rounded.		20	
	Direct Push	100%	6.7			@ 21' - Soil becomes wet.			
	Direct Push	100%	14.4		CL	<b>CLAY:</b> 100% clay, high-plasticity, medium-stiff, wet, greenish gray (GLE Y1 5/5G).			
	Direct Push	100%	5.0						
25	Direct Push	NR	4.1					25	
	Direct Push	75%	7.4		ML	<b>SILT:</b> 100% silt, non-plastic, soft, wet, yellowish brown (10YR 5/6).			
	Direct Push	75%	1.6	MW-2-28.0					
30	Geologist Terminated Boring at 28' - Target Depth Achieved First encountered groundwater at depth of 21'								30
	<ul style="list-style-type: none"> <li>- Well Constructed using 2-inch diameter SCH40 PVC from 0' - 17'</li> <li>- 0.010-inch machine-slotted SCH40 PVC screen from 17' - 24'</li> <li>- Neat cement seal placed from 1' - 14'</li> <li>- Medium bentonite chips (hydrated in place) placed from 14' - 16'</li> <li>- #2/12 sand placed from 16' - 25'</li> <li>- Direct-push boring backfilled with medium bentonite chips from 25' - 28'</li> <li>- Completed with flush-mount, traffic-rated, bolt-down well box with twist-lock well-cap</li> </ul>								

PROJECT NAME:	<b>Former F&amp;M Auto Service UST Site</b>	LOG OF BORING:	<b>MW-3</b>
SITE ADDRESS:	1839 Foothill Boulevard Oakland, California	BOREHOLE DIAM. (in):	8
		MONITORING WELL DIAM. (in):	2
DATE STARTED:	January 23, 2012	DRILLER/COMPANY:	Bobby Deason
DATE COMPLETED:	January 24, 2012		Gregg Drilling and Testing C-57# 485165
DRILLING METHOD:	Sampled using 2"-Diameter Direct Push Well Installed using Hollow Stem Auger	GEOLOGIST/ENGINEER:	B. Whalen Sierra West Consultants, Inc.

DEPTH (Feet)	Sample Interval	Recovery (%)	PID (ppm)	SAMPLE NUMBER	USCS SYMBOL	DESCRIPTION	Well Construction	DEPTH (Feet)
0	HAND AUGER ↓		0.0		ML	<b>6-Inches Concrete</b>  SILT: 90% silt, non-plastic, soft, wet, dark gray (10YR 4/1). 10% sand, fine- to medium-grained, sub-angular.  @4' - Color grades to brown (10YR 5/3).		0
5		Direct Push	100%					5
10		Direct Push	100%	0.2		MLS		<b>SANDY SILT WITH GRAVEL:</b> 65% silt, non-plastic, soft, moist, brown (10YR 5/3). 25% sand, fine- to medium-grained, sub-angular. 10% fine gravel, sub-angular.
15	Direct Push	NR	0.0		ML	<b>SILT WITH SAND:</b> 85% silt, non-plastic, dense, moist, dark yellowish brown (10YR 4/4). 15% fine sand. Some MgO staining.		15
20	Direct Push	NR	0.0		CL	<b>CLAY WITH SAND:</b> 85% clay, medium-plasticity, stiff, wet, brown (10YR 4/3). 15% sand, fine- to coarse-grained, poorly graded.		20
25	Direct Push	NR	0.0	MW-3-22.0				25
	Direct Push	50%	0.0					
			0.0	MW-3-28.0				
30						Geologist Terminated Boring at 28' - Target Depth Achieved First encountered groundwater at depth of 20'  <ul style="list-style-type: none"> <li>- Well Constructed using 2-inch diameter SCH40 PVC from 0' - 17'</li> <li>- 0.010-inch machine-slotted SCH40 PVC screen from 17' - 24'</li> <li>- Neat cement seal placed from 1' - 14'</li> <li>- Medium bentonite chips (hydrated in place) placed from 14' - 16'</li> <li>- #2/12 sand placed from 16' - 25'</li> <li>- Direct-push boring backfilled with medium bentonite chips from 25' - 28'</li> <li>- Completed with flush-mount, traffic-rated, bolt-down well box with twist-lock well-cap</li> </ul>		30

PROJECT NAME:	<b>Former F&amp;M Auto Service UST Site</b>	LOG OF BORING:	<b>MW-4</b>
SITE ADDRESS:	1839 Foothill Boulevard Oakland, California	BOREHOLE DIAM. (in):	8
		MONITORING WELL DIAM. (in):	2
DATE STARTED:	January 23, 2012	DRILLER/COMPANY:	Bobby Deason
DATE COMPLETED:	January 24, 2012		Gregg Drilling and Testing C-57# 485165
DRILLING METHOD:	Sampled using 2"-Diameter Direct Push Well Installed using Hollow Stem Auger	GEOLOGIST/ENGINEER:	B. Whalen Sierra West Consultants, Inc.

DEPTH (Feet)	Sample Interval	Recovery (%)	PID (ppm)	SAMPLE NUMBER	USCS SYMBOL	DESCRIPTION	Well Construction	DEPTH (Feet)	
0	HAND AUGER		0.0		ML	<b>SILT WITH SAND:</b> 85% silt, non-plastic, soft, moist, very dark gray (10YR 3/1). 15% fine sand. @2' - Color grades to brown (10YR 5/3).		0	
5			0.0					0.0	0.0
	Direct Push	100%	0.0		MLS	<b>SANDY SILT:</b> 75% silt, non-plastic, soft, moist, grayish brown (10YR 5/2). 20% fine sand. 5% fine gravel, sub-rounded.			
10	Direct Push	100%	0.0		CL	<b>CLAY WITH SAND:</b> 85% clay, low-plasticity, stiff, moist, brown (10YR 5/3). 15% fine sand. Some MgO staining. @15' - 10% fine gravel, sub-angular.		10	
	Direct Push	100%	0.0					13'	15
15	Direct Push	100%	0.0		MLG	<b>GRAVELLY SILT:</b> 65% silt, non-plastic, stiff, moist, brown (10YR 5/3). 10% sand, fine- to medium-grained, sub-angular to sub-rounded. 25% fine gravel, sub-angular.			
	Direct Push	100%	0.0		CL	<b>CLAY:</b> 100% clay, high-plasticity, stiff, brown (10YR 5/3).			
20	Direct Push	NR	0.0	MW-4-22.0	CLS	<b>SANDY CLAY:</b> 75% clay, high-plasticity, stiff, wet, grayish brown (10YR 5/2). 20% well-graded sand. 5% fine gravel, sub-angular to sub-rounded.		20	
	Direct Push	63%	0.0		CL	<b>CLAY:</b> 100% clay, high-plasticity, stiff, wet, grayish brown (10YR 5/2).		22'	
25	Direct Push	NR	0.0	MW-4-28.0				26.5'	25
	Direct Push	37.5%	0.0						
30	Geologist Terminated Boring at 28' - Target Depth Achieved First encountered groundwater at depth of 22'								30
	<ul style="list-style-type: none"> <li>- Well Constructed using 2-inch diameter SCH40 PVC from 0' - 17'</li> <li>- 0.010-inch machine-slotted SCH40 PVC screen from 17' - 24'</li> <li>- Neat cement seal placed from 1' - 14'</li> <li>- Medium bentonite chips (hydrated in place) placed from 14' - 16'</li> <li>- #2/12 sand placed from 16' - 25'</li> <li>- Direct-push boring backfilled with medium bentonite chips from 25' - 28'</li> <li>- Completed with flush-mount, traffic-rated, bolt-down well box with twist-lock well-cap</li> </ul>								

<b>PROJECT NAME:</b>	<b>Former F&amp;M Auto Service UST Site</b>	<b>LOG OF BORING:</b>	<b>B-1</b>
<b>SITE ADDRESS:</b>	1839 Foothill Boulevard Oakland, California	<b>BOREHOLE DIAM. (in):</b>	2
		<b>MONITORING WELL DIAM. (in):</b>	N/A
<b>DATE STARTED:</b>	January 23, 2012	<b>DRILLER/COMPANY:</b>	Bobby Deason
<b>DATE COMPLETED:</b>	January 24, 2012		Gregg Drilling and Testing C-57# 485165
<b>DRILLING METHOD:</b>	Drilled and Sampled using 2"-Diameter Direct Push	<b>GEOLOGIST/ENGINEER:</b>	B. Whalen Sierra West Consultants, Inc.

DEPTH (Feet)	Sample Interval	Recovery (%)	PID (ppm)	SAMPLE NUMBER	USCS SYMBOL	DESCRIPTION	Well Construction	DEPTH (Feet)
0	HAND AUGER		0.0		ML	<b>SILT:</b> 90% silt, non-plastic, soft, moist, dark brown (7.5YR 3/2). 10% fine sand.	Well Construction	0
			0.0					4.5'
5	Direct Push	100%	0.0		CL	<b>CLAY:</b> 100% clay, medium-plasticity, stiff, moist, dark greenish gray (GLE Y1 4/5GY)		5
			0.0					5.5'
	Direct Push	100%	0.2			<b>SILT:</b> 90% silt, non-plastic, medium-stiff, moist, yellowish brown (10YR 5/4). 10% fine sand.		
			7.4			@ 8.5' - 10% fine, sub-angular gravel.		9.5'
10	Direct Push	100%	8.4		CLS	<b>CLAY WITH SAND:</b> 80% clay, medium-plasticity, stiff, moist, dark greenish gray (GLE Y1 4/10Y). 20% fine sand.		
			2.4		B-1-11.5			
	Direct Push	100%	44.2					
			6.8					14.5'
15	Direct Push	100%	36.6		CL	<b>CLAY:</b> 100% clay, high-plasticity, stiff, moist, dark greenish gray (GLE Y1 4/10Y).		
			0.3					
	Direct Push	100%	1.2					
			3.6					
	Direct Push	100%	0.0					
			0.0				20.5'	
20	Direct Push	100%	0.0		ML	<b>SILT:</b> 90% silt, non-plastic, soft, moist, light yellowish brown (2.5Y 6/3). 10% fine sand.		
			0.0		B-1-20.5			
	Direct Push	100%	0.0			@ 21' - Soil becomes wet.		
			0.0					
25	Direct Push	100%	0.0					
			0.0					
	Direct Push	100%	0.0					
			0.0		B-1-28.0			
30						Geologist Terminated Boring at 28' - Target Depth Achieved First encountered groundwater at depth of 21'		
						Boring backfilled with neat cement grout via tremmie pipe.		

<b>PROJECT NAME:</b>	<b>Former F&amp;M Auto Service UST Site</b>	<b>LOG OF BORING:</b>	<b>B-2</b>
<b>SITE ADDRESS:</b>	1839 Foothill Boulevard Oakland, California	<b>BOREHOLE DIAM. (in):</b>	2
		<b>MONITORING WELL DIAM. (in):</b>	N/A
<b>DATE STARTED:</b>	January 23, 2012	<b>DRILLER/COMPANY:</b>	Bobby Deason
<b>DATE COMPLETED:</b>	January 24, 2012		Gregg Drilling and Testing C-57# 485165
<b>DRILLING METHOD:</b>	Drilled and Sampled using 2"-Diameter Direct Push	<b>GEOLOGIST/ENGINEER:</b>	B. Whalen Sierra West Consultants, Inc.

DEPTH (Feet)	Sample Interval	Recovery (%)	PID (ppm)	SAMPLE NUMBER	USCS SYMBOL	DESCRIPTION	Well Construction	DEPTH (Feet)
0	HAND AUGER		0.0		SW	<b>WELL GRADED SAND WITH SILT (UST EXCAVATION BACKFILL MATERIAL):</b> 85% sand, fine- to medium-grained, loose, wet, brown (7.5YR 4/5). 15% silt, non-plastic.		0
5	Direct Push	100%	0.0					5
10	Direct Push	NR	0.0					10
15	Direct Push	100%	16.0	B-2-12.5	CL	<b>CLAY:</b> 100% clay, high-plasticity, stiff, moist, greenish gray (GLE Y1 5/10Y).		15
20	Direct Push	NR	0.5					20
	Direct Push	25%	0.3		MLS	<b>SANDY SILT:</b> 60% silt, non-plastic, stiff, moist, dark greenish gray (GLE Y1 4/10Y). 40% sand, fine- to medium-grained, mostly medium, sub-angular. Few fine sub-rounded gravel, with max size of 3/4" at depth of 20'		20
25	Direct Push	100%	1.6					25
	Direct Push	25%	3.2		ML	<b>SILT:</b> 90% silt, non-plastic, medium stiff, wet, greenish gray (GLE Y1 5/10Y). 10% fine sand.		25
	Direct Push	NR	2.2					25
	Direct Push	100%	24.8	B-2-22.5				25
	Direct Push	NR	18.6					25
30	Direct Push	25%	0.0	B-2-28.0				30
						Geologist Terminated Boring at 28' - Target Depth Achieved First encountered groundwater at depth of 21'		30
						Boring backfilled with neat cement grout via tremmie pipe.		30

<b>PROJECT NAME:</b>	<b>Former F&amp;M Auto Service UST Site</b>	<b>LOG OF BORING:</b>	<b>B-3</b>
<b>SITE ADDRESS:</b>	1839 Foothill Boulevard Oakland, California	<b>BOREHOLE DIAM. (in):</b>	2
		<b>MONITORING WELL DIAM. (in):</b>	N/A
<b>DATE STARTED:</b>	January 23, 2012	<b>DRILLER/COMPANY:</b>	Bobby Deason
<b>DATE COMPLETED:</b>	January 24, 2012		Gregg Drilling and Testing C-57# 485165
<b>DRILLING METHOD:</b>	Drilled and Sampled using 2"-Diameter Direct Push	<b>GEOLOGIST/ENGINEER:</b>	B. Whalen Sierra West Consultants, Inc.

DEPTH (Feet)	Sample Interval	Recovery (%)	PID (ppm)	SAMPLE NUMBER	USCS SYMBOL	DESCRIPTION	Well Construction	DEPTH (Feet)
0	HAND AUGER				ML	<b>SILT:</b> 90% silt, non-plastic, soft, moist, yellowish brown (10YR 5/6). 10% fine sand. No hydrocarbon odor.  @2' - Color grades to very dark grayish brown (10YR 3/2).		0
5	Direct Push	100%			CL	<b>CLAY:</b> 95% clay, medium-plasticity, stiff, moist, yellowish brown (10YR 5/4). 10% fine sand. No hydrocarbon odor.		5
10	Direct Push	75%			CLS	<b>SANDY CLAY:</b> 65% clay, medium plasticity, stiff, moist, yellowish brown (10YR 5/4). 35% fine sand, MgO staining. No hydrocarbon odor.		10
15	Direct Push	100%		B-3-12.0	CLS	<b>SANDY CLAY WITH GRAVEL:</b> 65% clay, medium-plasticity, stiff, moist, grayish brown (10YR 5/2). 20% sand, fine- to coarse-grained, sub-angular. 15% fine gravel, sub-angular. Very slight hydrocarbon odor.		15
20	Direct Push	100%		B-3-22.5	CL	<b>CLAY WITH SAND:</b> 85% clay, medium-plasticity, stiff, moist, brown (10YR 5/3). 15% fine sand. Slight hydrocarbon odor.  @18.5' - Color grades to yellowish brown (10YR 5/4).		20
25	Direct Push	NR		B-3-28.0	MLS	<b>SANDY SILT:</b> 80% silt, non-plastic, medium-stiff, wet, greenish gray (GLE1 5/10GY). 20% sand, fine- to medium-grained. Strong hydrocarbon odor.		25
		50%			ML	<b>SILT:</b> 100% silt, non-plastic, soft, wet, yellowish brown (10YR 5/4). Slight hydrocarbon odor.		
30					ML	<b>SILT WITH SAND:</b> 85% silt, non-plastic, medium-stiff, wet, greenish gray (GLE1 5/10GY). 15% fine sand. Slight hydrocarbon odor.  Geologist Terminated Boring at 28' - Target Depth Achieved First encountered groundwater at depth of 21'  Boring backfilled with neat cement grout via tremmie pipe. PID readings not available due to equipment malfunction.		30

**Appendix C**  
**DWR Well Completion Reports**

**CONFIDENTIAL**

STATE OF CALIFORNIA DWR  
WELL COMPLETION REPORT  
(WELL LOGS)

**REMOVED**



**CONFIDENTIAL**

STATE OF CALIFORNIA DWR  
WELL COMPLETION REPORT  
(WELL LOGS)

**REMOVED**

**CONFIDENTIAL**

**STATE OF CALIFORNIA DWR  
WELL COMPLETION REPORT  
(WELL LOGS)**

**REMOVED**

**CONFIDENTIAL**

STATE OF CALIFORNIA DWR  
WELL COMPLETION REPORT  
(WELL LOGS)

**REMOVED**

**Appendix D**  
**Soil Sample Laboratory Analytical Report**

Technical Report for

Sierra West Consultants, Inc.

T0000003190-F&M Auto Service., 1839 Foothill Blvd, Oakland, CA

Accutest Job Number: C19981

Sampling Dates: 01/23/12 - 01/24/12

Report to:

Sierra West Consultants, Inc.

jbensch@sierra-west.net  
bwhalen@sierra-west.net  
ATTN: Jeff Bensch

Total number of pages in report: **124**



Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Conference and/or state specific certification programs as applicable.

Kesavalu M. Bagawandoss,  
Ph.D., J.D., Lab Director

Client Service contact: Nutan Kabir 408-588-0200

Certifications: CA (08258CA) AZ (AZ0762) DoD/ISO/IEC 17025:2005 (L2242)

This report shall not be reproduced, except in its entirety, without the written approval of Accutest Laboratories.  
Test results relate only to samples analyzed.



February 14, 2012

Jeff Bensch  
Sierra West Consultants, Inc.  
4227 Sunrise Blvd Suite #220  
Fair Oaks, CA 95628

**Re: Revised Report – Job # C19981**

Dear Mr. Bensch,

This is a reissued report for Accutest Job # **C19981**, original report dated 2/10/12.

The reporting list for samples *C19981-15* and *C19981-16* has been revised as per COC to include the missing constituents. Revised result pages have been incorporated into this revised report.

We apologize for any inconvenience the above issue may have caused you. Please contact us at 408-588-0200 if we can be of further assistance in this matter, or if you have any questions regarding this data report.

Sincerely,

Accutest Laboratories

# Table of Contents

-1-

<b>Section 1: Sample Summary .....</b>	<b>4</b>
<b>Section 2: Sample Results .....</b>	<b>6</b>
<b>2.1:</b> C19981-1: B-1-11.5 .....	7
<b>2.2:</b> C19981-2: B-1-20.5 .....	10
<b>2.3:</b> C19981-3: B-1-28.0 .....	13
<b>2.4:</b> C19981-4: B-2-12.5 .....	16
<b>2.5:</b> C19981-5: B-2-22.5 .....	19
<b>2.6:</b> C19981-6: B-2-28.0 .....	22
<b>2.7:</b> C19981-7: B-3-12.0 .....	25
<b>2.8:</b> C19981-8: B-3-22.5 .....	28
<b>2.9:</b> C19981-9: B-3-28.0 .....	31
<b>2.10:</b> C19981-10: MW-2-14.5 .....	34
<b>2.11:</b> C19981-11: MW-2-20.5 .....	37
<b>2.12:</b> C19981-12: MW-2-28.0 .....	40
<b>2.13:</b> C19981-13: MW-4-22.0 .....	43
<b>2.14:</b> C19981-14: MW-4-28.0 .....	46
<b>2.15:</b> C19981-15: MW-3-22.0 .....	49
<b>2.16:</b> C19981-16: MW-3-28.0 .....	57
<b>2.17:</b> C19981-17: MW-1-10.5 .....	65
<b>2.18:</b> C19981-18: MW-1-18.5 .....	68
<b>2.19:</b> C19981-19: MW-1-25.0 .....	71
<b>Section 3: Misc. Forms .....</b>	<b>74</b>
<b>3.1:</b> Chain of Custody .....	75
<b>Section 4: GC/MS Volatiles - QC Data Summaries .....</b>	<b>78</b>
<b>4.1:</b> Method Blank Summary .....	79
<b>4.2:</b> Blank Spike/Blank Spike Duplicate Summary .....	85
<b>4.3:</b> Laboratory Control Sample Summary .....	90
<b>4.4:</b> Matrix Spike/Matrix Spike Duplicate Summary .....	94
<b>Section 5: GC/MS Semi-volatiles - QC Data Summaries .....</b>	<b>98</b>
<b>5.1:</b> Method Blank Summary .....	99
<b>5.2:</b> Blank Spike/Blank Spike Duplicate Summary .....	102
<b>5.3:</b> Matrix Spike/Matrix Spike Duplicate Summary .....	106
<b>Section 6: GC Semi-volatiles - QC Data Summaries .....</b>	<b>109</b>
<b>6.1:</b> Method Blank Summary .....	110
<b>6.2:</b> Blank Spike/Blank Spike Duplicate Summary .....	113
<b>6.3:</b> Matrix Spike/Matrix Spike Duplicate Summary .....	116
<b>Section 7: Metals Analysis - QC Data Summaries .....</b>	<b>119</b>
<b>7.1:</b> Prep QC MP4471: Cd,Cr,Pb,Ni,Zn .....	120



## Sample Summary

Sierra West Consultants, Inc.

**Job No:** C19981

T0000003190-F&M Auto Service., 1839 Foothill Blvd, Oakland, CA

Sample Number	Collected		Received	Matrix		Client Sample ID
	Date	Time By		Code	Type	
C19981-1	01/23/12	10:05 BW	01/24/12	SO	Soil	B-1-11.5
C19981-2	01/23/12	10:05 BW	01/24/12	SO	Soil	B-1-20.5
C19981-3	01/23/12	10:05 BW	01/24/12	SO	Soil	B-1-28.0
C19981-4	01/23/12	11:30 BW	01/24/12	SO	Soil	B-2-12.5
C19981-5	01/23/12	11:30 BW	01/24/12	SO	Soil	B-2-22.5
C19981-6	01/23/12	11:30 BW	01/24/12	SO	Soil	B-2-28.0
C19981-7	01/23/12	12:55 BW	01/24/12	SO	Soil	B-3-12.0
C19981-8	01/23/12	12:55 BW	01/24/12	SO	Soil	B-3-22.5
C19981-9	01/23/12	12:55 BW	01/24/12	SO	Soil	B-3-28.0
C19981-10	01/23/12	15:10 BW	01/24/12	SO	Soil	MW-2-14.5
C19981-11	01/23/12	15:10 BW	01/24/12	SO	Soil	MW-2-20.5
C19981-12	01/23/12	15:10 BW	01/24/12	SO	Soil	MW-2-28.0
C19981-13	01/23/12	14:05 BW	01/24/12	SO	Soil	MW-4-22.0

Soil samples reported on a dry weight basis unless otherwise indicated on result page.





## Sample Summary

(continued)

Sierra West Consultants, Inc.

**Job No:** C19981

T0000003190-F&M Auto Service., 1839 Foothill Blvd, Oakland, CA

Sample Number	Collected		Received	Matrix		Client Sample ID
	Date	Time By		Code	Type	
C19981-14	01/23/12	14:05 BW	01/24/12	SO	Soil	MW-4-28.0
C19981-15	01/23/12	16:15 BW	01/24/12	SO	Soil	MW-3-22.0
C19981-16	01/23/12	16:15 BW	01/24/12	SO	Soil	MW-3-28.0
C19981-17	01/24/12	15:45 BW	01/24/12	SO	Soil	MW-1-10.5
C19981-18	01/24/12	15:45 BW	01/24/12	SO	Soil	MW-1-18.5
C19981-19	01/24/12	15:45 BW	01/24/12	SO	Soil	MW-1-25.0

---

Soil samples reported on a dry weight basis unless otherwise indicated on result page.

Sample Results

---

Report of Analysis

---

## Report of Analysis

<b>Client Sample ID:</b> B-1-11.5		<b>Date Sampled:</b> 01/23/12
<b>Lab Sample ID:</b> C19981-1		<b>Date Received:</b> 01/24/12
<b>Matrix:</b> SO - Soil		<b>Percent Solids:</b> n/a <sup>a</sup>
<b>Method:</b> SW846 8260B		
<b>Project:</b> T0000003190-F&M Auto Service., 1839 Foothill Blvd, Oakland, CA		

Run #1	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	M31100.D	1	02/03/12	XB	n/a	n/a	VM982
Run #2							

Run #1	Initial Weight
Run #1	5.00 g
Run #2	

**BTEX, Oxygenates**

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	5.0	0.50	ug/kg	
108-88-3	Toluene	ND	5.0	0.50	ug/kg	
100-41-4	Ethylbenzene	ND	5.0	0.50	ug/kg	
1330-20-7	Xylene (total)	ND	10	1.0	ug/kg	
108-20-3	Di-Isopropyl ether	ND	5.0	0.50	ug/kg	
637-92-3	Ethyl tert-Butyl Ether	ND	5.0	0.50	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	4.0	5.0	1.0	ug/kg	J
994-05-8	Tert-Amyl Methyl Ether	ND	5.0	0.50	ug/kg	
75-65-0	Tert Butyl Alcohol	13.5	40	10	ug/kg	J
	TPH-GRO (C6-C10)	389	100	50	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	100%		60-130%
2037-26-5	Toluene-D8	101%		60-130%
460-00-4	4-Bromofluorobenzene	103%		60-130%

(a) All results reported on a wet weight basis.

---

ND = Not detected      MDL - Method Detection Limit      J = Indicates an estimated value  
 RL = Reporting Limit      B = Indicates analyte found in associated method blank  
 E = Indicates value exceeds calibration range      N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> B-1-11.5	<b>Date Sampled:</b> 01/23/12
<b>Lab Sample ID:</b> C19981-1	<b>Date Received:</b> 01/24/12
<b>Matrix:</b> SO - Soil	<b>Percent Solids:</b> n/a <sup>a</sup>
<b>Method:</b> SW846 8015B M SW846 3545A	
<b>Project:</b> T0000003190-F&M Auto Service., 1839 Foothill Blvd, Oakland, CA	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	GG31655.D	1	01/28/12	JH	01/27/12	OP5279	GGG848
Run #2							

Run #	Initial Weight	Final Volume
Run #1	10.0 g	1.0 ml
Run #2		

### TPH Extractable

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (C10-C28)	ND	10	2.5	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
630-01-3	Hexacosane	52%		45-140%

(a) All results reported on a wet weight basis.

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b>	B-1-11.5	<b>Date Sampled:</b>	01/23/12
<b>Lab Sample ID:</b>	C19981-1	<b>Date Received:</b>	01/24/12
<b>Matrix:</b>	SO - Soil	<b>Percent Solids:</b>	n/a <sup>a</sup>
<b>Project:</b>	T0000003190-F&M Auto Service., 1839 Foothill Blvd, Oakland, CA		

### Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Lead	7.2	1.9	mg/kg	1	01/30/12	01/31/12 RS	SW846 6010B <sup>1</sup>	SW846 3050B <sup>2</sup>

(1) Instrument QC Batch: MA2313

(2) Prep QC Batch: MP4471

(a) All results reported on a wet weight basis.

---

RL = Reporting Limit

## Report of Analysis

<b>Client Sample ID:</b> B-1-20.5		<b>Date Sampled:</b> 01/23/12
<b>Lab Sample ID:</b> C19981-2		<b>Date Received:</b> 01/24/12
<b>Matrix:</b> SO - Soil		<b>Percent Solids:</b> n/a <sup>a</sup>
<b>Method:</b> SW846 8260B		
<b>Project:</b> T0000003190-F&M Auto Service., 1839 Foothill Blvd, Oakland, CA		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	M31007.D	1	01/27/12	XB	n/a	n/a	VM979
Run #2							

Run #	Initial Weight
Run #1	5.05 g
Run #2	

**BTEX, Oxygenates**

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	5.0	0.50	ug/kg	
108-88-3	Toluene	ND	5.0	0.50	ug/kg	
100-41-4	Ethylbenzene	1.4	5.0	0.50	ug/kg	J
1330-20-7	Xylene (total)	ND	9.9	0.99	ug/kg	
108-20-3	Di-Isopropyl ether	ND	5.0	0.50	ug/kg	
637-92-3	Ethyl tert-Butyl Ether	ND	5.0	0.50	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	5.6	5.0	0.99	ug/kg	
994-05-8	Tert-Amyl Methyl Ether	ND	5.0	0.50	ug/kg	
75-65-0	Tert Butyl Alcohol	ND	40	9.9	ug/kg	
	TPH-GRO (C6-C10)	379	99	50	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	94%		60-130%
2037-26-5	Toluene-D8	101%		60-130%
460-00-4	4-Bromofluorobenzene	107%		60-130%

(a) All results reported on a wet weight basis.

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b>	B-1-20.5	<b>Date Sampled:</b>	01/23/12
<b>Lab Sample ID:</b>	C19981-2	<b>Date Received:</b>	01/24/12
<b>Matrix:</b>	SO - Soil	<b>Percent Solids:</b>	n/a <sup>a</sup>
<b>Method:</b>	SW846 8015B M SW846 3545A		
<b>Project:</b>	T0000003190-F&M Auto Service., 1839 Foothill Blvd, Oakland, CA		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	GG31656.D	1	01/28/12	JH	01/27/12	OP5279	GGG848
Run #2							

Run #	Initial Weight	Final Volume
Run #1	10.0 g	1.0 ml
Run #2		

### TPH Extractable

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (C10-C28)	ND	10	2.5	mg/kg	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
630-01-3	Hexacosane	72%		45-140%		

(a) All results reported on a wet weight basis.

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound



## Report of Analysis

<b>Client Sample ID:</b> B-1-20.5	<b>Date Sampled:</b> 01/23/12
<b>Lab Sample ID:</b> C19981-2	<b>Date Received:</b> 01/24/12
<b>Matrix:</b> SO - Soil	<b>Percent Solids:</b> n/a <sup>a</sup>
<b>Project:</b> T0000003190-F&M Auto Service., 1839 Foothill Blvd, Oakland, CA	

### Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Lead	4.2	1.7	mg/kg	1	01/30/12	01/31/12 RS	SW846 6010B <sup>1</sup>	SW846 3050B <sup>2</sup>

(1) Instrument QC Batch: MA2313

(2) Prep QC Batch: MP4471

(a) All results reported on a wet weight basis.

---

RL = Reporting Limit

## Report of Analysis

<b>Client Sample ID:</b> B-1-28.0		<b>Date Sampled:</b> 01/23/12
<b>Lab Sample ID:</b> C19981-3		<b>Date Received:</b> 01/24/12
<b>Matrix:</b> SO - Soil		<b>Percent Solids:</b> n/a <sup>a</sup>
<b>Method:</b> SW846 8260B		
<b>Project:</b> T0000003190-F&M Auto Service., 1839 Foothill Blvd, Oakland, CA		

Run #1	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	M31002.D	1	01/27/12	XB	n/a	n/a	VM979
Run #2							

Run #1	Initial Weight
Run #1	5.05 g
Run #2	

**BTEX, Oxygenates**

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	5.0	0.50	ug/kg	
108-88-3	Toluene	ND	5.0	0.50	ug/kg	
100-41-4	Ethylbenzene	ND	5.0	0.50	ug/kg	
1330-20-7	Xylene (total)	ND	9.9	0.99	ug/kg	
108-20-3	Di-Isopropyl ether	ND	5.0	0.50	ug/kg	
637-92-3	Ethyl tert-Butyl Ether	ND	5.0	0.50	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	5.0	0.99	ug/kg	
994-05-8	Tert-Amyl Methyl Ether	ND	5.0	0.50	ug/kg	
75-65-0	Tert Butyl Alcohol	ND	40	9.9	ug/kg	
	TPH-GRO (C6-C10)	ND	99	50	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	103%		60-130%
2037-26-5	Toluene-D8	102%		60-130%
460-00-4	4-Bromofluorobenzene	100%		60-130%

(a) All results reported on a wet weight basis.

---

ND = Not detected      MDL - Method Detection Limit      J = Indicates an estimated value  
 RL = Reporting Limit      B = Indicates analyte found in associated method blank  
 E = Indicates value exceeds calibration range      N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> B-1-28.0		<b>Date Sampled:</b> 01/23/12
<b>Lab Sample ID:</b> C19981-3		<b>Date Received:</b> 01/24/12
<b>Matrix:</b> SO - Soil		<b>Percent Solids:</b> n/a <sup>a</sup>
<b>Method:</b> SW846 8015B M SW846 3545A		
<b>Project:</b> T0000003190-F&M Auto Service., 1839 Foothill Blvd, Oakland, CA		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	GG31657.D	1	01/28/12	JH	01/27/12	OP5279	GGG848
Run #2							

Run #	Initial Weight	Final Volume
Run #1	10.0 g	1.0 ml
Run #2		

**TPH Extractable**

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (C10-C28)	ND	10	2.5	mg/kg	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
630-01-3	Hexacosane	73%		45-140%		

(a) All results reported on a wet weight basis.

---

ND = Not detected	MDL - Method Detection Limit	J = Indicates an estimated value
RL = Reporting Limit		B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range		N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> B-1-28.0	<b>Date Sampled:</b> 01/23/12
<b>Lab Sample ID:</b> C19981-3	<b>Date Received:</b> 01/24/12
<b>Matrix:</b> SO - Soil	<b>Percent Solids:</b> n/a <sup>a</sup>
<b>Project:</b> T0000003190-F&M Auto Service., 1839 Foothill Blvd, Oakland, CA	

### Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Lead	7.7	1.7	mg/kg	1	01/30/12	01/31/12 RS	SW846 6010B <sup>1</sup>	SW846 3050B <sup>2</sup>

(1) Instrument QC Batch: MA2313

(2) Prep QC Batch: MP4471

(a) All results reported on a wet weight basis.

---

RL = Reporting Limit

## Report of Analysis

<b>Client Sample ID:</b>	B-2-12.5	<b>Date Sampled:</b>	01/23/12
<b>Lab Sample ID:</b>	C19981-4	<b>Date Received:</b>	01/24/12
<b>Matrix:</b>	SO - Soil	<b>Percent Solids:</b>	n/a <sup>a</sup>
<b>Method:</b>	SW846 8260B		
<b>Project:</b>	T0000003190-F&M Auto Service., 1839 Foothill Blvd, Oakland, CA		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	M31036.D	1	02/01/12	XB	n/a	n/a	VM980
Run #2							

Run #	Initial Weight	Final Volume	Methanol Aliquot
Run #1	6.45 g	5.0 ml	60.0 ul
Run #2			

## BTEX, Oxygenates

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	320	32	ug/kg	
108-88-3	Toluene	ND	320	32	ug/kg	
100-41-4	Ethylbenzene	291	320	32	ug/kg	J
1330-20-7	Xylene (total)	562	650	65	ug/kg	J
108-20-3	Di-Isopropyl ether	ND	320	32	ug/kg	
637-92-3	Ethyl tert-Butyl Ether	ND	320	32	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	320	65	ug/kg	
994-05-8	Tert-Amyl Methyl Ether	ND	320	32	ug/kg	
75-65-0	Tert Butyl Alcohol	ND	2600	650	ug/kg	
	TPH-GRO (C6-C10)	50900	6500	3200	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	93%		60-130%
2037-26-5	Toluene-D8	100%		60-130%
460-00-4	4-Bromofluorobenzene	107%		60-130%

(a) All results reported on a wet weight basis.

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b>	B-2-12.5	<b>Date Sampled:</b>	01/23/12
<b>Lab Sample ID:</b>	C19981-4	<b>Date Received:</b>	01/24/12
<b>Matrix:</b>	SO - Soil	<b>Percent Solids:</b>	n/a <sup>a</sup>
<b>Method:</b>	SW846 8015B M SW846 3545A		
<b>Project:</b>	T0000003190-F&M Auto Service., 1839 Foothill Blvd, Oakland, CA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	HH20906.D	1	01/28/12	JH	01/27/12	OP5279	GHH662
Run #2							

	Initial Weight	Final Volume
Run #1	10.0 g	1.0 ml
Run #2		

## TPH Extractable

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (C10-C28)	20.5	10	2.5	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
630-01-3	Hexacosane	84%		45-140%

(a) All results reported on a wet weight basis.

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> B-2-12.5	<b>Date Sampled:</b> 01/23/12
<b>Lab Sample ID:</b> C19981-4	<b>Date Received:</b> 01/24/12
<b>Matrix:</b> SO - Soil	<b>Percent Solids:</b> n/a <sup>a</sup>
<b>Project:</b> T0000003190-F&M Auto Service., 1839 Foothill Blvd, Oakland, CA	

### Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Lead	8.8	1.9	mg/kg	1	01/30/12	01/31/12 RS	SW846 6010B <sup>1</sup>	SW846 3050B <sup>2</sup>

(1) Instrument QC Batch: MA2313

(2) Prep QC Batch: MP4471

(a) All results reported on a wet weight basis.

---

RL = Reporting Limit



## Report of Analysis

<b>Client Sample ID:</b> B-2-22.5		<b>Date Sampled:</b> 01/23/12
<b>Lab Sample ID:</b> C19981-5		<b>Date Received:</b> 01/24/12
<b>Matrix:</b> SO - Soil		<b>Percent Solids:</b> n/a <sup>a</sup>
<b>Method:</b> SW846 8260B		
<b>Project:</b> T0000003190-F&M Auto Service., 1839 Foothill Blvd, Oakland, CA		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	M31103.D	1	02/03/12	XB	n/a	n/a	VM982
Run #2							

Run #	Initial Weight	Final Volume	Methanol Aliquot
Run #1	5.78 g	5.0 ml	100 ul
Run #2			

**BTEX, Oxygenates**

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	220	22	ug/kg	
108-88-3	Toluene	ND	220	22	ug/kg	
100-41-4	Ethylbenzene	294	220	22	ug/kg	
1330-20-7	Xylene (total)	830	430	43	ug/kg	
108-20-3	Di-Isopropyl ether	ND	220	22	ug/kg	
637-92-3	Ethyl tert-Butyl Ether	ND	220	22	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	220	43	ug/kg	
994-05-8	Tert-Amyl Methyl Ether	ND	220	22	ug/kg	
75-65-0	Tert Butyl Alcohol	ND	1700	430	ug/kg	
	TPH-GRO (C6-C10)	31000	4300	2200	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	89%		60-130%
2037-26-5	Toluene-D8	100%		60-130%
460-00-4	4-Bromofluorobenzene	103%		60-130%

(a) All results reported on a wet weight basis.

---

ND = Not detected      MDL - Method Detection Limit      J = Indicates an estimated value  
 RL = Reporting Limit      B = Indicates analyte found in associated method blank  
 E = Indicates value exceeds calibration range      N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> B-2-22.5		
<b>Lab Sample ID:</b> C19981-5		<b>Date Sampled:</b> 01/23/12
<b>Matrix:</b> SO - Soil		<b>Date Received:</b> 01/24/12
<b>Method:</b> SW846 8015B M SW846 3545A		<b>Percent Solids:</b> n/a <sup>a</sup>
<b>Project:</b> T0000003190-F&M Auto Service., 1839 Foothill Blvd, Oakland, CA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	GG31674.D	1	01/28/12	JH	01/27/12	OP5279	GGG848
Run #2							

	Initial Weight	Final Volume
Run #1	10.0 g	1.0 ml
Run #2		

### TPH Extractable

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (C10-C28)	3.74	10	2.5	mg/kg	J

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
630-01-3	Hexacosane	73%		45-140%

(a) All results reported on a wet weight basis.

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> B-2-22.5	<b>Date Sampled:</b> 01/23/12
<b>Lab Sample ID:</b> C19981-5	<b>Date Received:</b> 01/24/12
<b>Matrix:</b> SO - Soil	<b>Percent Solids:</b> n/a <sup>a</sup>
<b>Project:</b> T0000003190-F&M Auto Service., 1839 Foothill Blvd, Oakland, CA	

### Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Lead	6.5	1.8	mg/kg	1	01/30/12	01/31/12 RS	SW846 6010B <sup>1</sup>	SW846 3050B <sup>2</sup>

(1) Instrument QC Batch: MA2313

(2) Prep QC Batch: MP4471

(a) All results reported on a wet weight basis.

---

RL = Reporting Limit

## Report of Analysis

<b>Client Sample ID:</b>	B-2-28.0	<b>Date Sampled:</b>	01/23/12
<b>Lab Sample ID:</b>	C19981-6	<b>Date Received:</b>	01/24/12
<b>Matrix:</b>	SO - Soil	<b>Percent Solids:</b>	n/a <sup>a</sup>
<b>Method:</b>	SW846 8260B		
<b>Project:</b>	T0000003190-F&M Auto Service., 1839 Foothill Blvd, Oakland, CA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	M31038.D	1	02/01/12	XB	n/a	n/a	VM980
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	4.98 g	5.0 ml	100 ul
Run #2			

## BTEX, Oxygenates

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	250	25	ug/kg	
108-88-3	Toluene	ND	250	25	ug/kg	
100-41-4	Ethylbenzene	163	250	25	ug/kg	J
1330-20-7	Xylene (total)	448	500	50	ug/kg	J
108-20-3	Di-Isopropyl ether	ND	250	25	ug/kg	
637-92-3	Ethyl tert-Butyl Ether	ND	250	25	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	250	50	ug/kg	
994-05-8	Tert-Amyl Methyl Ether	ND	250	25	ug/kg	
75-65-0	Tert Butyl Alcohol	ND	2000	500	ug/kg	
	TPH-GRO (C6-C10)	16200	5000	2500	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	91%		60-130%
2037-26-5	Toluene-D8	102%		60-130%
460-00-4	4-Bromofluorobenzene	105%		60-130%

(a) All results reported on a wet weight basis.

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> B-2-28.0		<b>Date Sampled:</b> 01/23/12
<b>Lab Sample ID:</b> C19981-6		<b>Date Received:</b> 01/24/12
<b>Matrix:</b> SO - Soil		<b>Percent Solids:</b> n/a <sup>a</sup>
<b>Method:</b> SW846 8015B M SW846 3545A		
<b>Project:</b> T0000003190-F&M Auto Service., 1839 Foothill Blvd, Oakland, CA		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	GG31675.D	1	01/28/12	JH	01/27/12	OP5279	GGG848
Run #2							

Run #	Initial Weight	Final Volume
Run #1	10.0 g	1.0 ml
Run #2		

**TPH Extractable**

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (C10-C28)	4.23	10	2.5	mg/kg	J
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
630-01-3	Hexacosane	68%		45-140%		

(a) All results reported on a wet weight basis.

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> B-2-28.0	<b>Date Sampled:</b> 01/23/12
<b>Lab Sample ID:</b> C19981-6	<b>Date Received:</b> 01/24/12
<b>Matrix:</b> SO - Soil	<b>Percent Solids:</b> n/a <sup>a</sup>
<b>Project:</b> T0000003190-F&M Auto Service., 1839 Foothill Blvd, Oakland, CA	

### Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Lead	9.9	1.8	mg/kg	1	01/30/12	01/31/12 RS	SW846 6010B <sup>1</sup>	SW846 3050B <sup>2</sup>

(1) Instrument QC Batch: MA2313

(2) Prep QC Batch: MP4471

(a) All results reported on a wet weight basis.

---

RL = Reporting Limit

## Report of Analysis

<b>Client Sample ID:</b> B-3-12.0		<b>Date Sampled:</b> 01/23/12
<b>Lab Sample ID:</b> C19981-7		<b>Date Received:</b> 01/24/12
<b>Matrix:</b> SO - Soil		<b>Percent Solids:</b> n/a <sup>a</sup>
<b>Method:</b> SW846 8260B		
<b>Project:</b> T0000003190-F&M Auto Service., 1839 Foothill Blvd, Oakland, CA		

Run #1	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	M31028.D	1	02/01/12	XB	n/a	n/a	VM980
Run #2							

Run #1	Initial Weight
Run #1	5.10 g
Run #2	

**BTEX, Oxygenates**

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	4.9	0.49	ug/kg	
108-88-3	Toluene	ND	4.9	0.49	ug/kg	
100-41-4	Ethylbenzene	ND	4.9	0.49	ug/kg	
1330-20-7	Xylene (total)	ND	9.8	0.98	ug/kg	
108-20-3	Di-Isopropyl ether	ND	4.9	0.49	ug/kg	
637-92-3	Ethyl tert-Butyl Ether	ND	4.9	0.49	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	4.9	0.98	ug/kg	
994-05-8	Tert-Amyl Methyl Ether	ND	4.9	0.49	ug/kg	
75-65-0	Tert Butyl Alcohol	ND	39	9.8	ug/kg	
	TPH-GRO (C6-C10)	ND	98	49	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	97%		60-130%
2037-26-5	Toluene-D8	101%		60-130%
460-00-4	4-Bromofluorobenzene	101%		60-130%

(a) All results reported on a wet weight basis.

---

ND = Not detected      MDL - Method Detection Limit      J = Indicates an estimated value  
 RL = Reporting Limit      B = Indicates analyte found in associated method blank  
 E = Indicates value exceeds calibration range      N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> B-3-12.0		<b>Date Sampled:</b> 01/23/12
<b>Lab Sample ID:</b> C19981-7		<b>Date Received:</b> 01/24/12
<b>Matrix:</b> SO - Soil		<b>Percent Solids:</b> n/a <sup>a</sup>
<b>Method:</b> SW846 8015B M SW846 3545A		
<b>Project:</b> T0000003190-F&M Auto Service., 1839 Foothill Blvd, Oakland, CA		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	GG31676.D	1	01/28/12	JH	01/27/12	OP5279	GGG848
Run #2							

Run #	Initial Weight	Final Volume
Run #1	10.0 g	1.0 ml
Run #2		

**TPH Extractable**

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (C10-C28)	ND	10	2.5	mg/kg	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
630-01-3	Hexacosane	70%		45-140%		

(a) All results reported on a wet weight basis.

---

ND = Not detected	MDL - Method Detection Limit	J = Indicates an estimated value
RL = Reporting Limit		B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range		N = Indicates presumptive evidence of a compound



## Report of Analysis

<b>Client Sample ID:</b> B-3-12.0	<b>Date Sampled:</b> 01/23/12
<b>Lab Sample ID:</b> C19981-7	<b>Date Received:</b> 01/24/12
<b>Matrix:</b> SO - Soil	<b>Percent Solids:</b> n/a <sup>a</sup>
<b>Project:</b> T0000003190-F&M Auto Service., 1839 Foothill Blvd, Oakland, CA	

### Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Lead	3.5	1.8	mg/kg	1	01/30/12	01/31/12 RS	SW846 6010B <sup>1</sup>	SW846 3050B <sup>2</sup>

(1) Instrument QC Batch: MA2313

(2) Prep QC Batch: MP4471

(a) All results reported on a wet weight basis.

---

RL = Reporting Limit

## Report of Analysis

<b>Client Sample ID:</b> B-3-22.5		<b>Date Sampled:</b> 01/23/12
<b>Lab Sample ID:</b> C19981-8		<b>Date Received:</b> 01/24/12
<b>Matrix:</b> SO - Soil		<b>Percent Solids:</b> n/a <sup>a</sup>
<b>Method:</b> SW846 8260B		
<b>Project:</b> T0000003190-F&M Auto Service., 1839 Foothill Blvd, Oakland, CA		

Run #1	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L14301.D	1	02/02/12	XB	n/a	n/a	VL443
Run #2							

Run #1	Initial Weight
Run #1	5.00 g
Run #2	

**BTEX, Oxygenates**

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	5.0	0.50	ug/kg	
108-88-3	Toluene	ND	5.0	0.50	ug/kg	
100-41-4	Ethylbenzene	ND	5.0	0.50	ug/kg	
1330-20-7	Xylene (total)	ND	10	1.0	ug/kg	
108-20-3	Di-Isopropyl ether	ND	5.0	0.50	ug/kg	
637-92-3	Ethyl tert-Butyl Ether	ND	5.0	0.50	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	5.0	1.0	ug/kg	
994-05-8	Tert-Amyl Methyl Ether	ND	5.0	0.50	ug/kg	
75-65-0	Tert Butyl Alcohol	ND	40	10	ug/kg	
	TPH-GRO (C6-C10) <sup>b</sup>	686	100	50	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	102%		60-130%
2037-26-5	Toluene-D8	103%		60-130%
460-00-4	4-Bromofluorobenzene	154% <sup>c</sup>		60-130%

- (a) All results reported on a wet weight basis.
- (b) Not a typical gasoline pattern.
- (c) Outside control limits due to matrix interference.

---

ND = Not detected      MDL - Method Detection Limit      J = Indicates an estimated value  
 RL = Reporting Limit      B = Indicates analyte found in associated method blank  
 E = Indicates value exceeds calibration range      N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> B-3-22.5		<b>Date Sampled:</b> 01/23/12
<b>Lab Sample ID:</b> C19981-8		<b>Date Received:</b> 01/24/12
<b>Matrix:</b> SO - Soil		<b>Percent Solids:</b> n/a <sup>a</sup>
<b>Method:</b> SW846 8015B M SW846 3545A		
<b>Project:</b> T0000003190-F&M Auto Service., 1839 Foothill Blvd, Oakland, CA		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	GG31677.D	1	01/28/12	JH	01/27/12	OP5279	GGG848
Run #2							

Run #	Initial Weight	Final Volume
Run #1	10.0 g	1.0 ml
Run #2		

### TPH Extractable

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (C10-C28)	8.06	10	2.5	mg/kg	J
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
630-01-3	Hexacosane	71%		45-140%		

(a) All results reported on a wet weight basis.

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> B-3-22.5		<b>Date Sampled:</b> 01/23/12
<b>Lab Sample ID:</b> C19981-8		<b>Date Received:</b> 01/24/12
<b>Matrix:</b> SO - Soil		<b>Percent Solids:</b> n/a <sup>a</sup>
<b>Project:</b> T0000003190-F&M Auto Service., 1839 Foothill Blvd, Oakland, CA		

### Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Lead	4.8	1.8	mg/kg	1	01/30/12	01/31/12 RS	SW846 6010B <sup>1</sup>	SW846 3050B <sup>2</sup>

(1) Instrument QC Batch: MA2313

(2) Prep QC Batch: MP4471

(a) All results reported on a wet weight basis.

---

RL = Reporting Limit

## Report of Analysis

<b>Client Sample ID:</b>	B-3-28.0	<b>Date Sampled:</b>	01/23/12
<b>Lab Sample ID:</b>	C19981-9	<b>Date Received:</b>	01/24/12
<b>Matrix:</b>	SO - Soil	<b>Percent Solids:</b>	n/a <sup>a</sup>
<b>Method:</b>	SW846 8260B		
<b>Project:</b>	T0000003190-F&M Auto Service., 1839 Foothill Blvd, Oakland, CA		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	M31035.D	1	02/01/12	XB	n/a	n/a	VM980
Run #2 <sup>b</sup>	L14345.D	1	02/03/12	XB	n/a	n/a	VL445

Run #	Initial Weight
Run #1	5.11 g
Run #2	2.07 g

## BTEX, Oxygenates

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	4.9	0.49	ug/kg	
108-88-3	Toluene	ND	4.9	0.49	ug/kg	
100-41-4	Ethylbenzene	ND	4.9	0.49	ug/kg	
1330-20-7	Xylene (total)	ND	9.8	0.98	ug/kg	
108-20-3	Di-Isopropyl ether	ND	4.9	0.49	ug/kg	
637-92-3	Ethyl tert-Butyl Ether	ND	4.9	0.49	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	4.9	0.98	ug/kg	
994-05-8	Tert-Amyl Methyl Ether	ND	4.9	0.49	ug/kg	
75-65-0	Tert Butyl Alcohol	ND	39	9.8	ug/kg	
	TPH-GRO (C6-C10) <sup>c</sup>	510	98	49	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	105%	104%	60-130%
2037-26-5	Toluene-D8	100%	103%	60-130%
460-00-4	4-Bromofluorobenzene	140% <sup>d</sup>	131% <sup>d</sup>	60-130%

- (a) All results reported on a wet weight basis.  
 (b) Confirmation run for surrogate recoveries.  
 (c) Not a typical gasoline pattern.  
 (d) Outside control limits due to matrix interference.

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b>	B-3-28.0	<b>Date Sampled:</b>	01/23/12
<b>Lab Sample ID:</b>	C19981-9	<b>Date Received:</b>	01/24/12
<b>Matrix:</b>	SO - Soil	<b>Percent Solids:</b>	n/a <sup>a</sup>
<b>Method:</b>	SW846 8015B M SW846 3545A		
<b>Project:</b>	T0000003190-F&M Auto Service., 1839 Foothill Blvd, Oakland, CA		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	GG31678.D	1	01/28/12	JH	01/27/12	OP5279	GGG848
Run #2							

Run #	Initial Weight	Final Volume
Run #1	10.0 g	1.0 ml
Run #2		

### TPH Extractable

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (C10-C28)	3.49	10	2.5	mg/kg	J

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
630-01-3	Hexacosane	77%		45-140%

(a) All results reported on a wet weight basis.

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> B-3-28.0	<b>Date Sampled:</b> 01/23/12
<b>Lab Sample ID:</b> C19981-9	<b>Date Received:</b> 01/24/12
<b>Matrix:</b> SO - Soil	<b>Percent Solids:</b> n/a <sup>a</sup>
<b>Project:</b> T0000003190-F&M Auto Service., 1839 Foothill Blvd, Oakland, CA	

### Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Lead	4.8	1.8	mg/kg	1	01/30/12	01/31/12 RS	SW846 6010B <sup>1</sup>	SW846 3050B <sup>2</sup>

(1) Instrument QC Batch: MA2313

(2) Prep QC Batch: MP4471

(a) All results reported on a wet weight basis.

---

RL = Reporting Limit

## Report of Analysis

<b>Client Sample ID:</b> MW-2-14.5		<b>Date Sampled:</b> 01/23/12
<b>Lab Sample ID:</b> C19981-10		<b>Date Received:</b> 01/24/12
<b>Matrix:</b> SO - Soil		<b>Percent Solids:</b> n/a <sup>a</sup>
<b>Method:</b> SW846 8260B		
<b>Project:</b> T0000003190-F&M Auto Service., 1839 Foothill Blvd, Oakland, CA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	M31109.D	1	02/03/12	XB	n/a	n/a	VM982
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	5.04 g	5.0 ml	6.0 ul
Run #2			

## BTEX, Oxygenates

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	4100	410	ug/kg	
108-88-3	Toluene	ND	4100	410	ug/kg	
100-41-4	Ethylbenzene	2510	4100	410	ug/kg	J
1330-20-7	Xylene (total)	ND	8300	830	ug/kg	
108-20-3	Di-Isopropyl ether	ND	4100	410	ug/kg	
637-92-3	Ethyl tert-Butyl Ether	ND	4100	410	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	4100	830	ug/kg	
994-05-8	Tert-Amyl Methyl Ether	ND	4100	410	ug/kg	
75-65-0	Tert Butyl Alcohol	ND	33000	8300	ug/kg	
	TPH-GRO (C6-C10)	830000	83000	41000	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	94%		60-130%
2037-26-5	Toluene-D8	100%		60-130%
460-00-4	4-Bromofluorobenzene	104%		60-130%

(a) All results reported on a wet weight basis.

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound



## Report of Analysis

<b>Client Sample ID:</b> MW-2-14.5		<b>Date Sampled:</b> 01/23/12
<b>Lab Sample ID:</b> C19981-10		<b>Date Received:</b> 01/24/12
<b>Matrix:</b> SO - Soil		<b>Percent Solids:</b> n/a <sup>a</sup>
<b>Method:</b> SW846 8015B M SW846 3545A		
<b>Project:</b> T0000003190-F&M Auto Service., 1839 Foothill Blvd, Oakland, CA		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	HH20907.D	1	01/28/12	JH	01/27/12	OP5279	GHH662
Run #2							

Run #	Initial Weight	Final Volume
Run #1	10.0 g	1.0 ml
Run #2		

**TPH Extractable**

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (C10-C28)	70.6	10	2.5	mg/kg	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
630-01-3	Hexacosane	86%		45-140%		

(a) All results reported on a wet weight basis.

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> MW-2-14.5	
<b>Lab Sample ID:</b> C19981-10	<b>Date Sampled:</b> 01/23/12
<b>Matrix:</b> SO - Soil	<b>Date Received:</b> 01/24/12
	<b>Percent Solids:</b> n/a <sup>a</sup>
<b>Project:</b> T0000003190-F&M Auto Service., 1839 Foothill Blvd, Oakland, CA	

### Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Lead	7.5	1.8	mg/kg	1	01/30/12	01/31/12 RS	SW846 6010B <sup>1</sup>	SW846 3050B <sup>2</sup>

(1) Instrument QC Batch: MA2313

(2) Prep QC Batch: MP4471

(a) All results reported on a wet weight basis.

---

RL = Reporting Limit

## Report of Analysis

<b>Client Sample ID:</b> MW-2-20.5		
<b>Lab Sample ID:</b> C19981-11		<b>Date Sampled:</b> 01/23/12
<b>Matrix:</b> SO - Soil		<b>Date Received:</b> 01/24/12
<b>Method:</b> SW846 8260B		<b>Percent Solids:</b> n/a <sup>a</sup>
<b>Project:</b> T0000003190-F&M Auto Service., 1839 Foothill Blvd, Oakland, CA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	M31040.D	1	02/01/12	XB	n/a	n/a	VM980
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	5.14 g	5.0 ml	50.0 ul
Run #2			

## BTEX, Oxygenates

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	490	49	ug/kg	
108-88-3	Toluene	ND	490	49	ug/kg	
100-41-4	Ethylbenzene	ND	490	49	ug/kg	
1330-20-7	Xylene (total)	ND	970	97	ug/kg	
108-20-3	Di-Isopropyl ether	ND	490	49	ug/kg	
637-92-3	Ethyl tert-Butyl Ether	ND	490	49	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	490	97	ug/kg	
994-05-8	Tert-Amyl Methyl Ether	ND	490	49	ug/kg	
75-65-0	Tert Butyl Alcohol	ND	3900	970	ug/kg	
	TPH-GRO (C6-C10)	94800	9700	4900	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	91%		60-130%
2037-26-5	Toluene-D8	103%		60-130%
460-00-4	4-Bromofluorobenzene	105%		60-130%

(a) All results reported on a wet weight basis.

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> MW-2-20.5		
<b>Lab Sample ID:</b> C19981-11		<b>Date Sampled:</b> 01/23/12
<b>Matrix:</b> SO - Soil		<b>Date Received:</b> 01/24/12
<b>Method:</b> SW846 8015B M SW846 3545A		<b>Percent Solids:</b> n/a <sup>a</sup>
<b>Project:</b> T0000003190-F&M Auto Service., 1839 Foothill Blvd, Oakland, CA		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	GG31679.D	1	01/28/12	JH	01/27/12	OP5279	GGG848
Run #2							

Run #	Initial Weight	Final Volume
Run #1	10.0 g	1.0 ml
Run #2		

### TPH Extractable

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (C10-C28)	7.94	10	2.5	mg/kg	J

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
630-01-3	Hexacosane	84%		45-140%

(a) All results reported on a wet weight basis.

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> MW-2-20.5	
<b>Lab Sample ID:</b> C19981-11	<b>Date Sampled:</b> 01/23/12
<b>Matrix:</b> SO - Soil	<b>Date Received:</b> 01/24/12
	<b>Percent Solids:</b> n/a <sup>a</sup>
<b>Project:</b> T0000003190-F&M Auto Service., 1839 Foothill Blvd, Oakland, CA	

### Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Lead	5.6	1.9	mg/kg	1	01/30/12	01/31/12 RS	SW846 6010B <sup>1</sup>	SW846 3050B <sup>2</sup>

(1) Instrument QC Batch: MA2313

(2) Prep QC Batch: MP4471

(a) All results reported on a wet weight basis.

---

RL = Reporting Limit

## Report of Analysis

<b>Client Sample ID:</b> MW-2-28.0		<b>Date Sampled:</b> 01/23/12
<b>Lab Sample ID:</b> C19981-12		<b>Date Received:</b> 01/24/12
<b>Matrix:</b> SO - Soil		<b>Percent Solids:</b> n/a <sup>a</sup>
<b>Method:</b> SW846 8260B		
<b>Project:</b> T0000003190-F&M Auto Service., 1839 Foothill Blvd, Oakland, CA		

Run #1	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	M31006.D	1	01/27/12	XB	n/a	n/a	VM979
Run #2							

Run #1	Initial Weight
Run #1	5.02 g
Run #2	

**BTEX, Oxygenates**

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	5.0	0.50	ug/kg	
108-88-3	Toluene	ND	5.0	0.50	ug/kg	
100-41-4	Ethylbenzene	ND	5.0	0.50	ug/kg	
1330-20-7	Xylene (total)	ND	10	1.0	ug/kg	
108-20-3	Di-Isopropyl ether	ND	5.0	0.50	ug/kg	
637-92-3	Ethyl tert-Butyl Ether	ND	5.0	0.50	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	1.5	5.0	1.0	ug/kg	J
994-05-8	Tert-Amyl Methyl Ether	ND	5.0	0.50	ug/kg	
75-65-0	Tert Butyl Alcohol	ND	40	10	ug/kg	
	TPH-GRO (C6-C10)	ND	100	50	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	94%		60-130%
2037-26-5	Toluene-D8	101%		60-130%
460-00-4	4-Bromofluorobenzene	104%		60-130%

(a) All results reported on a wet weight basis.

---

ND = Not detected      MDL - Method Detection Limit      J = Indicates an estimated value  
 RL = Reporting Limit      B = Indicates analyte found in associated method blank  
 E = Indicates value exceeds calibration range      N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> MW-2-28.0	<b>Date Sampled:</b> 01/23/12
<b>Lab Sample ID:</b> C19981-12	<b>Date Received:</b> 01/24/12
<b>Matrix:</b> SO - Soil	<b>Percent Solids:</b> n/a <sup>a</sup>
<b>Method:</b> SW846 8015B M SW846 3545A	
<b>Project:</b> T0000003190-F&M Auto Service., 1839 Foothill Blvd, Oakland, CA	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	GG31680.D	1	01/28/12	JH	01/27/12	OP5279	GGG848
Run #2							

	Initial Weight	Final Volume
Run #1	10.0 g	1.0 ml
Run #2		

## TPH Extractable

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (C10-C28)	ND	10	2.5	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
630-01-3	Hexacosane	69%		45-140%

(a) All results reported on a wet weight basis.

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> MW-2-28.0	
<b>Lab Sample ID:</b> C19981-12	<b>Date Sampled:</b> 01/23/12
<b>Matrix:</b> SO - Soil	<b>Date Received:</b> 01/24/12
	<b>Percent Solids:</b> n/a <sup>a</sup>
<b>Project:</b> T0000003190-F&M Auto Service., 1839 Foothill Blvd, Oakland, CA	

### Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Lead	6.6	1.8	mg/kg	1	01/30/12	01/31/12 RS	SW846 6010B <sup>1</sup>	SW846 3050B <sup>2</sup>

(1) Instrument QC Batch: MA2313

(2) Prep QC Batch: MP4471

(a) All results reported on a wet weight basis.

---

RL = Reporting Limit



## Report of Analysis

<b>Client Sample ID:</b> MW-4-22.0		<b>Date Sampled:</b> 01/23/12
<b>Lab Sample ID:</b> C19981-13		<b>Date Received:</b> 01/24/12
<b>Matrix:</b> SO - Soil		<b>Percent Solids:</b> n/a <sup>a</sup>
<b>Method:</b> SW846 8260B		
<b>Project:</b> T0000003190-F&M Auto Service., 1839 Foothill Blvd, Oakland, CA		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	M31010.D	1	01/27/12	XB	n/a	n/a	VM979
Run #2							

Run #	Initial Weight
Run #1	5.00 g
Run #2	

## BTEX, Oxygenates

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	5.0	0.50	ug/kg	
108-88-3	Toluene	ND	5.0	0.50	ug/kg	
100-41-4	Ethylbenzene	ND	5.0	0.50	ug/kg	
1330-20-7	Xylene (total)	ND	10	1.0	ug/kg	
108-20-3	Di-Isopropyl ether	ND	5.0	0.50	ug/kg	
637-92-3	Ethyl tert-Butyl Ether	ND	5.0	0.50	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	5.0	1.0	ug/kg	
994-05-8	Tert-Amyl Methyl Ether	ND	5.0	0.50	ug/kg	
75-65-0	Tert Butyl Alcohol	ND	40	10	ug/kg	
	TPH-GRO (C6-C10)	ND	100	50	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	94%		60-130%
2037-26-5	Toluene-D8	100%		60-130%
460-00-4	4-Bromofluorobenzene	101%		60-130%

(a) All results reported on a wet weight basis.

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> MW-4-22.0		
<b>Lab Sample ID:</b> C19981-13		<b>Date Sampled:</b> 01/23/12
<b>Matrix:</b> SO - Soil		<b>Date Received:</b> 01/24/12
<b>Method:</b> SW846 8015B M SW846 3545A		<b>Percent Solids:</b> n/a <sup>a</sup>
<b>Project:</b> T0000003190-F&M Auto Service., 1839 Foothill Blvd, Oakland, CA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	GG31682.D	1	01/28/12	JH	01/27/12	OP5279	GGG848
Run #2							

	Initial Weight	Final Volume
Run #1	10.0 g	1.0 ml
Run #2		

### TPH Extractable

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (C10-C28)	ND	10	2.5	mg/kg	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
630-01-3	Hexacosane	75%		45-140%		

(a) All results reported on a wet weight basis.

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> MW-4-22.0	
<b>Lab Sample ID:</b> C19981-13	<b>Date Sampled:</b> 01/23/12
<b>Matrix:</b> SO - Soil	<b>Date Received:</b> 01/24/12
	<b>Percent Solids:</b> n/a <sup>a</sup>
<b>Project:</b> T0000003190-F&M Auto Service., 1839 Foothill Blvd, Oakland, CA	

### Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Lead	5.0	1.8	mg/kg	1	01/30/12	01/31/12 RS	SW846 6010B <sup>1</sup>	SW846 3050B <sup>2</sup>

(1) Instrument QC Batch: MA2313

(2) Prep QC Batch: MP4471

(a) All results reported on a wet weight basis.

---

RL = Reporting Limit

## Report of Analysis

<b>Client Sample ID:</b> MW-4-28.0		<b>Date Sampled:</b> 01/23/12
<b>Lab Sample ID:</b> C19981-14		<b>Date Received:</b> 01/24/12
<b>Matrix:</b> SO - Soil		<b>Percent Solids:</b> n/a <sup>a</sup>
<b>Method:</b> SW846 8260B		
<b>Project:</b> T0000003190-F&M Auto Service., 1839 Foothill Blvd, Oakland, CA		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	M31011.D	1	01/27/12	XB	n/a	n/a	VM979
Run #2							

Run #	Initial Weight
Run #1	5.00 g
Run #2	

## BTEX, Oxygenates

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	5.0	0.50	ug/kg	
108-88-3	Toluene	ND	5.0	0.50	ug/kg	
100-41-4	Ethylbenzene	ND	5.0	0.50	ug/kg	
1330-20-7	Xylene (total)	ND	10	1.0	ug/kg	
108-20-3	Di-Isopropyl ether	ND	5.0	0.50	ug/kg	
637-92-3	Ethyl tert-Butyl Ether	ND	5.0	0.50	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	5.0	1.0	ug/kg	
994-05-8	Tert-Amyl Methyl Ether	ND	5.0	0.50	ug/kg	
75-65-0	Tert Butyl Alcohol	ND	40	10	ug/kg	
	TPH-GRO (C6-C10)	ND	100	50	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	94%		60-130%
2037-26-5	Toluene-D8	100%		60-130%
460-00-4	4-Bromofluorobenzene	101%		60-130%

(a) All results reported on a wet weight basis.

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> MW-4-28.0		<b>Date Sampled:</b> 01/23/12
<b>Lab Sample ID:</b> C19981-14		<b>Date Received:</b> 01/24/12
<b>Matrix:</b> SO - Soil		<b>Percent Solids:</b> n/a <sup>a</sup>
<b>Method:</b> SW846 8015B M SW846 3545A		
<b>Project:</b> T0000003190-F&M Auto Service., 1839 Foothill Blvd, Oakland, CA		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	GG31683.D	1	01/28/12	JH	01/27/12	OP5279	GGG848
Run #2							

Run #	Initial Weight	Final Volume
Run #1	10.0 g	1.0 ml
Run #2		

**TPH Extractable**

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (C10-C28)	ND	10	2.5	mg/kg	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
630-01-3	Hexacosane	77%		45-140%		

(a) All results reported on a wet weight basis.

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> MW-4-28.0	
<b>Lab Sample ID:</b> C19981-14	<b>Date Sampled:</b> 01/23/12
<b>Matrix:</b> SO - Soil	<b>Date Received:</b> 01/24/12
	<b>Percent Solids:</b> n/a <sup>a</sup>
<b>Project:</b> T0000003190-F&M Auto Service., 1839 Foothill Blvd, Oakland, CA	

### Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Lead	5.0	1.8	mg/kg	1	01/30/12	01/31/12 RS	SW846 6010B <sup>1</sup>	SW846 3050B <sup>2</sup>

(1) Instrument QC Batch: MA2313

(2) Prep QC Batch: MP4471

(a) All results reported on a wet weight basis.

---

RL = Reporting Limit

## Report of Analysis

<b>Client Sample ID:</b> MW-3-22.0		<b>Date Sampled:</b> 01/23/12
<b>Lab Sample ID:</b> C19981-15		<b>Date Received:</b> 01/24/12
<b>Matrix:</b> SO - Soil		<b>Percent Solids:</b> n/a <sup>a</sup>
<b>Method:</b> SW846 8260B		
<b>Project:</b> T0000003190-F&M Auto Service., 1839 Foothill Blvd, Oakland, CA		

Run #1	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #2	M31013.D	1	01/27/12	XB	n/a	n/a	VM979

Run #1	Initial Weight
Run #2	5.10 g

## VOA Halogenated List

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	4.9	0.49	ug/kg	
75-27-4	Bromodichloromethane	ND	4.9	0.49	ug/kg	
75-25-2	Bromoform	ND	4.9	0.49	ug/kg	
108-90-7	Chlorobenzene	ND	4.9	0.49	ug/kg	
75-00-3	Chloroethane	ND	4.9	0.98	ug/kg	
67-66-3	Chloroform	ND	4.9	0.49	ug/kg	
56-23-5	Carbon tetrachloride	ND	4.9	0.49	ug/kg	
75-34-3	1,1-Dichloroethane	ND	4.9	0.49	ug/kg	
75-35-4	1,1-Dichloroethylene	ND	4.9	0.49	ug/kg	
106-93-4	1,2-Dibromoethane	ND	4.9	0.49	ug/kg	
107-06-2	1,2-Dichloroethane	ND	4.9	0.49	ug/kg	
78-87-5	1,2-Dichloropropane	ND	4.9	0.49	ug/kg	
108-20-3	Di-Isopropyl ether	ND	4.9	0.49	ug/kg	
124-48-1	Dibromochloromethane	ND	4.9	0.49	ug/kg	
75-71-8	Dichlorodifluoromethane	ND	4.9	0.98	ug/kg	
156-59-2	cis-1,2-Dichloroethylene	ND	4.9	1.1	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	4.9	0.49	ug/kg	
541-73-1	m-Dichlorobenzene	ND	4.9	0.49	ug/kg	
95-50-1	o-Dichlorobenzene	ND	4.9	0.49	ug/kg	
106-46-7	p-Dichlorobenzene	ND	4.9	0.49	ug/kg	
156-60-5	trans-1,2-Dichloroethylene	ND	4.9	0.49	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	4.9	0.49	ug/kg	
100-41-4	Ethylbenzene	ND	4.9	0.49	ug/kg	
637-92-3	Ethyl tert-Butyl Ether	ND	4.9	0.49	ug/kg	
74-83-9	Methyl bromide	ND	4.9	0.98	ug/kg	
74-87-3	Methyl chloride	ND	4.9	0.98	ug/kg	
75-09-2	Methylene chloride	ND	20	4.9	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	1.3	4.9	0.98	ug/kg	J
994-05-8	Tert-Amyl Methyl Ether	ND	4.9	0.49	ug/kg	
75-65-0	Tert Butyl Alcohol	ND	39	9.8	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	4.9	0.49	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	4.9	0.49	ug/kg	

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> MW-3-22.0		<b>Date Sampled:</b> 01/23/12
<b>Lab Sample ID:</b> C19981-15		<b>Date Received:</b> 01/24/12
<b>Matrix:</b> SO - Soil		<b>Percent Solids:</b> n/a <sup>a</sup>
<b>Method:</b> SW846 8260B		
<b>Project:</b> T0000003190-F&M Auto Service., 1839 Foothill Blvd, Oakland, CA		

**VOA Halogenated List**

CAS No.	Compound	Result	RL	MDL	Units	Q
79-00-5	1,1,2-Trichloroethane	ND	4.9	0.49	ug/kg	
127-18-4	Tetrachloroethylene	ND	4.9	0.59	ug/kg	
108-88-3	Toluene	ND	4.9	0.49	ug/kg	
79-01-6	Trichloroethylene	ND	4.9	0.49	ug/kg	
75-69-4	Trichlorofluoromethane	ND	4.9	0.98	ug/kg	
75-01-4	Vinyl chloride	ND	4.9	0.98	ug/kg	
1330-20-7	Xylene (total)	ND	9.8	0.98	ug/kg	
	TPH-GRO (C6-C10)	ND	98	49	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	99%		60-130%
2037-26-5	Toluene-D8	100%		60-130%
460-00-4	4-Bromofluorobenzene	101%		60-130%

(a) All results reported on a wet weight basis.

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound



## Report of Analysis

<b>Client Sample ID:</b> MW-3-22.0		<b>Date Sampled:</b> 01/23/12
<b>Lab Sample ID:</b> C19981-15		<b>Date Received:</b> 01/24/12
<b>Matrix:</b> SO - Soil		<b>Percent Solids:</b> n/a <sup>a</sup>
<b>Method:</b> SW846 8270C SW846 3550B		
<b>Project:</b> T0000003190-F&M Auto Service., 1839 Foothill Blvd, Oakland, CA		

Run #1	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	Y12512.D	1	02/08/12	LB	02/04/12	OP5316	EY595
Run #2							

Run #1	Initial Weight	Final Volume
Run #1	30.0 g	1.0 ml
Run #2		

## ABN Full List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic acid	ND	670	160	ug/kg	
95-57-8	2-Chlorophenol	ND	170	71	ug/kg	
59-50-7	4-Chloro-3-methyl phenol	ND	170	72	ug/kg	
120-83-2	2,4-Dichlorophenol	ND	170	78	ug/kg	
105-67-9	2,4-Dimethylphenol	ND	170	65	ug/kg	
51-28-5	2,4-Dinitrophenol	ND	670	130	ug/kg	
534-52-1	4,6-Dinitro-o-cresol	ND	330	62	ug/kg	
95-48-7	2-Methylphenol	ND	170	88	ug/kg	
	3&4-Methylphenol	ND	330	79	ug/kg	
88-75-5	2-Nitrophenol	ND	170	79	ug/kg	
100-02-7	4-Nitrophenol	ND	330	40	ug/kg	
87-86-5	Pentachlorophenol	ND	330	34	ug/kg	
108-95-2	Phenol	ND	170	69	ug/kg	
95-95-4	2,4,5-Trichlorophenol	ND	170	75	ug/kg	
88-06-2	2,4,6-Trichlorophenol	ND	170	71	ug/kg	
83-32-9	Acenaphthene	ND	170	73	ug/kg	
208-96-8	Acenaphthylene	ND	170	78	ug/kg	
62-53-3	Aniline	ND	170	44	ug/kg	
120-12-7	Anthracene	ND	170	54	ug/kg	
103-33-3	Azobenzene	ND	170	59	ug/kg	
92-87-5	Benzidine	ND	670	79	ug/kg	
56-55-3	Benzo(a)anthracene	ND	170	33	ug/kg	
50-32-8	Benzo(a)pyrene	ND	170	33	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	170	33	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	170	43	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	170	33	ug/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	170	67	ug/kg	
85-68-7	Butyl benzyl phthalate	ND	170	33	ug/kg	
100-51-6	Benzyl Alcohol	ND	170	89	ug/kg	
91-58-7	2-Chloronaphthalene	ND	170	76	ug/kg	
106-47-8	4-Chloroaniline	ND	170	50	ug/kg	
86-74-8	Carbazole	ND	170	35	ug/kg	

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b>	MW-3-22.0	<b>Date Sampled:</b>	01/23/12
<b>Lab Sample ID:</b>	C19981-15	<b>Date Received:</b>	01/24/12
<b>Matrix:</b>	SO - Soil	<b>Percent Solids:</b>	n/a <sup>a</sup>
<b>Method:</b>	SW846 8270C SW846 3550B		
<b>Project:</b>	T0000003190-F&M Auto Service., 1839 Foothill Blvd, Oakland, CA		

## ABN Full List

CAS No.	Compound	Result	RL	MDL	Units	Q
218-01-9	Chrysene	ND	170	33	ug/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND	170	74	ug/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	170	67	ug/kg	
108-60-1	bis(2-Chloroisopropyl)ether	ND	170	67	ug/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	170	76	ug/kg	
95-50-1	1,2-Dichlorobenzene	ND	170	75	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	170	74	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	170	72	ug/kg	
121-14-2	2,4-Dinitrotoluene	ND	170	72	ug/kg	
606-20-2	2,6-Dinitrotoluene	ND	170	75	ug/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	330	70	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	170	41	ug/kg	
132-64-9	Dibenzofuran	ND	170	73	ug/kg	
122-39-4	Diphenylamine	ND	170	65	ug/kg	
84-74-2	Di-n-butyl phthalate	ND	170	33	ug/kg	
117-84-0	Di-n-octyl phthalate	ND	170	34	ug/kg	
84-66-2	Diethyl phthalate	ND	170	57	ug/kg	
131-11-3	Dimethyl phthalate	ND	170	69	ug/kg	
123-91-1	1,4-Dioxane	ND	170	43	ug/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	330	67	ug/kg	
206-44-0	Fluoranthene	ND	170	33	ug/kg	
86-73-7	Fluorene	ND	170	72	ug/kg	
118-74-1	Hexachlorobenzene	ND	170	71	ug/kg	
87-68-3	Hexachlorobutadiene	ND	170	96	ug/kg	
77-47-4	Hexachlorocyclopentadiene	ND	170	92	ug/kg	
67-72-1	Hexachloroethane	ND	170	71	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	170	43	ug/kg	
78-59-1	Isophorone	ND	170	69	ug/kg	
90-12-0	1-Methylnaphthalene	ND	170	76	ug/kg	
91-57-6	2-Methylnaphthalene	ND	170	80	ug/kg	
88-74-4	2-Nitroaniline	ND	170	67	ug/kg	
99-09-2	3-Nitroaniline	ND	170	50	ug/kg	
100-01-6	4-Nitroaniline	ND	170	43	ug/kg	
91-20-3	Naphthalene	ND	170	77	ug/kg	
98-95-3	Nitrobenzene	ND	170	78	ug/kg	
62-75-9	N-Nitrosodimethylamine	ND	170	66	ug/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	170	72	ug/kg	
85-01-8	Phenanthrene	ND	170	58	ug/kg	
129-00-0	Pyrene	ND	170	33	ug/kg	
110-86-1	Pyridine	ND	330	46	ug/kg	

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> MW-3-22.0		<b>Date Sampled:</b> 01/23/12
<b>Lab Sample ID:</b> C19981-15		<b>Date Received:</b> 01/24/12
<b>Matrix:</b> SO - Soil		<b>Percent Solids:</b> n/a <sup>a</sup>
<b>Method:</b> SW846 8270C SW846 3550B		
<b>Project:</b> T0000003190-F&M Auto Service., 1839 Foothill Blvd, Oakland, CA		

**ABN Full List**

CAS No.	Compound	Result	RL	MDL	Units	Q
120-82-1	1,2,4-Trichlorobenzene	ND	170	75	ug/kg	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
367-12-4	2-Fluorophenol	56%		20-100%		
4165-62-2	Phenol-d5	56%		20-100%		
118-79-6	2,4,6-Tribromophenol	69%		30-100%		
4165-60-0	Nitrobenzene-d5	54%		20-100%		
321-60-8	2-Fluorobiphenyl	56%		20-106%		
1718-51-0	Terphenyl-d14	92%		55-130%		

(a) All results reported on a wet weight basis.

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> MW-3-22.0		<b>Date Sampled:</b> 01/23/12
<b>Lab Sample ID:</b> C19981-15		<b>Date Received:</b> 01/24/12
<b>Matrix:</b> SO - Soil		<b>Percent Solids:</b> n/a <sup>a</sup>
<b>Method:</b> SW846 8082 SW846 3550B		
<b>Project:</b> T0000003190-F&M Auto Service., 1839 Foothill Blvd, Oakland, CA		

Run #1	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	MM002244.D	1	02/01/12	RV	01/30/12	OP5292	GMM68
Run #2							

Run #1	Initial Weight	Final Volume
Run #1	30.1 g	10.0 ml
Run #2		

**PCB List**

CAS No.	Compound	Result	RL	MDL	Units	Q
12674-11-2	Aroclor 1016	ND	33	6.6	ug/kg	
11104-28-2	Aroclor 1221	ND	33	17	ug/kg	
11141-16-5	Aroclor 1232	ND	33	17	ug/kg	
53469-21-9	Aroclor 1242	ND	33	17	ug/kg	
12672-29-6	Aroclor 1248	ND	33	17	ug/kg	
11097-69-1	Aroclor 1254	ND	33	17	ug/kg	
11096-82-5	Aroclor 1260	ND	33	6.6	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	70%		45-108%
877-09-8	Tetrachloro-m-xylene	68%		45-108%
2051-24-3	Decachlorobiphenyl	79%		54-121%
2051-24-3	Decachlorobiphenyl	86%		54-121%

(a) All results reported on a wet weight basis.

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> MW-3-22.0		<b>Date Sampled:</b> 01/23/12
<b>Lab Sample ID:</b> C19981-15		<b>Date Received:</b> 01/24/12
<b>Matrix:</b> SO - Soil		<b>Percent Solids:</b> n/a <sup>a</sup>
<b>Method:</b> SW846 8015B M SW846 3545A		
<b>Project:</b> T0000003190-F&M Auto Service., 1839 Foothill Blvd, Oakland, CA		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	GG31599.D	1	01/27/12	JH	01/26/12	OP5264	GGG847
Run #2							

Run #	Initial Weight	Final Volume
Run #1	10.0 g	1.0 ml
Run #2		

### TPH Extractable w/ Silica Gel Cleanup

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (C10-C28)	ND	10	2.5	mg/kg	
	TPH (> C28-C40)	ND	20	5.0	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
630-01-3	Hexacosane	73%		45-140%

(a) All results reported on a wet weight basis.

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> MW-3-22.0	
<b>Lab Sample ID:</b> C19981-15	<b>Date Sampled:</b> 01/23/12
<b>Matrix:</b> SO - Soil	<b>Date Received:</b> 01/24/12
	<b>Percent Solids:</b> n/a <sup>a</sup>
<b>Project:</b> T0000003190-F&M Auto Service., 1839 Foothill Blvd, Oakland, CA	

### Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Cadmium	< 0.94	0.94	mg/kg	1	01/30/12	01/31/12 RS	SW846 6010B <sup>1</sup>	SW846 3050B <sup>2</sup>
Chromium	35.5	0.94	mg/kg	1	01/30/12	01/31/12 RS	SW846 6010B <sup>1</sup>	SW846 3050B <sup>2</sup>
Lead	6.1	1.9	mg/kg	1	01/30/12	01/31/12 RS	SW846 6010B <sup>1</sup>	SW846 3050B <sup>2</sup>
Nickel	48.2	0.94	mg/kg	1	01/30/12	01/31/12 RS	SW846 6010B <sup>1</sup>	SW846 3050B <sup>2</sup>
Zinc	34.0	1.9	mg/kg	1	01/30/12	01/31/12 RS	SW846 6010B <sup>1</sup>	SW846 3050B <sup>2</sup>

(1) Instrument QC Batch: MA2313

(2) Prep QC Batch: MP4471

(a) All results reported on a wet weight basis.

RL = Reporting Limit

## Report of Analysis

<b>Client Sample ID:</b> MW-3-28.0		<b>Date Sampled:</b> 01/23/12
<b>Lab Sample ID:</b> C19981-16		<b>Date Received:</b> 01/24/12
<b>Matrix:</b> SO - Soil		<b>Percent Solids:</b> n/a <sup>a</sup>
<b>Method:</b> SW846 8260B		
<b>Project:</b> T0000003190-F&M Auto Service., 1839 Foothill Blvd, Oakland, CA		

Run #1	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	M31012.D	1	01/27/12	XB	n/a	n/a	VM979
Run #2							

Run #1	Initial Weight
Run #1	5.03 g
Run #2	

## VOA Halogenated List

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	5.0	0.50	ug/kg	
75-27-4	Bromodichloromethane	ND	5.0	0.50	ug/kg	
75-25-2	Bromoform	ND	5.0	0.50	ug/kg	
108-90-7	Chlorobenzene	ND	5.0	0.50	ug/kg	
75-00-3	Chloroethane	ND	5.0	0.99	ug/kg	
67-66-3	Chloroform	ND	5.0	0.50	ug/kg	
56-23-5	Carbon tetrachloride	ND	5.0	0.50	ug/kg	
75-34-3	1,1-Dichloroethane	ND	5.0	0.50	ug/kg	
75-35-4	1,1-Dichloroethylene	ND	5.0	0.50	ug/kg	
106-93-4	1,2-Dibromoethane	ND	5.0	0.50	ug/kg	
107-06-2	1,2-Dichloroethane	ND	5.0	0.50	ug/kg	
78-87-5	1,2-Dichloropropane	ND	5.0	0.50	ug/kg	
108-20-3	Di-Isopropyl ether	ND	5.0	0.50	ug/kg	
124-48-1	Dibromochloromethane	ND	5.0	0.50	ug/kg	
75-71-8	Dichlorodifluoromethane	ND	5.0	0.99	ug/kg	
156-59-2	cis-1,2-Dichloroethylene	ND	5.0	1.1	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	5.0	0.50	ug/kg	
541-73-1	m-Dichlorobenzene	ND	5.0	0.50	ug/kg	
95-50-1	o-Dichlorobenzene	ND	5.0	0.50	ug/kg	
106-46-7	p-Dichlorobenzene	ND	5.0	0.50	ug/kg	
156-60-5	trans-1,2-Dichloroethylene	ND	5.0	0.50	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	5.0	0.50	ug/kg	
100-41-4	Ethylbenzene	ND	5.0	0.50	ug/kg	
637-92-3	Ethyl tert-Butyl Ether	ND	5.0	0.50	ug/kg	
74-83-9	Methyl bromide	ND	5.0	0.99	ug/kg	
74-87-3	Methyl chloride	ND	5.0	0.99	ug/kg	
75-09-2	Methylene chloride	ND	20	5.0	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	5.0	0.99	ug/kg	
994-05-8	Tert-Amyl Methyl Ether	ND	5.0	0.50	ug/kg	
75-65-0	Tert Butyl Alcohol	ND	40	9.9	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	5.0	0.50	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	5.0	0.50	ug/kg	

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> MW-3-28.0		<b>Date Sampled:</b> 01/23/12
<b>Lab Sample ID:</b> C19981-16		<b>Date Received:</b> 01/24/12
<b>Matrix:</b> SO - Soil		<b>Percent Solids:</b> n/a <sup>a</sup>
<b>Method:</b> SW846 8260B		
<b>Project:</b> T0000003190-F&M Auto Service., 1839 Foothill Blvd, Oakland, CA		

**VOA Halogenated List**

CAS No.	Compound	Result	RL	MDL	Units	Q
79-00-5	1,1,2-Trichloroethane	ND	5.0	0.50	ug/kg	
127-18-4	Tetrachloroethylene	ND	5.0	0.60	ug/kg	
108-88-3	Toluene	ND	5.0	0.50	ug/kg	
79-01-6	Trichloroethylene	ND	5.0	0.50	ug/kg	
75-69-4	Trichlorofluoromethane	ND	5.0	0.99	ug/kg	
75-01-4	Vinyl chloride	ND	5.0	0.99	ug/kg	
1330-20-7	Xylene (total)	ND	9.9	0.99	ug/kg	
	TPH-GRO (C6-C10)	ND	99	50	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	98%		60-130%
2037-26-5	Toluene-D8	100%		60-130%
460-00-4	4-Bromofluorobenzene	98%		60-130%

(a) All results reported on a wet weight basis.

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound



## Report of Analysis

<b>Client Sample ID:</b> MW-3-28.0		
<b>Lab Sample ID:</b> C19981-16		<b>Date Sampled:</b> 01/23/12
<b>Matrix:</b> SO - Soil		<b>Date Received:</b> 01/24/12
<b>Method:</b> SW846 8270C SW846 3550B		<b>Percent Solids:</b> n/a <sup>a</sup>
<b>Project:</b> T0000003190-F&M Auto Service., 1839 Foothill Blvd, Oakland, CA		

Run #1	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	Y12513.D	1	02/08/12	LB	02/04/12	OP5316	EY595
Run #2							

Run #1	Initial Weight	Final Volume
Run #1	30.0 g	1.0 ml
Run #2		

## ABN Full List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic acid	ND	670	160	ug/kg	
95-57-8	2-Chlorophenol	ND	170	71	ug/kg	
59-50-7	4-Chloro-3-methyl phenol	ND	170	72	ug/kg	
120-83-2	2,4-Dichlorophenol	ND	170	78	ug/kg	
105-67-9	2,4-Dimethylphenol	ND	170	65	ug/kg	
51-28-5	2,4-Dinitrophenol	ND	670	130	ug/kg	
534-52-1	4,6-Dinitro-o-cresol	ND	330	62	ug/kg	
95-48-7	2-Methylphenol	ND	170	88	ug/kg	
	3&4-Methylphenol	ND	330	79	ug/kg	
88-75-5	2-Nitrophenol	ND	170	79	ug/kg	
100-02-7	4-Nitrophenol	ND	330	40	ug/kg	
87-86-5	Pentachlorophenol	ND	330	34	ug/kg	
108-95-2	Phenol	ND	170	69	ug/kg	
95-95-4	2,4,5-Trichlorophenol	ND	170	75	ug/kg	
88-06-2	2,4,6-Trichlorophenol	ND	170	71	ug/kg	
83-32-9	Acenaphthene	ND	170	73	ug/kg	
208-96-8	Acenaphthylene	ND	170	78	ug/kg	
62-53-3	Aniline	ND	170	44	ug/kg	
120-12-7	Anthracene	ND	170	54	ug/kg	
103-33-3	Azobenzene	ND	170	59	ug/kg	
92-87-5	Benzidine	ND	670	79	ug/kg	
56-55-3	Benzo(a)anthracene	ND	170	33	ug/kg	
50-32-8	Benzo(a)pyrene	ND	170	33	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	170	33	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	170	43	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	170	33	ug/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	170	67	ug/kg	
85-68-7	Butyl benzyl phthalate	ND	170	33	ug/kg	
100-51-6	Benzyl Alcohol	ND	170	89	ug/kg	
91-58-7	2-Chloronaphthalene	ND	170	76	ug/kg	
106-47-8	4-Chloroaniline	ND	170	50	ug/kg	
86-74-8	Carbazole	ND	170	35	ug/kg	

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b>	MW-3-28.0	<b>Date Sampled:</b>	01/23/12
<b>Lab Sample ID:</b>	C19981-16	<b>Date Received:</b>	01/24/12
<b>Matrix:</b>	SO - Soil	<b>Percent Solids:</b>	n/a <sup>a</sup>
<b>Method:</b>	SW846 8270C SW846 3550B		
<b>Project:</b>	T0000003190-F&M Auto Service., 1839 Foothill Blvd, Oakland, CA		

## ABN Full List

CAS No.	Compound	Result	RL	MDL	Units	Q
218-01-9	Chrysene	ND	170	33	ug/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND	170	74	ug/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	170	67	ug/kg	
108-60-1	bis(2-Chloroisopropyl)ether	ND	170	67	ug/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	170	76	ug/kg	
95-50-1	1,2-Dichlorobenzene	ND	170	75	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	170	74	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	170	72	ug/kg	
121-14-2	2,4-Dinitrotoluene	ND	170	72	ug/kg	
606-20-2	2,6-Dinitrotoluene	ND	170	75	ug/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	330	70	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	170	41	ug/kg	
132-64-9	Dibenzofuran	ND	170	73	ug/kg	
122-39-4	Diphenylamine	ND	170	65	ug/kg	
84-74-2	Di-n-butyl phthalate	ND	170	33	ug/kg	
117-84-0	Di-n-octyl phthalate	ND	170	34	ug/kg	
84-66-2	Diethyl phthalate	ND	170	57	ug/kg	
131-11-3	Dimethyl phthalate	ND	170	69	ug/kg	
123-91-1	1,4-Dioxane	ND	170	43	ug/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	330	67	ug/kg	
206-44-0	Fluoranthene	ND	170	33	ug/kg	
86-73-7	Fluorene	ND	170	72	ug/kg	
118-74-1	Hexachlorobenzene	ND	170	71	ug/kg	
87-68-3	Hexachlorobutadiene	ND	170	96	ug/kg	
77-47-4	Hexachlorocyclopentadiene	ND	170	92	ug/kg	
67-72-1	Hexachloroethane	ND	170	71	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	170	43	ug/kg	
78-59-1	Isophorone	ND	170	69	ug/kg	
90-12-0	1-Methylnaphthalene	ND	170	76	ug/kg	
91-57-6	2-Methylnaphthalene	ND	170	80	ug/kg	
88-74-4	2-Nitroaniline	ND	170	67	ug/kg	
99-09-2	3-Nitroaniline	ND	170	50	ug/kg	
100-01-6	4-Nitroaniline	ND	170	43	ug/kg	
91-20-3	Naphthalene	ND	170	77	ug/kg	
98-95-3	Nitrobenzene	ND	170	78	ug/kg	
62-75-9	N-Nitrosodimethylamine	ND	170	66	ug/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	170	72	ug/kg	
85-01-8	Phenanthrene	ND	170	58	ug/kg	
129-00-0	Pyrene	ND	170	33	ug/kg	
110-86-1	Pyridine	ND	330	46	ug/kg	

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> MW-3-28.0		<b>Date Sampled:</b> 01/23/12
<b>Lab Sample ID:</b> C19981-16		<b>Date Received:</b> 01/24/12
<b>Matrix:</b> SO - Soil		<b>Percent Solids:</b> n/a <sup>a</sup>
<b>Method:</b> SW846 8270C SW846 3550B		
<b>Project:</b> T0000003190-F&M Auto Service., 1839 Foothill Blvd, Oakland, CA		

### ABN Full List

CAS No.	Compound	Result	RL	MDL	Units	Q
120-82-1	1,2,4-Trichlorobenzene	ND	170	75	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	69%		20-100%
4165-62-2	Phenol-d5	70%		20-100%
118-79-6	2,4,6-Tribromophenol	72%		30-100%
4165-60-0	Nitrobenzene-d5	65%		20-100%
321-60-8	2-Fluorobiphenyl	67%		20-106%
1718-51-0	Terphenyl-d14	101%		55-130%

(a) All results reported on a wet weight basis.

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> MW-3-28.0		<b>Date Sampled:</b> 01/23/12
<b>Lab Sample ID:</b> C19981-16		<b>Date Received:</b> 01/24/12
<b>Matrix:</b> SO - Soil		<b>Percent Solids:</b> n/a <sup>a</sup>
<b>Method:</b> SW846 8082 SW846 3550B		
<b>Project:</b> T0000003190-F&M Auto Service., 1839 Foothill Blvd, Oakland, CA		

Run #1	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	MM002245.D	1	02/01/12	RV	01/30/12	OP5292	GMM68
Run #2							

Run #1	Initial Weight	Final Volume
Run #1	30.0 g	10.0 ml
Run #2		

**PCB List**

CAS No.	Compound	Result	RL	MDL	Units	Q
12674-11-2	Aroclor 1016	ND	33	6.7	ug/kg	
11104-28-2	Aroclor 1221	ND	33	17	ug/kg	
11141-16-5	Aroclor 1232	ND	33	17	ug/kg	
53469-21-9	Aroclor 1242	ND	33	17	ug/kg	
12672-29-6	Aroclor 1248	ND	33	17	ug/kg	
11097-69-1	Aroclor 1254	ND	33	17	ug/kg	
11096-82-5	Aroclor 1260	ND	33	6.7	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	74%		45-108%
877-09-8	Tetrachloro-m-xylene	73%		45-108%
2051-24-3	Decachlorobiphenyl	75%		54-121%
2051-24-3	Decachlorobiphenyl	80%		54-121%

(a) All results reported on a wet weight basis.

---

ND = Not detected      MDL - Method Detection Limit      J = Indicates an estimated value  
 RL = Reporting Limit      B = Indicates analyte found in associated method blank  
 E = Indicates value exceeds calibration range      N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> MW-3-28.0		<b>Date Sampled:</b> 01/23/12
<b>Lab Sample ID:</b> C19981-16		<b>Date Received:</b> 01/24/12
<b>Matrix:</b> SO - Soil		<b>Percent Solids:</b> n/a <sup>a</sup>
<b>Method:</b> SW846 8015B M SW846 3545A		
<b>Project:</b> T0000003190-F&M Auto Service., 1839 Foothill Blvd, Oakland, CA		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	GG31600.D	1	01/27/12	JH	01/26/12	OP5264	GGG847
Run #2							

Run #	Initial Weight	Final Volume
Run #1	10.0 g	1.0 ml
Run #2		

**TPH Extractable w/ Silica Gel Cleanup**

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (C10-C28)	ND	10	2.5	mg/kg	
	TPH (> C28-C40)	ND	20	5.0	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
630-01-3	Hexacosane	76%		45-140%

(a) All results reported on a wet weight basis.

---

ND = Not detected      MDL - Method Detection Limit      J = Indicates an estimated value  
 RL = Reporting Limit      B = Indicates analyte found in associated method blank  
 E = Indicates value exceeds calibration range      N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> MW-3-28.0		
<b>Lab Sample ID:</b> C19981-16		<b>Date Sampled:</b> 01/23/12
<b>Matrix:</b> SO - Soil		<b>Date Received:</b> 01/24/12
		<b>Percent Solids:</b> n/a <sup>a</sup>
<b>Project:</b> T0000003190-F&M Auto Service., 1839 Foothill Blvd, Oakland, CA		

### Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Cadmium	< 0.85	0.85	mg/kg	1	01/30/12	01/31/12 RS	SW846 6010B <sup>1</sup>	SW846 3050B <sup>2</sup>
Chromium	39.9	0.85	mg/kg	1	01/30/12	01/31/12 RS	SW846 6010B <sup>1</sup>	SW846 3050B <sup>2</sup>
Lead	4.9	1.7	mg/kg	1	01/30/12	01/31/12 RS	SW846 6010B <sup>1</sup>	SW846 3050B <sup>2</sup>
Nickel	40.5	0.85	mg/kg	1	01/30/12	01/31/12 RS	SW846 6010B <sup>1</sup>	SW846 3050B <sup>2</sup>
Zinc	31.3	1.7	mg/kg	1	01/30/12	01/31/12 RS	SW846 6010B <sup>1</sup>	SW846 3050B <sup>2</sup>

(1) Instrument QC Batch: MA2313

(2) Prep QC Batch: MP4471

(a) All results reported on a wet weight basis.

RL = Reporting Limit

## Report of Analysis

<b>Client Sample ID:</b> MW-1-10.5		<b>Date Sampled:</b> 01/24/12
<b>Lab Sample ID:</b> C19981-17		<b>Date Received:</b> 01/24/12
<b>Matrix:</b> SO - Soil		<b>Percent Solids:</b> n/a <sup>a</sup>
<b>Method:</b> SW846 8260B		
<b>Project:</b> T0000003190-F&M Auto Service., 1839 Foothill Blvd, Oakland, CA		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	M31041.D	1	02/01/12	XB	n/a	n/a	VM980
Run #2							

Run #	Initial Weight	Final Volume	Methanol Aliquot
Run #1	5.01 g	5.0 ml	5.0 ul
Run #2			

**BTEX, Oxygenates**

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	5940	5000	500	ug/kg	
108-88-3	Toluene	36200	5000	500	ug/kg	
100-41-4	Ethylbenzene	12000	5000	500	ug/kg	
1330-20-7	Xylene (total)	69800	10000	1000	ug/kg	
108-20-3	Di-Isopropyl ether	ND	5000	500	ug/kg	
637-92-3	Ethyl tert-Butyl Ether	ND	5000	500	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	5000	1000	ug/kg	
994-05-8	Tert-Amyl Methyl Ether	ND	5000	500	ug/kg	
75-65-0	Tert Butyl Alcohol	ND	40000	10000	ug/kg	
	TPH-GRO (C6-C10)	791000	100000	50000	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	91%		60-130%
2037-26-5	Toluene-D8	101%		60-130%
460-00-4	4-Bromofluorobenzene	101%		60-130%

(a) All results reported on a wet weight basis.

---

ND = Not detected      MDL - Method Detection Limit      J = Indicates an estimated value  
 RL = Reporting Limit      B = Indicates analyte found in associated method blank  
 E = Indicates value exceeds calibration range      N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b>	MW-1-10.5	<b>Date Sampled:</b>	01/24/12
<b>Lab Sample ID:</b>	C19981-17	<b>Date Received:</b>	01/24/12
<b>Matrix:</b>	SO - Soil	<b>Percent Solids:</b>	n/a <sup>a</sup>
<b>Method:</b>	SW846 8015B M SW846 3545A		
<b>Project:</b>	T0000003190-F&M Auto Service., 1839 Foothill Blvd, Oakland, CA		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	GG31684.D	1	01/28/12	JH	01/27/12	OP5279	GGG848
Run #2							

Run #	Initial Weight	Final Volume
Run #1	10.0 g	1.0 ml
Run #2		

**TPH Extractable**

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (C10-C28)	81.8	10	2.5	mg/kg	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
630-01-3	Hexacosane	76%		45-140%		

(a) All results reported on a wet weight basis.

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound



## Report of Analysis

<b>Client Sample ID:</b> MW-1-10.5	<b>Date Sampled:</b> 01/24/12
<b>Lab Sample ID:</b> C19981-17	<b>Date Received:</b> 01/24/12
<b>Matrix:</b> SO - Soil	<b>Percent Solids:</b> n/a <sup>a</sup>
<b>Project:</b> T0000003190-F&M Auto Service., 1839 Foothill Blvd, Oakland, CA	

### Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Lead	5.6	1.7	mg/kg	1	01/30/12	01/31/12 RS	SW846 6010B <sup>1</sup>	SW846 3050B <sup>2</sup>

(1) Instrument QC Batch: MA2313

(2) Prep QC Batch: MP4471

(a) All results reported on a wet weight basis.

---

RL = Reporting Limit

## Report of Analysis

<b>Client Sample ID:</b> MW-1-18.5		<b>Date Sampled:</b> 01/24/12
<b>Lab Sample ID:</b> C19981-18		<b>Date Received:</b> 01/24/12
<b>Matrix:</b> SO - Soil		<b>Percent Solids:</b> n/a <sup>a</sup>
<b>Method:</b> SW846 8260B		
<b>Project:</b> T0000003190-F&M Auto Service., 1839 Foothill Blvd, Oakland, CA		

Run #1	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	M31008.D	1	01/27/12	XB	n/a	n/a	VM979
Run #2							

Run #1	Initial Weight
Run #1	5.00 g
Run #2	

**BTEX, Oxygenates**

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	3.2	5.0	0.50	ug/kg	J
108-88-3	Toluene	4.8	5.0	0.50	ug/kg	J
100-41-4	Ethylbenzene	1.2	5.0	0.50	ug/kg	J
1330-20-7	Xylene (total)	5.0	10	1.0	ug/kg	J
108-20-3	Di-Isopropyl ether	ND	5.0	0.50	ug/kg	
637-92-3	Ethyl tert-Butyl Ether	ND	5.0	0.50	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	6.5	5.0	1.0	ug/kg	
994-05-8	Tert-Amyl Methyl Ether	ND	5.0	0.50	ug/kg	
75-65-0	Tert Butyl Alcohol	ND	40	10	ug/kg	
	TPH-GRO (C6-C10)	596	100	50	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	94%		60-130%
2037-26-5	Toluene-D8	100%		60-130%
460-00-4	4-Bromofluorobenzene	120%		60-130%

(a) All results reported on a wet weight basis.

---

ND = Not detected      MDL - Method Detection Limit      J = Indicates an estimated value  
 RL = Reporting Limit      B = Indicates analyte found in associated method blank  
 E = Indicates value exceeds calibration range      N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> MW-1-18.5		
<b>Lab Sample ID:</b> C19981-18		<b>Date Sampled:</b> 01/24/12
<b>Matrix:</b> SO - Soil		<b>Date Received:</b> 01/24/12
<b>Method:</b> SW846 8015B M SW846 3545A		<b>Percent Solids:</b> n/a <sup>a</sup>
<b>Project:</b> T0000003190-F&M Auto Service., 1839 Foothill Blvd, Oakland, CA		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	GG31685.D	1	01/28/12	JH	01/27/12	OP5279	GGG848
Run #2							

Run #	Initial Weight	Final Volume
Run #1	10.0 g	1.0 ml
Run #2		

### TPH Extractable

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (C10-C28)	ND	10	2.5	mg/kg	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
630-01-3	Hexacosane	68%		45-140%		

(a) All results reported on a wet weight basis.

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> MW-1-18.5	
<b>Lab Sample ID:</b> C19981-18	<b>Date Sampled:</b> 01/24/12
<b>Matrix:</b> SO - Soil	<b>Date Received:</b> 01/24/12
	<b>Percent Solids:</b> n/a <sup>a</sup>
<b>Project:</b> T0000003190-F&M Auto Service., 1839 Foothill Blvd, Oakland, CA	

### Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Lead	3.0	1.9	mg/kg	1	01/30/12	01/31/12 RS	SW846 6010B <sup>1</sup>	SW846 3050B <sup>2</sup>

(1) Instrument QC Batch: MA2313

(2) Prep QC Batch: MP4471

(a) All results reported on a wet weight basis.

---

RL = Reporting Limit

## Report of Analysis

<b>Client Sample ID:</b>	MW-1-25.0	<b>Date Sampled:</b>	01/24/12
<b>Lab Sample ID:</b>	C19981-19	<b>Date Received:</b>	01/24/12
<b>Matrix:</b>	SO - Soil	<b>Percent Solids:</b>	n/a <sup>a</sup>
<b>Method:</b>	SW846 8260B		
<b>Project:</b>	T0000003190-F&M Auto Service., 1839 Foothill Blvd, Oakland, CA		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	M31009.D	1	01/27/12	XB	n/a	n/a	VM979
Run #2							

Run #	Initial Weight
Run #1	5.10 g
Run #2	

## BTEX, Oxygenates

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	3.0	4.9	0.49	ug/kg	J
108-88-3	Toluene	4.1	4.9	0.49	ug/kg	J
100-41-4	Ethylbenzene	1.1	4.9	0.49	ug/kg	J
1330-20-7	Xylene (total)	4.3	9.8	0.98	ug/kg	J
108-20-3	Di-Isopropyl ether	ND	4.9	0.49	ug/kg	
637-92-3	Ethyl tert-Butyl Ether	ND	4.9	0.49	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	19.7	4.9	0.98	ug/kg	
994-05-8	Tert-Amyl Methyl Ether	ND	4.9	0.49	ug/kg	
75-65-0	Tert Butyl Alcohol	ND	39	9.8	ug/kg	
	TPH-GRO (C6-C10)	383	98	49	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	93%		60-130%
2037-26-5	Toluene-D8	101%		60-130%
460-00-4	4-Bromofluorobenzene	106%		60-130%

(a) All results reported on a wet weight basis.

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> MW-1-25.0		<b>Date Sampled:</b> 01/24/12
<b>Lab Sample ID:</b> C19981-19		<b>Date Received:</b> 01/24/12
<b>Matrix:</b> SO - Soil		<b>Percent Solids:</b> n/a <sup>a</sup>
<b>Method:</b> SW846 8015B M SW846 3545A		
<b>Project:</b> T0000003190-F&M Auto Service., 1839 Foothill Blvd, Oakland, CA		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	GG31686.D	1	01/28/12	JH	01/27/12	OP5279	GGG848
Run #2							

Run #	Initial Weight	Final Volume
Run #1	10.0 g	1.0 ml
Run #2		

### TPH Extractable

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (C10-C28)	ND	10	2.5	mg/kg	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
630-01-3	Hexacosane	67%		45-140%		

(a) All results reported on a wet weight basis.

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> MW-1-25.0	<b>Date Sampled:</b> 01/24/12
<b>Lab Sample ID:</b> C19981-19	<b>Date Received:</b> 01/24/12
<b>Matrix:</b> SO - Soil	<b>Percent Solids:</b> n/a <sup>a</sup>
<b>Project:</b> T0000003190-F&M Auto Service., 1839 Foothill Blvd, Oakland, CA	

### Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Lead	5.5	1.8	mg/kg	1	01/30/12	01/31/12 RS	SW846 6010B <sup>1</sup>	SW846 3050B <sup>2</sup>

(1) Instrument QC Batch: MA2313

(2) Prep QC Batch: MP4471

(a) All results reported on a wet weight basis.

---

RL = Reporting Limit

## Misc. Forms

---

### Custody Documents and Other Forms

---

Includes the following where applicable:

- Chain of Custody





**ACCUTEST**  
LABORATORIES

**CHAIN OF CUSTODY**

2105 Lundy Ave, San Jose, CA 95131  
(408) 588-0200 FAX: (408) 588-0201

FED-EX Tracking #		Bottle Order Control #															
Accutest Quote #		Accutest NC Job #: C <b>C19981</b>															
Client / Reporting Information		Project Information															
Company Name: <b>Sierra West Consultants, Inc.</b>		Project Name: <b>F.R.M Auto Service</b>															
Address: <b>4227 Sunrise Blvd., Ste. 220</b>		Street: <b>1839 Foothill Blvd.</b>															
City: <b>Fair Oakes CA 95628</b>		City: <b>Oakland CA</b>															
Project Contact: <b>Brian Whalen</b>		Project #:															
Phone #: <b>(916) 863-3220</b>		EMAIL: <b>BWhalen@Sierra-West.net</b>															
Sampler's Name: <b>Brian Whalen</b>		Client Purchase Order #:															
Accutest Sample ID	Sample ID / Field Point / Point of Collection	Collection												Requested Analysis	Matrix Codes		
		Date	Time	Sampled by	Matrix	# of bottles	IC	MECH	INOC	PCOH	ROSE	NUMCH	MECH			ENCODER	LAB USE ONLY
1	B-1-11.5	1/23/12	1005	BW	SO	1									X TPHg, BTEX, 5 oxys	WW- Wastewater GW- Ground Water SW- Surface Water SO- Soil OI-Oil WP-Wipe LLO- Non-aqueous Liquid AIR DW- Drinking Water (Perchlorate Only)	
2	B-1-20.5														X TPHd		
3	B-1-28.0														X Lead		
4	B-2-12.5		1130														
5	B-2-22.5																
6	B-2-28.0																
7	B-3-12.0		1255														
8	B-3-22.5																
9	B-3-28.0																
10	MW-2-14.5		1510														
Turnaround Time (Business days)		Data Deliverable Information												Comments / Remarks			
<input checked="" type="checkbox"/> Standard TAT 15 Business Days <input type="checkbox"/> 10 Day (Workload dependent) <input type="checkbox"/> 5 Day (Workload dependent) <input type="checkbox"/> 3 Day (125% markup) <input type="checkbox"/> 2 Day (150% markup) <input type="checkbox"/> 1 Day (200% markup) <input type="checkbox"/> Same Day (300% markup)		Approved By/Date:		<input checked="" type="checkbox"/> Commercial "A" - Results only <input type="checkbox"/> Commercial "B" - Results with QC summaries <input type="checkbox"/> Commercial "B*" - Results, QC, and chromatograms <input type="checkbox"/> FULT1 - Level 4 data package <input checked="" type="checkbox"/> EDF for Geotracker <input type="checkbox"/> EGD Format Provide EDF Global ID: <b>70000003190</b> Provide EDF Logcode:										COC #1 of 2			
Emergency T/A data available VIA Lablink														Sample Custody must be documented below each time samples change possession, including courier delivery.			
Relinquished by Sampler:		Date/Time:		Received By:		Relinquished By:		Date/Time:		Received By:		Date/Time:		Received By:			
1 <i>[Signature]</i>		1/24 @ 1650		1 <i>[Signature]</i>		2 <i>[Signature]</i>		1/4/8		2 <i>[Signature]</i>		01-24-12		2 <i>[Signature]</i>			
3				3		4				4							
Relinquished by:		Date/Time:		Received By:		Custody Seal #		Appropriate Bottle / Pres. Y / N		Headspace Y / N		On Ice Y / N		Cooler Temp.			
5				5				Labels match Coc? Y / N		Separate Receiving Check List used: Y / N				See page 2 oc			

31  
3

C19981: Chain of Custody

Page 1 of 3



Review Chain of Custody

Chain of Custody Is to be complete and legible.

- Are these regulatory (NPDES) samples? CWA Yes/No
Is pH requested? Yes/No
Was Client informed that hold time is 15 min? Yes/No
Was ortho-Phosphate filtered with in 15 min? Yes/No
Are sample within hold time? Yes/No
Are sample in danger of exceeding hold-time Existing Project? Yes/No
Special requirements? Yes/No
Sample IDs / date & time of collection provided? Yes/No
Is Matrix listed and correct? Yes/No
Analyses listed, we do, or client has authorized a subcontract? Yes/No
Chain is signed and dated by both client and sample custodian? Yes/No
TAT requested available? Yes/No Approved by pm

Review Coolers

2 Coolers Rec'd

- Were all Coolers temperatures measured at <=6°C? Yes/No
If cooler is outside the <=6°C; note down the affected bottles in that cooler on the left
Are samples on Ice? Yes/No
Note that ANC does NOT accept evidentiary samples. (We do not lock refrigerators)

Shipment Received Method AC

- Custody Seals: Present: Yes/No If Yes; Unbroken: Yes/No

Review of Sample Bottles: If you answer no, explain to the slide

- Chain matches bottle labels? Yes/No Sample bottle intact? Yes/No
Is there enough sample volume in proper bottle for requested analyses? Yes/No
Proper Preservatives? Yes/No
Check pH on preserved samples except 1664, 625, 8270 and VOAs; make notes on left.
Headspace-VOAs? Greater than 6mm in diameter List sample ID and affected container Yes/No

Table with 3 columns: Client Sample ID, pH Check, Other Comments/Issues. Includes handwritten notes like 'Cooler #1: 4.1-0.4 = 3.7°C' and 'Cooler #2: 3.6+0.1 = 3.7°C'.

Non-Compliance issues and discrepancies on the COC are forwarded to Project Management

\\Accunca.accutest.com\depts\qa\sops\sop\_completelist\_2010\current\_active\_sop\_oct\_2010\sc0011f\_0\_form1\_samplecontrol\_samplerereceivingchecklist\_2009-01-01.doc

31
3

## GC/MS Volatiles

---

### QC Data Summaries

---

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

## Method Blank Summary

**Job Number:** C19981

**Account:** SWCICAFO Sierra West Consultants, Inc.

**Project:** T0000003190-F&M Auto Service., 1839 Foothill Blvd, Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VM979-MB	M30997.D	1	01/27/12	XB	n/a	n/a	VM979

The QC reported here applies to the following samples:

Method: SW846 8260B

C19981-2, C19981-3, C19981-12, C19981-13, C19981-14, C19981-15, C19981-16, C19981-18, C19981-19

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	5.0	0.50	ug/kg	
75-27-4	Bromodichloromethane	ND	5.0	0.50	ug/kg	
75-25-2	Bromoform	ND	5.0	0.50	ug/kg	
108-90-7	Chlorobenzene	ND	5.0	0.50	ug/kg	
75-00-3	Chloroethane	ND	5.0	1.0	ug/kg	
67-66-3	Chloroform	ND	5.0	0.50	ug/kg	
56-23-5	Carbon tetrachloride	ND	5.0	0.50	ug/kg	
75-34-3	1,1-Dichloroethane	ND	5.0	0.50	ug/kg	
75-35-4	1,1-Dichloroethylene	ND	5.0	0.50	ug/kg	
106-93-4	1,2-Dibromoethane	ND	5.0	0.50	ug/kg	
107-06-2	1,2-Dichloroethane	ND	5.0	0.50	ug/kg	
78-87-5	1,2-Dichloropropane	ND	5.0	0.50	ug/kg	
108-20-3	Di-Isopropyl ether	ND	5.0	0.50	ug/kg	
124-48-1	Dibromochloromethane	ND	5.0	0.50	ug/kg	
75-71-8	Dichlorodifluoromethane	ND	5.0	1.0	ug/kg	
156-59-2	cis-1,2-Dichloroethylene	ND	5.0	1.1	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	5.0	0.50	ug/kg	
541-73-1	m-Dichlorobenzene	ND	5.0	0.50	ug/kg	
95-50-1	o-Dichlorobenzene	ND	5.0	0.50	ug/kg	
106-46-7	p-Dichlorobenzene	ND	5.0	0.50	ug/kg	
156-60-5	trans-1,2-Dichloroethylene	ND	5.0	0.50	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	5.0	0.50	ug/kg	
100-41-4	Ethylbenzene	ND	5.0	0.50	ug/kg	
637-92-3	Ethyl tert-Butyl Ether	ND	5.0	0.50	ug/kg	
74-83-9	Methyl bromide	ND	5.0	1.0	ug/kg	
74-87-3	Methyl chloride	ND	5.0	1.0	ug/kg	
75-09-2	Methylene chloride	ND	20	5.0	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	5.0	1.0	ug/kg	
994-05-8	Tert-Amyl Methyl Ether	ND	5.0	0.50	ug/kg	
75-65-0	Tert Butyl Alcohol	ND	40	10	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	5.0	0.50	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	5.0	0.50	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	5.0	0.50	ug/kg	
127-18-4	Tetrachloroethylene	ND	5.0	0.60	ug/kg	
108-88-3	Toluene	ND	5.0	0.50	ug/kg	
79-01-6	Trichloroethylene	ND	5.0	0.50	ug/kg	

## Method Blank Summary

**Job Number:** C19981

**Account:** SWCICAFO Sierra West Consultants, Inc.

**Project:** T0000003190-F&M Auto Service., 1839 Foothill Blvd, Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VM979-MB	M30997.D	1	01/27/12	XB	n/a	n/a	VM979

The QC reported here applies to the following samples:

Method: SW846 8260B

C19981-2, C19981-3, C19981-12, C19981-13, C19981-14, C19981-15, C19981-16, C19981-18, C19981-19

CAS No.	Compound	Result	RL	MDL	Units	Q
75-69-4	Trichlorofluoromethane	ND	5.0	1.0	ug/kg	
75-01-4	Vinyl chloride	ND	5.0	1.0	ug/kg	
1330-20-7	Xylene (total)	ND	10	1.0	ug/kg	
	TPH-GRO (C6-C10)	ND	100	50	ug/kg	

CAS No.	Surrogate Recoveries	Limits	
1868-53-7	Dibromofluoromethane	93%	60-130%
2037-26-5	Toluene-D8	102%	60-130%
460-00-4	4-Bromofluorobenzene	99%	60-130%

## Method Blank Summary

**Job Number:** C19981

**Account:** SWCICAFO Sierra West Consultants, Inc.

**Project:** T0000003190-F&M Auto Service., 1839 Foothill Blvd, Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VL443-MB	L14276.D	1	02/01/12	XB	n/a	n/a	VL443

The QC reported here applies to the following samples:

Method: SW846 8260B

C19981-8

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	5.0	0.50	ug/kg	
108-20-3	Di-Isopropyl ether	ND	5.0	0.50	ug/kg	
100-41-4	Ethylbenzene	ND	5.0	0.50	ug/kg	
637-92-3	Ethyl tert-Butyl Ether	ND	5.0	0.50	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	5.0	1.0	ug/kg	
994-05-8	Tert-Amyl Methyl Ether	ND	5.0	0.50	ug/kg	
75-65-0	Tert Butyl Alcohol	ND	40	10	ug/kg	
108-88-3	Toluene	ND	5.0	0.50	ug/kg	
1330-20-7	Xylene (total)	ND	10	1.0	ug/kg	
	TPH-GRO (C6-C10)	ND	100	50	ug/kg	

CAS No.	Surrogate Recoveries	Limits	
1868-53-7	Dibromofluoromethane	92%	60-130%
2037-26-5	Toluene-D8	103%	60-130%
460-00-4	4-Bromofluorobenzene	102%	60-130%

# Method Blank Summary

**Job Number:** C19981

**Account:** SWCICAFO Sierra West Consultants, Inc.

**Project:** T0000003190-F&M Auto Service., 1839 Foothill Blvd, Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VM980-MB	M31027.D	1	02/01/12	XB	n/a	n/a	VM980

The QC reported here applies to the following samples:

Method: SW846 8260B

C19981-4, C19981-6, C19981-7, C19981-9, C19981-11, C19981-17

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	5.0	0.50	ug/kg	
108-20-3	Di-Isopropyl ether	ND	5.0	0.50	ug/kg	
100-41-4	Ethylbenzene	ND	5.0	0.50	ug/kg	
637-92-3	Ethyl tert-Butyl Ether	ND	5.0	0.50	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	5.0	1.0	ug/kg	
994-05-8	Tert-Amyl Methyl Ether	ND	5.0	0.50	ug/kg	
75-65-0	Tert Butyl Alcohol	ND	40	10	ug/kg	
108-88-3	Toluene	ND	5.0	0.50	ug/kg	
1330-20-7	Xylene (total)	ND	10	1.0	ug/kg	
	TPH-GRO (C6-C10)	ND	100	50	ug/kg	

CAS No.	Surrogate Recoveries	Limits	
1868-53-7	Dibromofluoromethane	93%	60-130%
2037-26-5	Toluene-D8	102%	60-130%
460-00-4	4-Bromofluorobenzene	98%	60-130%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ug/kg	



## Method Blank Summary

**Job Number:** C19981

**Account:** SWCICAFO Sierra West Consultants, Inc.

**Project:** T0000003190-F&M Auto Service., 1839 Foothill Blvd, Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VL443-MB	L14288.D	1	02/01/12	XB	n/a	n/a	VL443

The QC reported here applies to the following samples:

Method: SW846 8260B

C19981-8

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	5.0	0.50	ug/kg	
108-20-3	Di-Isopropyl ether	ND	5.0	0.50	ug/kg	
100-41-4	Ethylbenzene	ND	5.0	0.50	ug/kg	
637-92-3	Ethyl tert-Butyl Ether	ND	5.0	0.50	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	5.0	1.0	ug/kg	
994-05-8	Tert-Amyl Methyl Ether	ND	5.0	0.50	ug/kg	
75-65-0	Tert Butyl Alcohol	ND	40	10	ug/kg	
108-88-3	Toluene	ND	5.0	0.50	ug/kg	
1330-20-7	Xylene (total)	ND	10	1.0	ug/kg	
	TPH-GRO (C6-C10)	ND	100	50	ug/kg	

CAS No.	Surrogate Recoveries	Limits	
1868-53-7	Dibromofluoromethane	95%	60-130%
2037-26-5	Toluene-D8	103%	60-130%
460-00-4	4-Bromofluorobenzene	102%	60-130%

# Method Blank Summary

**Job Number:** C19981  
**Account:** SWCICAFO Sierra West Consultants, Inc.  
**Project:** T0000003190-F&M Auto Service., 1839 Foothill Blvd, Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VM982-MB	M31093.D	1	02/03/12	XB	n/a	n/a	VM982

The QC reported here applies to the following samples:

Method: SW846 8260B

C19981-1, C19981-5, C19981-10

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	5.0	0.50	ug/kg	
108-20-3	Di-Isopropyl ether	ND	5.0	0.50	ug/kg	
100-41-4	Ethylbenzene	ND	5.0	0.50	ug/kg	
637-92-3	Ethyl tert-Butyl Ether	ND	5.0	0.50	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	5.0	1.0	ug/kg	
994-05-8	Tert-Amyl Methyl Ether	ND	5.0	0.50	ug/kg	
75-65-0	Tert Butyl Alcohol	ND	40	10	ug/kg	
108-88-3	Toluene	ND	5.0	0.50	ug/kg	
1330-20-7	Xylene (total)	ND	10	1.0	ug/kg	
	TPH-GRO (C6-C10)	ND	100	50	ug/kg	

CAS No.	Surrogate Recoveries	Limits	
1868-53-7	Dibromofluoromethane	99%	60-130%
2037-26-5	Toluene-D8	103%	60-130%
460-00-4	4-Bromofluorobenzene	98%	60-130%

4.1.5  
4

# Blank Spike/Blank Spike Duplicate Summary

**Job Number:** C19981

**Account:** SWCICAFO Sierra West Consultants, Inc.

**Project:** T0000003190-F&M Auto Service., 1839 Foothill Blvd, Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VM979-BS	M30994.D	1	01/27/12	XB	n/a	n/a	VM979
VM979-BSD	M30995.D	1	01/27/12	XB	n/a	n/a	VM979

The QC reported here applies to the following samples:

Method: SW846 8260B

C19981-2, C19981-3, C19981-12, C19981-13, C19981-14, C19981-15, C19981-16, C19981-18, C19981-19

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	BSD ug/kg	BSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	40	45.0	113	45.2	113	0	60-130/30
75-27-4	Bromodichloromethane	40	45.9	115	46.5	116	1	60-130/30
75-25-2	Bromoform	40	41.6	104	42.3	106	2	60-130/30
108-90-7	Chlorobenzene	40	43.2	108	43.9	110	2	60-130/30
75-00-3	Chloroethane	40	42.2	106	44.5	111	5	60-130/30
67-66-3	Chloroform	40	43.8	110	44.3	111	1	60-130/30
56-23-5	Carbon tetrachloride	40	45.5	114	46.4	116	2	60-130/30
75-34-3	1,1-Dichloroethane	40	43.1	108	43.8	110	2	60-130/30
75-35-4	1,1-Dichloroethylene	40	42.5	106	43.0	108	1	60-130/30
106-93-4	1,2-Dibromoethane	40	43.6	109	43.4	109	0	60-130/30
107-06-2	1,2-Dichloroethane	40	46.5	116	46.5	116	0	60-130/30
78-87-5	1,2-Dichloropropane	40	45.4	114	45.2	113	0	60-130/30
108-20-3	Di-Isopropyl ether	40	44.0	110	44.2	111	0	60-130/30
124-48-1	Dibromochloromethane	40	44.0	110	44.4	111	1	60-130/30
75-71-8	Dichlorodifluoromethane	40	32.3	81	33.2	83	3	60-130/30
156-59-2	cis-1,2-Dichloroethylene	40	42.4	106	43.8	110	3	60-130/30
10061-01-5	cis-1,3-Dichloropropene	40	46.2	116	46.6	117	1	60-130/30
541-73-1	m-Dichlorobenzene	40	44.3	111	44.4	111	0	60-130/30
95-50-1	o-Dichlorobenzene	40	44.1	110	43.9	110	0	60-130/30
106-46-7	p-Dichlorobenzene	40	44.0	110	44.5	111	1	60-130/30
156-60-5	trans-1,2-Dichloroethylene	40	43.2	108	44.3	111	3	60-130/30
10061-02-6	trans-1,3-Dichloropropene	40	44.4	111	44.6	112	0	60-130/30
100-41-4	Ethylbenzene	40	44.3	111	44.8	112	1	60-130/30
637-92-3	Ethyl tert-Butyl Ether	40	46.6	117	47.4	119	2	60-130/30
74-83-9	Methyl bromide	40	44.0	110	45.9	115	4	60-130/30
74-87-3	Methyl chloride	40	42.2	106	42.1	105	0	60-130/30
75-09-2	Methylene chloride	40	40.8	102	41.9	105	3	60-130/30
1634-04-4	Methyl Tert Butyl Ether	40	45.6	114	45.3	113	1	60-130/30
994-05-8	Tert-Amyl Methyl Ether	40	45.8	115	46.3	116	1	60-130/30
75-65-0	Tert Butyl Alcohol	200	217	109	210	105	3	60-130/30
71-55-6	1,1,1-Trichloroethane	40	45.5	114	46.3	116	2	60-130/30
79-34-5	1,1,2,2-Tetrachloroethane	40	42.4	106	40.6	102	4	60-130/30
79-00-5	1,1,2-Trichloroethane	40	41.4	104	42.2	106	2	60-130/30
127-18-4	Tetrachloroethylene	40	44.5	111	44.9	112	1	60-130/30
108-88-3	Toluene	40	42.9	107	43.7	109	2	60-130/30
79-01-6	Trichloroethylene	40	45.8	115	46.7	117	2	60-130/30

4.2.1  
4

# Blank Spike/Blank Spike Duplicate Summary

**Job Number:** C19981  
**Account:** SWCICAFO Sierra West Consultants, Inc.  
**Project:** T0000003190-F&M Auto Service., 1839 Foothill Blvd, Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VM979-BS	M30994.D	1	01/27/12	XB	n/a	n/a	VM979
VM979-BSD	M30995.D	1	01/27/12	XB	n/a	n/a	VM979

The QC reported here applies to the following samples: Method: SW846 8260B

C19981-2, C19981-3, C19981-12, C19981-13, C19981-14, C19981-15, C19981-16, C19981-18, C19981-19

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	BSD ug/kg	BSD %	RPD	Limits Rec/RPD
75-69-4	Trichlorofluoromethane	40	44.3	111	45.9	115	4	60-130/30
75-01-4	Vinyl chloride	40	36.8	92	37.3	93	1	60-130/30
1330-20-7	Xylene (total)	120	128	107	132	110	3	60-130/30

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
1868-53-7	Dibromofluoromethane	98%	96%	60-130%
2037-26-5	Toluene-D8	97%	98%	60-130%
460-00-4	4-Bromofluorobenzene	101%	102%	60-130%

4.2.1  
4

# Blank Spike/Blank Spike Duplicate Summary

**Job Number:** C19981

**Account:** SWCICAFO Sierra West Consultants, Inc.

**Project:** T0000003190-F&M Auto Service., 1839 Foothill Blvd, Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VL443-BS	L14273.D	1	02/01/12	XB	n/a	n/a	VL443
VL443-BSD	L14274.D	1	02/01/12	XB	n/a	n/a	VL443

The QC reported here applies to the following samples:

Method: SW846 8260B

C19981-8

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	BSD ug/kg	BSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	40	37.8	95	38.4	96	2	60-130/30
108-20-3	Di-Isopropyl ether	40	46.3	116	44.6	112	4	60-130/30
100-41-4	Ethylbenzene	40	41.1	103	41.3	103	0	60-130/30
637-92-3	Ethyl tert-Butyl Ether	40	43.6	109	40.6	102	7	60-130/30
1634-04-4	Methyl Tert Butyl Ether	40	35.9	90	38.6	97	7	60-130/30
994-05-8	Tert-Amyl Methyl Ether	40	37.0	93	39.2	98	6	60-130/30
75-65-0	Tert Butyl Alcohol	200	209	105	224	112	7	60-130/30
108-88-3	Toluene	40	44.8	112	42.0	105	6	60-130/30
1330-20-7	Xylene (total)	120	120	100	124	103	3	60-130/30

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
1868-53-7	Dibromofluoromethane	95%	99%	60-130%
2037-26-5	Toluene-D8	115%	110%	60-130%
460-00-4	4-Bromofluorobenzene	101%	115%	60-130%

4.2.2  
4

# Blank Spike/Blank Spike Duplicate Summary

**Job Number:** C19981

**Account:** SWCICAFO Sierra West Consultants, Inc.

**Project:** T0000003190-F&M Auto Service., 1839 Foothill Blvd, Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VM980-BS	M31024.D	1	02/01/12	XB	n/a	n/a	VM980
VM980-BSD	M31025.D	1	02/01/12	XB	n/a	n/a	VM980

The QC reported here applies to the following samples:

Method: SW846 8260B

C19981-4, C19981-6, C19981-7, C19981-9, C19981-11, C19981-17

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	BSD ug/kg	BSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	40	42.7	107	41.6	104	3	60-130/30
108-20-3	Di-Isopropyl ether	40	42.7	107	43.0	108	1	60-130/30
100-41-4	Ethylbenzene	40	43.1	108	42.2	106	2	60-130/30
637-92-3	Ethyl tert-Butyl Ether	40	46.0	115	46.5	116	1	60-130/30
1634-04-4	Methyl Tert Butyl Ether	40	44.9	112	44.5	111	1	60-130/30
994-05-8	Tert-Amyl Methyl Ether	40	45.6	114	45.3	113	1	60-130/30
75-65-0	Tert Butyl Alcohol	200	221	111	208	104	6	60-130/30
108-88-3	Toluene	40	41.9	105	41.2	103	2	60-130/30
1330-20-7	Xylene (total)	120	127	106	123	103	3	60-130/30

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
1868-53-7	Dibromofluoromethane	97%	98%	60-130%
2037-26-5	Toluene-D8	98%	96%	60-130%
460-00-4	4-Bromofluorobenzene	104%	101%	60-130%

4.2.3  
4

# Blank Spike/Blank Spike Duplicate Summary

**Job Number:** C19981

**Account:** SWCICAF0 Sierra West Consultants, Inc.

**Project:** T0000003190-F&M Auto Service., 1839 Foothill Blvd, Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VM982-BS	M31095.D	1	02/03/12	XB	n/a	n/a	VM982
VM982-BSD	M31096.D	1	02/03/12	XB	n/a	n/a	VM982

The QC reported here applies to the following samples:

Method: SW846 8260B

C19981-1, C19981-5, C19981-10

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	BSD ug/kg	BSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	40	44.4	111	43.7	109	2	60-130/30
108-20-3	Di-Isopropyl ether	40	43.8	110	43.4	109	1	60-130/30
100-41-4	Ethylbenzene	40	44.0	110	44.1	110	0	60-130/30
637-92-3	Ethyl tert-Butyl Ether	40	47.3	118	47.1	118	0	60-130/30
1634-04-4	Methyl Tert Butyl Ether	40	46.1	115	45.8	115	1	60-130/30
994-05-8	Tert-Amyl Methyl Ether	40	46.4	116	46.5	116	0	60-130/30
75-65-0	Tert Butyl Alcohol	200	226	113	230	115	2	60-130/30
108-88-3	Toluene	40	42.8	107	43.3	108	1	60-130/30
1330-20-7	Xylene (total)	120	129	108	129	108	0	60-130/30

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
1868-53-7	Dibromofluoromethane	95%	97%	60-130%
2037-26-5	Toluene-D8	97%	98%	60-130%
460-00-4	4-Bromofluorobenzene	101%	101%	60-130%

4.2.4  
4

# Laboratory Control Sample Summary

**Job Number:** C19981  
**Account:** SWCICAFO Sierra West Consultants, Inc.  
**Project:** T0000003190-F&M Auto Service., 1839 Foothill Blvd, Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VM979-LCS	M30996.D	1	01/27/12	XB	n/a	n/a	VM979

The QC reported here applies to the following samples: Method: SW846 8260B

C19981-2, C19981-3, C19981-12, C19981-13, C19981-14, C19981-15, C19981-16, C19981-18, C19981-19

CAS No.	Compound	Spike ug/kg	LCS ug/kg	LCS %	Limits
	TPH-GRO (C6-C10)	250	259	104	60-130

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	94%	60-130%
2037-26-5	Toluene-D8	102%	60-130%
460-00-4	4-Bromofluorobenzene	101%	60-130%

4.3.1  
4



# Laboratory Control Sample Summary

**Job Number:** C19981  
**Account:** SWCICAFO Sierra West Consultants, Inc.  
**Project:** T0000003190-F&M Auto Service., 1839 Foothill Blvd, Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VL443-LCS	L14275.D	1	02/01/12	XB	n/a	n/a	VL443

The QC reported here applies to the following samples:

Method: SW846 8260B

C19981-8

CAS No.	Compound	Spike ug/kg	LCS ug/kg	LCS %	Limits
	TPH-GRO (C6-C10)	250	248	99	60-130

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	93%	60-130%
2037-26-5	Toluene-D8	109%	60-130%
460-00-4	4-Bromofluorobenzene	99%	60-130%

4.3.2  
4

# Laboratory Control Sample Summary

**Job Number:** C19981  
**Account:** SWCICAFO Sierra West Consultants, Inc.  
**Project:** T0000003190-F&M Auto Service., 1839 Foothill Blvd, Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VM980-LCS	M31026.D	1	02/01/12	XB	n/a	n/a	VM980

The QC reported here applies to the following samples:

Method: SW846 8260B

C19981-4, C19981-6, C19981-7, C19981-9, C19981-11, C19981-17

CAS No.	Compound	Spike ug/kg	LCS ug/kg	LCS %	Limits
	TPH-GRO (C6-C10)	250	250	100	60-130

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	94%	60-130%
2037-26-5	Toluene-D8	101%	60-130%
460-00-4	4-Bromofluorobenzene	100%	60-130%

# Laboratory Control Sample Summary

**Job Number:** C19981

**Account:** SWCICAFO Sierra West Consultants, Inc.

**Project:** T0000003190-F&M Auto Service., 1839 Foothill Blvd, Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VM982-LCS	M31092.D	1	02/03/12	XB	n/a	n/a	VM982

The QC reported here applies to the following samples:

Method: SW846 8260B

C19981-1, C19981-5, C19981-10

CAS No.	Compound	Spike ug/kg	LCS ug/kg	LCS %	Limits
	TPH-GRO (C6-C10)	250	261	104	60-130

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	99%	60-130%
2037-26-5	Toluene-D8	104%	60-130%
460-00-4	4-Bromofluorobenzene	103%	60-130%

4.3.4  
4

# Matrix Spike/Matrix Spike Duplicate Summary

**Job Number:** C19981

**Account:** SWCICAFO Sierra West Consultants, Inc.

**Project:** T0000003190-F&M Auto Service., 1839 Foothill Blvd, Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
C19981-3MS	M31014.D	1	01/27/12	XB	n/a	n/a	VM979
C19981-3MSD	M31015.D	1	01/27/12	XB	n/a	n/a	VM979
C19981-3	M31002.D	1	01/27/12	XB	n/a	n/a	VM979

The QC reported here applies to the following samples:

Method: SW846 8260B

C19981-2, C19981-3, C19981-12, C19981-13, C19981-14, C19981-15, C19981-16, C19981-18, C19981-19

CAS No.	Compound	C19981-3 ug/kg	Spike Q	ug/kg	MS ug/kg	MS %	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	ND		39.4	42.6	108	42.4	107	0	60-130/30
75-27-4	Bromodichloromethane	ND		39.4	42.5	108	41.7	106	2	60-130/30
75-25-2	Bromoform	ND		39.4	45.3	115	44.2	112	2	60-130/30
108-90-7	Chlorobenzene	ND		39.4	40.3	102	40.1	102	0	60-130/30
75-00-3	Chloroethane	ND		39.4	41.6	106	41.0	104	1	60-130/30
67-66-3	Chloroform	ND		39.4	42.2	107	42.0	106	0	60-130/30
56-23-5	Carbon tetrachloride	ND		39.4	42.9	109	43.6	111	2	60-130/30
75-34-3	1,1-Dichloroethane	ND		39.4	41.5	105	41.3	105	0	60-130/30
75-35-4	1,1-Dichloroethylene	ND		39.4	38.6	98	40.0	101	4	60-130/30
106-93-4	1,2-Dibromoethane	ND		39.4	46.0	117	44.6	113	3	60-130/30
107-06-2	1,2-Dichloroethane	ND		39.4	46.5	118	45.7	116	2	60-130/30
78-87-5	1,2-Dichloropropane	ND		39.4	42.3	107	42.5	108	0	60-130/30
108-20-3	Di-Isopropyl ether	ND		39.4	40.3	102	40.8	103	1	60-130/30
124-48-1	Dibromochloromethane	ND		39.4	43.3	110	42.4	107	2	60-130/30
75-71-8	Dichlorodifluoromethane	ND		39.4	23.9	61	22.8	58* a	5	60-130/30
156-59-2	cis-1,2-Dichloroethylene	ND		39.4	42.0	107	41.9	106	0	60-130/30
10061-01-5	cis-1,3-Dichloropropene	ND		39.4	45.0	114	44.3	112	2	60-130/30
541-73-1	m-Dichlorobenzene	ND		39.4	39.2	100	40.0	101	2	60-130/30
95-50-1	o-Dichlorobenzene	ND		39.4	40.6	103	40.8	103	0	60-130/30
106-46-7	p-Dichlorobenzene	ND		39.4	39.5	100	40.3	102	2	60-130/30
156-60-5	trans-1,2-Dichloroethylene	ND		39.4	40.9	104	40.9	104	0	60-130/30
10061-02-6	trans-1,3-Dichloropropene	ND		39.4	40.6	103	39.6	100	2	60-130/30
100-41-4	Ethylbenzene	ND		39.4	41.6	106	41.8	106	0	60-130/30
637-92-3	Ethyl tert-Butyl Ether	ND		39.4	47.6	121	47.6	121	0	60-130/30
74-83-9	Methyl bromide	ND		39.4	40.0	102	39.7	101	1	60-130/30
74-87-3	Methyl chloride	ND		39.4	34.4	87	33.3	84	3	60-130/30
75-09-2	Methylene chloride	ND		39.4	39.4	100	39.7	101	1	60-130/30
1634-04-4	Methyl Tert Butyl Ether	ND		39.4	48.5	123	47.6	121	2	60-130/30
994-05-8	Tert-Amyl Methyl Ether	ND		39.4	47.6	121	46.8	119	2	60-130/30
75-65-0	Tert Butyl Alcohol	ND		197	262	133* a	252	128	4	60-130/30
71-55-6	1,1,1-Trichloroethane	ND		39.4	44.2	112	44.8	114	1	60-130/30
79-34-5	1,1,2,2-Tetrachloroethane	ND		39.4	46.7	119	46.1	117	1	60-130/30
79-00-5	1,1,2-Trichloroethane	ND		39.4	43.9	112	43.2	110	2	60-130/30
127-18-4	Tetrachloroethylene	ND		39.4	40.3	102	40.6	103	1	60-130/30
108-88-3	Toluene	ND		39.4	40.9	104	40.8	103	0	60-130/30
79-01-6	Trichloroethylene	ND		39.4	42.8	109	42.9	109	0	60-130/30

4.4.1  
4

# Matrix Spike/Matrix Spike Duplicate Summary

**Job Number:** C19981

**Account:** SWCICAFO Sierra West Consultants, Inc.

**Project:** T0000003190-F&M Auto Service., 1839 Foothill Blvd, Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
C19981-3MS	M31014.D	1	01/27/12	XB	n/a	n/a	VM979
C19981-3MSD	M31015.D	1	01/27/12	XB	n/a	n/a	VM979
C19981-3	M31002.D	1	01/27/12	XB	n/a	n/a	VM979

The QC reported here applies to the following samples:

Method: SW846 8260B

C19981-2, C19981-3, C19981-12, C19981-13, C19981-14, C19981-15, C19981-16, C19981-18, C19981-19

CAS No.	Compound	C19981-3 ug/kg	Spike Q ug/kg	MS ug/kg	MS %	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
75-69-4	Trichlorofluoromethane	ND	39.4	42.1	107	41.4	105	2	60-130/30
75-01-4	Vinyl chloride	ND	39.4	40.5	103	39.0	99	4	60-130/30
1330-20-7	Xylene (total)	ND	118	121	102	121	102	0	60-130/30

CAS No.	Surrogate Recoveries	MS	MSD	C19981-3	Limits
1868-53-7	Dibromofluoromethane	100%	100%	103%	60-130%
2037-26-5	Toluene-D8	95%	96%	102%	60-130%
460-00-4	4-Bromofluorobenzene	106%	105%	100%	60-130%

(a) Outside laboratory control limits.

4.4.1  
4

# Matrix Spike/Matrix Spike Duplicate Summary

**Job Number:** C19981

**Account:** SWCICAFO Sierra West Consultants, Inc.

**Project:** T0000003190-F&M Auto Service., 1839 Foothill Blvd, Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
C19956-13MS	L14302.D	1	02/02/12	XB	n/a	n/a	VL443
C19956-13MSD	L14303.D	1	02/02/12	XB	n/a	n/a	VL443
C19956-13	L14297.D	1	02/01/12	XB	n/a	n/a	VL443

The QC reported here applies to the following samples:

Method: SW846 8260B

C19981-8

CAS No.	Compound	C19956-13 ug/kg	Spike Q	ug/kg	MS ug/kg	MS %	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	4.9 U		30.4	25.5	84	27.0	82	6	60-130/30
108-20-3	Di-Isopropyl ether	4.9 U		30.4	29.3	96	31.4	95	7	60-130/30
100-41-4	Ethylbenzene	4.9 U		30.4	24.0	79	24.0	72	0	60-130/30
637-92-3	Ethyl tert-Butyl Ether	4.9 U		30.4	31.8	104	34.2	103	7	60-130/30
1634-04-4	Methyl Tert Butyl Ether	4.9 U		30.4	31.3	103	33.8	102	8	60-130/30
994-05-8	Tert-Amyl Methyl Ether	4.9 U		30.4	30.8	101	32.9	99	7	60-130/30
75-65-0	Tert Butyl Alcohol	40 U		152	189	124	212	128	11	60-130/30
108-88-3	Toluene	4.9 U		30.4	24.1	79	24.5	74	2	60-130/30
1330-20-7	Xylene (total)	9.9 U		91.3	67.8	74	68.5	69	1	60-130/30

CAS No.	Surrogate Recoveries	MS	MSD	C19956-13	Limits
1868-53-7	Dibromofluoromethane	25% * b	25% * b	21% * a	60-130%
2037-26-5	Toluene-D8	102%	102%	101%	60-130%
460-00-4	4-Bromofluorobenzene	108%	103%	102%	60-130%

(a) Outside control limits due to matrix interference. Confirmed by MS/MSD.

(b) Outside control limits due to matrix interference.

# Matrix Spike/Matrix Spike Duplicate Summary

**Job Number:** C19981

**Account:** SWCICAFO Sierra West Consultants, Inc.

**Project:** T0000003190-F&M Auto Service., 1839 Foothill Blvd, Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
C20061-1MS	M31110.D	1	02/03/12	XB	n/a	n/a	VM982
C20061-1MSD	M31111.D	1	02/03/12	XB	n/a	n/a	VM982
C20061-1	M31097.D	1	02/03/12	XB	n/a	n/a	VM982

The QC reported here applies to the following samples:

Method: SW846 8260B

C19981-1, C19981-5, C19981-10

CAS No.	Compound	C20061-1 ug/kg	Spike Q ug/kg	MS ug/kg	MS %	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	ND	40	41.2	103	40.6	103	1	60-130/30
108-20-3	Di-Isopropyl ether	ND	40	40.1	100	40.9	103	2	60-130/30
100-41-4	Ethylbenzene	ND	40	40.3	101	40.6	103	1	60-130/30
637-92-3	Ethyl tert-Butyl Ether	ND	40	44.6	112	44.4	112	0	60-130/30
1634-04-4	Methyl Tert Butyl Ether	ND	40	45.2	113	44.5	112	2	60-130/30
994-05-8	Tert-Amyl Methyl Ether	ND	40	45.3	113	44.1	111	3	60-130/30
75-65-0	Tert Butyl Alcohol	ND	200	251	126	255	129	2	60-130/30
108-88-3	Toluene	ND	40	40.4	101	40.4	102	0	60-130/30
1330-20-7	Xylene (total)	ND	120	116	97	117	98	1	60-130/30

CAS No.	Surrogate Recoveries	MS	MSD	C20061-1	Limits
1868-53-7	Dibromofluoromethane	97%	97%	93%	60-130%
2037-26-5	Toluene-D8	96%	98%	99%	60-130%
460-00-4	4-Bromofluorobenzene	99%	105%	97%	60-130%

4.4.3  
4

## GC/MS Semi-volatiles

5

### QC Data Summaries

---

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries



## Method Blank Summary

**Job Number:** C19981

**Account:** SWCICAFO Sierra West Consultants, Inc.

**Project:** T0000003190-F&M Auto Service., 1839 Foothill Blvd, Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP5316-MB	Y12343.D	1	02/04/12	LB	02/04/12	OP5316	EY590

The QC reported here applies to the following samples:

Method: SW846 8270C

C19981-15, C19981-16

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic acid	ND	670	160	ug/kg	
95-57-8	2-Chlorophenol	ND	170	71	ug/kg	
59-50-7	4-Chloro-3-methyl phenol	ND	170	72	ug/kg	
120-83-2	2,4-Dichlorophenol	ND	170	78	ug/kg	
105-67-9	2,4-Dimethylphenol	ND	170	65	ug/kg	
51-28-5	2,4-Dinitrophenol	ND	670	130	ug/kg	
534-52-1	4,6-Dinitro-o-cresol	ND	330	62	ug/kg	
95-48-7	2-Methylphenol	ND	170	88	ug/kg	
	3&4-Methylphenol	ND	330	79	ug/kg	
88-75-5	2-Nitrophenol	ND	170	79	ug/kg	
100-02-7	4-Nitrophenol	ND	330	40	ug/kg	
87-86-5	Pentachlorophenol	ND	330	34	ug/kg	
108-95-2	Phenol	ND	170	69	ug/kg	
95-95-4	2,4,5-Trichlorophenol	ND	170	75	ug/kg	
88-06-2	2,4,6-Trichlorophenol	ND	170	71	ug/kg	
83-32-9	Acenaphthene	ND	170	73	ug/kg	
208-96-8	Acenaphthylene	ND	170	78	ug/kg	
62-53-3	Aniline	ND	170	44	ug/kg	
120-12-7	Anthracene	ND	170	54	ug/kg	
103-33-3	Azobenzene	ND	170	59	ug/kg	
92-87-5	Benzidine	ND	670	79	ug/kg	
56-55-3	Benzo(a)anthracene	ND	170	33	ug/kg	
50-32-8	Benzo(a)pyrene	ND	170	33	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	170	33	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	170	43	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	170	33	ug/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	170	67	ug/kg	
85-68-7	Butyl benzyl phthalate	ND	170	33	ug/kg	
100-51-6	Benzyl Alcohol	ND	170	89	ug/kg	
91-58-7	2-Chloronaphthalene	ND	170	76	ug/kg	
106-47-8	4-Chloroaniline	ND	170	50	ug/kg	
86-74-8	Carbazole	ND	170	35	ug/kg	
218-01-9	Chrysene	ND	170	33	ug/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND	170	74	ug/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	170	67	ug/kg	
108-60-1	bis(2-Chloroisopropyl)ether	ND	170	67	ug/kg	

## Method Blank Summary

**Job Number:** C19981

**Account:** SWCICAFO Sierra West Consultants, Inc.

**Project:** T0000003190-F&M Auto Service., 1839 Foothill Blvd, Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP5316-MB	Y12343.D	1	02/04/12	LB	02/04/12	OP5316	EY590

The QC reported here applies to the following samples:

Method: SW846 8270C

C19981-15, C19981-16

CAS No.	Compound	Result	RL	MDL	Units	Q
7005-72-3	4-Chlorophenyl phenyl ether	ND	170	76	ug/kg	
95-50-1	1,2-Dichlorobenzene	ND	170	75	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	170	74	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	170	72	ug/kg	
121-14-2	2,4-Dinitrotoluene	ND	170	72	ug/kg	
606-20-2	2,6-Dinitrotoluene	ND	170	75	ug/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	330	70	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	170	41	ug/kg	
132-64-9	Dibenzofuran	ND	170	73	ug/kg	
122-39-4	Diphenylamine	ND	170	65	ug/kg	
84-74-2	Di-n-butyl phthalate	ND	170	33	ug/kg	
117-84-0	Di-n-octyl phthalate	ND	170	34	ug/kg	
84-66-2	Diethyl phthalate	ND	170	57	ug/kg	
131-11-3	Dimethyl phthalate	ND	170	69	ug/kg	
123-91-1	1,4-Dioxane	ND	170	43	ug/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	330	67	ug/kg	
206-44-0	Fluoranthene	ND	170	33	ug/kg	
86-73-7	Fluorene	ND	170	72	ug/kg	
118-74-1	Hexachlorobenzene	ND	170	71	ug/kg	
87-68-3	Hexachlorobutadiene	ND	170	96	ug/kg	
77-47-4	Hexachlorocyclopentadiene	ND	170	92	ug/kg	
67-72-1	Hexachloroethane	ND	170	71	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	170	43	ug/kg	
78-59-1	Isophorone	ND	170	69	ug/kg	
90-12-0	1-Methylnaphthalene	ND	170	76	ug/kg	
91-57-6	2-Methylnaphthalene	ND	170	80	ug/kg	
88-74-4	2-Nitroaniline	ND	170	67	ug/kg	
99-09-2	3-Nitroaniline	ND	170	50	ug/kg	
100-01-6	4-Nitroaniline	ND	170	43	ug/kg	
91-20-3	Naphthalene	ND	170	77	ug/kg	
98-95-3	Nitrobenzene	ND	170	78	ug/kg	
62-75-9	N-Nitrosodimethylamine	ND	170	66	ug/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	170	72	ug/kg	
85-01-8	Phenanthrene	ND	170	58	ug/kg	
129-00-0	Pyrene	ND	170	33	ug/kg	
110-86-1	Pyridine	ND	330	46	ug/kg	

## Method Blank Summary

**Job Number:** C19981

**Account:** SWCICAFO Sierra West Consultants, Inc.

**Project:** T0000003190-F&M Auto Service., 1839 Foothill Blvd, Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP5316-MB	Y12343.D	1	02/04/12	LB	02/04/12	OP5316	EY590

The QC reported here applies to the following samples:

Method: SW846 8270C

C19981-15, C19981-16

CAS No.	Compound	Result	RL	MDL	Units	Q
120-82-1	1,2,4-Trichlorobenzene	ND	170	75	ug/kg	

CAS No.	Surrogate Recoveries	Limits	
367-12-4	2-Fluorophenol	75%	20-100%
4165-62-2	Phenol-d5	77%	20-100%
118-79-6	2,4,6-Tribromophenol	76%	30-100%
4165-60-0	Nitrobenzene-d5	75%	20-100%
321-60-8	2-Fluorobiphenyl	76%	20-106%
1718-51-0	Terphenyl-d14	104%	55-130%

# Blank Spike/Blank Spike Duplicate Summary

**Job Number:** C19981  
**Account:** SWCICAFO Sierra West Consultants, Inc.  
**Project:** T0000003190-F&M Auto Service., 1839 Foothill Blvd, Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP5316-BS2	Y12344.D	1	02/04/12	LB	02/04/12	OP5316	EY590
OP5316-BSD2	Y12345.D	1	02/04/12	LB	02/04/12	OP5316	EY590

The QC reported here applies to the following samples: Method: SW846 8270C

C19981-15, C19981-16

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	BSD ug/kg	BSD %	RPD	Limits Rec/RPD
123-91-1	1,4-Dioxane	833	336	40	371	45	10	19-70/30

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
367-12-4	2-Fluorophenol	70%	77%	20-100%
4165-62-2	Phenol-d5	74%	81%	20-100%
118-79-6	2,4,6-Tribromophenol	88%	89%	30-100%
4165-60-0	Nitrobenzene-d5	71%	78%	20-100%
321-60-8	2-Fluorobiphenyl	74%	81%	20-106%
1718-51-0	Terphenyl-d14	101%	105%	55-130%

5.2.1  
5

# Blank Spike/Blank Spike Duplicate Summary

**Job Number:** C19981

**Account:** SWCICAFO Sierra West Consultants, Inc.

**Project:** T0000003190-F&M Auto Service., 1839 Foothill Blvd, Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP5316-BS1	Y12346.D	1	02/04/12	LB	02/04/12	OP5316	EY590
OP5316-BSD1	Y12347.D	1	02/04/12	LB	02/04/12	OP5316	EY590

The QC reported here applies to the following samples:

Method: SW846 8270C

C19981-15, C19981-16

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	BSD ug/kg	BSD %	RPD	Limits Rec/RPD
65-85-0	Benzoic acid	1670	1370	82	1380	83	1	24-116/30
95-57-8	2-Chlorophenol	833	701	84	652	78	7	31-130/30
59-50-7	4-Chloro-3-methyl phenol	833	729	87	684	82	6	35-117/30
120-83-2	2,4-Dichlorophenol	833	731	88	694	83	5	40-111/30
105-67-9	2,4-Dimethylphenol	833	731	88	695	83	5	29-109/30
51-28-5	2,4-Dinitrophenol	833	639	77	742	89	15	19-117/30
534-52-1	4,6-Dinitro-o-cresol	833	735	88	765	92	4	28-119/30
95-48-7	2-Methylphenol	833	732	88	686	82	6	33-114/30
	3&4-Methylphenol	833	713	86	659	79	8	34-115/30
88-75-5	2-Nitrophenol	833	715	86	673	81	6	20-116/30
100-02-7	4-Nitrophenol	833	716	86	789	95	10	6-114/30
87-86-5	Pentachlorophenol	833	772	93	808	97	5	10-115/30
108-95-2	Phenol	833	732	88	681	82	7	28-122/30
95-95-4	2,4,5-Trichlorophenol	833	701	84	674	81	4	30-111/30
88-06-2	2,4,6-Trichlorophenol	833	725	87	673	81	7	30-110/30
83-32-9	Acenaphthene	833	707	85	675	81	5	34-129/30
208-96-8	Acenaphthylene	833	719	86	682	82	5	38-118/30
62-53-3	Aniline	833	581	70	517	62	12	28-112/30
120-12-7	Anthracene	833	740	89	729	87	1	41-114/30
103-33-3	Azobenzene	833	714	86	687	82	4	28-114/30
92-87-5	Benzidine	1670	25.0	2* a	25.3	2* a	1	10-156/30
56-55-3	Benzo(a)anthracene	833	816	98	820	98	0	40-116/30
50-32-8	Benzo(a)pyrene	833	791	95	804	96	2	39-112/30
205-99-2	Benzo(b)fluoranthene	833	817	98	822	99	1	40-117/30
191-24-2	Benzo(g,h,i)perylene	833	827	99	864	104	4	36-113/30
207-08-9	Benzo(k)fluoranthene	833	817	98	818	98	0	41-117/30
101-55-3	4-Bromophenyl phenyl ether	833	728	87	702	84	4	30-114/30
85-68-7	Butyl benzyl phthalate	833	813	98	810	97	0	27-110/30
100-51-6	Benzyl Alcohol	833	711	85	653	78	9	31-112/30
91-58-7	2-Chloronaphthalene	833	714	86	677	81	5	37-115/30
106-47-8	4-Chloroaniline	833	642	77	550	66	15	29-95/30
86-74-8	Carbazole	833	783	94	788	95	1	40-116/30
218-01-9	Chrysene	833	822	99	824	99	0	40-117/30
111-91-1	bis(2-Chloroethoxy)methane	833	741	89	688	83	7	31-99/30
111-44-4	bis(2-Chloroethyl)ether	833	696	84	656	79	6	30-106/30
108-60-1	bis(2-Chloroisopropyl)ether	833	695	83	654	78	6	24-104/30

5.2.2  
5

# Blank Spike/Blank Spike Duplicate Summary

**Job Number:** C19981

**Account:** SWCICAFO Sierra West Consultants, Inc.

**Project:** T0000003190-F&M Auto Service., 1839 Foothill Blvd, Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP5316-BS1	Y12346.D	1	02/04/12	LB	02/04/12	OP5316	EY590
OP5316-BSD1	Y12347.D	1	02/04/12	LB	02/04/12	OP5316	EY590

The QC reported here applies to the following samples:

Method: SW846 8270C

C19981-15, C19981-16

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	BSD ug/kg	BSD %	RPD	Limits Rec/RPD
7005-72-3	4-Chlorophenyl phenyl ether	833	710	85	681	82	4	30-111/30
95-50-1	1,2-Dichlorobenzene	833	672	81	620	74	8	27-111/30
541-73-1	1,3-Dichlorobenzene	833	652	78	608	73	7	25-116/30
106-46-7	1,4-Dichlorobenzene	833	663	80	615	74	8	27-120/30
121-14-2	2,4-Dinitrotoluene	833	754	90	737	88	2	27-114/30
606-20-2	2,6-Dinitrotoluene	833	737	88	717	86	3	27-114/30
91-94-1	3,3'-Dichlorobenzidine	1670	1500	90	1460	88	3	24-118/30
53-70-3	Dibenzo(a,h)anthracene	833	804	96	855	103	6	37-115/30
132-64-9	Dibenzofuran	833	726	87	701	84	4	28-113/30
122-39-4	Diphenylamine	833	729	87	717	86	2	23-117/30
84-74-2	Di-n-butyl phthalate	833	746	90	748	90	0	29-115/30
117-84-0	Di-n-octyl phthalate	833	816	98	804	96	1	29-127/30
84-66-2	Diethyl phthalate	833	695	83	677	81	3	29-116/30
131-11-3	Dimethyl phthalate	833	705	85	671	81	5	30-110/30
117-81-7	bis(2-Ethylhexyl)phthalate	833	822	99	818	98	0	27-121/30
206-44-0	Fluoranthene	833	783	94	776	93	1	40-120/30
86-73-7	Fluorene	833	724	87	689	83	5	40-119/30
118-74-1	Hexachlorobenzene	833	737	88	720	86	2	28-113/30
87-68-3	Hexachlorobutadiene	833	738	89	710	85	4	29-115/30
77-47-4	Hexachlorocyclopentadiene	833	563	68	579	69	3	26-114/30
67-72-1	Hexachloroethane	833	652	78	603	72	8	24-109/30
193-39-5	Indeno(1,2,3-cd)pyrene	833	798	96	855	103	7	37-114/30
78-59-1	Isophorone	833	710	85	665	80	7	28-117/30
90-12-0	1-Methylnaphthalene	833	719	86	688	83	4	25-113/30
91-57-6	2-Methylnaphthalene	833	694	83	664	80	4	27-113/30
88-74-4	2-Nitroaniline	833	736	88	707	85	4	23-116/30
99-09-2	3-Nitroaniline	833	711	85	668	80	6	29-115/30
100-01-6	4-Nitroaniline	833	732	88	753	90	3	29-114/30
91-20-3	Naphthalene	833	781	94	739	89	6	24-113/30
98-95-3	Nitrobenzene	833	702	84	650	78	8	23-112/30
62-75-9	N-Nitrosodimethylamine	833	665	80	609	73	9	20-108/30
621-64-7	N-Nitroso-di-n-propylamine	833	709	85	671	81	6	26-127/30
85-01-8	Phenanthrene	833	753	90	742	89	1	41-113/30
129-00-0	Pyrene	833	755	91	749	90	1	45-134/30
110-86-1	Pyridine	833	453	54	416	50	9	20-78/30
120-82-1	1,2,4-Trichlorobenzene	833	651	78	617	74	5	31-122/30

5.2.2  
5

## Blank Spike/Blank Spike Duplicate Summary

**Job Number:** C19981

**Account:** SWCICAFO Sierra West Consultants, Inc.

**Project:** T0000003190-F&M Auto Service., 1839 Foothill Blvd, Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP5316-BS1	Y12346.D	1	02/04/12	LB	02/04/12	OP5316	EY590
OP5316-BSD1	Y12347.D	1	02/04/12	LB	02/04/12	OP5316	EY590

The QC reported here applies to the following samples:

Method: SW846 8270C

C19981-15, C19981-16

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
367-12-4	2-Fluorophenol	83%	77%	20-100%
4165-62-2	Phenol-d5	87%	79%	20-100%
118-79-6	2,4,6-Tribromophenol	89%	87%	30-100%
4165-60-0	Nitrobenzene-d5	83%	78%	20-100%
321-60-8	2-Fluorobiphenyl	83%	80%	20-106%
1718-51-0	Terphenyl-d14	98%	97%	55-130%

(a) Outside laboratory control limits.

# Matrix Spike/Matrix Spike Duplicate Summary

**Job Number:** C19981

**Account:** SWCICAFO Sierra West Consultants, Inc.

**Project:** T0000003190-F&M Auto Service., 1839 Foothill Blvd, Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP5316-MS	Y12666.D	1	02/12/12	LB	02/04/12	OP5316	EY602
OP5316-MSD	Y12667.D	1	02/13/12	LB	02/04/12	OP5316	EY602
C19980-20	Y12661.D	1	02/12/12	LB	02/04/12	OP5316	EY602

The QC reported here applies to the following samples:

Method: SW846 8270C

C19981-15, C19981-16

CAS No.	Compound	C19980-20 ug/kg	Spike Q	ug/kg	MS ug/kg	MS %	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
65-85-0	Benzoic acid	790 U		1990	852	43	1070	54	23	24-116/36
95-57-8	2-Chlorophenol	200 U		993	394	40	545	55	32* a	31-130/31
59-50-7	4-Chloro-3-methyl phenol	200 U		993	461	46	582	59	23	35-117/38
120-83-2	2,4-Dichlorophenol	200 U		993	407	41	565	57	33* a	40-111/30
105-67-9	2,4-Dimethylphenol	200 U		993	437	44	580	58	28	29-109/31
51-28-5	2,4-Dinitrophenol	790 U		993	344	35	496	50	36	19-117/40
534-52-1	4,6-Dinitro-o-cresol	400 U		993	547	55	631	64	14	28-119/37
95-48-7	2-Methylphenol	200 U		993	448	45	604	61	30* a	33-114/29
	3&4-Methylphenol	400 U		993	422	42	577	58	31	34-115/31
88-75-5	2-Nitrophenol	200 U		993	383	39	533	54	33* a	20-116/30
100-02-7	4-Nitrophenol	400 U		993	729	73	768	77	5	6-114/56
87-86-5	Pentachlorophenol	400 U		993	846	85	873	88	3	10-115/39
108-95-2	Phenol	200 U		993	458	46	602	61	27	28-122/38
95-95-4	2,4,5-Trichlorophenol	200 U		993	487	49	616	62	23	30-111/28
88-06-2	2,4,6-Trichlorophenol	200 U		993	434	44	570	57	27	30-110/27
83-32-9	Acenaphthene	200 U		993	418	42	568	57	30	34-129/31
208-96-8	Acenaphthylene	200 U		993	416	42	570	57	31* a	38-118/30
62-53-3	Aniline	200 U		993	387	39	507	51	27	28-112/38
120-12-7	Anthracene	200 U		993	654	66	715	72	9	41-114/29
103-33-3	Azobenzene	200 U		993	513	52	623	63	19	28-114/27
92-87-5	Benzidine	790 U		1990	704	35	825	42	16	10-156/50
56-55-3	Benzo(a)anthracene	200 U		993	831	84	857	86	3	40-116/31
50-32-8	Benzo(a)pyrene	200 U		993	807	81	833	84	3	39-112/32
205-99-2	Benzo(b)fluoranthene	200 U		993	813	82	830	84	2	40-117/31
191-24-2	Benzo(g,h,i)perylene	200 U		993	801	81	852	86	6	36-113/32
207-08-9	Benzo(k)fluoranthene	200 U		993	838	84	858	86	2	41-117/30
101-55-3	4-Bromophenyl phenyl ether	200 U		993	550	55	632	64	14	30-114/26
85-68-7	Butyl benzyl phthalate	200 U		993	873	88	903	91	3	27-110/28
100-51-6	Benzyl Alcohol	200 U		993	318	32	381	38	18	31-112/34
91-58-7	2-Chloronaphthalene	200 U		993	384	39	542	55	34* a	37-115/28
106-47-8	4-Chloroaniline	200 U		993	391	39	508	51	26	29-95/34
86-74-8	Carbazole	200 U		993	770	78	801	81	4	40-116/30
218-01-9	Chrysene	200 U		993	837	84	860	87	3	40-117/31
111-91-1	bis(2-Chloroethoxy)methane	200 U		993	402	40	552	56	31* a	31-99/30
111-44-4	bis(2-Chloroethyl)ether	200 U		993	363	37	515	52	35* a	30-106/33
108-60-1	bis(2-Chloroisopropyl)ether	200 U		993	372	37	534	54	36* a	24-104/32

5.3.1  
5



# Matrix Spike/Matrix Spike Duplicate Summary

**Job Number:** C19981  
**Account:** SWCICAFO Sierra West Consultants, Inc.  
**Project:** T0000003190-F&M Auto Service., 1839 Foothill Blvd, Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP5316-MS	Y12666.D	1	02/12/12	LB	02/04/12	OP5316	EY602
OP5316-MSD	Y12667.D	1	02/13/12	LB	02/04/12	OP5316	EY602
C19980-20	Y12661.D	1	02/12/12	LB	02/04/12	OP5316	EY602

The QC reported here applies to the following samples:

Method: SW846 8270C

C19981-15, C19981-16

CAS No.	Compound	C19980-20 ug/kg	Spike Q	ug/kg	MS ug/kg	MS %	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
7005-72-3	4-Chlorophenyl phenyl ether	200 U		993	478	48	590	59	21	30-111/26
95-50-1	1,2-Dichlorobenzene	200 U		993	329	33	487	49	39* a	27-111/35
541-73-1	1,3-Dichlorobenzene	200 U		993	315	32	463	47	38* a	25-116/36
106-46-7	1,4-Dichlorobenzene	200 U		993	319	32	474	48	39* a	27-120/30
121-14-2	2,4-Dinitrotoluene	200 U		993	621	63	698	70	12	27-114/38
606-20-2	2,6-Dinitrotoluene	200 U		993	530	53	629	63	17	27-114/30
91-94-1	3,3'-Dichlorobenzidine	790 U		1990	1580	80	1630	82	3	24-118/31
53-70-3	Dibenzo(a,h)anthracene	200 U		993	783	79	856	86	9	37-115/29
132-64-9	Dibenzofuran	200 U		993	449	45	584	59	26	28-113/27
122-39-4	Diphenylamine	200 U		993	586	59	673	68	14	23-117/28
84-74-2	Di-n-butyl phthalate	200 U		993	754	76	780	79	3	29-115/27
117-84-0	Di-n-octyl phthalate	200 U		993	907	91	930	94	3	29-127/28
84-66-2	Diethyl phthalate	200 U		993	616	62	684	69	10	29-116/27
131-11-3	Dimethyl phthalate	200 U		993	552	56	655	66	17	30-110/26
117-81-7	bis(2-Ethylhexyl)phthalate	400 U		993	885	89	918	92	4	27-121/29
206-44-0	Fluoranthene	200 U		993	765	77	777	78	2	40-120/32
86-73-7	Fluorene	200 U		993	495	50	608	61	20	40-119/30
118-74-1	Hexachlorobenzene	200 U		993	604	61	688	69	13	28-113/27
87-68-3	Hexachlorobutadiene	200 U		993	384	39	562	57	38* a	29-115/33
77-47-4	Hexachlorocyclopentadiene	200 U		993	106	11* b	224	23* b	72* b	26-114/41
67-72-1	Hexachloroethane	200 U		993	307	31	463	47	41* a	24-109/38
193-39-5	Indeno(1,2,3-cd)pyrene	200 U		993	740	75	820	83	10	37-114/33
78-59-1	Isophorone	200 U		993	396	40	545	55	32* a	28-117/30
90-12-0	1-Methylnaphthalene	200 U		993	388	39	549	55	34* a	25-113/33
91-57-6	2-Methylnaphthalene	200 U		993	376	38	532	54	34* a	27-113/32
88-74-4	2-Nitroaniline	200 U		993	518	52	639	64	21	23-116/29
99-09-2	3-Nitroaniline	200 U		993	574	58	651	66	13	29-115/31
100-01-6	4-Nitroaniline	200 U		993	676	68	722	73	7	29-114/31
91-20-3	Naphthalene	200 U		993	420	42	597	60	35* a	24-113/32
98-95-3	Nitrobenzene	200 U		993	362	36	519	52	36* a	23-112/32
62-75-9	N-Nitrosodimethylamine	200 U		993	348	35	454	46	26	20-108/34
621-64-7	N-Nitroso-di-n-propylamine	200 U		993	380	38	522	53	31	26-127/43
85-01-8	Phenanthrene	200 U		993	658	66	714	72	8	41-113/32
129-00-0	Pyrene	200 U		993	762	77	796	80	4	45-134/33
110-86-1	Pyridine	400 U		993	229	23	322	32	34	20-78/38
120-82-1	1,2,4-Trichlorobenzene	200 U		993	339	34	484	49	35	31-122/44

5.3.1  
5

# Matrix Spike/Matrix Spike Duplicate Summary

**Job Number:** C19981

**Account:** SWCICAFO Sierra West Consultants, Inc.

**Project:** T0000003190-F&M Auto Service., 1839 Foothill Blvd, Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP5316-MS	Y12666.D	1	02/12/12	LB	02/04/12	OP5316	EY602
OP5316-MSD	Y12667.D	1	02/13/12	LB	02/04/12	OP5316	EY602
C19980-20	Y12661.D	1	02/12/12	LB	02/04/12	OP5316	EY602

The QC reported here applies to the following samples:

Method: SW846 8270C

C19981-15, C19981-16

CAS No.	Surrogate Recoveries	MS	MSD	C19980-20	Limits
367-12-4	2-Fluorophenol	41%	57%	75%	20-100%
4165-62-2	Phenol-d5	44%	59%	75%	20-100%
118-79-6	2,4,6-Tribromophenol	64%	74%	76%	30-100%
4165-60-0	Nitrobenzene-d5	38%	54%	74%	20-100%
321-60-8	2-Fluorobiphenyl	39%	56%	73%	20-106%
1718-51-0	Terphenyl-d14	85%	89%	96%	55-130%

(a) Outside laboratory control limits. MS/MSD recoveries within control limits.

(b) Outside laboratory control limits.

## GC Semi-volatiles

---

### QC Data Summaries

---

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

## Method Blank Summary

**Job Number:** C19981

**Account:** SWCICAFO Sierra West Consultants, Inc.

**Project:** T0000003190-F&M Auto Service., 1839 Foothill Blvd, Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP5292-MB	MM002240.DI		02/01/12	RV	01/30/12	OP5292	GMM68

The QC reported here applies to the following samples:

Method: SW846 8082

C19981-15, C19981-16

CAS No.	Compound	Result	RL	MDL	Units	Q
12674-11-2	Aroclor 1016	ND	33	6.7	ug/kg	
11104-28-2	Aroclor 1221	ND	33	17	ug/kg	
11141-16-5	Aroclor 1232	ND	33	17	ug/kg	
53469-21-9	Aroclor 1242	ND	33	17	ug/kg	
12672-29-6	Aroclor 1248	ND	33	17	ug/kg	
11097-69-1	Aroclor 1254	ND	33	17	ug/kg	
11096-82-5	Aroclor 1260	ND	33	6.7	ug/kg	

CAS No.	Surrogate Recoveries	Limits	
877-09-8	Tetrachloro-m-xylene	66%	45-108%
877-09-8	Tetrachloro-m-xylene	65%	45-108%
2051-24-3	Decachlorobiphenyl	77%	54-121%
2051-24-3	Decachlorobiphenyl	84%	54-121%

# Method Blank Summary

**Job Number:** C19981  
**Account:** SWCICAFO Sierra West Consultants, Inc.  
**Project:** T0000003190-F&M Auto Service., 1839 Foothill Blvd, Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP5264-MB	GG31568.D	1	01/26/12	JH	01/26/12	OP5264	GGG846

The QC reported here applies to the following samples:

Method: SW846 8015B M

C19981-15, C19981-16

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (C10-C28)	ND	10	2.5	mg/kg	
	TPH (> C28-C40)	ND	20	5.0	mg/kg	

CAS No.	Surrogate Recoveries	Limits
630-01-3	Hexacosane	73% 45-140%

6.1.2  
6

## Method Blank Summary

**Job Number:** C19981  
**Account:** SWCICAFO Sierra West Consultants, Inc.  
**Project:** T0000003190-F&M Auto Service., 1839 Foothill Blvd, Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP5279-MB	GG31652.D	1	01/28/12	JH	01/27/12	OP5279	GGG848

The QC reported here applies to the following samples:

Method: SW846 8015B M

C19981-1, C19981-2, C19981-3, C19981-4, C19981-5, C19981-6, C19981-7, C19981-8, C19981-9, C19981-10, C19981-11, C19981-12, C19981-13, C19981-14, C19981-17, C19981-18, C19981-19

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (C10-C28)	ND	10	2.5	mg/kg	

CAS No.	Surrogate Recoveries	Limits
630-01-3	Hexacosane	90% 45-140%

# Blank Spike/Blank Spike Duplicate Summary

**Job Number:** C19981  
**Account:** SWCICAFO Sierra West Consultants, Inc.  
**Project:** T0000003190-F&M Auto Service., 1839 Foothill Blvd, Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP5292-BS	MM002241.DI		02/01/12	RV	01/30/12	OP5292	GMM68
OP5292-BSD	MM002242.DI		02/01/12	RV	01/30/12	OP5292	GMM68

The QC reported here applies to the following samples: Method: SW846 8082

C19981-15, C19981-16

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	BSD ug/kg	BSD %	RPD	Limits Rec/RPD
12674-11-2	Aroclor 1016	133	94.2	71	91.6	69	3	40-145/30
11096-82-5	Aroclor 1260	133	87.3	65	87.7	66	0	40-145/30

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
877-09-8	Tetrachloro-m-xylene	78%	78%	45-108%
877-09-8	Tetrachloro-m-xylene	72%	75%	45-108%
2051-24-3	Decachlorobiphenyl	74%	77%	54-121%
2051-24-3	Decachlorobiphenyl	84%	84%	54-121%

6.2.1

6

# Blank Spike/Blank Spike Duplicate Summary

**Job Number:** C19981  
**Account:** SWCICAFO Sierra West Consultants, Inc.  
**Project:** T0000003190-F&M Auto Service., 1839 Foothill Blvd, Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP5264-BS	GG31569.D	1	01/26/12	JH	01/26/12	OP5264	GGG846
OP5264-BSD	GG31570.D	1	01/26/12	JH	01/26/12	OP5264	GGG846

The QC reported here applies to the following samples:

Method: SW846 8015B M

C19981-15, C19981-16

CAS No.	Compound	Spike mg/kg	BSP mg/kg	BSP %	BSD mg/kg	BSD %	RPD	Limits Rec/RPD
	TPH (C10-C28)	100	67.8	68	63.4	63	7	45-140/30
	TPH (> C28-C40)	100	60.7	61	56.5	57	7	45-140/30

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
630-01-3	Hexacosane	72%	66%	45-140%

6.2.2

6



# Blank Spike/Blank Spike Duplicate Summary

**Job Number:** C19981  
**Account:** SWCICAFO Sierra West Consultants, Inc.  
**Project:** T0000003190-F&M Auto Service., 1839 Foothill Blvd, Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP5279-BS	GG31653.D	1	01/28/12	JH	01/27/12	OP5279	GGG848
OP5279-BSD	GG31654.D	1	01/28/12	JH	01/27/12	OP5279	GGG848

The QC reported here applies to the following samples: Method: SW846 8015B M

C19981-1, C19981-2, C19981-3, C19981-4, C19981-5, C19981-6, C19981-7, C19981-8, C19981-9, C19981-10, C19981-11, C19981-12, C19981-13, C19981-14, C19981-17, C19981-18, C19981-19

CAS No.	Compound	Spike mg/kg	BSP mg/kg	BSP %	BSD mg/kg	BSD %	RPD	Limits Rec/RPD
	TPH (C10-C28)	100	79.4	79	89.4	89	12	45-140/30

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
630-01-3	Hexacosane	88%	92%	45-140%

6.2.3

9

# Matrix Spike/Matrix Spike Duplicate Summary

**Job Number:** C19981  
**Account:** SWCICAFO Sierra West Consultants, Inc.  
**Project:** T0000003190-F&M Auto Service., 1839 Foothill Blvd, Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP5292-MS	MM002246.DI		02/01/12	RV	01/30/12	OP5292	GMM68
OP5292-MSD	MM002247.DI		02/01/12	RV	01/30/12	OP5292	GMM68
C19879-67	MM002235.DI		02/01/12	RV	01/30/12	OP5292	GMM68

The QC reported here applies to the following samples:

Method: SW846 8082

C19981-15, C19981-16

CAS No.	Compound	C19879-67 ug/kg	Spike Q ug/kg	MS ug/kg	MS %	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
12674-11-2	Aroclor 1016	ND	133	81.3	61	83.5	63	3	40-145/40
11096-82-5	Aroclor 1260	70.6	133	241	128	260	142	8	40-145/40

CAS No.	Surrogate Recoveries	MS	MSD	C19879-67	Limits
877-09-8	Tetrachloro-m-xylene	66%	63%	64%	45-108%
877-09-8	Tetrachloro-m-xylene	64%	61%	68%	45-108%
2051-24-3	Decachlorobiphenyl	77%	75%	72%	54-121%
2051-24-3	Decachlorobiphenyl	82%	79%	79%	54-121%

6.3.1

6

# Matrix Spike/Matrix Spike Duplicate Summary

**Job Number:** C19981  
**Account:** SWCICAFO Sierra West Consultants, Inc.  
**Project:** T0000003190-F&M Auto Service., 1839 Foothill Blvd, Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP5264-MS	HH20877.D	1	01/27/12	JH	01/26/12	OP5264	GHH661
OP5264-MSD	HH20878.D	1	01/27/12	JH	01/26/12	OP5264	GHH661
C19981-16	GG31600.D	1	01/27/12	JH	01/26/12	OP5264	GGG847

The QC reported here applies to the following samples:

Method: SW846 8015B M

C19981-15, C19981-16

CAS No.	Compound	C19981-16 mg/kg	Spike mg/kg	MS mg/kg	MS %	MSD mg/kg	MSD %	RPD	Limits Rec/RPD
	TPH (C10-C28)	ND	100	72.9	73	73.5	74	1	45-140/30
	TPH (> C28-C40)	ND	100	87.3	87	84.5	85	3	45-140/30

CAS No.	Surrogate Recoveries	MS	MSD	C19981-16	Limits
630-01-3	Hexacosane	85%	88%	76%	45-140%

6.3.2  
6

# Matrix Spike/Matrix Spike Duplicate Summary

**Job Number:** C19981  
**Account:** SWCICAFO Sierra West Consultants, Inc.  
**Project:** T0000003190-F&M Auto Service., 1839 Foothill Blvd, Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP5279-MS	GG31688.D	1	01/29/12	JH	01/27/12	OP5279	GGG848
OP5279-MSD	GG31689.D	1	01/29/12	JH	01/27/12	OP5279	GGG848
C19981-12	GG31680.D	1	01/28/12	JH	01/27/12	OP5279	GGG848

The QC reported here applies to the following samples:

Method: SW846 8015B M

C19981-1, C19981-2, C19981-3, C19981-4, C19981-5, C19981-6, C19981-7, C19981-8, C19981-9, C19981-10, C19981-11, C19981-12, C19981-13, C19981-14, C19981-17, C19981-18, C19981-19

CAS No.	Compound	C19981-12 mg/kg	Spike Q	mg/kg	MS mg/kg	MS %	MSD mg/kg	MSD %	RPD	Limits Rec/RPD
	TPH (C10-C28)	ND	100	65.3	65	60.2	60	8	45-140/30	

CAS No.	Surrogate Recoveries	MS	MSD	C19981-12	Limits
630-01-3	Hexacosane	85%	73%	69%	45-140%

6.3.3

6

## Metals Analysis

---

## QC Data Summaries

---

Includes the following where applicable:

- Method Blank Summaries
- Matrix Spike and Duplicate Summaries
- Blank Spike and Lab Control Sample Summaries
- Serial Dilution Summaries

BLANK RESULTS SUMMARY  
Part 2 - Method Blanks

Login Number: C19981  
Account: SWCICAFO - Sierra West Consultants, Inc.  
Project: T0000003190-F&M Auto Service., 1839 Foothill Blvd, Oakland, CA

QC Batch ID: MP4471  
Matrix Type: SOLID

Methods: SW846 6010B  
Units: mg/kg

Prep Date: 01/30/12

Metal	RL	IDL	MDL	MB raw	final
Aluminum	20	1.3	2		
Antimony	2.0	.07	.087		
Arsenic	2.0	.07	.07		
Barium	20	.04	.035		
Beryllium	1.0	.02	.012		
Boron	10	.09	.2		
Cadmium	1.0	.02	.015	0.010	<1.0
Calcium	500	.71	7.6		
Chromium	1.0	.03	.054	0.030	<1.0
Cobalt	1.0	.02	.022		
Copper	2.5	.12	.19		
Iron	20	.64	1.6		
Lead	2.0	.07	.054	0.010	<2.0
Magnesium	500	2.7	1.5		
Manganese	1.5	.01	.054		
Molybdenum	2.0	.02	.024		
Nickel	1.0	.02	.024	0.070	<1.0
Potassium	1000	1.8	1.3		
Selenium	2.0	.18	.23		
Silicon		.12			
Silver	1.0	.03	.044		
Sodium	1000	1.5	4.8		
Strontium	1.0	.02	.017		
Thallium	2.0	.05	.073		
Tin	50	.02	.41		
Titanium	1.0	.04	.079		
Vanadium	1.0	.03	.025		
Zinc	2.0	.03	.098	0.46	<2.0

Associated samples MP4471: C19981-1, C19981-2, C19981-3, C19981-4, C19981-5, C19981-6, C19981-7, C19981-8, C19981-9, C19981-10, C19981-11, C19981-12, C19981-13, C19981-14, C19981-15, C19981-16, C19981-17, C19981-18, C19981-19

Results < IDL are shown as zero for calculation purposes  
(\* ) Outside of QC limits  
(anr) Analyte not requested

7.1.1  
7

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: C19981  
 Account: SWCICAFO - Sierra West Consultants, Inc.  
 Project: T0000003190-F&M Auto Service., 1839 Foothill Blvd, Oakland, CA

QC Batch ID: MP4471  
 Matrix Type: SOLID

Methods: SW846 6010B  
 Units: mg/kg

Prep Date: 01/30/12

Metal	C19981-15		Spike/lot		QC Limits
	Original MS		MPIR4A	% Rec	
Aluminum					
Antimony					
Arsenic					
Barium					
Beryllium					
Boron					
Cadmium	0.0	39.2	45.5	86.2	75-125
Calcium					
Chromium	35.5	77.7	45.5	92.8	75-125
Cobalt					
Copper					
Iron					
Lead	6.1	47.8	45.5	91.7	75-125
Magnesium					
Manganese					
Molybdenum					
Nickel	48.2	90.5	45.5	93.1	75-125
Potassium					
Selenium					
Silicon					
Silver					
Sodium					
Strontium					
Thallium					
Tin					
Titanium					
Vanadium					
Zinc	34.0	73.2	45.5	86.2	75-125

Associated samples MP4471: C19981-1, C19981-2, C19981-3, C19981-4, C19981-5, C19981-6, C19981-7, C19981-8, C19981-9, C19981-10, C19981-11, C19981-12, C19981-13, C19981-14, C19981-15, C19981-16, C19981-17, C19981-18, C19981-19

Results < IDL are shown as zero for calculation purposes  
 (\*) Outside of QC limits  
 (N) Matrix Spike Rec. outside of QC limits  
 (anr) Analyte not requested

7.1.2  
 7

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: C19981  
 Account: SWCICAFO - Sierra West Consultants, Inc.  
 Project: T0000003190-F&M Auto Service., 1839 Foothill Blvd, Oakland, CA

QC Batch ID: MP4471  
 Matrix Type: SOLID

Methods: SW846 6010B  
 Units: mg/kg

Prep Date: 01/30/12

Metal	C19981-15 Original MSD		SpikeLot MPIR4A % Rec		MSD RPD	QC Limit
Aluminum						
Antimony						
Arsenic						
Barium						
Beryllium						
Boron						
Cadmium	0.0	36.8	43.1	85.4	6.3	20
Calcium						
Chromium	35.5	73.8	43.1	88.9	5.1	20
Cobalt						
Copper						
Iron						
Lead	6.1	45.5	43.1	91.4	4.9	20
Magnesium						
Manganese						
Molybdenum						
Nickel	48.2	85.1	43.1	85.6	6.2	20
Potassium						
Selenium						
Silicon						
Silver						
Sodium						
Strontium						
Thallium						
Tin						
Titanium						
Vanadium						
Zinc	34.0	70.6	43.1	84.9	3.6	20

Associated samples MP4471: C19981-1, C19981-2, C19981-3, C19981-4, C19981-5, C19981-6, C19981-7, C19981-8, C19981-9, C19981-10, C19981-11, C19981-12, C19981-13, C19981-14, C19981-15, C19981-16, C19981-17, C19981-18, C19981-19

Results < IDL are shown as zero for calculation purposes  
 (\*) Outside of QC limits  
 (N) Matrix Spike Rec. outside of QC limits  
 (anr) Analyte not requested

7.1.2  
 7



SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: C19981  
 Account: SWCICAFO - Sierra West Consultants, Inc.  
 Project: T0000003190-F&M Auto Service., 1839 Foothill Blvd, Oakland, CA

QC Batch ID: MP4471  
 Matrix Type: SOLID

Methods: SW846 6010B  
 Units: mg/kg

Prep Date: 01/30/12

Metal	BSP Result	Spikelot MPIR4A	% Rec	QC Limits
Aluminum				
Antimony				
Arsenic				
Barium				
Beryllium				
Boron				
Cadmium	46.9	50	93.8	80-120
Calcium				
Chromium	49.4	50	98.8	80-120
Cobalt				
Copper				
Iron				
Lead	47.5	50	95.0	80-120
Magnesium				
Manganese				
Molybdenum				
Nickel	47.0	50	94.0	80-120
Potassium				
Selenium				
Silicon				
Silver				
Sodium				
Strontium				
Thallium				
Tin				
Titanium				
Vanadium				
Zinc	50.9	50	101.8	80-120

Associated samples MP4471: C19981-1, C19981-2, C19981-3, C19981-4, C19981-5, C19981-6, C19981-7, C19981-8, C19981-9, C19981-10, C19981-11, C19981-12, C19981-13, C19981-14, C19981-15, C19981-16, C19981-17, C19981-18, C19981-19

Results < IDL are shown as zero for calculation purposes  
 (\*) Outside of QC limits  
 (anr) Analyte not requested

7.1.3  
7

SERIAL DILUTION RESULTS SUMMARY

Login Number: C19981  
 Account: SWCICAFO - Sierra West Consultants, Inc.  
 Project: T0000003190-F&M Auto Service., 1839 Foothill Blvd, Oakland, CA

QC Batch ID: MP4471  
 Matrix Type: SOLID

Methods: SW846 6010B  
 Units: ug/l

Prep Date: 01/30/12

Metal	C19981-15 Original SDL 1:5		%DIF	QC Limits
Aluminum				
Antimony				
Arsenic				
Barium				
Beryllium				
Boron				
Cadmium	0.00	0.00	NC	0-10
Calcium				
Chromium	376	397	5.6	0-10
Cobalt				
Copper				
Iron				
Lead	65.1	62.7	3.7	0-10
Magnesium				
Manganese				
Molybdenum				
Nickel	510	480	6.1	0-10
Potassium				
Selenium				
Silicon				
Silver				
Sodium				
Strontium				
Thallium				
Tin				
Titanium				
Vanadium				
Zinc	360	370	2.9	0-10

Associated samples MP4471: C19981-1, C19981-2, C19981-3, C19981-4, C19981-5, C19981-6, C19981-7, C19981-8, C19981-9, C19981-10, C19981-11, C19981-12, C19981-13, C19981-14, C19981-15, C19981-16, C19981-17, C19981-18, C19981-19

Results < IDL are shown as zero for calculation purposes  
 (\*) Outside of QC limits  
 (anr) Analyte not requested

7.1.4  
7

## **Appendix E**

### **Grab Groundwater Sample Laboratory Analytical Report**

Technical Report for

Sierra West Consultants, Inc.

T0000003190-F&M Auto Service., 1839 Foothill Blvd, Oakland, CA

Accutest Job Number: C19982

Sampling Dates: 01/23/12 - 01/24/12

Report to:

Sierra West Consultants, Inc.  
4227 Sunrise Blvd Suite#220  
Fair Oaks, CA 95628  
jbensch@sierra-west.net; bwhalen@sierra-west.net  
ATTN: Jeff Bensch

Total number of pages in report: **64**



Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Conference and/or state specific certification programs as applicable.

Kesavalu M. Bagawandoss,  
Ph.D., J.D., Lab Director

Client Service contact: Nutan Kabir 408-588-0200

Certifications: CA (08258CA) AZ (AZ0762) DoD/ISO/IEC 17025:2005 (L2242)

This report shall not be reproduced, except in its entirety, without the written approval of Accutest Laboratories.  
Test results relate only to samples analyzed.

# Table of Contents

-1-

<b>Section 1: Sample Summary .....</b>	<b>3</b>
<b>Section 2: Sample Results .....</b>	<b>4</b>
<b>2.1: C19982-1: B-1-GW .....</b>	5
<b>2.2: C19982-1F: B-1-GW .....</b>	7
<b>2.3: C19982-2: B-2-GW .....</b>	8
<b>2.4: C19982-2F: B-2-GW .....</b>	10
<b>2.5: C19982-3: B-3-GW .....</b>	11
<b>2.6: C19982-3F: B-3-GW .....</b>	13
<b>2.7: C19982-4: MW-4-GW .....</b>	14
<b>2.8: C19982-4F: MW-4-GW .....</b>	16
<b>2.9: C19982-5: MW-2-GW .....</b>	17
<b>2.10: C19982-5F: MW-2-GW .....</b>	19
<b>2.11: C19982-6: MW-3-GW .....</b>	20
<b>2.12: C19982-7: MW-1-GW .....</b>	28
<b>2.13: C19982-7F: MW-1-GW .....</b>	30
<b>Section 3: Misc. Forms .....</b>	<b>31</b>
<b>3.1: Chain of Custody .....</b>	32
<b>Section 4: GC/MS Volatiles - QC Data Summaries .....</b>	<b>34</b>
<b>4.1: Method Blank Summary .....</b>	35
<b>4.2: Blank Spike/Blank Spike Duplicate Summary .....</b>	37
<b>4.3: Laboratory Control Sample Summary .....</b>	39
<b>4.4: Matrix Spike/Matrix Spike Duplicate Summary .....</b>	40
<b>Section 5: GC/MS Semi-volatiles - QC Data Summaries .....</b>	<b>42</b>
<b>5.1: Method Blank Summary .....</b>	43
<b>5.2: Blank Spike/Blank Spike Duplicate Summary .....</b>	46
<b>Section 6: GC Semi-volatiles - QC Data Summaries .....</b>	<b>50</b>
<b>6.1: Method Blank Summary .....</b>	51
<b>6.2: Blank Spike/Blank Spike Duplicate Summary .....</b>	53
<b>Section 7: Metals Analysis - QC Data Summaries .....</b>	<b>55</b>
<b>7.1: Prep QC MP4470: Pb .....</b>	56
<b>Section 8: General Chemistry - QC Data Summaries .....</b>	<b>61</b>
<b>8.1: Method Blank and Spike Results Summary .....</b>	62
<b>8.2: Blank Spike Duplicate Results Summary .....</b>	63
<b>8.3: Matrix Spike Results Summary .....</b>	64

1

2

3

4

5

6

7

8



## Sample Summary

Sierra West Consultants, Inc.

**Job No:** C19982

T0000003190-F&M Auto Service., 1839 Foothill Blvd, Oakland, CA

Sample Number	Collected		Received	Matrix		Client Sample ID
	Date	Time By		Code	Type	
C19982-1	01/23/12	11:50 BW	01/24/12	AQ	Ground Water	B-1-GW
C19982-1F	01/23/12	11:50 BW	01/24/12	AQ	Groundwater Filtered	B-1-GW
C19982-2	01/23/12	11:45 BW	01/24/12	AQ	Ground Water	B-2-GW
C19982-2F	01/23/12	11:45 BW	01/24/12	AQ	Groundwater Filtered	B-2-GW
C19982-3	01/23/12	13:00 BW	01/24/12	AQ	Ground Water	B-3-GW
C19982-3F	01/23/12	13:00 BW	01/24/12	AQ	Groundwater Filtered	B-3-GW
C19982-4	01/23/12	14:10 BW	01/24/12	AQ	Ground Water	MW-4-GW
C19982-4F	01/23/12	14:10 BW	01/24/12	AQ	Groundwater Filtered	MW-4-GW
C19982-5	01/23/12	15:20 BW	01/24/12	AQ	Ground Water	MW-2-GW
C19982-5F	01/23/12	15:20 BW	01/24/12	AQ	Groundwater Filtered	MW-2-GW
C19982-6	01/23/12	16:30 BW	01/24/12	AQ	Ground Water	MW-3-GW
C19982-7	01/24/12	16:35 BW	01/24/12	AQ	Ground Water	MW-1-GW
C19982-7F	01/24/12	16:35 BW	01/24/12	AQ	Groundwater Filtered	MW-1-GW

Sample Results

---

Report of Analysis

---

## Report of Analysis

<b>Client Sample ID:</b>	B-1-GW	<b>Date Sampled:</b>	01/23/12
<b>Lab Sample ID:</b>	C19982-1	<b>Date Received:</b>	01/24/12
<b>Matrix:</b>	AQ - Ground Water	<b>Percent Solids:</b>	n/a
<b>Method:</b>	SW846 8260B		
<b>Project:</b>	T0000003190-F&M Auto Service., 1839 Foothill Blvd, Oakland, CA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 <sup>a</sup>	Q6481.D	1	01/26/12	TN	n/a	n/a	VQ237
Run #2							

	Purge Volume
Run #1	10.0 ml
Run #2	

## BTEX, Oxygenates

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	0.20	ug/l	
108-88-3	Toluene	ND	1.0	0.20	ug/l	
100-41-4	Ethylbenzene	0.75	1.0	0.20	ug/l	J
1330-20-7	Xylene (total)	ND	2.0	0.46	ug/l	
108-20-3	Di-Isopropyl ether	ND	2.0	0.22	ug/l	
637-92-3	Ethyl Tert Butyl Ether	ND	2.0	0.22	ug/l	
1634-04-4	Methyl Tert Butyl Ether	23.2	1.0	0.20	ug/l	
994-05-8	Tert-Amyl Methyl Ether	ND	2.0	0.40	ug/l	
75-65-0	Tert-Butyl Alcohol	ND	10	2.4	ug/l	
	TPH-GRO (C6-C10)	120	50	25	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	105%		60-130%
2037-26-5	Toluene-D8	95%		60-130%
460-00-4	4-Bromofluorobenzene	98%		60-130%

(a) Sample vial contained more than 0.5cm of sediment.

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound



## Report of Analysis

<b>Client Sample ID:</b> B-1-GW		<b>Date Sampled:</b> 01/23/12
<b>Lab Sample ID:</b> C19982-1		<b>Date Received:</b> 01/24/12
<b>Matrix:</b> AQ - Ground Water		<b>Percent Solids:</b> n/a
<b>Method:</b> SW846 8015B M SW846 3510C		
<b>Project:</b> T0000003190-F&M Auto Service., 1839 Foothill Blvd, Oakland, CA		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	GG31565.D	1	01/26/12	JH	01/26/12	OP5267	GGG846
Run #2							

Run #	Initial Volume	Final Volume
Run #1	900 ml	1.0 ml
Run #2		

### TPH Extractable

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (C10-C28)	0.143	0.11	0.028	mg/l	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
630-01-3	Hexacosane	51%		45-140%		

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> B-1-GW	
<b>Lab Sample ID:</b> C19982-1F	<b>Date Sampled:</b> 01/23/12
<b>Matrix:</b> AQ - Groundwater Filtered	<b>Date Received:</b> 01/24/12
	<b>Percent Solids:</b> n/a
<b>Project:</b> T0000003190-F&M Auto Service., 1839 Foothill Blvd, Oakland, CA	

### Dissolved Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Lead	< 10	10	ug/l	1	01/30/12	01/30/12 RS	SW846 6010B <sup>1</sup>	SW3010A <sup>2</sup>

(1) Instrument QC Batch: MA2313

(2) Prep QC Batch: MP4470

---

RL = Reporting Limit

## Report of Analysis

<b>Client Sample ID:</b> B-2-GW		<b>Date Sampled:</b> 01/23/12
<b>Lab Sample ID:</b> C19982-2		<b>Date Received:</b> 01/24/12
<b>Matrix:</b> AQ - Ground Water		<b>Percent Solids:</b> n/a
<b>Method:</b> SW846 8260B		
<b>Project:</b> T0000003190-F&M Auto Service., 1839 Foothill Blvd, Oakland, CA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 <sup>a</sup>	Q6482.D	10	01/26/12	TN	n/a	n/a	VQ237
Run #2							

	Purge Volume
Run #1	10.0 ml
Run #2	

**BTEX, Oxygenates**

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	19.1	10	2.0	ug/l	
108-88-3	Toluene	5.7	10	2.0	ug/l	J
100-41-4	Ethylbenzene	240	10	2.0	ug/l	
1330-20-7	Xylene (total)	657	20	4.6	ug/l	
108-20-3	Di-Isopropyl ether	ND	20	2.2	ug/l	
637-92-3	Ethyl Tert Butyl Ether	ND	20	2.2	ug/l	
1634-04-4	Methyl Tert Butyl Ether	8.0	10	2.0	ug/l	J
994-05-8	Tert-Amyl Methyl Ether	ND	20	4.0	ug/l	
75-65-0	Tert-Butyl Alcohol	ND	100	24	ug/l	
	TPH-GRO (C6-C10)	4290	500	250	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	102%		60-130%
2037-26-5	Toluene-D8	99%		60-130%
460-00-4	4-Bromofluorobenzene	102%		60-130%

(a) Sample vial contained more than 0.5cm of sediment.

---

ND = Not detected      MDL - Method Detection Limit      J = Indicates an estimated value  
 RL = Reporting Limit      B = Indicates analyte found in associated method blank  
 E = Indicates value exceeds calibration range      N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> B-2-GW		<b>Date Sampled:</b> 01/23/12
<b>Lab Sample ID:</b> C19982-2		<b>Date Received:</b> 01/24/12
<b>Matrix:</b> AQ - Ground Water		<b>Percent Solids:</b> n/a
<b>Method:</b> SW846 8015B M SW846 3510C		
<b>Project:</b> T0000003190-F&M Auto Service., 1839 Foothill Blvd, Oakland, CA		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	GG31566.D	1	01/26/12	JH	01/26/12	OP5267	GGG846
Run #2							

Run #	Initial Volume	Final Volume
Run #1	900 ml	1.0 ml
Run #2		

**TPH Extractable**

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (C10-C28)	1.58	0.11	0.028	mg/l	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
630-01-3	Hexacosane	56%		45-140%		

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> B-2-GW	<b>Date Sampled:</b> 01/23/12
<b>Lab Sample ID:</b> C19982-2F	<b>Date Received:</b> 01/24/12
<b>Matrix:</b> AQ - Groundwater Filtered	<b>Percent Solids:</b> n/a
<b>Project:</b> T0000003190-F&M Auto Service., 1839 Foothill Blvd, Oakland, CA	

### Dissolved Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Lead	< 10	10	ug/l	1	01/30/12	01/30/12 RS	SW846 6010B <sup>1</sup>	SW3010A <sup>2</sup>

(1) Instrument QC Batch: MA2313

(2) Prep QC Batch: MP4470

---

RL = Reporting Limit

## Report of Analysis

<b>Client Sample ID:</b> B-3-GW		<b>Date Sampled:</b> 01/23/12
<b>Lab Sample ID:</b> C19982-3		<b>Date Received:</b> 01/24/12
<b>Matrix:</b> AQ - Ground Water		<b>Percent Solids:</b> n/a
<b>Method:</b> SW846 8260B		
<b>Project:</b> T0000003190-F&M Auto Service., 1839 Foothill Blvd, Oakland, CA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 <sup>a</sup>	Q6483.D	1	01/26/12	TN	n/a	n/a	VQ237
Run #2							

	Purge Volume
Run #1	10.0 ml
Run #2	

**BTEX, Oxygenates**

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	0.20	1.0	0.20	ug/l	J
108-88-3	Toluene	ND	1.0	0.20	ug/l	
100-41-4	Ethylbenzene	0.21	1.0	0.20	ug/l	J
1330-20-7	Xylene (total)	0.57	2.0	0.46	ug/l	J
108-20-3	Di-Isopropyl ether	ND	2.0	0.22	ug/l	
637-92-3	Ethyl Tert Butyl Ether	ND	2.0	0.22	ug/l	
1634-04-4	Methyl Tert Butyl Ether	2.0	1.0	0.20	ug/l	
994-05-8	Tert-Amyl Methyl Ether	ND	2.0	0.40	ug/l	
75-65-0	Tert-Butyl Alcohol	ND	10	2.4	ug/l	
	TPH-GRO (C6-C10)	ND	50	25	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	103%		60-130%
2037-26-5	Toluene-D8	96%		60-130%
460-00-4	4-Bromofluorobenzene	99%		60-130%

(a) Sample vial contained more than 0.5cm of sediment.

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> B-3-GW		<b>Date Sampled:</b> 01/23/12
<b>Lab Sample ID:</b> C19982-3		<b>Date Received:</b> 01/24/12
<b>Matrix:</b> AQ - Ground Water		<b>Percent Solids:</b> n/a
<b>Method:</b> SW846 8015B M SW846 3510C		
<b>Project:</b> T0000003190-F&M Auto Service., 1839 Foothill Blvd, Oakland, CA		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	GG31573.D	1	01/26/12	JH	01/26/12	OP5267	GGG846
Run #2							

Run #	Initial Volume	Final Volume
Run #1	900 ml	1.0 ml
Run #2		

**TPH Extractable**

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (C10-C28)	0.199	0.11	0.028	mg/l	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
630-01-3	Hexacosane	63%		45-140%		

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> B-3-GW	
<b>Lab Sample ID:</b> C19982-3F	<b>Date Sampled:</b> 01/23/12
<b>Matrix:</b> AQ - Groundwater Filtered	<b>Date Received:</b> 01/24/12
	<b>Percent Solids:</b> n/a
<b>Project:</b> T0000003190-F&M Auto Service., 1839 Foothill Blvd, Oakland, CA	

### Dissolved Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Lead	< 10	10	ug/l	1	01/30/12	01/30/12 RS	SW846 6010B <sup>1</sup>	SW3010A <sup>2</sup>

(1) Instrument QC Batch: MA2313

(2) Prep QC Batch: MP4470

---

RL = Reporting Limit



## Report of Analysis

<b>Client Sample ID:</b> MW-4-GW		<b>Date Sampled:</b> 01/23/12
<b>Lab Sample ID:</b> C19982-4		<b>Date Received:</b> 01/24/12
<b>Matrix:</b> AQ - Ground Water		<b>Percent Solids:</b> n/a
<b>Method:</b> SW846 8260B		
<b>Project:</b> T0000003190-F&M Auto Service., 1839 Foothill Blvd, Oakland, CA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 <sup>a</sup>	Q6484.D	1	01/26/12	TN	n/a	n/a	VQ237
Run #2							

	Purge Volume
Run #1	10.0 ml
Run #2	

**BTEX, Oxygenates**

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	0.20	ug/l	
108-88-3	Toluene	ND	1.0	0.20	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.20	ug/l	
1330-20-7	Xylene (total)	ND	2.0	0.46	ug/l	
108-20-3	Di-Isopropyl ether	ND	2.0	0.22	ug/l	
637-92-3	Ethyl Tert Butyl Ether	ND	2.0	0.22	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.20	ug/l	
994-05-8	Tert-Amyl Methyl Ether	ND	2.0	0.40	ug/l	
75-65-0	Tert-Butyl Alcohol	ND	10	2.4	ug/l	
	TPH-GRO (C6-C10)	ND	50	25	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	103%		60-130%
2037-26-5	Toluene-D8	93%		60-130%
460-00-4	4-Bromofluorobenzene	98%		60-130%

(a) Sample vial contained more than 0.5cm of sediment.

---

ND = Not detected      MDL - Method Detection Limit      J = Indicates an estimated value  
 RL = Reporting Limit      B = Indicates analyte found in associated method blank  
 E = Indicates value exceeds calibration range      N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> MW-4-GW		<b>Date Sampled:</b> 01/23/12
<b>Lab Sample ID:</b> C19982-4		<b>Date Received:</b> 01/24/12
<b>Matrix:</b> AQ - Ground Water		<b>Percent Solids:</b> n/a
<b>Method:</b> SW846 8015B M SW846 3510C		
<b>Project:</b> T0000003190-F&M Auto Service., 1839 Foothill Blvd, Oakland, CA		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	GG31574.D	1	01/26/12	JH	01/26/12	OP5267	GGG846
Run #2							

Run #	Initial Volume	Final Volume
Run #1	900 ml	1.0 ml
Run #2		

**TPH Extractable**

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (C10-C28)	0.0676	0.11	0.028	mg/l	J
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
630-01-3	Hexacosane	65%		45-140%		

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> MW-4-GW	
<b>Lab Sample ID:</b> C19982-4F	<b>Date Sampled:</b> 01/23/12
<b>Matrix:</b> AQ - Groundwater Filtered	<b>Date Received:</b> 01/24/12
	<b>Percent Solids:</b> n/a
<b>Project:</b> T0000003190-F&M Auto Service., 1839 Foothill Blvd, Oakland, CA	

### Dissolved Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Lead	< 10	10	ug/l	1	01/30/12	01/30/12 RS	SW846 6010B <sup>1</sup>	SW3010A <sup>2</sup>

(1) Instrument QC Batch: MA2313

(2) Prep QC Batch: MP4470

---

RL = Reporting Limit

## Report of Analysis

<b>Client Sample ID:</b> MW-2-GW		<b>Date Sampled:</b> 01/23/12
<b>Lab Sample ID:</b> C19982-5		<b>Date Received:</b> 01/24/12
<b>Matrix:</b> AQ - Ground Water		<b>Percent Solids:</b> n/a
<b>Method:</b> SW846 8260B		
<b>Project:</b> T0000003190-F&M Auto Service., 1839 Foothill Blvd, Oakland, CA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 <sup>a</sup>	Q6485.D	10	01/26/12	TN	n/a	n/a	VQ237
Run #2							

	Purge Volume
Run #1	10.0 ml
Run #2	

**BTEX, Oxygenates**

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	10.1	10	2.0	ug/l	
108-88-3	Toluene	ND	10	2.0	ug/l	
100-41-4	Ethylbenzene	86.7	10	2.0	ug/l	
1330-20-7	Xylene (total)	38.0	20	4.6	ug/l	
108-20-3	Di-Isopropyl ether	ND	20	2.2	ug/l	
637-92-3	Ethyl Tert Butyl Ether	ND	20	2.2	ug/l	
1634-04-4	Methyl Tert Butyl Ether	48.6	10	2.0	ug/l	
994-05-8	Tert-Amyl Methyl Ether	ND	20	4.0	ug/l	
75-65-0	Tert-Butyl Alcohol	ND	100	24	ug/l	
	TPH-GRO (C6-C10)	2720	500	250	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	105%		60-130%
2037-26-5	Toluene-D8	96%		60-130%
460-00-4	4-Bromofluorobenzene	101%		60-130%

(a) Sample vial contained more than 0.5cm of sediment.

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> MW-2-GW		
<b>Lab Sample ID:</b> C19982-5		<b>Date Sampled:</b> 01/23/12
<b>Matrix:</b> AQ - Ground Water		<b>Date Received:</b> 01/24/12
<b>Method:</b> SW846 8015B M SW846 3510C		<b>Percent Solids:</b> n/a
<b>Project:</b> T0000003190-F&M Auto Service., 1839 Foothill Blvd, Oakland, CA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	GG31591.D	2	01/27/12	JH	01/26/12	OP5267	GGG847
Run #2							

	Initial Volume	Final Volume
Run #1	900 ml	1.0 ml
Run #2		

### TPH Extractable

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (C10-C28)	2.58	0.22	0.056	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
630-01-3	Hexacosane	66%		45-140%

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> MW-2-GW	<b>Date Sampled:</b> 01/23/12
<b>Lab Sample ID:</b> C19982-5F	<b>Date Received:</b> 01/24/12
<b>Matrix:</b> AQ - Groundwater Filtered	<b>Percent Solids:</b> n/a
<b>Project:</b> T0000003190-F&M Auto Service., 1839 Foothill Blvd, Oakland, CA	

### Dissolved Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Lead	< 10	10	ug/l	1	01/30/12	01/30/12 RS	SW846 6010B <sup>1</sup>	SW3010A <sup>2</sup>

(1) Instrument QC Batch: MA2313

(2) Prep QC Batch: MP4470

---

RL = Reporting Limit

## Report of Analysis

<b>Client Sample ID:</b> MW-3-GW		<b>Date Sampled:</b> 01/23/12
<b>Lab Sample ID:</b> C19982-6		<b>Date Received:</b> 01/24/12
<b>Matrix:</b> AQ - Ground Water		<b>Percent Solids:</b> n/a
<b>Method:</b> SW846 8260B		
<b>Project:</b> T0000003190-F&M Auto Service., 1839 Foothill Blvd, Oakland, CA		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 <sup>a</sup>	Q6486.D	1	01/26/12	TN	n/a	n/a	VQ237
Run #2							

Run #	Purge Volume
Run #1	10.0 ml
Run #2	

### VOA Halogenated List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-27-4	Bromodichloromethane	ND	1.0	0.20	ug/l	
75-25-2	Bromoform	ND	1.0	0.22	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.20	ug/l	
75-00-3	Chloroethane	ND	1.0	0.20	ug/l	
67-66-3	Chloroform	ND	1.0	0.20	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.20	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.20	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	0.20	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.20	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.20	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.20	ug/l	
75-71-8	Dichlorodifluoromethane	ND	1.0	0.20	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	0.20	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.20	ug/l	
541-73-1	m-Dichlorobenzene	ND	1.0	0.20	ug/l	
95-50-1	o-Dichlorobenzene	ND	1.0	0.20	ug/l	
106-46-7	p-Dichlorobenzene	ND	1.0	0.20	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	0.20	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.30	ug/l	
74-83-9	Methyl bromide	ND	2.0	0.20	ug/l	
74-87-3	Methyl chloride	ND	1.0	0.20	ug/l	
75-09-2	Methylene chloride	ND	10	2.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.20	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.20	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.22	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	0.54	ug/l	
79-01-6	Trichloroethylene	ND	1.0	0.20	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.20	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.20	ug/l	
	TPH-GRO (C6-C10)	56.2	50	25	ug/l	

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> MW-3-GW	
<b>Lab Sample ID:</b> C19982-6	<b>Date Sampled:</b> 01/23/12
<b>Matrix:</b> AQ - Ground Water	<b>Date Received:</b> 01/24/12
<b>Method:</b> SW846 8260B	<b>Percent Solids:</b> n/a
<b>Project:</b> T0000003190-F&M Auto Service., 1839 Foothill Blvd, Oakland, CA	

## VOA Halogenated List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	97%		60-130%
2037-26-5	Toluene-D8	98%		60-130%
460-00-4	4-Bromofluorobenzene	98%		60-130%

(a) Sample vial contained more than 0.5cm of sediment.

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound



## Report of Analysis

<b>Client Sample ID:</b> MW-3-GW		<b>Date Sampled:</b> 01/23/12
<b>Lab Sample ID:</b> C19982-6		<b>Date Received:</b> 01/24/12
<b>Matrix:</b> AQ - Ground Water		<b>Percent Solids:</b> n/a
<b>Method:</b> SW846 8270C SW846 3510C		
<b>Project:</b> T0000003190-F&M Auto Service., 1839 Foothill Blvd, Oakland, CA		

Run #1	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	Y12129.D	1	01/28/12	LB	01/27/12	OP5272	EY582
Run #2							

Run #1	Initial Volume	Final Volume
Run #1	750 ml	1.0 ml
Run #2		

## ABN Full List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	27	5.3	ug/l	
95-57-8	2-Chlorophenol	ND	6.7	1.9	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	6.7	1.9	ug/l	
120-83-2	2,4-Dichlorophenol	ND	6.7	1.6	ug/l	
105-67-9	2,4-Dimethylphenol	ND	6.7	1.5	ug/l	
51-28-5	2,4-Dinitrophenol	ND	27	5.3	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	13	1.7	ug/l	
95-48-7	2-Methylphenol	ND	6.7	2.2	ug/l	
	3&4-Methylphenol	ND	13	2.1	ug/l	
88-75-5	2-Nitrophenol	ND	6.7	1.3	ug/l	
100-02-7	4-Nitrophenol	ND	13	1.3	ug/l	
87-86-5	Pentachlorophenol	ND	13	2.3	ug/l	
108-95-2	Phenol	ND	6.7	1.3	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	6.7	1.3	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	6.7	1.3	ug/l	
83-32-9	Acenaphthene	ND	6.7	1.8	ug/l	
208-96-8	Acenaphthylene	ND	6.7	1.6	ug/l	
62-53-3	Aniline	ND	6.7	1.5	ug/l	
120-12-7	Anthracene	ND	6.7	1.7	ug/l	
103-33-3	Azobenzene	ND	6.7	1.6	ug/l	
92-87-5	Benzidine	ND	27	3.1	ug/l	
56-55-3	Benzo(a)anthracene	ND	6.7	1.9	ug/l	
50-32-8	Benzo(a)pyrene	ND	6.7	1.5	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	6.7	1.8	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	6.7	2.0	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	6.7	1.8	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	6.7	2.1	ug/l	
85-68-7	Butyl benzyl phthalate	ND	6.7	1.7	ug/l	
100-51-6	Benzyl Alcohol	ND	6.7	2.2	ug/l	
91-58-7	2-Chloronaphthalene	ND	6.7	1.8	ug/l	
106-47-8	4-Chloroaniline	ND	6.7	1.5	ug/l	
86-74-8	Carbazole	ND	6.7	2.0	ug/l	

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b>	MW-3-GW	<b>Date Sampled:</b>	01/23/12
<b>Lab Sample ID:</b>	C19982-6	<b>Date Received:</b>	01/24/12
<b>Matrix:</b>	AQ - Ground Water	<b>Percent Solids:</b>	n/a
<b>Method:</b>	SW846 8270C SW846 3510C		
<b>Project:</b>	T0000003190-F&M Auto Service., 1839 Foothill Blvd, Oakland, CA		

## ABN Full List

CAS No.	Compound	Result	RL	MDL	Units	Q
218-01-9	Chrysene	ND	6.7	2.2	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	6.7	1.5	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	6.7	1.5	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	6.7	1.3	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	6.7	2.0	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	6.7	1.5	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	6.7	1.6	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	6.7	1.7	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	6.7	1.7	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	6.7	1.7	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	13	2.7	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	6.7	1.7	ug/l	
132-64-9	Dibenzofuran	ND	6.7	1.9	ug/l	
122-39-4	Diphenylamine	ND	6.7	1.9	ug/l	
84-74-2	Di-n-butyl phthalate	1.9	6.7	1.9	ug/l	J
117-84-0	Di-n-octyl phthalate	ND	6.7	2.4	ug/l	
84-66-2	Diethyl phthalate	ND	6.7	1.4	ug/l	
131-11-3	Dimethyl phthalate	ND	6.7	2.4	ug/l	
123-91-1	1,4-Dioxane	ND	6.7	1.3	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	13	2.7	ug/l	
206-44-0	Fluoranthene	ND	6.7	1.9	ug/l	
86-73-7	Fluorene	ND	6.7	2.0	ug/l	
118-74-1	Hexachlorobenzene	ND	6.7	1.9	ug/l	
87-68-3	Hexachlorobutadiene	ND	6.7	2.2	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	6.7	1.3	ug/l	
67-72-1	Hexachloroethane	ND	6.7	1.6	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	6.7	1.8	ug/l	
78-59-1	Isophorone	ND	6.7	1.4	ug/l	
90-12-0	1-Methylnaphthalene	ND	6.7	1.7	ug/l	
91-57-6	2-Methylnaphthalene	ND	6.7	1.8	ug/l	
88-74-4	2-Nitroaniline	ND	6.7	1.4	ug/l	
99-09-2	3-Nitroaniline	ND	6.7	1.7	ug/l	
100-01-6	4-Nitroaniline	ND	6.7	1.5	ug/l	
91-20-3	Naphthalene	ND	6.7	1.6	ug/l	
98-95-3	Nitrobenzene	ND	6.7	1.3	ug/l	
62-75-9	N-Nitrosodimethylamine	ND	6.7	1.3	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	6.7	1.4	ug/l	
85-01-8	Phenanthrene	ND	6.7	1.8	ug/l	
129-00-0	Pyrene	ND	6.7	2.1	ug/l	
110-86-1	Pyridine	ND	13	1.3	ug/l	

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> MW-3-GW		<b>Date Sampled:</b> 01/23/12
<b>Lab Sample ID:</b> C19982-6		<b>Date Received:</b> 01/24/12
<b>Matrix:</b> AQ - Ground Water		<b>Percent Solids:</b> n/a
<b>Method:</b> SW846 8270C SW846 3510C		
<b>Project:</b> T0000003190-F&M Auto Service., 1839 Foothill Blvd, Oakland, CA		

**ABN Full List**

CAS No.	Compound	Result	RL	MDL	Units	Q
120-82-1	1,2,4-Trichlorobenzene	ND	6.7	1.6	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	26%		10-100%
4165-62-2	Phenol-d5	20%		7-100%
118-79-6	2,4,6-Tribromophenol	89%		25-115%
4165-60-0	Nitrobenzene-d5	84%		25-100%
321-60-8	2-Fluorobiphenyl	83%		25-106%
1718-51-0	Terphenyl-d14	96%		35-130%

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> MW-3-GW		
<b>Lab Sample ID:</b> C19982-6		<b>Date Sampled:</b> 01/23/12
<b>Matrix:</b> AQ - Ground Water		<b>Date Received:</b> 01/24/12
<b>Method:</b> SW846 8082 SW846 3510C		<b>Percent Solids:</b> n/a
<b>Project:</b> T0000003190-F&M Auto Service., 1839 Foothill Blvd, Oakland, CA		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	MM001998.D	1	01/27/12	RV	01/27/12	OP5276	GMM64
Run #2							

Run #	Initial Volume	Final Volume
Run #1	900 ml	1.0 ml
Run #2		

## PCB List

CAS No.	Compound	Result	RL	MDL	Units	Q
12674-11-2	Aroclor 1016	ND	0.11	0.022	ug/l	
11104-28-2	Aroclor 1221	ND	0.11	0.056	ug/l	
11141-16-5	Aroclor 1232	ND	0.11	0.056	ug/l	
53469-21-9	Aroclor 1242	ND	0.11	0.056	ug/l	
12672-29-6	Aroclor 1248	ND	0.11	0.056	ug/l	
11097-69-1	Aroclor 1254	ND	0.11	0.056	ug/l	
11096-82-5	Aroclor 1260	ND	0.11	0.033	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	48%		41-134%
877-09-8	Tetrachloro-m-xylene	48%		41-134%
2051-24-3	Decachlorobiphenyl	67%		41-134%
2051-24-3	Decachlorobiphenyl	71%		41-134%

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> MW-3-GW		<b>Date Sampled:</b> 01/23/12
<b>Lab Sample ID:</b> C19982-6		<b>Date Received:</b> 01/24/12
<b>Matrix:</b> AQ - Ground Water		<b>Percent Solids:</b> n/a
<b>Method:</b> SW846 8015B M SW846 3510C		
<b>Project:</b> T0000003190-F&M Auto Service., 1839 Foothill Blvd, Oakland, CA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	GG31576.D	1	01/26/12	JH	01/26/12	OP5267	GGG846
Run #2							

	Initial Volume	Final Volume
Run #1	800 ml	1.0 ml
Run #2		

### TPH Extractable

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (C10-C28)	0.645	0.13	0.031	mg/l	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
630-01-3	Hexacosane	73%		45-140%		

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> MW-3-GW	<b>Date Sampled:</b> 01/23/12
<b>Lab Sample ID:</b> C19982-6	<b>Date Received:</b> 01/24/12
<b>Matrix:</b> AQ - Ground Water	<b>Percent Solids:</b> n/a
<b>Project:</b> T0000003190-F&M Auto Service., 1839 Foothill Blvd, Oakland, CA	

### General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
HEM Oil and Grease	< 10	10	mg/l	1	02/06/12	RL	EPA 1664A
HEM Petroleum Hydrocarbons	< 10	10	mg/l	1	02/06/12	RL	EPA 1664A

RL = Reporting Limit

## Report of Analysis

<b>Client Sample ID:</b> MW-1-GW		
<b>Lab Sample ID:</b> C19982-7		<b>Date Sampled:</b> 01/24/12
<b>Matrix:</b> AQ - Ground Water		<b>Date Received:</b> 01/24/12
<b>Method:</b> SW846 8260B		<b>Percent Solids:</b> n/a
<b>Project:</b> T0000003190-F&M Auto Service., 1839 Foothill Blvd, Oakland, CA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 <sup>a</sup>	Q6487.D	100	01/26/12	TN	n/a	n/a	VQ237
Run #2							

	Purge Volume
Run #1	10.0 ml
Run #2	

### BTEX, Oxygenates

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	3020	100	20	ug/l	
108-88-3	Toluene	4040	100	20	ug/l	
100-41-4	Ethylbenzene	587	100	20	ug/l	
1330-20-7	Xylene (total)	2590	200	46	ug/l	
108-20-3	Di-Isopropyl ether	ND	200	22	ug/l	
637-92-3	Ethyl Tert Butyl Ether	ND	200	22	ug/l	
1634-04-4	Methyl Tert Butyl Ether	443	100	20	ug/l	
994-05-8	Tert-Amyl Methyl Ether	ND	200	40	ug/l	
75-65-0	Tert-Butyl Alcohol	ND	1000	240	ug/l	
	TPH-GRO (C6-C10)	34100	5000	2500	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	100%		60-130%
2037-26-5	Toluene-D8	100%		60-130%
460-00-4	4-Bromofluorobenzene	98%		60-130%

(a) Sample vial contained more than 0.5cm of sediment.

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> MW-1-GW		
<b>Lab Sample ID:</b> C19982-7		<b>Date Sampled:</b> 01/24/12
<b>Matrix:</b> AQ - Ground Water		<b>Date Received:</b> 01/24/12
<b>Method:</b> SW846 8015B M SW846 3510C		<b>Percent Solids:</b> n/a
<b>Project:</b> T0000003190-F&M Auto Service., 1839 Foothill Blvd, Oakland, CA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	GG31643.D	5	01/28/12	JH	01/27/12	OP5270	GGG847
Run #2							

	Initial Volume	Final Volume
Run #1	750 ml	1.0 ml
Run #2		

### TPH Extractable

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (C10-C28)	4.65	0.67	0.17	mg/l	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
630-01-3	Hexacosane	59%		45-140%		

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound



## Report of Analysis

<b>Client Sample ID:</b> MW-1-GW		
<b>Lab Sample ID:</b> C19982-7F		<b>Date Sampled:</b> 01/24/12
<b>Matrix:</b> AQ - Groundwater Filtered		<b>Date Received:</b> 01/24/12
		<b>Percent Solids:</b> n/a
<b>Project:</b> T0000003190-F&M Auto Service., 1839 Foothill Blvd, Oakland, CA		

### Dissolved Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Lead	< 10	10	ug/l	1	01/30/12	01/30/12 RS	SW846 6010B <sup>1</sup>	SW3010A <sup>2</sup>

(1) Instrument QC Batch: MA2313

(2) Prep QC Batch: MP4470

---

RL = Reporting Limit

## Misc. Forms

---

### Custody Documents and Other Forms

---

Includes the following where applicable:

- Chain of Custody

**CHAIN OF CUSTODY**

2105 Lundy Ave, San Jose, CA 95131  
(408) 588-0200 FAX: (408) 588-0201

FED-EX Tracking #		Bottle Order Control #																					
Accutest Quote #		Accutest NC Job #: C <u>C19982</u>																					
Client / Reporting Information		Project Information																					
Company Name <u>Sierra West Consultants, Inc.</u>		Project Name: <u>F&amp;M Auto Service</u>																					
Address <u>4227 Sunrise Blvd, Ste 220</u>		Street <u>1839 Foothill Blvd.</u>																					
City State Zip <u>Fair Oaks CA 95628</u>		City State <u>Oakland CA</u>																					
Project Contact: <u>Brian Whalen</u>		Project #																					
Phone # <u>(916) 863-3220</u>		EMAIL: <u>BWhalen@Sierra-West.net</u>																					
Sampler's Name <u>Brian Whalen</u>		Client Purchase Order #																					
Accutest Sample ID	Collection				Requested Analysis										Matrix Codes								
	Sample ID / Field Point / Point of Collection	Date	Time	Sampled by	Matrix	# of bottles	IC	NIOSH	NIOSH	PCDD	PCDF	PAHs	PERC	PCBs	PCP	PMA	Cresote, 1-4 dioxane	Cadmium, Chromium	Nickel, Zinc	WW- Wastewater GW- Ground Water SW- Surface Water SO- Soil OI-Oil WP-Wipe LIQ - Non-aqueous Liquid AIR DIW- Drinking Water (Perchlorate Only)	LAB USE ONLY		
1	B-1-GW	1/23/12	1150	BW	GW	6	X																
2	B-2-GW	1/23/12	1145	BW																			
3	B-3-GW		1300																				
4	MW-4-GW		1410																				
5	MW-2-GW		1520																				
6	MW-3-GW		1630				X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
7	MW-1-GW	1/24/12	1635			6	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Turnaround Time (Business days)		Data Deliverable Information				Comments / Remarks																	
<input checked="" type="checkbox"/> Standard TAT 15 Business Days <input type="checkbox"/> 10 Day (Workload dependent) <input type="checkbox"/> 5 Day (Workload dependent) <input type="checkbox"/> 3 Day (125% markup) <input type="checkbox"/> 2 Day (150% markup) <input type="checkbox"/> 1 Day (200% markup) <input type="checkbox"/> Same Day (300% markup)		Approved By / Date:		<input checked="" type="checkbox"/> Commercial "A" - Results only <input type="checkbox"/> Commercial "B" - Results with GC summaries <input type="checkbox"/> Commercial "B*" - Results, QC, and chromatograms <input type="checkbox"/> FULT1 - Level 4 data package <input checked="" type="checkbox"/> EDF for Geotracker <input type="checkbox"/> EDD Format Provide EDF Global ID <u>T0000003190</u> Provide EDF Logcode:		Lab to filter, analyze for dissolved metals. Cooler #1 → 4.1-0.4 = 3.7°C #2 → 3.8-0.1 = 3.9°C #3 → 2.5+0.1 = 2.6°C																	
Emergency T/A data available VIA Lablink														Sample Custody must be documented below each time samples change possession, including courier delivery.									
Relinquished by Sampler:		Date Time:		Received By:		Relinquished By:		Date Time:		Received By:		Relinquished By:		Date Time:		Received By:							
<u>Brian Whalen</u>		1/24/12 1650		<u>[Signature]</u>		<u>[Signature]</u>		17AB		<u>[Signature]</u>		<u>[Signature]</u>		01-24-12		<u>[Signature]</u>							
Relinquished by:		Date Time:		Received By:		Relinquished By:		Date Time:		Received By:		Relinquished By:		Date Time:		Received By:							
3				3		4				4		5				5							
Relinquished by:		Date Time:		Received By:		Custody Seal #		Appropriate Bottle / Pres		Headspace Y/N		On Ice Y/N		Cooler Temp.		Cooler Temp.							
5				5				Y/N		Y/N		Y/N		3 Coolers		°C							

31  
3

C19982: Chain of Custody

Page 1 of 2

Review Chain of Custody

Chain of Custody is to be complete and legible.

- Are these regulatory (NPDES) samples? CWA Yes/No (Yes/No)
- Is pH requested? Yes/No (Yes/No)
  - Was Client informed that hold time is 15 min? Yes/No Continue Yes/No
  - Was ortho-Phosphate filtered with in 15 min? Yes/No Continue Yes/No
- Are sample within hold time? Yes/No (Yes/No)
  - Are sample in danger of exceeding hold-time? Yes/No (Yes/No)
  - Existing Project? Yes/No (Yes/No)
  - If No: Is Report to info complete and legible, including;
    - deliverable  Name  Address  phone  e-mail
  - Is Bill to info complete and legible, including;
    - PO#  Credit card  Contact address  phone  e-mail
  - Is Contact and/or Project Manager identified, including;
    - phone  e-mail
    - Project name / number
- Special requirements? Yes/No (Yes/No)
- Sample IDs / date & time of collection provided? Yes/No (Yes/No)
- Is Matrix listed and correct? Yes/No (Yes/No)
- Analyses listed, we do, or client has authorized a subcontract? Yes/No (Yes/No)
- Chain is signed and dated by both client and sample custodian? Yes/No (Yes/No)
- TAT requested available? (Yes/No) Approved by PM

Review Coolers: 3 Coolers

- Were all Coolers temperatures measured at ≤6°C? Yes/No (Yes/No)
    - If cooler is outside the ≤6°C; note down the affected bottles in that cooler on the left
  - Are samples on ice? Yes/No (Yes/No)
- Note that ANC does NOT accept evidentiary samples. (We do not lock refrigerators)

Shipment Received Method AC

- Custody Seals: Present: Yes / (No) If Yes; Unbroken: Yes / No

Review of Sample Bottles: If you answer no, explain to the side

- Chain matches bottle labels? (Yes) No  Sample bottle intact? (Yes) No
- Is there enough sample volume in proper bottle for requested analyses? (Yes) No
- Proper Preservatives? (Yes) No
- Check pH on preserved samples except 1664, 625, 8270 and VOAs; make notes on left.
- Headspace-VOAs? Greater than 6mm in diameter Yes/No (Yes/No)
  - List sample ID and affected container

Client Sample ID	pH Check	Other Comments/Issues
-1		3ials (w/ HCL) ea.
-2	pH ✓	250ml HDPE (w/ HNG) ea.
↓		2 x 1 Liter Ambers NIP ea.
-5		
-7		
-6	mw-3-gw	3ials (w/ HCL)
		250ml HDPE (w/ HNG)
		2 x 1 Liter Ambers (w/ HNG)
		↓
		* no bottles rec'd to lab-filter for "dissolved metals"
		↓
		* "NO unpreserved" liters rec'd for extraction 8015/8270/8082
		(EK) 01-24-12

Non-Compliance issues and discrepancies on the COC are forwarded to Project Management

\\Accunca.accutest.com\depts\qatsops\sop\_complete\list\_2010\current\_active\_sop\_oct\_2010\sc001f1\_0\_form1\_samplecontrol\_samplerereceivingchecklist\_2009-01-01.doc



31  
3

## GC/MS Volatiles

---

### QC Data Summaries

---

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

## Method Blank Summary

**Job Number:** C19982

**Account:** SWCICAFO Sierra West Consultants, Inc.

**Project:** T0000003190-F&M Auto Service., 1839 Foothill Blvd, Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VQ237-MB	Q6476.D	1	01/26/12	TN	n/a	n/a	VQ237

The QC reported here applies to the following samples:

Method: SW846 8260B

C19982-1, C19982-2, C19982-3, C19982-4, C19982-5, C19982-6, C19982-7

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	0.20	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.20	ug/l	
75-25-2	Bromoform	ND	1.0	0.22	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.20	ug/l	
75-00-3	Chloroethane	ND	1.0	0.20	ug/l	
67-66-3	Chloroform	ND	1.0	0.20	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.20	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.20	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	0.20	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.20	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.20	ug/l	
108-20-3	Di-Isopropyl ether	ND	2.0	0.22	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.20	ug/l	
75-71-8	Dichlorodifluoromethane	ND	1.0	0.20	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	0.20	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.20	ug/l	
541-73-1	m-Dichlorobenzene	ND	1.0	0.20	ug/l	
95-50-1	o-Dichlorobenzene	ND	1.0	0.20	ug/l	
106-46-7	p-Dichlorobenzene	ND	1.0	0.20	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	0.20	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.30	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.20	ug/l	
637-92-3	Ethyl Tert Butyl Ether	ND	2.0	0.22	ug/l	
74-83-9	Methyl bromide	ND	2.0	0.20	ug/l	
74-87-3	Methyl chloride	ND	1.0	0.20	ug/l	
75-09-2	Methylene chloride	ND	10	2.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.20	ug/l	
994-05-8	Tert-Amyl Methyl Ether	ND	2.0	0.40	ug/l	
75-65-0	Tert-Butyl Alcohol	ND	10	2.4	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.20	ug/l	
79-34-5	1,1,1,2-Tetrachloroethane	ND	1.0	0.20	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.22	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	0.54	ug/l	
108-88-3	Toluene	ND	1.0	0.20	ug/l	
79-01-6	Trichloroethylene	ND	1.0	0.20	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.20	ug/l	

## Method Blank Summary

**Job Number:** C19982  
**Account:** SWCICAFO Sierra West Consultants, Inc.  
**Project:** T0000003190-F&M Auto Service., 1839 Foothill Blvd, Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VQ237-MB	Q6476.D	1	01/26/12	TN	n/a	n/a	VQ237

The QC reported here applies to the following samples:

Method: SW846 8260B

C19982-1, C19982-2, C19982-3, C19982-4, C19982-5, C19982-6, C19982-7

CAS No.	Compound	Result	RL	MDL	Units	Q
75-01-4	Vinyl chloride	ND	1.0	0.20	ug/l	
1330-20-7	Xylene (total)	ND	2.0	0.46	ug/l	
	TPH-GRO (C6-C10)	ND	50	25	ug/l	

CAS No.	Surrogate Recoveries	Limits
1868-53-7	Dibromofluoromethane	97% 60-130%
2037-26-5	Toluene-D8	98% 60-130%
460-00-4	4-Bromofluorobenzene	98% 60-130%

# Blank Spike/Blank Spike Duplicate Summary

**Job Number:** C19982

**Account:** SWCICAFO Sierra West Consultants, Inc.

**Project:** T0000003190-F&M Auto Service., 1839 Foothill Blvd, Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VQ237-BS	Q6473.D	1	01/26/12	TN	n/a	n/a	VQ237
VQ237-BSD	Q6474.D	1	01/26/12	TN	n/a	n/a	VQ237

The QC reported here applies to the following samples:

Method: SW846 8260B

C19982-1, C19982-2, C19982-3, C19982-4, C19982-5, C19982-6, C19982-7

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	20	19.2	96	18.7	94	3	60-130/30
75-27-4	Bromodichloromethane	20	19.5	98	19.1	96	2	60-130/30
75-25-2	Bromoform	20	19.0	95	18.5	93	3	60-130/30
108-90-7	Chlorobenzene	20	19.8	99	19.5	98	2	60-130/30
75-00-3	Chloroethane	20	21.7	109	20.6	103	5	60-130/30
67-66-3	Chloroform	20	19.7	99	19.2	96	3	60-130/30
56-23-5	Carbon tetrachloride	20	18.6	93	18.4	92	1	60-130/30
75-34-3	1,1-Dichloroethane	20	19.0	95	18.3	92	4	60-130/30
75-35-4	1,1-Dichloroethylene	20	17.0	85	16.1	81	5	60-130/30
107-06-2	1,2-Dichloroethane	20	19.2	96	18.8	94	2	60-130/30
78-87-5	1,2-Dichloropropane	20	19.6	98	19.2	96	2	60-130/30
108-20-3	Di-Isopropyl ether	20	18.2	91	17.8	89	2	60-130/30
124-48-1	Dibromochloromethane	20	20.8	104	20.3	102	2	60-130/30
75-71-8	Dichlorodifluoromethane	20	22.5	113	19.3	97	15	60-130/30
156-59-2	cis-1,2-Dichloroethylene	20	19.7	99	19.2	96	3	60-130/30
10061-01-5	cis-1,3-Dichloropropene	20	20.8	104	20.4	102	2	60-130/30
541-73-1	m-Dichlorobenzene	20	19.3	97	18.7	94	3	60-130/30
95-50-1	o-Dichlorobenzene	20	19.2	96	18.8	94	2	60-130/30
106-46-7	p-Dichlorobenzene	20	19.4	97	19.0	95	2	60-130/30
156-60-5	trans-1,2-Dichloroethylene	20	19.2	96	18.7	94	3	60-130/30
10061-02-6	trans-1,3-Dichloropropene	20	19.1	96	18.7	94	2	60-130/30
100-41-4	Ethylbenzene	20	19.8	99	19.3	97	3	60-130/30
637-92-3	Ethyl Tert Butyl Ether	20	19.7	99	19.4	97	2	60-130/30
74-83-9	Methyl bromide	20	20.3	102	19.6	98	4	60-130/30
74-87-3	Methyl chloride	20	21.6	108	20.4	102	6	60-130/30
75-09-2	Methylene chloride	20	19.1	96	18.5	93	3	60-130/30
1634-04-4	Methyl Tert Butyl Ether	20	19.7	99	19.0	95	4	60-130/30
994-05-8	Tert-Amyl Methyl Ether	20	20.1	101	19.7	99	2	60-130/30
75-65-0	Tert-Butyl Alcohol	100	95.8	96	87.2	87	9	60-130/30
71-55-6	1,1,1-Trichloroethane	20	19.1	96	18.6	93	3	60-130/30
79-34-5	1,1,2,2-Tetrachloroethane	20	19.5	98	18.7	94	4	60-130/30
79-00-5	1,1,2-Trichloroethane	20	19.6	98	19.1	96	3	60-130/30
127-18-4	Tetrachloroethylene	20	19.7	99	19.0	95	4	60-130/30
108-88-3	Toluene	20	19.6	98	19.3	97	2	60-130/30
79-01-6	Trichloroethylene	20	19.6	98	19.0	95	3	60-130/30
75-69-4	Trichlorofluoromethane	20	21.7	109	19.4	97	11	60-130/30



# Blank Spike/Blank Spike Duplicate Summary

**Job Number:** C19982  
**Account:** SWCICAFO Sierra West Consultants, Inc.  
**Project:** T0000003190-F&M Auto Service., 1839 Foothill Blvd, Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VQ237-BS	Q6473.D	1	01/26/12	TN	n/a	n/a	VQ237
VQ237-BSD	Q6474.D	1	01/26/12	TN	n/a	n/a	VQ237

The QC reported here applies to the following samples:

Method: SW846 8260B

C19982-1, C19982-2, C19982-3, C19982-4, C19982-5, C19982-6, C19982-7

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
75-01-4	Vinyl chloride	20	22.7	114	20.8	104	9	60-130/30
1330-20-7	Xylene (total)	60	60.3	101	58.7	98	3	60-130/30

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
1868-53-7	Dibromofluoromethane	101%	101%	60-130%
2037-26-5	Toluene-D8	99%	99%	60-130%
460-00-4	4-Bromofluorobenzene	102%	101%	60-130%

4.2.1  
4

# Laboratory Control Sample Summary

**Job Number:** C19982  
**Account:** SWCICAFO Sierra West Consultants, Inc.  
**Project:** T0000003190-F&M Auto Service., 1839 Foothill Blvd, Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VQ237-LCS	Q6475.D	1	01/26/12	TN	n/a	n/a	VQ237

The QC reported here applies to the following samples:

Method: SW846 8260B

C19982-1, C19982-2, C19982-3, C19982-4, C19982-5, C19982-6, C19982-7

CAS No.	Compound	Spike ug/l	LCS ug/l	LCS %	Limits
	TPH-GRO (C6-C10)	125	139	111	60-130

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	94%	60-130%
2037-26-5	Toluene-D8	100%	60-130%
460-00-4	4-Bromofluorobenzene	97%	60-130%

4.3.1  
4

# Matrix Spike/Matrix Spike Duplicate Summary

**Job Number:** C19982

**Account:** SWCICAFO Sierra West Consultants, Inc.

**Project:** T0000003190-F&M Auto Service., 1839 Foothill Blvd, Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
C19959-4MS	Q6491.D	1	01/26/12	TN	n/a	n/a	VQ237
C19959-4MSD	Q6492.D	1	01/26/12	TN	n/a	n/a	VQ237
C19959-4	Q6480.D	1	01/26/12	TN	n/a	n/a	VQ237

The QC reported here applies to the following samples:

Method: SW846 8260B

C19982-1, C19982-2, C19982-3, C19982-4, C19982-5, C19982-6, C19982-7

CAS No.	Compound	C19959-4 ug/l	Spike Q	ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	ND		20	18.3	92	18.9	95	3	60-130/25
75-27-4	Bromodichloromethane	ND		20	18.3	92	19.1	96	4	60-130/25
75-25-2	Bromoform	ND		20	15.8	79	16.5	83	4	60-130/25
108-90-7	Chlorobenzene	ND		20	18.3	92	19.2	96	5	60-130/25
75-00-3	Chloroethane	ND		20	21.6	108	22.4	112	4	60-130/25
67-66-3	Chloroform	ND		20	20.4	102	21.2	106	4	60-130/25
56-23-5	Carbon tetrachloride	ND		20	16.7	84	18.0	90	7	60-130/25
75-34-3	1,1-Dichloroethane	0.21	J	20	19.4	96	20.1	99	4	60-130/25
75-35-4	1,1-Dichloroethylene	ND		20	16.6	83	17.4	87	5	60-130/25
107-06-2	1,2-Dichloroethane	ND		20	18.6	93	19.5	98	5	60-130/25
78-87-5	1,2-Dichloropropane	ND		20	18.7	94	19.7	99	5	60-130/25
108-20-3	Di-Isopropyl ether	ND		20	18.4	92	19.5	98	6	60-130/25
124-48-1	Dibromochloromethane	ND		20	18.4	92	19.6	98	6	60-130/25
75-71-8	Dichlorodifluoromethane	ND		20	19.3	97	20.7	104	7	60-130/25
156-59-2	cis-1,2-Dichloroethylene	ND		20	20.3	102	21.1	106	4	60-130/25
10061-01-5	cis-1,3-Dichloropropene	ND		20	19.4	97	20.4	102	5	60-130/25
541-73-1	m-Dichlorobenzene	ND		20	18.0	90	18.8	94	4	60-130/25
95-50-1	o-Dichlorobenzene	ND		20	18.1	91	19.1	96	5	60-130/25
106-46-7	p-Dichlorobenzene	ND		20	18.1	91	19.1	96	5	60-130/25
156-60-5	trans-1,2-Dichloroethylene	ND		20	18.8	94	19.6	98	4	60-130/25
10061-02-6	trans-1,3-Dichloropropene	ND		20	17.5	88	18.5	93	6	60-130/25
100-41-4	Ethylbenzene	ND		20	18.3	92	19.0	95	4	60-130/25
637-92-3	Ethyl Tert Butyl Ether	ND		20	19.2	96	20.8	104	8	60-130/25
74-83-9	Methyl bromide	ND		20	20.4	102	21.3	107	4	60-130/25
74-87-3	Methyl chloride	ND		20	21.3	107	20.4	102	4	60-130/25
75-09-2	Methylene chloride	ND		20	19.5	98	20.3	102	4	60-130/25
1634-04-4	Methyl Tert Butyl Ether	ND		20	19.1	96	20.9	105	9	60-130/25
994-05-8	Tert-Amyl Methyl Ether	ND		20	19.9	100	21.5	108	8	60-130/25
75-65-0	Tert-Butyl Alcohol	ND		100	94.3	94	101	101	7	60-130/25
71-55-6	1,1,1-Trichloroethane	ND		20	18.8	94	20.1	101	7	60-130/25
79-34-5	1,1,2,2-Tetrachloroethane	ND		20	19.8	99	20.7	104	4	60-130/25
79-00-5	1,1,2-Trichloroethane	ND		20	19.4	97	20.3	102	5	60-130/25
127-18-4	Tetrachloroethylene	ND		20	16.1	81	17.3	87	7	60-130/25
108-88-3	Toluene	ND		20	18.2	91	19.1	96	5	60-130/25
79-01-6	Trichloroethylene	ND		20	18.2	91	18.9	95	4	60-130/25
75-69-4	Trichlorofluoromethane	ND		20	20.1	101	21.9	110	9	60-130/25

# Matrix Spike/Matrix Spike Duplicate Summary

**Job Number:** C19982  
**Account:** SWCICAFO Sierra West Consultants, Inc.  
**Project:** T0000003190-F&M Auto Service., 1839 Foothill Blvd, Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
C19959-4MS	Q6491.D	1	01/26/12	TN	n/a	n/a	VQ237
C19959-4MSD	Q6492.D	1	01/26/12	TN	n/a	n/a	VQ237
C19959-4	Q6480.D	1	01/26/12	TN	n/a	n/a	VQ237

The QC reported here applies to the following samples:

Method: SW846 8260B

C19982-1, C19982-2, C19982-3, C19982-4, C19982-5, C19982-6, C19982-7

CAS No.	Compound	C19959-4 ug/l	Spike Q ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
75-01-4	Vinyl chloride	ND	20	21.4	107	21.6	108	1	60-130/25
1330-20-7	Xylene (total)	ND	60	53.9	90	56.7	95	5	60-130/25

CAS No.	Surrogate Recoveries	MS	MSD	C19959-4	Limits
1868-53-7	Dibromofluoromethane	111%	112%	110%	60-130%
2037-26-5	Toluene-D8	98%	99%	97%	60-130%
460-00-4	4-Bromofluorobenzene	104%	104%	98%	60-130%

4.4.1  
4

## GC/MS Semi-volatiles

5

### QC Data Summaries

---

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

## Method Blank Summary

**Job Number:** C19982

**Account:** SWCICAFO Sierra West Consultants, Inc.

**Project:** T0000003190-F&M Auto Service., 1839 Foothill Blvd, Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP5272-MB	Y12121.D	1	01/28/12	LB	01/27/12	OP5272	EY582

The QC reported here applies to the following samples:

Method: SW846 8270C

C19982-6

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	20	4.0	ug/l	
95-57-8	2-Chlorophenol	ND	5.0	1.4	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	5.0	1.4	ug/l	
120-83-2	2,4-Dichlorophenol	ND	5.0	1.2	ug/l	
105-67-9	2,4-Dimethylphenol	ND	5.0	1.1	ug/l	
51-28-5	2,4-Dinitrophenol	ND	20	4.0	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	10	1.3	ug/l	
95-48-7	2-Methylphenol	ND	5.0	1.7	ug/l	
	3&4-Methylphenol	ND	10	1.6	ug/l	
88-75-5	2-Nitrophenol	ND	5.0	1.0	ug/l	
100-02-7	4-Nitrophenol	ND	10	1.0	ug/l	
87-86-5	Pentachlorophenol	ND	10	1.7	ug/l	
108-95-2	Phenol	ND	5.0	1.0	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	5.0	1.0	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	5.0	1.0	ug/l	
83-32-9	Acenaphthene	ND	5.0	1.3	ug/l	
208-96-8	Acenaphthylene	ND	5.0	1.2	ug/l	
62-53-3	Aniline	ND	5.0	1.1	ug/l	
120-12-7	Anthracene	ND	5.0	1.3	ug/l	
103-33-3	Azobenzene	ND	5.0	1.2	ug/l	
92-87-5	Benzidine	ND	20	2.4	ug/l	
56-55-3	Benzo(a)anthracene	ND	5.0	1.4	ug/l	
50-32-8	Benzo(a)pyrene	ND	5.0	1.1	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	5.0	1.3	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	5.0	1.5	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	5.0	1.4	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	5.0	1.5	ug/l	
85-68-7	Butyl benzyl phthalate	ND	5.0	1.2	ug/l	
100-51-6	Benzyl Alcohol	ND	5.0	1.7	ug/l	
91-58-7	2-Chloronaphthalene	ND	5.0	1.4	ug/l	
106-47-8	4-Chloroaniline	ND	5.0	1.1	ug/l	
86-74-8	Carbazole	ND	5.0	1.5	ug/l	
218-01-9	Chrysene	ND	5.0	1.6	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	5.0	1.1	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.0	1.1	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.0	1.0	ug/l	

## Method Blank Summary

**Job Number:** C19982

**Account:** SWCICAFO Sierra West Consultants, Inc.

**Project:** T0000003190-F&M Auto Service., 1839 Foothill Blvd, Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP5272-MB	Y12121.D	1	01/28/12	LB	01/27/12	OP5272	EY582

The QC reported here applies to the following samples:

Method: SW846 8270C

C19982-6

CAS No.	Compound	Result	RL	MDL	Units	Q
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.0	1.5	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	5.0	1.1	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	5.0	1.2	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	5.0	1.3	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	5.0	1.3	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	5.0	1.2	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	10	2.0	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	5.0	1.3	ug/l	
132-64-9	Dibenzofuran	ND	5.0	1.4	ug/l	
122-39-4	Diphenylamine	ND	5.0	1.4	ug/l	
84-74-2	Di-n-butyl phthalate	ND	5.0	1.4	ug/l	
117-84-0	Di-n-octyl phthalate	ND	5.0	1.8	ug/l	
84-66-2	Diethyl phthalate	ND	5.0	1.1	ug/l	
131-11-3	Dimethyl phthalate	ND	5.0	1.8	ug/l	
123-91-1	1,4-Dioxane	ND	5.0	1.0	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	10	2.0	ug/l	
206-44-0	Fluoranthene	ND	5.0	1.5	ug/l	
86-73-7	Fluorene	ND	5.0	1.5	ug/l	
118-74-1	Hexachlorobenzene	ND	5.0	1.4	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.6	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	5.0	1.0	ug/l	
67-72-1	Hexachloroethane	ND	5.0	1.2	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	5.0	1.4	ug/l	
78-59-1	Isophorone	ND	5.0	1.1	ug/l	
90-12-0	1-Methylnaphthalene	ND	5.0	1.3	ug/l	
91-57-6	2-Methylnaphthalene	ND	5.0	1.3	ug/l	
88-74-4	2-Nitroaniline	ND	5.0	1.1	ug/l	
99-09-2	3-Nitroaniline	ND	5.0	1.3	ug/l	
100-01-6	4-Nitroaniline	ND	5.0	1.1	ug/l	
91-20-3	Naphthalene	ND	5.0	1.2	ug/l	
98-95-3	Nitrobenzene	ND	5.0	1.0	ug/l	
62-75-9	N-Nitrosodimethylamine	ND	5.0	1.0	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	5.0	1.1	ug/l	
85-01-8	Phenanthrene	ND	5.0	1.3	ug/l	
129-00-0	Pyrene	ND	5.0	1.6	ug/l	
110-86-1	Pyridine	ND	10	1.0	ug/l	

## Method Blank Summary

**Job Number:** C19982  
**Account:** SWCICAFO Sierra West Consultants, Inc.  
**Project:** T0000003190-F&M Auto Service., 1839 Foothill Blvd, Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP5272-MB	Y12121.D	1	01/28/12	LB	01/27/12	OP5272	EY582

The QC reported here applies to the following samples:

Method: SW846 8270C

C19982-6

CAS No.	Compound	Result	RL	MDL	Units	Q
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	1.2	ug/l	

CAS No.	Surrogate Recoveries	Limits	
367-12-4	2-Fluorophenol	54%	10-100%
4165-62-2	Phenol-d5	38%	7-100%
118-79-6	2,4,6-Tribromophenol	86%	25-115%
4165-60-0	Nitrobenzene-d5	83%	25-100%
321-60-8	2-Fluorobiphenyl	82%	25-106%
1718-51-0	Terphenyl-d14	92%	35-130%



# Blank Spike/Blank Spike Duplicate Summary

**Job Number:** C19982

**Account:** SWCICAFO Sierra West Consultants, Inc.

**Project:** T0000003190-F&M Auto Service., 1839 Foothill Blvd, Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP5272-BS	Y12122.D	1	01/28/12	LB	01/27/12	OP5272	EY582
OP5272-BSD	Y12123.D	1	01/28/12	LB	01/27/12	OP5272	EY582

The QC reported here applies to the following samples:

Method: SW846 8270C

C19982-6

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
65-85-0	Benzoic Acid	50	14.2	28	13.8	28	3	10-100/30
95-57-8	2-Chlorophenol	25	21.6	86	21.5	86	0	23-103/30
59-50-7	4-Chloro-3-methyl phenol	25	22.6	90	22.1	88	2	17-130/30
120-83-2	2,4-Dichlorophenol	25	23.2	93	23.3	93	0	23-108/30
105-67-9	2,4-Dimethylphenol	25	20.1	80	19.7	79	2	17-91/30
51-28-5	2,4-Dinitrophenol	25	18.4	74	16.8	67	9	17-111/30
534-52-1	4,6-Dinitro-o-cresol	25	23.1	92	21.6	86	7	22-115/30
95-48-7	2-Methylphenol	25	19.8	79	19.4	78	2	25-101/30
	3&4-Methylphenol	25	18.6	74	18.1	72	3	22-105/30
88-75-5	2-Nitrophenol	25	22.9	92	23.4	94	2	19-111/30
100-02-7	4-Nitrophenol	25	10.2	41	9.3	37	9	13-130/30
87-86-5	Pentachlorophenol	25	25.4	102	23.7	95	7	24-130/30
108-95-2	Phenol	25	10.3	41	10.3	41	0	5-130/30
95-95-4	2,4,5-Trichlorophenol	25	22.6	90	23.3	93	3	19-106/30
88-06-2	2,4,6-Trichlorophenol	25	22.5	90	23.0	92	2	18-107/30
83-32-9	Acenaphthene	25	22.0	88	21.9	88	0	25-130/30
208-96-8	Acenaphthylene	25	22.2	89	22.2	89	0	28-105/30
62-53-3	Aniline	25	19.1	76	17.9	72	6	23-98/30
120-12-7	Anthracene	25	22.8	91	22.0	88	4	35-108/30
103-33-3	Azobenzene	25	22.8	91	22.6	90	1	31-110/30
92-87-5	Benzidine	50	32.8	66	28.5	57	14	15-73/30
56-55-3	Benzo(a)anthracene	25	23.7	95	22.5	90	5	33-111/30
50-32-8	Benzo(a)pyrene	25	23.5	94	22.3	89	5	32-106/30
205-99-2	Benzo(b)fluoranthene	25	22.9	92	22.2	89	3	33-109/30
191-24-2	Benzo(g,h,i)perylene	25	24.0	96	21.6	86	11	31-111/30
207-08-9	Benzo(k)fluoranthene	25	23.6	94	23.0	92	3	34-111/30
101-55-3	4-Bromophenyl phenyl ether	25	21.5	86	21.4	86	0	34-107/30
85-68-7	Butyl benzyl phthalate	25	23.0	92	21.6	86	6	29-114/30
100-51-6	Benzyl Alcohol	25	20.5	82	20.1	80	2	24-108/30
91-58-7	2-Chloronaphthalene	25	21.6	86	21.4	86	1	23-130/30
106-47-8	4-Chloroaniline	25	21.8	87	21.1	84	3	23-103/30
86-74-8	Carbazole	25	24.6	98	23.1	92	6	36-109/30
218-01-9	Chrysene	25	23.8	95	22.8	91	4	34-111/30
111-91-1	bis(2-Chloroethoxy)methane	25	22.4	90	22.4	90	0	28-101/30
111-44-4	bis(2-Chloroethyl)ether	25	21.5	86	21.8	87	1	31-108/30
108-60-1	bis(2-Chloroisopropyl)ether	25	23.1	92	23.0	92	0	33-106/30

5.2.1  
5

# Blank Spike/Blank Spike Duplicate Summary

**Job Number:** C19982  
**Account:** SWCICAFO Sierra West Consultants, Inc.  
**Project:** T0000003190-F&M Auto Service., 1839 Foothill Blvd, Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP5272-BS	Y12122.D	1	01/28/12	LB	01/27/12	OP5272	EY582
OP5272-BSD	Y12123.D	1	01/28/12	LB	01/27/12	OP5272	EY582

The QC reported here applies to the following samples:

Method: SW846 8270C

C19982-6

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
7005-72-3	4-Chlorophenyl phenyl ether	25	21.8	87	21.4	86	2	31-107/30
95-50-1	1,2-Dichlorobenzene	25	20.9	84	20.6	82	1	21-102/30
541-73-1	1,3-Dichlorobenzene	25	20.2	81	20.0	80	1	28-100/30
106-46-7	1,4-Dichlorobenzene	25	20.5	82	20.5	82	0	24-130/30
121-14-2	2,4-Dinitrotoluene	25	22.7	91	21.7	87	5	26-130/30
606-20-2	2,6-Dinitrotoluene	25	22.4	90	22.1	88	1	28-104/30
91-94-1	3,3'-Dichlorobenzidine	50	47.7	95	46.3	93	3	27-105/30
53-70-3	Dibenzo(a,h)anthracene	25	24.2	97	22.1	88	9	32-112/30
132-64-9	Dibenzofuran	25	22.4	90	22.1	88	1	31-108/30
122-39-4	Diphenylamine	25	22.3	89	21.9	88	2	27-110/30
84-74-2	Di-n-butyl phthalate	25	21.7	87	20.2	81	7	32-109/30
117-84-0	Di-n-octyl phthalate	25	23.1	92	23.1	92	0	30-120/30
84-66-2	Diethyl phthalate	25	18.5	74	17.9	72	3	32-109/30
131-11-3	Dimethyl phthalate	25	14.6	58	15.3	61	5	33-106/30
117-81-7	bis(2-Ethylhexyl)phthalate	25	23.9	96	23.3	93	3	29-116/30
206-44-0	Fluoranthene	25	22.8	91	21.3	85	7	35-114/30
86-73-7	Fluorene	25	22.2	89	22.0	88	1	31-106/30
118-74-1	Hexachlorobenzene	25	21.7	87	21.4	86	1	32-107/30
87-68-3	Hexachlorobutadiene	25	21.7	87	21.8	87	0	28-107/30
77-47-4	Hexachlorocyclopentadiene	25	15.2	61	14.4	58	5	19-94/30
67-72-1	Hexachloroethane	25	19.4	78	19.7	79	2	25-101/30
193-39-5	Indeno(1,2,3-cd)pyrene	25	24.2	97	21.9	88	10	31-113/30
78-59-1	Isophorone	25	21.8	87	21.3	85	2	26-111/30
90-12-0	1-Methylnaphthalene	25	22.1	88	21.7	87	2	22-102/30
91-57-6	2-Methylnaphthalene	25	21.4	86	21.2	85	1	26-112/30
88-74-4	2-Nitroaniline	25	23.0	92	22.8	91	1	30-109/30
99-09-2	3-Nitroaniline	25	23.4	94	22.5	90	4	22-107/30
100-01-6	4-Nitroaniline	25	24.6	98	23.5	94	5	29-111/30
91-20-3	Naphthalene	25	24.4	98	24.1	96	1	20-104/30
98-95-3	Nitrobenzene	25	21.5	86	21.4	86	0	22-105/30
62-75-9	N-Nitrosodimethylamine	25	15.3	61	14.9	60	3	20-71/30
621-64-7	N-Nitroso-di-n-propylamine	25	21.9	88	21.5	86	2	16-130/30
85-01-8	Phenanthrene	25	22.5	90	21.8	87	3	35-108/30
129-00-0	Pyrene	25	22.4	90	22.2	89	1	35-130/30
110-86-1	Pyridine	25	11.8	47	11.0	44	7	15-77/30
120-82-1	1,2,4-Trichlorobenzene	25	19.7	79	19.7	79	0	15-130/30

5.2.1  
5

# Blank Spike/Blank Spike Duplicate Summary

**Job Number:** C19982  
**Account:** SWCICAFO Sierra West Consultants, Inc.  
**Project:** T0000003190-F&M Auto Service., 1839 Foothill Blvd, Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP5272-BS	Y12122.D	1	01/28/12	LB	01/27/12	OP5272	EY582
OP5272-BSD	Y12123.D	1	01/28/12	LB	01/27/12	OP5272	EY582

The QC reported here applies to the following samples:

Method: SW846 8270C

C19982-6

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
367-12-4	2-Fluorophenol	55%	54%	10-100%
4165-62-2	Phenol-d5	38%	38%	7-100%
118-79-6	2,4,6-Tribromophenol	88%	87%	25-115%
4165-60-0	Nitrobenzene-d5	83%	82%	25-100%
321-60-8	2-Fluorobiphenyl	80%	81%	25-106%
1718-51-0	Terphenyl-d14	89%	88%	35-130%

# Blank Spike/Blank Spike Duplicate Summary

**Job Number:** C19982  
**Account:** SWCICAFO Sierra West Consultants, Inc.  
**Project:** T0000003190-F&M Auto Service., 1839 Foothill Blvd, Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP5272-BS2	Y12124.D	1	01/28/12	LB	01/27/12	OP5272	EY582
OP5272-BSD2	Y12125.D	1	01/28/12	LB	01/27/12	OP5272	EY582

The QC reported here applies to the following samples: Method: SW846 8270C

C19982-6

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
123-91-1	1,4-Dioxane	25	12.5	50	11.9	48	5	20-69/30

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
367-12-4	2-Fluorophenol	58%	55%	10-100%
4165-62-2	Phenol-d5	48%	46%	7-100%
118-79-6	2,4,6-Tribromophenol	82%	83%	25-115%
4165-60-0	Nitrobenzene-d5	82%	79%	25-100%
321-60-8	2-Fluorobiphenyl	80%	77%	25-106%
1718-51-0	Terphenyl-d14	95%	91%	35-130%

5.2.2  
5

## GC Semi-volatiles

---

### QC Data Summaries

---

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

## Method Blank Summary

**Job Number:** C19982

**Account:** SWCICAFO Sierra West Consultants, Inc.

**Project:** T0000003190-F&M Auto Service., 1839 Foothill Blvd, Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP5276-MB	MM001999.DI		01/27/12	RV	01/27/12	OP5276	GMM64

The QC reported here applies to the following samples:

Method: SW846 8082

C19982-6

CAS No.	Compound	Result	RL	MDL	Units	Q
12674-11-2	Aroclor 1016	ND	0.10	0.020	ug/l	
11104-28-2	Aroclor 1221	ND	0.10	0.050	ug/l	
11141-16-5	Aroclor 1232	ND	0.10	0.050	ug/l	
53469-21-9	Aroclor 1242	ND	0.10	0.050	ug/l	
12672-29-6	Aroclor 1248	ND	0.10	0.050	ug/l	
11097-69-1	Aroclor 1254	ND	0.10	0.050	ug/l	
11096-82-5	Aroclor 1260	ND	0.10	0.030	ug/l	

CAS No.	Surrogate Recoveries	Results	Limits
877-09-8	Tetrachloro-m-xylene	79%	41-134%
877-09-8	Tetrachloro-m-xylene	78%	41-134%
2051-24-3	Decachlorobiphenyl	84%	41-134%
2051-24-3	Decachlorobiphenyl	87%	41-134%

## Method Blank Summary

**Job Number:** C19982  
**Account:** SWCICAFO Sierra West Consultants, Inc.  
**Project:** T0000003190-F&M Auto Service., 1839 Foothill Blvd, Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP5267-MB	GG31562.D	1	01/26/12	JH	01/26/12	OP5267	GGG846

The QC reported here applies to the following samples:

Method: SW846 8015B M

C19982-1, C19982-2, C19982-3, C19982-4, C19982-5, C19982-6

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (C10-C28)	ND	0.10	0.025	mg/l	

CAS No.	Surrogate Recoveries	Limits
630-01-3	Hexacosane	82% 45-140%

# Blank Spike/Blank Spike Duplicate Summary

**Job Number:** C19982  
**Account:** SWCICAFO Sierra West Consultants, Inc.  
**Project:** T0000003190-F&M Auto Service., 1839 Foothill Blvd, Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP5276-BS	MM002000.DI		01/27/12	RV	01/27/12	OP5276	GMM64
OP5276-BSD	MM002001.DI		01/27/12	RV	01/27/12	OP5276	GMM64

The QC reported here applies to the following samples:

Method: SW846 8082

C19982-6

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
12674-11-2	Aroclor 1016	0.4	0.35	88	0.36	90	3	40-140/30
11096-82-5	Aroclor 1260	0.4	0.33	83	0.35	88	6	40-140/30

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
877-09-8	Tetrachloro-m-xylene	78%	80%	41-134%
877-09-8	Tetrachloro-m-xylene	77%	79%	41-134%
2051-24-3	Decachlorobiphenyl	84%	85%	41-134%
2051-24-3	Decachlorobiphenyl	88%	91%	41-134%



# Blank Spike/Blank Spike Duplicate Summary

**Job Number:** C19982  
**Account:** SWCICAFO Sierra West Consultants, Inc.  
**Project:** T0000003190-F&M Auto Service., 1839 Foothill Blvd, Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP5267-BS	GG31563.D	1	01/26/12	JH	01/26/12	OP5267	GGG846
OP5267-BSD	GG31564.D	1	01/26/12	JH	01/26/12	OP5267	GGG846

The QC reported here applies to the following samples: Method: SW846 8015B M

C19982-1, C19982-2, C19982-3, C19982-4, C19982-5, C19982-6

CAS No.	Compound	Spike mg/l	BSP mg/l	BSP %	BSD mg/l	BSD %	RPD	Limits Rec/RPD
	TPH (C10-C28)	1	0.915	92	0.818	82	11	45-140/30

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
630-01-3	Hexacosane	82%	80%	45-140%

## Metals Analysis

---

## QC Data Summaries

---

Includes the following where applicable:

- Method Blank Summaries
- Matrix Spike and Duplicate Summaries
- Blank Spike and Lab Control Sample Summaries
- Serial Dilution Summaries

BLANK RESULTS SUMMARY  
Part 2 - Method Blanks

Login Number: C19982  
Account: SWCICAFO - Sierra West Consultants, Inc.  
Project: T0000003190-F&M Auto Service., 1839 Foothill Blvd, Oakland, CA

QC Batch ID: MP4470  
Matrix Type: AQUEOUS

Methods: SW846 6010B  
Units: ug/l

Prep Date: 01/30/12

Metal	RL	IDL	MDL	MB raw	final
Aluminum	200	13	8.5		
Antimony	6.0	.7	.51		
Arsenic	10	.7	.65		
Barium	200	.4	.35		
Beryllium	5.0	.2	.4		
Boron	100	.9	.64		
Cadmium	2.0	.2	.15		
Calcium	5000	7.1	12		
Chromium	10	.3	.41		
Cobalt	5.0	.2	.3		
Copper	10	1.2	3		
Iron	200	6.4	12		
Lead	10	.7	.85	-1.0	<10
Magnesium	5000	27	36		
Manganese	15	.1	1.3		
Molybdenum	20	.2	.22		
Nickel	5.0	.2	.12		
Potassium	10000	18	44		
Selenium	10	1.8	2.2		
Silicon	100	1.2	6.9		
Silver	5.0	.3	.47		
Sodium	10000	15	13		
Strontium	10	.2	.24		
Thallium	10	.5	.54		
Tin	50	.2	.7		
Titanium	10	.4	.34		
Vanadium	10	.3	.3		
Zinc	20	.3	4.2		

Associated samples MP4470: C19982-1F, C19982-2F, C19982-3F, C19982-4F, C19982-5F, C19982-7F

Results < IDL are shown as zero for calculation purposes  
(\* ) Outside of QC limits  
(anr) Analyte not requested

7.1.1  
7

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: C19982  
 Account: SWCICAFO - Sierra West Consultants, Inc.  
 Project: T0000003190-F&M Auto Service., 1839 Foothill Blvd, Oakland, CA

QC Batch ID: MP4470  
 Matrix Type: AQUEOUS

Methods: SW846 6010B  
 Units: ug/l

Prep Date: 01/30/12

Metal	C19988-2 Original MS	Spike/lot MP/IR4A	% Rec	QC Limits
Aluminum				
Antimony	anr			
Arsenic	anr			
Barium	anr			
Beryllium	anr			
Boron				
Cadmium	anr			
Calcium				
Chromium	anr			
Cobalt				
Copper				
Iron	anr			
Lead	0.0	493	500	98.6 75-125
Magnesium				
Manganese	anr			
Molybdenum				
Nickel	anr			
Potassium				
Selenium	anr			
Silicon				
Silver				
Sodium				
Strontium				
Thallium	anr			
Tin				
Titanium				
Vanadium				
Zinc				

Associated samples MP4470: C19982-1F, C19982-2F, C19982-3F, C19982-4F, C19982-5F, C19982-7F

Results < IDL are shown as zero for calculation purposes  
 (\*) Outside of QC limits  
 (N) Matrix Spike Rec. outside of QC limits  
 (anr) Analyte not requested

7.1.2  
7

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: C19982  
 Account: SWCICAFO - Sierra West Consultants, Inc.  
 Project: T0000003190-F&M Auto Service., 1839 Foothill Blvd, Oakland, CA

QC Batch ID: MP4470  
 Matrix Type: AQUEOUS

Methods: SW846 6010B  
 Units: ug/l

Prep Date: 01/30/12

Metal	C19988-2 Original MSD	SpikeLot MPiR4A	% Rec	MSD RPD	QC Limit
Aluminum					
Antimony	anr				
Arsenic	anr				
Barium	anr				
Beryllium	anr				
Boron					
Cadmium	anr				
Calcium					
Chromium	anr				
Cobalt					
Copper					
Iron	anr				
Lead	0.0	495	500	99.0	0.4 20
Magnesium					
Manganese	anr				
Molybdenum					
Nickel	anr				
Potassium					
Selenium	anr				
Silicon					
Silver					
Sodium					
Strontium					
Thallium	anr				
Tin					
Titanium					
Vanadium					
Zinc					

Associated samples MP4470: C19982-1F, C19982-2F, C19982-3F, C19982-4F, C19982-5F, C19982-7F

Results < IDL are shown as zero for calculation purposes  
 (\*) Outside of QC limits  
 (N) Matrix Spike Rec. outside of QC limits  
 (anr) Analyte not requested

7.1.2  
 7

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: C19982  
 Account: SWCICAFO - Sierra West Consultants, Inc.  
 Project: T0000003190-F&M Auto Service., 1839 Foothill Blvd, Oakland, CA

QC Batch ID: MP4470  
 Matrix Type: AQUEOUS

Methods: SW846 6010B  
 Units: ug/l

Prep Date: 01/30/12

Metal	BSP Result	Spikelot MPIR4A	% Rec	QC Limits
Aluminum				
Antimony	anr			
Arsenic	anr			
Barium	anr			
Beryllium	anr			
Boron				
Cadmium	anr			
Calcium				
Chromium	anr			
Cobalt				
Copper				
Iron	anr			
Lead	486	500	97.2	80-120
Magnesium				
Manganese	anr			
Molybdenum				
Nickel	anr			
Potassium				
Selenium	anr			
Silicon				
Silver				
Sodium				
Strontium				
Thallium	anr			
Tin				
Titanium				
Vanadium				
Zinc				

Associated samples MP4470: C19982-1F, C19982-2F, C19982-3F, C19982-4F, C19982-5F, C19982-7F

Results < IDL are shown as zero for calculation purposes  
 (\*) Outside of QC limits  
 (anr) Analyte not requested

7.1.3  
7

SERIAL DILUTION RESULTS SUMMARY

Login Number: C19982  
 Account: SWCICAFO - Sierra West Consultants, Inc.  
 Project: T0000003190-F&M Auto Service., 1839 Foothill Blvd, Oakland, CA

QC Batch ID: MP4470  
 Matrix Type: AQUEOUS

Methods: SW846 6010B  
 Units: ug/l

Prep Date: 01/30/12

Metal	C19988-2 Original	SDL 1:5	%DIF	QC Limits
Aluminum				
Antimony	anr			
Arsenic	anr			
Barium	anr			
Beryllium	anr			
Boron				
Cadmium	anr			
Calcium				
Chromium	anr			
Cobalt				
Copper				
Iron	anr			
Lead	0.00	0.00	NC	0-10
Magnesium				
Manganese	anr			
Molybdenum				
Nickel	anr			
Potassium				
Selenium	anr			
Silicon				
Silver				
Sodium				
Strontium				
Thallium	anr			
Tin				
Titanium				
Vanadium				
Zinc				

Associated samples MP4470: C19982-1F, C19982-2F, C19982-3F, C19982-4F, C19982-5F, C19982-7F

Results < IDL are shown as zero for calculation purposes  
 (\*) Outside of QC limits  
 (anr) Analyte not requested

7.1.4  
7

## General Chemistry

---

### QC Data Summaries

---

Includes the following where applicable:

- Method Blank and Blank Spike Summaries
- Duplicate Summaries
- Matrix Spike Summaries



METHOD BLANK AND SPIKE RESULTS SUMMARY  
GENERAL CHEMISTRY

Login Number: C19982  
Account: SWCICAFO - Sierra West Consultants, Inc.  
Project: T0000003190-F&M Auto Service., 1839 Foothill Blvd, Oakland, CA

Analyte	Batch ID	RL	MB Result	Units	Spike Amount	BSP Result	BSP %Recov	QC Limits
HEM Oil and Grease	GP3447/GN7558	5.0	1.0	mg/l	40	34.2	85.5	78-114%
HEM Petroleum Hydrocarbons	GP3450/GN7566	5.0	0.0	mg/l	20.0	19.0	95.0	64-132%

Associated Samples:  
Batch GP3447: C19982-6  
Batch GP3450: C19982-6  
(\* ) Outside of QC limits

8.1

8

BLANK SPIKE DUPLICATE RESULTS SUMMARY  
GENERAL CHEMISTRY

Login Number: C19982  
Account: SWCICAFO - Sierra West Consultants, Inc.  
Project: T0000003190-F&M Auto Service., 1839 Foothill Blvd, Oakland, CA

Analyte	Batch ID	Units	Spike Amount	BSD Result	RPD	QC Limit
HEM Oil and Grease	GP3447/GN7558	mg/l	40	33.8	1.2	18%
HEM Petroleum Hydrocarbons	GP3450/GN7566	mg/l	20.0	18.6	2.1	28%

Associated Samples:  
Batch GP3447: C19982-6  
Batch GP3450: C19982-6  
(\* ) Outside of QC limits

8.2  
8

MATRIX SPIKE RESULTS SUMMARY  
GENERAL CHEMISTRY

Login Number: C19982  
Account: SWCICAFO - Sierra West Consultants, Inc.  
Project: T0000003190-F&M Auto Service., 1839 Foothill Blvd, Oakland, CA

Analyte	Batch ID	QC Sample	Units	Original Result	Spike Amount	MS Result	%Rec	QC Limits
HEM Oil and Grease	GP3447/GN7558	C20016-1	mg/l	1.4	40	37.4	90.0	78-114%

Associated Samples:

Batch GP3447: C19982-6

(\*) Outside of QC limits

(N) Matrix Spike Rec. outside of QC limits



## **Appendix F**

### **Monitoring Well Sample Laboratory Analytical Report**

Technical Report for

Sierra West Consultants, Inc.

T0000003190-F&M Auto Service., 1839 Foothill Blvd, Oakland, CA

Accutest Job Number: C20117

Sampling Date: 01/31/12

Report to:

Sierra West Consultants, Inc.  
4227 Sunrise Blvd Suite#220  
Fair Oaks, CA 95628  
jbensch@sierra-west.net; bwhalen@sierra-west.net  
ATTN: Jeff Bensch

Total number of pages in report: **57**



Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Conference and/or state specific certification programs as applicable.

Kesavalu M. Bagawandoss,  
Ph.D., J.D., Lab Director

Client Service contact: Nutan Kabir 408-588-0200

Certifications: CA (08258CA) AZ (AZ0762) DoD/ISO/IEC 17025:2005 (L2242)

This report shall not be reproduced, except in its entirety, without the written approval of Accutest Laboratories.  
Test results relate only to samples analyzed.

# Table of Contents

-1-

<b>Section 1: Sample Summary .....</b>	<b>3</b>
<b>Section 2: Sample Results .....</b>	<b>4</b>
<b>2.1: C20117-1: MW-1 .....</b>	5
<b>2.2: C20117-1F: MW-1 .....</b>	7
<b>2.3: C20117-2: MW-2 .....</b>	8
<b>2.4: C20117-2F: MW-2 .....</b>	10
<b>2.5: C20117-3: MW-3 .....</b>	11
<b>2.6: C20117-3F: MW-3 .....</b>	19
<b>2.7: C20117-4: MW-4 .....</b>	20
<b>2.8: C20117-4F: MW-4 .....</b>	22
<b>Section 3: Misc. Forms .....</b>	<b>23</b>
<b>3.1: Chain of Custody .....</b>	24
<b>Section 4: GC/MS Volatiles - QC Data Summaries .....</b>	<b>26</b>
<b>4.1: Method Blank Summary .....</b>	27
<b>4.2: Blank Spike/Blank Spike Duplicate Summary .....</b>	29
<b>4.3: Laboratory Control Sample Summary .....</b>	31
<b>4.4: Matrix Spike/Matrix Spike Duplicate Summary .....</b>	32
<b>Section 5: GC/MS Semi-volatiles - QC Data Summaries .....</b>	<b>34</b>
<b>5.1: Method Blank Summary .....</b>	35
<b>5.2: Blank Spike/Blank Spike Duplicate Summary .....</b>	38
<b>Section 6: GC Semi-volatiles - QC Data Summaries .....</b>	<b>42</b>
<b>6.1: Method Blank Summary .....</b>	43
<b>6.2: Blank Spike/Blank Spike Duplicate Summary .....</b>	45
<b>6.3: Matrix Spike/Matrix Spike Duplicate Summary .....</b>	47
<b>Section 7: Metals Analysis - QC Data Summaries .....</b>	<b>48</b>
<b>7.1: Prep QC MP4505: Cd,Cr,Pb,Ni,Zn .....</b>	49
<b>Section 8: General Chemistry - QC Data Summaries .....</b>	<b>54</b>
<b>8.1: Method Blank and Spike Results Summary .....</b>	55
<b>8.2: Blank Spike Duplicate Results Summary .....</b>	56
<b>8.3: Matrix Spike Results Summary .....</b>	57

1

2

3

4

5

6

7

8



### Sample Summary

Sierra West Consultants, Inc.

**Job No:** C20117

T0000003190-F&M Auto Service., 1839 Foothill Blvd, Oakland, CA

Sample Number	Collected		Received	Matrix		Client Sample ID
	Date	Time By		Code	Type	
C20117-1	01/31/12	12:00 BW	02/01/12	AQ	Ground Water	MW-1
C20117-1F	01/31/12	12:00 BW	02/01/12	AQ	Groundwater Filtered	MW-1
C20117-2	01/31/12	12:35 BW	02/01/12	AQ	Ground Water	MW-2
C20117-2F	01/31/12	12:35 BW	02/01/12	AQ	Groundwater Filtered	MW-2
C20117-3	01/31/12	13:00 BW	02/01/12	AQ	Ground Water	MW-3
C20117-3F	01/31/12	13:00 BW	02/01/12	AQ	Groundwater Filtered	MW-3
C20117-4	01/31/12	13:15 BW	02/01/12	AQ	Ground Water	MW-4
C20117-4F	01/31/12	13:15 BW	02/01/12	AQ	Groundwater Filtered	MW-4

Sample Results

---

Report of Analysis

---



## Report of Analysis

<b>Client Sample ID:</b> MW-1		<b>Date Sampled:</b> 01/31/12
<b>Lab Sample ID:</b> C20117-1		<b>Date Received:</b> 02/01/12
<b>Matrix:</b> AQ - Ground Water		<b>Percent Solids:</b> n/a
<b>Method:</b> SW846 8260B		
<b>Project:</b> T0000003190-F&M Auto Service., 1839 Foothill Blvd, Oakland, CA		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	Q6682.D	50	02/07/12	TN	n/a	n/a	VQ245
Run #2							

Run #	Purge Volume
Run #1	10.0 ml
Run #2	

**BTEX, Oxygenates**

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	2750	50	10	ug/l	
108-88-3	Toluene	3470	50	10	ug/l	
100-41-4	Ethylbenzene	577	50	10	ug/l	
1330-20-7	Xylene (total)	2840	100	23	ug/l	
108-20-3	Di-Isopropyl ether	ND	100	11	ug/l	
637-92-3	Ethyl Tert Butyl Ether	ND	100	11	ug/l	
1634-04-4	Methyl Tert Butyl Ether	507	50	10	ug/l	
994-05-8	Tert-Amyl Methyl Ether	ND	100	20	ug/l	
75-65-0	Tert-Butyl Alcohol	ND	500	120	ug/l	
	TPH-GRO (C6-C10)	27800	2500	1300	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	93%		60-130%
2037-26-5	Toluene-D8	101%		60-130%
460-00-4	4-Bromofluorobenzene	96%		60-130%

ND = Not detected      MDL - Method Detection Limit      J = Indicates an estimated value  
 RL = Reporting Limit      B = Indicates analyte found in associated method blank  
 E = Indicates value exceeds calibration range      N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> MW-1		<b>Date Sampled:</b> 01/31/12
<b>Lab Sample ID:</b> C20117-1		<b>Date Received:</b> 02/01/12
<b>Matrix:</b> AQ - Ground Water		<b>Percent Solids:</b> n/a
<b>Method:</b> SW846 8015B M SW846 3510C		
<b>Project:</b> T0000003190-F&M Auto Service., 1839 Foothill Blvd, Oakland, CA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	HH21057.D	2	02/02/12	JH	02/02/12	OP5309	GHH666
Run #2							

	Initial Volume	Final Volume
Run #1	1050 ml	1.0 ml
Run #2		

### TPH Extractable

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (C10-C28)	2.22	0.19	0.048	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
630-01-3	Hexacosane	83%		45-140%

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> MW-1		
<b>Lab Sample ID:</b> C20117-1F		<b>Date Sampled:</b> 01/31/12
<b>Matrix:</b> AQ - Groundwater Filtered		<b>Date Received:</b> 02/01/12
		<b>Percent Solids:</b> n/a
<b>Project:</b> T0000003190-F&M Auto Service., 1839 Foothill Blvd, Oakland, CA		

### Dissolved Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Lead	86.4	10	ug/l	1	02/07/12	02/07/12 RS	SW846 6010B <sup>1</sup>	SW3010A <sup>2</sup>

(1) Instrument QC Batch: MA2326

(2) Prep QC Batch: MP4505

---

RL = Reporting Limit

## Report of Analysis

<b>Client Sample ID:</b> MW-2		
<b>Lab Sample ID:</b> C20117-2		<b>Date Sampled:</b> 01/31/12
<b>Matrix:</b> AQ - Ground Water		<b>Date Received:</b> 02/01/12
<b>Method:</b> SW846 8260B		<b>Percent Solids:</b> n/a
<b>Project:</b> T0000003190-F&M Auto Service., 1839 Foothill Blvd, Oakland, CA		

Run #1	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	Q6683.D	10	02/07/12	TN	n/a	n/a	VQ245
Run #2							

Run #1	Purge Volume
Run #1	10.0 ml
Run #2	

## BTEX, Oxygenates

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	38.8	10	2.0	ug/l	
108-88-3	Toluene	2.8	10	2.0	ug/l	J
100-41-4	Ethylbenzene	7.6	10	2.0	ug/l	J
1330-20-7	Xylene (total)	9.5	20	4.6	ug/l	J
108-20-3	Di-Isopropyl ether	ND	20	2.2	ug/l	
637-92-3	Ethyl Tert Butyl Ether	4.5	20	2.2	ug/l	J
1634-04-4	Methyl Tert Butyl Ether	116	10	2.0	ug/l	
994-05-8	Tert-Amyl Methyl Ether	ND	20	4.0	ug/l	
75-65-0	Tert-Butyl Alcohol	ND	100	24	ug/l	
	TPH-GRO (C6-C10)	3390	500	250	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	87%		60-130%
2037-26-5	Toluene-D8	101%		60-130%
460-00-4	4-Bromofluorobenzene	97%		60-130%

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> MW-2		<b>Date Sampled:</b> 01/31/12
<b>Lab Sample ID:</b> C20117-2		<b>Date Received:</b> 02/01/12
<b>Matrix:</b> AQ - Ground Water		<b>Percent Solids:</b> n/a
<b>Method:</b> SW846 8015B M SW846 3510C		
<b>Project:</b> T0000003190-F&M Auto Service., 1839 Foothill Blvd, Oakland, CA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	HH21037.D	1	02/02/12	JH	02/02/12	OP5309	GHH666
Run #2							

	Initial Volume	Final Volume
Run #1	1060 ml	1.0 ml
Run #2		

**TPH Extractable**

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (C10-C28)	1.12	0.094	0.024	mg/l	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
630-01-3	Hexacosane	72%		45-140%		

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> MW-2		
<b>Lab Sample ID:</b> C20117-2F		<b>Date Sampled:</b> 01/31/12
<b>Matrix:</b> AQ - Groundwater Filtered		<b>Date Received:</b> 02/01/12
		<b>Percent Solids:</b> n/a
<b>Project:</b> T0000003190-F&M Auto Service., 1839 Foothill Blvd, Oakland, CA		

### Dissolved Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Lead	63.5	10	ug/l	1	02/07/12	02/07/12 RS	SW846 6010B <sup>1</sup>	SW3010A <sup>2</sup>

(1) Instrument QC Batch: MA2326

(2) Prep QC Batch: MP4505

---

RL = Reporting Limit

## Report of Analysis

<b>Client Sample ID:</b> MW-3		<b>Date Sampled:</b> 01/31/12
<b>Lab Sample ID:</b> C20117-3		<b>Date Received:</b> 02/01/12
<b>Matrix:</b> AQ - Ground Water		<b>Percent Solids:</b> n/a
<b>Method:</b> SW846 8260B		
<b>Project:</b> T0000003190-F&M Auto Service., 1839 Foothill Blvd, Oakland, CA		

Run #1	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	Q6684.D	1	02/07/12	TN	n/a	n/a	VQ245
Run #2							

Run #1	Purge Volume
Run #1	10.0 ml
Run #2	

## VOA Halogenated and Aromatic List

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	0.20	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.20	ug/l	
75-25-2	Bromoform	ND	1.0	0.22	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.20	ug/l	
75-00-3	Chloroethane	ND	1.0	0.20	ug/l	
67-66-3	Chloroform	ND	1.0	0.20	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.20	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.20	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	0.20	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.20	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.20	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.20	ug/l	
108-20-3	Di-Isopropyl ether	ND	2.0	0.22	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.20	ug/l	
75-71-8	Dichlorodifluoromethane	ND	1.0	0.20	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	0.20	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.20	ug/l	
541-73-1	m-Dichlorobenzene	ND	1.0	0.20	ug/l	
95-50-1	o-Dichlorobenzene	ND	1.0	0.20	ug/l	
106-46-7	p-Dichlorobenzene	ND	1.0	0.20	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	0.20	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.30	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.20	ug/l	
637-92-3	Ethyl Tert Butyl Ether	ND	2.0	0.22	ug/l	
74-83-9	Methyl bromide	ND	2.0	0.20	ug/l	
74-87-3	Methyl chloride	ND	1.0	0.20	ug/l	
75-09-2	Methylene chloride	ND	10	2.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	6.1	1.0	0.20	ug/l	
994-05-8	Tert-Amyl Methyl Ether	ND	2.0	0.40	ug/l	
75-65-0	Tert-Butyl Alcohol	ND	10	2.4	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.20	ug/l	
79-34-5	1,1,1,2-Tetrachloroethane	ND	1.0	0.20	ug/l	

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> MW-3	
<b>Lab Sample ID:</b> C20117-3	<b>Date Sampled:</b> 01/31/12
<b>Matrix:</b> AQ - Ground Water	<b>Date Received:</b> 02/01/12
<b>Method:</b> SW846 8260B	<b>Percent Solids:</b> n/a
<b>Project:</b> T0000003190-F&M Auto Service., 1839 Foothill Blvd, Oakland, CA	

### VOA Halogenated and Aromatic List

CAS No.	Compound	Result	RL	MDL	Units	Q
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.22	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	0.54	ug/l	
108-88-3	Toluene	ND	1.0	0.20	ug/l	
79-01-6	Trichloroethylene	ND	1.0	0.20	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.20	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.20	ug/l	
1330-20-7	Xylene (total)	ND	2.0	0.46	ug/l	
	TPH-GRO (C6-C10)	ND	50	25	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	90%		60-130%
2037-26-5	Toluene-D8	97%		60-130%
460-00-4	4-Bromofluorobenzene	94%		60-130%

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound



## Report of Analysis

<b>Client Sample ID:</b> MW-3		<b>Date Sampled:</b> 01/31/12
<b>Lab Sample ID:</b> C20117-3		<b>Date Received:</b> 02/01/12
<b>Matrix:</b> AQ - Ground Water		<b>Percent Solids:</b> n/a
<b>Method:</b> SW846 8270C SW846 3510C		
<b>Project:</b> T0000003190-F&M Auto Service., 1839 Foothill Blvd, Oakland, CA		

Run #1	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	Y12270.D	1	02/02/12	LB	02/02/12	OP5298	EY588
Run #2							

Run #1	Initial Volume	Final Volume
Run #1	1060 ml	1.0 ml
Run #2		

## ABN Full List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	19	3.8	ug/l	
95-57-8	2-Chlorophenol	ND	4.7	1.3	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	4.7	1.3	ug/l	
120-83-2	2,4-Dichlorophenol	ND	4.7	1.1	ug/l	
105-67-9	2,4-Dimethylphenol	ND	4.7	1.0	ug/l	
51-28-5	2,4-Dinitrophenol	ND	19	3.8	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	9.4	1.2	ug/l	
95-48-7	2-Methylphenol	ND	4.7	1.6	ug/l	
	3&4-Methylphenol	ND	9.4	1.5	ug/l	
88-75-5	2-Nitrophenol	ND	4.7	0.94	ug/l	
100-02-7	4-Nitrophenol	ND	9.4	0.94	ug/l	
87-86-5	Pentachlorophenol	ND	9.4	1.6	ug/l	
108-95-2	Phenol	ND	4.7	0.94	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	4.7	0.94	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	4.7	0.94	ug/l	
83-32-9	Acenaphthene	ND	4.7	1.3	ug/l	
208-96-8	Acenaphthylene	ND	4.7	1.1	ug/l	
62-53-3	Aniline	ND	4.7	1.1	ug/l	
120-12-7	Anthracene	ND	4.7	1.2	ug/l	
103-33-3	Azobenzene	ND	4.7	1.1	ug/l	
92-87-5	Benzidine	ND	19	2.2	ug/l	
56-55-3	Benzo(a)anthracene	ND	4.7	1.3	ug/l	
50-32-8	Benzo(a)pyrene	ND	4.7	1.0	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	4.7	1.2	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	4.7	1.4	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	4.7	1.3	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	4.7	1.5	ug/l	
85-68-7	Butyl benzyl phthalate	ND	4.7	1.2	ug/l	
100-51-6	Benzyl Alcohol	ND	4.7	1.6	ug/l	
91-58-7	2-Chloronaphthalene	ND	4.7	1.3	ug/l	
106-47-8	4-Chloroaniline	ND	4.7	1.0	ug/l	
86-74-8	Carbazole	ND	4.7	1.4	ug/l	

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> MW-3		<b>Date Sampled:</b> 01/31/12
<b>Lab Sample ID:</b> C20117-3		<b>Date Received:</b> 02/01/12
<b>Matrix:</b> AQ - Ground Water		<b>Percent Solids:</b> n/a
<b>Method:</b> SW846 8270C SW846 3510C		
<b>Project:</b> T0000003190-F&M Auto Service., 1839 Foothill Blvd, Oakland, CA		

## ABN Full List

CAS No.	Compound	Result	RL	MDL	Units	Q
218-01-9	Chrysene	ND	4.7	1.5	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	4.7	1.1	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	4.7	1.0	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	4.7	0.94	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	4.7	1.4	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	4.7	1.1	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	4.7	1.2	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	4.7	1.2	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	4.7	1.2	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	4.7	1.2	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	9.4	1.9	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	4.7	1.2	ug/l	
132-64-9	Dibenzofuran	ND	4.7	1.3	ug/l	
122-39-4	Diphenylamine	ND	4.7	1.3	ug/l	
84-74-2	Di-n-butyl phthalate	ND	4.7	1.3	ug/l	
117-84-0	Di-n-octyl phthalate	ND	4.7	1.7	ug/l	
84-66-2	Diethyl phthalate	ND	4.7	1.0	ug/l	
131-11-3	Dimethyl phthalate	ND	4.7	1.7	ug/l	
123-91-1	1,4-Dioxane	ND	4.7	0.94	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	9.4	1.9	ug/l	
206-44-0	Fluoranthene	ND	4.7	1.4	ug/l	
86-73-7	Fluorene	ND	4.7	1.4	ug/l	
118-74-1	Hexachlorobenzene	ND	4.7	1.3	ug/l	
87-68-3	Hexachlorobutadiene	ND	4.7	1.5	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	4.7	0.94	ug/l	
67-72-1	Hexachloroethane	ND	4.7	1.1	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	4.7	1.3	ug/l	
78-59-1	Isophorone	ND	4.7	1.0	ug/l	
90-12-0	1-Methylnaphthalene	ND	4.7	1.2	ug/l	
91-57-6	2-Methylnaphthalene	ND	4.7	1.2	ug/l	
88-74-4	2-Nitroaniline	ND	4.7	1.0	ug/l	
99-09-2	3-Nitroaniline	ND	4.7	1.2	ug/l	
100-01-6	4-Nitroaniline	ND	4.7	1.1	ug/l	
91-20-3	Naphthalene	ND	4.7	1.2	ug/l	
98-95-3	Nitrobenzene	ND	4.7	0.94	ug/l	
62-75-9	N-Nitrosodimethylamine	ND	4.7	0.94	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	4.7	0.99	ug/l	
85-01-8	Phenanthrene	ND	4.7	1.2	ug/l	
129-00-0	Pyrene	ND	4.7	1.5	ug/l	
110-86-1	Pyridine	ND	9.4	0.94	ug/l	

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> MW-3		<b>Date Sampled:</b> 01/31/12
<b>Lab Sample ID:</b> C20117-3		<b>Date Received:</b> 02/01/12
<b>Matrix:</b> AQ - Ground Water		<b>Percent Solids:</b> n/a
<b>Method:</b> SW846 8270C SW846 3510C		
<b>Project:</b> T0000003190-F&M Auto Service., 1839 Foothill Blvd, Oakland, CA		

**ABN Full List**

CAS No.	Compound	Result	RL	MDL	Units	Q
120-82-1	1,2,4-Trichlorobenzene	ND	4.7	1.2	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	25%		10-100%
4165-62-2	Phenol-d5	18%		7-100%
118-79-6	2,4,6-Tribromophenol	77%		25-115%
4165-60-0	Nitrobenzene-d5	79%		25-100%
321-60-8	2-Fluorobiphenyl	79%		25-106%
1718-51-0	Terphenyl-d14	96%		35-130%

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> MW-3		<b>Date Sampled:</b> 01/31/12
<b>Lab Sample ID:</b> C20117-3		<b>Date Received:</b> 02/01/12
<b>Matrix:</b> AQ - Ground Water		<b>Percent Solids:</b> n/a
<b>Method:</b> SW846 8082 SW846 3510C		
<b>Project:</b> T0000003190-F&M Auto Service., 1839 Foothill Blvd, Oakland, CA		

Run #1	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	MM002322.D	1	02/02/12	RV	02/02/12	OP5300	GMM70
Run #2							

Run #1	Initial Volume	Final Volume
Run #1	1060 ml	1.0 ml
Run #2		

**PCB List**

CAS No.	Compound	Result	RL	MDL	Units	Q
12674-11-2	Aroclor 1016	ND	0.094	0.019	ug/l	
11104-28-2	Aroclor 1221	ND	0.094	0.047	ug/l	
11141-16-5	Aroclor 1232	ND	0.094	0.047	ug/l	
53469-21-9	Aroclor 1242	ND	0.094	0.047	ug/l	
12672-29-6	Aroclor 1248	ND	0.094	0.047	ug/l	
11097-69-1	Aroclor 1254	ND	0.094	0.047	ug/l	
11096-82-5	Aroclor 1260	ND	0.094	0.028	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	76%		41-134%
877-09-8	Tetrachloro-m-xylene	75%		41-134%
2051-24-3	Decachlorobiphenyl	110%		41-134%
2051-24-3	Decachlorobiphenyl	107%		41-134%

ND = Not detected      MDL - Method Detection Limit      J = Indicates an estimated value  
 RL = Reporting Limit      B = Indicates analyte found in associated method blank  
 E = Indicates value exceeds calibration range      N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> MW-3		<b>Date Sampled:</b> 01/31/12
<b>Lab Sample ID:</b> C20117-3		<b>Date Received:</b> 02/01/12
<b>Matrix:</b> AQ - Ground Water		<b>Percent Solids:</b> n/a
<b>Method:</b> SW846 8015B M SW846 3510C		
<b>Project:</b> T0000003190-F&M Auto Service., 1839 Foothill Blvd, Oakland, CA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	HH21038.D	1	02/02/12	JH	02/02/12	OP5309	GHH666
Run #2							

	Initial Volume	Final Volume
Run #1	1060 ml	1.0 ml
Run #2		

**TPH Extractable**

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (C10-C28)	0.324	0.094	0.024	mg/l	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
630-01-3	Hexacosane	75%		45-140%		

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> MW-3	<b>Date Sampled:</b> 01/31/12
<b>Lab Sample ID:</b> C20117-3	<b>Date Received:</b> 02/01/12
<b>Matrix:</b> AQ - Ground Water	<b>Percent Solids:</b> n/a
<b>Project:</b> T0000003190-F&M Auto Service., 1839 Foothill Blvd, Oakland, CA	

### General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
HEM Oil and Grease	< 5.0	5.0	mg/l	1	02/10/12	RL	EPA 1664A
HEM Petroleum Hydrocarbons	< 5.0	5.0	mg/l	1	02/10/12	RL	EPA 1664A

RL = Reporting Limit

## Report of Analysis

<b>Client Sample ID:</b> MW-3		
<b>Lab Sample ID:</b> C20117-3F		<b>Date Sampled:</b> 01/31/12
<b>Matrix:</b> AQ - Groundwater Filtered		<b>Date Received:</b> 02/01/12
		<b>Percent Solids:</b> n/a
<b>Project:</b> T0000003190-F&M Auto Service., 1839 Foothill Blvd, Oakland, CA		

### Dissolved Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Cadmium	< 2.0	2.0	ug/l	1	02/07/12	02/07/12 RS	SW846 6010B <sup>1</sup>	SW3010A <sup>2</sup>
Chromium	< 10	10	ug/l	1	02/07/12	02/07/12 RS	SW846 6010B <sup>1</sup>	SW3010A <sup>2</sup>
Lead	14.1	10	ug/l	1	02/07/12	02/07/12 RS	SW846 6010B <sup>1</sup>	SW3010A <sup>2</sup>
Nickel	46.3	5.0	ug/l	1	02/07/12	02/07/12 RS	SW846 6010B <sup>1</sup>	SW3010A <sup>2</sup>
Zinc	< 20	20	ug/l	1	02/07/12	02/07/12 RS	SW846 6010B <sup>1</sup>	SW3010A <sup>2</sup>

(1) Instrument QC Batch: MA2326

(2) Prep QC Batch: MP4505

RL = Reporting Limit

## Report of Analysis

<b>Client Sample ID:</b> MW-4		<b>Date Sampled:</b> 01/31/12
<b>Lab Sample ID:</b> C20117-4		<b>Date Received:</b> 02/01/12
<b>Matrix:</b> AQ - Ground Water		<b>Percent Solids:</b> n/a
<b>Method:</b> SW846 8260B		
<b>Project:</b> T0000003190-F&M Auto Service., 1839 Foothill Blvd, Oakland, CA		

Run #1	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	Q6685.D	1	02/07/12	TN	n/a	n/a	VQ245
Run #2							

Run #1	Purge Volume
Run #1	10.0 ml
Run #2	

**BTEX, Oxygenates**

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	0.20	ug/l	
108-88-3	Toluene	ND	1.0	0.20	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.20	ug/l	
1330-20-7	Xylene (total)	ND	2.0	0.46	ug/l	
108-20-3	Di-Isopropyl ether	ND	2.0	0.22	ug/l	
637-92-3	Ethyl Tert Butyl Ether	ND	2.0	0.22	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.20	ug/l	
994-05-8	Tert-Amyl Methyl Ether	ND	2.0	0.40	ug/l	
75-65-0	Tert-Butyl Alcohol	ND	10	2.4	ug/l	
	TPH-GRO (C6-C10)	ND	50	25	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	95%		60-130%
2037-26-5	Toluene-D8	99%		60-130%
460-00-4	4-Bromofluorobenzene	93%		60-130%

ND = Not detected      MDL - Method Detection Limit      J = Indicates an estimated value  
 RL = Reporting Limit      B = Indicates analyte found in associated method blank  
 E = Indicates value exceeds calibration range      N = Indicates presumptive evidence of a compound



## Report of Analysis

<b>Client Sample ID:</b> MW-4		<b>Date Sampled:</b> 01/31/12
<b>Lab Sample ID:</b> C20117-4		<b>Date Received:</b> 02/01/12
<b>Matrix:</b> AQ - Ground Water		<b>Percent Solids:</b> n/a
<b>Method:</b> SW846 8015B M SW846 3510C		
<b>Project:</b> T0000003190-F&M Auto Service., 1839 Foothill Blvd, Oakland, CA		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	HH21039.D	1	02/02/12	JH	02/02/12	OP5309	GHH666
Run #2							

Run #	Initial Volume	Final Volume
Run #1	1050 ml	1.0 ml
Run #2		

**TPH Extractable**

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (C10-C28)	0.0502	0.095	0.024	mg/l	J
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
630-01-3	Hexacosane	70%		45-140%		

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> MW-4		
<b>Lab Sample ID:</b> C20117-4F		<b>Date Sampled:</b> 01/31/12
<b>Matrix:</b> AQ - Groundwater Filtered		<b>Date Received:</b> 02/01/12
		<b>Percent Solids:</b> n/a
<b>Project:</b> T0000003190-F&M Auto Service., 1839 Foothill Blvd, Oakland, CA		

### Dissolved Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Lead	< 10	10	ug/l	1	02/07/12	02/07/12 RS	SW846 6010B <sup>1</sup>	SW3010A <sup>2</sup>

(1) Instrument QC Batch: MA2326

(2) Prep QC Batch: MP4505

---

RL = Reporting Limit

## Misc. Forms

---

### Custody Documents and Other Forms

---

Includes the following where applicable:

- Chain of Custody

## CHAIN OF CUSTODY

2105 Lundy Ave, San Jose, CA 95131  
 (408) 588-0200 FAX: (408) 588-0201

SWCICAF03210

FED-EX Tracking #	Bottle Order Control #
Accutest Quote #	Accutest NC Job #: <b>C20117</b>

Client / Reporting Information		Project Information	
Company Name <b>Sierra West Consultants, Inc.</b>		Project Name: <b>F&amp;M Auto Service</b>	
Address <b>4227 Sunrise Blvd., Ste. 220</b>		Street <b>1839 Foothill Blvd.</b>	
City <b>Fair Oaks</b>	State <b>CA</b>	City <b>Oakland</b>	State <b>CA</b>
Zip <b>95628</b>	Project #		
Project Contact: <b>Brian Whalen</b>		Project #	
Phone # <b>(916) 863-3220</b>		EMAIL: <b>BWhalen@sierra-west.net</b>	
Sample's Name <b>Brian Whalen</b>		Client Purchase Order #	

Sample ID	Sample / Field Point / Point of Collection	Date	Time	Sampled by	Matrix	Number of preserved Bottles													Requested Analysis	Matrix Codes	
						IC	NIOSH	NIOSH	NIOSH	NIOSH	NIOSH	NIOSH	NIOSH	NIOSH	NIOSH	NIOSH	NIOSH	NIOSH			
-1	MW-1	1/31/12	1200	BW	GW	6	3												X	TPH, BTEX, 5 Oils	WW- Wastewater GW- Ground Water SW- Surface Water SO- Soil OI-OI WP-Wpe LID - Non-aqueous Liquid AIR DW- Drinking Water (Perchlorate Only)
-2	MW-2		1235			6	3												X	TPH	
-3	MW-3		1300			10	3												X	Lead	
-4	MW-4		1315			6	3												X	Oil+Grease w/SCC Chlorinated #4's EDB, EDC PCBs, PCP, PVA Creosote, 1,4-Dioxane Cadmium, Chromium Nickel, Zinc	
-5	Trip Blank																				"HOLD"

Accutest Sample ID	Collection	Number of preserved Bottles												
		IC	NIOSH	NIOSH	NIOSH	NIOSH	NIOSH	NIOSH	NIOSH	NIOSH	NIOSH	NIOSH	NIOSH	

Turnaround Time (Business days)	Data Deliverable Information	Comments / Remarks
<input checked="" type="checkbox"/> Standard TAT 15 Business Days <input type="checkbox"/> 10 Day (Workload dependent) <input type="checkbox"/> 5 Day (Workload dependent) <input type="checkbox"/> 3 Day (125% markup) <input type="checkbox"/> 2 Day (150% markup) <input type="checkbox"/> 1 Day (200% markup) <input type="checkbox"/> Same Day (300% markup)	<input checked="" type="checkbox"/> Commercial "A" - Results only <input type="checkbox"/> Commercial "B" - Results with QC summaries <input type="checkbox"/> Commercial "B*" - Results, QC, and chromatograms <input type="checkbox"/> FULL1 - Level 4 data package <input checked="" type="checkbox"/> EDF for Geotracker <input type="checkbox"/> EDD Format Provide EDF Global ID: <b>T0000003190</b> Provide EDF Logcode:	Lab to filter, analyze for dissolved metals.
Approved By/ Date: _____ Approved By/ Date: _____ Approved By/ Date: _____ Approved By/ Date: _____ Approved By/ Date: _____		
<input type="checkbox"/> Emergency T/A data available VIA LabLink		

Sample Custody must be documented below each time samples change possession, including courier delivery.					
1	Relinquished by:	Date Time: 2/1/12 @ 0830	Received by:	Date Time: 2/1/12 @ 1257	Received By:
2	Relinquished by:	Date Time: 17:15	Received by:	Date Time:	Received By:
3	Relinquished by:	Date Time: 02/01/12	Received by:	Date Time:	Received By:
4	Relinquished by:	Date Time:	Received by:	Date Time:	Received By:
5	Relinquished by:	Date Time:	Received by:	Date Time:	Received By:

Custody Seal #	Appropriate Bottle / Pres <input checked="" type="checkbox"/> / N	Headspace <input checked="" type="checkbox"/> / N	On Ice <input checked="" type="checkbox"/> / N	Cooler Temp. 3.5 to 1 = 3.6
Labels match Coc <input checked="" type="checkbox"/> / N	Separate Receiving Check List used <input checked="" type="checkbox"/> / N			4.2 - 0.4 = 3.8 - GC



## GC/MS Volatiles

---

### QC Data Summaries

---

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

## Method Blank Summary

**Job Number:** C20117**Account:** SWCICAF0 Sierra West Consultants, Inc.**Project:** T0000003190-F&M Auto Service., 1839 Foothill Blvd, Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VQ245-MB	Q6678.D	1	02/07/12	TN	n/a	n/a	VQ245

**The QC reported here applies to the following samples:****Method:** SW846 8260B

C20117-1, C20117-2, C20117-3, C20117-4

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	0.20	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.20	ug/l	
75-25-2	Bromoform	ND	1.0	0.22	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.20	ug/l	
75-00-3	Chloroethane	ND	1.0	0.20	ug/l	
67-66-3	Chloroform	ND	1.0	0.20	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.20	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.20	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	0.20	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.20	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.20	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.20	ug/l	
108-20-3	Di-Isopropyl ether	ND	2.0	0.22	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.20	ug/l	
75-71-8	Dichlorodifluoromethane	ND	1.0	0.20	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	0.20	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.20	ug/l	
541-73-1	m-Dichlorobenzene	ND	1.0	0.20	ug/l	
95-50-1	o-Dichlorobenzene	ND	1.0	0.20	ug/l	
106-46-7	p-Dichlorobenzene	ND	1.0	0.20	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	0.20	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.30	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.20	ug/l	
637-92-3	Ethyl Tert Butyl Ether	ND	2.0	0.22	ug/l	
74-83-9	Methyl bromide	ND	2.0	0.20	ug/l	
74-87-3	Methyl chloride	ND	1.0	0.20	ug/l	
75-09-2	Methylene chloride	ND	10	2.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.20	ug/l	
994-05-8	Tert-Amyl Methyl Ether	ND	2.0	0.40	ug/l	
75-65-0	Tert-Butyl Alcohol	ND	10	2.4	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.20	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.20	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.22	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	0.54	ug/l	
108-88-3	Toluene	ND	1.0	0.20	ug/l	
79-01-6	Trichloroethylene	ND	1.0	0.20	ug/l	

## Method Blank Summary

**Job Number:** C20117  
**Account:** SWCICAFO Sierra West Consultants, Inc.  
**Project:** T0000003190-F&M Auto Service., 1839 Foothill Blvd, Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VQ245-MB	Q6678.D	1	02/07/12	TN	n/a	n/a	VQ245

The QC reported here applies to the following samples:

Method: SW846 8260B

C20117-1, C20117-2, C20117-3, C20117-4

CAS No.	Compound	Result	RL	MDL	Units	Q
75-69-4	Trichlorofluoromethane	ND	1.0	0.20	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.20	ug/l	
1330-20-7	Xylene (total)	ND	2.0	0.46	ug/l	
	TPH-GRO (C6-C10)	ND	50	25	ug/l	

CAS No.	Surrogate Recoveries	Limits	
1868-53-7	Dibromofluoromethane	95%	60-130%
2037-26-5	Toluene-D8	100%	60-130%
460-00-4	4-Bromofluorobenzene	95%	60-130%



# Blank Spike/Blank Spike Duplicate Summary

**Job Number:** C20117

**Account:** SWCICAFO Sierra West Consultants, Inc.

**Project:** T0000003190-F&M Auto Service., 1839 Foothill Blvd, Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VQ245-BS	Q6675.D	1	02/07/12	TN	n/a	n/a	VQ245
VQ245-BSD	Q6676.D	1	02/07/12	TN	n/a	n/a	VQ245

The QC reported here applies to the following samples:

Method: SW846 8260B

C20117-1, C20117-2, C20117-3, C20117-4

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	20	19.9	100	19.8	99	1	60-130/30
75-27-4	Bromodichloromethane	20	19.5	98	19.4	97	1	60-130/30
75-25-2	Bromoform	20	19.1	96	19.1	96	0	60-130/30
108-90-7	Chlorobenzene	20	19.9	100	19.8	99	1	60-130/30
75-00-3	Chloroethane	20	23.4	117	21.8	109	7	60-130/30
67-66-3	Chloroform	20	19.2	96	18.7	94	3	60-130/30
56-23-5	Carbon tetrachloride	20	22.3	112	21.6	108	3	60-130/30
75-34-3	1,1-Dichloroethane	20	19.3	97	18.7	94	3	60-130/30
75-35-4	1,1-Dichloroethylene	20	19.8	99	19.3	97	3	60-130/30
106-93-4	1,2-Dibromoethane	20	19.9	100	19.9	100	0	60-130/30
107-06-2	1,2-Dichloroethane	20	19.5	98	19.3	97	1	60-130/30
78-87-5	1,2-Dichloropropane	20	20.7	104	20.5	103	1	60-130/30
108-20-3	Di-Isopropyl ether	20	19.5	98	18.9	95	3	60-130/30
124-48-1	Dibromochloromethane	20	20.3	102	20.1	101	1	60-130/30
75-71-8	Dichlorodifluoromethane	20	23.0	115	19.3	97	17	60-130/30
156-59-2	cis-1,2-Dichloroethylene	20	19.5	98	19.1	96	2	60-130/30
10061-01-5	cis-1,3-Dichloropropene	20	20.5	103	20.3	102	1	60-130/30
541-73-1	m-Dichlorobenzene	20	18.9	95	19.0	95	1	60-130/30
95-50-1	o-Dichlorobenzene	20	19.2	96	19.2	96	0	60-130/30
106-46-7	p-Dichlorobenzene	20	19.0	95	19.1	96	1	60-130/30
156-60-5	trans-1,2-Dichloroethylene	20	19.4	97	19.0	95	2	60-130/30
10061-02-6	trans-1,3-Dichloropropene	20	18.5	93	18.6	93	1	60-130/30
100-41-4	Ethylbenzene	20	20.3	102	20.2	101	0	60-130/30
637-92-3	Ethyl Tert Butyl Ether	20	21.3	107	20.9	105	2	60-130/30
74-83-9	Methyl bromide	20	21.5	108	20.3	102	6	60-130/30
74-87-3	Methyl chloride	20	19.7	99	18.7	94	5	60-130/30
75-09-2	Methylene chloride	20	20.4	102	19.7	99	3	60-130/30
1634-04-4	Methyl Tert Butyl Ether	20	20.7	104	20.3	102	2	60-130/30
994-05-8	Tert-Amyl Methyl Ether	20	21.0	105	20.6	103	2	60-130/30
75-65-0	Tert-Butyl Alcohol	100	95.6	96	93.8	94	2	60-130/30
71-55-6	1,1,1-Trichloroethane	20	21.9	110	21.4	107	2	60-130/30
79-34-5	1,1,2,2-Tetrachloroethane	20	18.7	94	18.6	93	1	60-130/30
79-00-5	1,1,2-Trichloroethane	20	19.9	100	19.8	99	1	60-130/30
127-18-4	Tetrachloroethylene	20	21.0	105	21.8	109	4	60-130/30
108-88-3	Toluene	20	20.0	100	20.0	100	0	60-130/30
79-01-6	Trichloroethylene	20	19.8	99	19.9	100	1	60-130/30

4.2.1  
4

# Blank Spike/Blank Spike Duplicate Summary

**Job Number:** C20117  
**Account:** SWCICAFO Sierra West Consultants, Inc.  
**Project:** T0000003190-F&M Auto Service., 1839 Foothill Blvd, Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VQ245-BS	Q6675.D	1	02/07/12	TN	n/a	n/a	VQ245
VQ245-BSD	Q6676.D	1	02/07/12	TN	n/a	n/a	VQ245

The QC reported here applies to the following samples:

Method: SW846 8260B

C20117-1, C20117-2, C20117-3, C20117-4

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
75-69-4	Trichlorofluoromethane	20	24.9	125	22.2	111	11	60-130/30
75-01-4	Vinyl chloride	20	23.2	116	21.2	106	9	60-130/30
1330-20-7	Xylene (total)	60	63.3	106	62.6	104	1	60-130/30

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
1868-53-7	Dibromofluoromethane	97%	95%	60-130%
2037-26-5	Toluene-D8	100%	100%	60-130%
460-00-4	4-Bromofluorobenzene	98%	99%	60-130%

4.2.1  
4

# Laboratory Control Sample Summary

**Job Number:** C20117  
**Account:** SWCICAFO Sierra West Consultants, Inc.  
**Project:** T0000003190-F&M Auto Service., 1839 Foothill Blvd, Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VQ245-LCS	Q6677.D	1	02/07/12	TN	n/a	n/a	VQ245

The QC reported here applies to the following samples:

Method: SW846 8260B

C20117-1, C20117-2, C20117-3, C20117-4

CAS No.	Compound	Spike ug/l	LCS ug/l	LCS %	Limits
	TPH-GRO (C6-C10)	125	120	96	60-130

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	90%	60-130%
2037-26-5	Toluene-D8	100%	60-130%
460-00-4	4-Bromofluorobenzene	97%	60-130%

4.3.1  
4

# Matrix Spike/Matrix Spike Duplicate Summary

**Job Number:** C20117  
**Account:** SWCICAFO Sierra West Consultants, Inc.  
**Project:** T0000003190-F&M Auto Service., 1839 Foothill Blvd, Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
C20117-1MS	Q6687.D	50	02/07/12	TN	n/a	n/a	VQ245
C20117-1MSD	Q6688.D	50	02/07/12	TN	n/a	n/a	VQ245
C20117-1	Q6682.D	50	02/07/12	TN	n/a	n/a	VQ245

The QC reported here applies to the following samples:

Method: SW846 8260B

C20117-1, C20117-2, C20117-3, C20117-4

CAS No.	Compound	C20117-1 ug/l	Spike Q	ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	2750		1000	3560	81	3720	97	4	60-130/25
75-27-4	Bromodichloromethane	ND		1000	856	86	901	90	5	60-130/25
75-25-2	Bromoform	ND		1000	744	74	789	79	6	60-130/25
108-90-7	Chlorobenzene	ND		1000	914	91	969	97	6	60-130/25
75-00-3	Chloroethane	ND		1000	981	98	1000	100	2	60-130/25
67-66-3	Chloroform	ND		1000	860	86	870	87	1	60-130/25
56-23-5	Carbon tetrachloride	ND		1000	992	99	1040	104	5	60-130/25
75-34-3	1,1-Dichloroethane	ND		1000	852	85	860	86	1	60-130/25
75-35-4	1,1-Dichloroethylene	ND		1000	885	89	902	90	2	60-130/25
106-93-4	1,2-Dibromoethane	ND		1000	932	93	954	95	2	60-130/25
107-06-2	1,2-Dichloroethane	ND		1000	902	90	926	93	3	60-130/25
78-87-5	1,2-Dichloropropane	ND		1000	948	95	982	98	4	60-130/25
108-20-3	Di-Isopropyl ether	ND		1000	866	87	875	88	1	60-130/25
124-48-1	Dibromochloromethane	ND		1000	839	84	890	89	6	60-130/25
75-71-8	Dichlorodifluoromethane	ND		1000	858	86	794	79	8	60-130/25
156-59-2	cis-1,2-Dichloroethylene	ND		1000	873	87	894	89	2	60-130/25
10061-01-5	cis-1,3-Dichloropropene	ND		1000	894	89	941	94	5	60-130/25
541-73-1	m-Dichlorobenzene	ND		1000	880	88	928	93	5	60-130/25
95-50-1	o-Dichlorobenzene	ND		1000	893	89	950	95	6	60-130/25
106-46-7	p-Dichlorobenzene	ND		1000	874	87	936	94	7	60-130/25
156-60-5	trans-1,2-Dichloroethylene	ND		1000	863	86	871	87	1	60-130/25
10061-02-6	trans-1,3-Dichloropropene	ND		1000	812	81	854	85	5	60-130/25
100-41-4	Ethylbenzene	577		1000	1480	90	1560	98	5	60-130/25
637-92-3	Ethyl Tert Butyl Ether	ND		1000	962	96	964	96	0	60-130/25
74-83-9	Methyl bromide	ND		1000	914	91	928	93	2	60-130/25
74-87-3	Methyl chloride	ND		1000	800	80	859	86	7	60-130/25
75-09-2	Methylene chloride	ND		1000	895	90	908	91	1	60-130/25
1634-04-4	Methyl Tert Butyl Ether	507		1000	1450	94	1450	94	0	60-130/25
994-05-8	Tert-Amyl Methyl Ether	ND		1000	957	96	965	97	1	60-130/25
75-65-0	Tert-Butyl Alcohol	ND		5000	4720	94	4500	90	5	60-130/25
71-55-6	1,1,1-Trichloroethane	ND		1000	976	98	995	100	2	60-130/25
79-34-5	1,1,2,2-Tetrachloroethane	ND		1000	857	86	880	88	3	60-130/25
79-00-5	1,1,2-Trichloroethane	ND		1000	926	93	954	95	3	60-130/25
127-18-4	Tetrachloroethylene	ND		1000	969	97	1020	102	5	60-130/25
108-88-3	Toluene	3470		1000	4180	71	4440	97	6	60-130/25
79-01-6	Trichloroethylene	ND		1000	918	92	960	96	4	60-130/25

4.4.1  
4

# Matrix Spike/Matrix Spike Duplicate Summary

**Job Number:** C20117  
**Account:** SWCICAFO Sierra West Consultants, Inc.  
**Project:** T0000003190-F&M Auto Service., 1839 Foothill Blvd, Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
C20117-1MS	Q6687.D	50	02/07/12	TN	n/a	n/a	VQ245
C20117-1MSD	Q6688.D	50	02/07/12	TN	n/a	n/a	VQ245
C20117-1	Q6682.D	50	02/07/12	TN	n/a	n/a	VQ245

**The QC reported here applies to the following samples:** **Method:** SW846 8260B

C20117-1, C20117-2, C20117-3, C20117-4

CAS No.	Compound	C20117-1 ug/l	Spike Q ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
75-69-4	Trichlorofluoromethane	ND	1000	1060	106	1030	103	3	60-130/25
75-01-4	Vinyl chloride	ND	1000	992	99	981	98	1	60-130/25
1330-20-7	Xylene (total)	2840	3000	5600	92	5910	102	5	60-130/25

CAS No.	Surrogate Recoveries	MS	MSD	C20117-1	Limits
1868-53-7	Dibromofluoromethane	97%	91%	93%	60-130%
2037-26-5	Toluene-D8	99%	99%	101%	60-130%
460-00-4	4-Bromofluorobenzene	99%	96%	96%	60-130%

4.4.1  
4

## GC/MS Semi-volatiles

5

### QC Data Summaries

---

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

## Method Blank Summary

**Job Number:** C20117

**Account:** SWCICAFO Sierra West Consultants, Inc.

**Project:** T0000003190-F&M Auto Service., 1839 Foothill Blvd, Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP5298-MB	Y12264.D	1	02/02/12	LB	02/01/12	OP5298	EY588

The QC reported here applies to the following samples:

Method: SW846 8270C

C20117-3

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	20	4.0	ug/l	
95-57-8	2-Chlorophenol	ND	5.0	1.4	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	5.0	1.4	ug/l	
120-83-2	2,4-Dichlorophenol	ND	5.0	1.2	ug/l	
105-67-9	2,4-Dimethylphenol	ND	5.0	1.1	ug/l	
51-28-5	2,4-Dinitrophenol	ND	20	4.0	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	10	1.3	ug/l	
95-48-7	2-Methylphenol	ND	5.0	1.7	ug/l	
	3&4-Methylphenol	ND	10	1.6	ug/l	
88-75-5	2-Nitrophenol	ND	5.0	1.0	ug/l	
100-02-7	4-Nitrophenol	ND	10	1.0	ug/l	
87-86-5	Pentachlorophenol	ND	10	1.7	ug/l	
108-95-2	Phenol	ND	5.0	1.0	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	5.0	1.0	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	5.0	1.0	ug/l	
83-32-9	Acenaphthene	ND	5.0	1.3	ug/l	
208-96-8	Acenaphthylene	ND	5.0	1.2	ug/l	
62-53-3	Aniline	ND	5.0	1.1	ug/l	
120-12-7	Anthracene	ND	5.0	1.3	ug/l	
103-33-3	Azobenzene	ND	5.0	1.2	ug/l	
92-87-5	Benzidine	ND	20	2.4	ug/l	
56-55-3	Benzo(a)anthracene	ND	5.0	1.4	ug/l	
50-32-8	Benzo(a)pyrene	ND	5.0	1.1	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	5.0	1.3	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	5.0	1.5	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	5.0	1.4	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	5.0	1.5	ug/l	
85-68-7	Butyl benzyl phthalate	ND	5.0	1.2	ug/l	
100-51-6	Benzyl Alcohol	ND	5.0	1.7	ug/l	
91-58-7	2-Chloronaphthalene	ND	5.0	1.4	ug/l	
106-47-8	4-Chloroaniline	ND	5.0	1.1	ug/l	
86-74-8	Carbazole	ND	5.0	1.5	ug/l	
218-01-9	Chrysene	ND	5.0	1.6	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	5.0	1.1	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.0	1.1	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.0	1.0	ug/l	

## Method Blank Summary

**Job Number:** C20117**Account:** SWCICAFO Sierra West Consultants, Inc.**Project:** T0000003190-F&M Auto Service., 1839 Foothill Blvd, Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP5298-MB	Y12264.D	1	02/02/12	LB	02/01/12	OP5298	EY588

**The QC reported here applies to the following samples:****Method:** SW846 8270C

C20117-3

CAS No.	Compound	Result	RL	MDL	Units	Q
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.0	1.5	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	5.0	1.1	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	5.0	1.2	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	5.0	1.3	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	5.0	1.3	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	5.0	1.2	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	10	2.0	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	5.0	1.3	ug/l	
132-64-9	Dibenzofuran	ND	5.0	1.4	ug/l	
122-39-4	Diphenylamine	ND	5.0	1.4	ug/l	
84-74-2	Di-n-butyl phthalate	ND	5.0	1.4	ug/l	
117-84-0	Di-n-octyl phthalate	ND	5.0	1.8	ug/l	
84-66-2	Diethyl phthalate	ND	5.0	1.1	ug/l	
131-11-3	Dimethyl phthalate	ND	5.0	1.8	ug/l	
123-91-1	1,4-Dioxane	ND	5.0	1.0	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	10	2.0	ug/l	
206-44-0	Fluoranthene	ND	5.0	1.5	ug/l	
86-73-7	Fluorene	ND	5.0	1.5	ug/l	
118-74-1	Hexachlorobenzene	ND	5.0	1.4	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.6	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	5.0	1.0	ug/l	
67-72-1	Hexachloroethane	ND	5.0	1.2	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	5.0	1.4	ug/l	
78-59-1	Isophorone	ND	5.0	1.1	ug/l	
90-12-0	1-Methylnaphthalene	ND	5.0	1.3	ug/l	
91-57-6	2-Methylnaphthalene	ND	5.0	1.3	ug/l	
88-74-4	2-Nitroaniline	ND	5.0	1.1	ug/l	
99-09-2	3-Nitroaniline	ND	5.0	1.3	ug/l	
100-01-6	4-Nitroaniline	ND	5.0	1.1	ug/l	
91-20-3	Naphthalene	ND	5.0	1.2	ug/l	
98-95-3	Nitrobenzene	ND	5.0	1.0	ug/l	
62-75-9	N-Nitrosodimethylamine	ND	5.0	1.0	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	5.0	1.1	ug/l	
85-01-8	Phenanthrene	ND	5.0	1.3	ug/l	
129-00-0	Pyrene	ND	5.0	1.6	ug/l	
110-86-1	Pyridine	ND	10	1.0	ug/l	



## Method Blank Summary

**Job Number:** C20117  
**Account:** SWCICAFO Sierra West Consultants, Inc.  
**Project:** T0000003190-F&M Auto Service., 1839 Foothill Blvd, Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP5298-MB	Y12264.D	1	02/02/12	LB	02/01/12	OP5298	EY588

The QC reported here applies to the following samples:

Method: SW846 8270C

C20117-3

CAS No.	Compound	Result	RL	MDL	Units	Q
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	1.2	ug/l	

CAS No.	Surrogate Recoveries	Limits	
367-12-4	2-Fluorophenol	52%	10-100%
4165-62-2	Phenol-d5	37%	7-100%
118-79-6	2,4,6-Tribromophenol	85%	25-115%
4165-60-0	Nitrobenzene-d5	80%	25-100%
321-60-8	2-Fluorobiphenyl	78%	25-106%
1718-51-0	Terphenyl-d14	93%	35-130%

# Blank Spike/Blank Spike Duplicate Summary

**Job Number:** C20117  
**Account:** SWCICAFO Sierra West Consultants, Inc.  
**Project:** T0000003190-F&M Auto Service., 1839 Foothill Blvd, Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP5298-BS2	Y12248.D	1	02/02/12	LB	02/01/12	OP5298	EY587
OP5298-BSD2	Y12249.D	1	02/02/12	LB	02/01/12	OP5298	EY587

The QC reported here applies to the following samples: Method: SW846 8270C

C20117-3

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
123-91-1	1,4-Dioxane	25	12.8	51	12.1	48	6	20-69/30

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
367-12-4	2-Fluorophenol	57%	55%	10-100%
4165-62-2	Phenol-d5	48%	46%	7-100%
118-79-6	2,4,6-Tribromophenol	81%	80%	25-115%
4165-60-0	Nitrobenzene-d5	76%	73%	25-100%
321-60-8	2-Fluorobiphenyl	75%	73%	25-106%
1718-51-0	Terphenyl-d14	91%	92%	35-130%

5.2.1  
5

# Blank Spike/Blank Spike Duplicate Summary

**Job Number:** C20117

**Account:** SWCICAFO Sierra West Consultants, Inc.

**Project:** T0000003190-F&M Auto Service., 1839 Foothill Blvd, Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP5298-BS	Y12265.D	1	02/02/12	LB	02/01/12	OP5298	EY588
OP5298-BSD	Y12266.D	1	02/02/12	LB	02/01/12	OP5298	EY588

The QC reported here applies to the following samples:

Method: SW846 8270C

C20117-3

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
65-85-0	Benzoic Acid	50	16.0	32	19.6	39	20	10-100/30
95-57-8	2-Chlorophenol	25	21.3	85	20.7	83	3	23-103/30
59-50-7	4-Chloro-3-methyl phenol	25	21.9	88	21.3	85	3	17-130/30
120-83-2	2,4-Dichlorophenol	25	22.7	91	21.8	87	4	23-108/30
105-67-9	2,4-Dimethylphenol	25	19.9	80	18.9	76	5	17-91/30
51-28-5	2,4-Dinitrophenol	25	21.0	84	24.9	100	17	17-111/30
534-52-1	4,6-Dinitro-o-cresol	25	23.8	95	25.8	103	8	22-115/30
95-48-7	2-Methylphenol	25	18.9	76	19.2	77	2	25-101/30
	3&4-Methylphenol	25	17.4	70	18.0	72	3	22-105/30
88-75-5	2-Nitrophenol	25	22.8	91	21.7	87	5	19-111/30
100-02-7	4-Nitrophenol	25	10.3	41	11.6	46	12	13-130/30
87-86-5	Pentachlorophenol	25	25.2	101	27.0	108	7	24-130/30
108-95-2	Phenol	25	10.1	40	10.4	42	3	5-130/30
95-95-4	2,4,5-Trichlorophenol	25	22.8	91	22.7	91	0	19-106/30
88-06-2	2,4,6-Trichlorophenol	25	21.8	87	22.0	88	1	18-107/30
83-32-9	Acenaphthene	25	22.4	90	22.6	90	1	25-130/30
208-96-8	Acenaphthylene	25	22.4	90	22.6	90	1	28-105/30
62-53-3	Aniline	25	18.4	74	20.7	83	12	23-98/30
120-12-7	Anthracene	25	22.8	91	23.1	92	1	35-108/30
103-33-3	Azobenzene	25	22.7	91	23.3	93	3	31-110/30
92-87-5	Benzidine	50	51.8	104* a	54.0	108* a	4	15-73/30
56-55-3	Benzo(a)anthracene	25	24.9	100	25.2	101	1	33-111/30
50-32-8	Benzo(a)pyrene	25	24.4	98	24.9	100	2	32-106/30
205-99-2	Benzo(b)fluoranthene	25	23.6	94	24.9	100	5	33-109/30
191-24-2	Benzo(g,h,i)perylene	25	26.1	104	24.1	96	8	31-111/30
207-08-9	Benzo(k)fluoranthene	25	25.4	102	25.7	103	1	34-111/30
101-55-3	4-Bromophenyl phenyl ether	25	21.9	88	22.0	88	0	34-107/30
85-68-7	Butyl benzyl phthalate	25	25.1	100	25.3	101	1	29-114/30
100-51-6	Benzyl Alcohol	25	18.9	76	21.1	84	11	24-108/30
91-58-7	2-Chloronaphthalene	25	21.8	87	22.0	88	1	23-130/30
106-47-8	4-Chloroaniline	25	21.5	86	22.7	91	5	23-103/30
86-74-8	Carbazole	25	24.9	100	25.2	101	1	36-109/30
218-01-9	Chrysene	25	24.7	99	25.2	101	2	34-111/30
111-91-1	bis(2-Chloroethoxy)methane	25	22.6	90	22.8	91	1	28-101/30
111-44-4	bis(2-Chloroethyl)ether	25	21.5	86	22.1	88	3	31-108/30
108-60-1	bis(2-Chloroisopropyl)ether	25	22.9	92	23.7	95	3	33-106/30

5.2.2  
5

# Blank Spike/Blank Spike Duplicate Summary

**Job Number:** C20117

**Account:** SWCICAFO Sierra West Consultants, Inc.

**Project:** T0000003190-F&M Auto Service., 1839 Foothill Blvd, Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP5298-BS	Y12265.D	1	02/02/12	LB	02/01/12	OP5298	EY588
OP5298-BSD	Y12266.D	1	02/02/12	LB	02/01/12	OP5298	EY588

The QC reported here applies to the following samples:

Method: SW846 8270C

C20117-3

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
7005-72-3	4-Chlorophenyl phenyl ether	25	21.5	86	21.8	87	1	31-107/30
95-50-1	1,2-Dichlorobenzene	25	20.9	84	21.3	85	2	21-102/30
541-73-1	1,3-Dichlorobenzene	25	20.5	82	20.7	83	1	28-100/30
106-46-7	1,4-Dichlorobenzene	25	20.8	83	21.1	84	1	24-130/30
121-14-2	2,4-Dinitrotoluene	25	22.0	88	22.7	91	3	26-130/30
606-20-2	2,6-Dinitrotoluene	25	22.3	89	22.8	91	2	28-104/30
91-94-1	3,3'-Dichlorobenzidine	50	56.3	113* a	55.6	111* a	1	27-105/30
53-70-3	Dibenzo(a,h)anthracene	25	26.0	104	24.1	96	8	32-112/30
132-64-9	Dibenzofuran	25	22.4	90	22.7	91	1	31-108/30
122-39-4	Diphenylamine	25	21.9	88	22.7	91	4	27-110/30
84-74-2	Di-n-butyl phthalate	25	22.1	88	22.6	90	2	32-109/30
117-84-0	Di-n-octyl phthalate	25	25.3	101	27.0	108	7	30-120/30
84-66-2	Diethyl phthalate	25	20.5	82	20.7	83	1	32-109/30
131-11-3	Dimethyl phthalate	25	17.9	72	16.4	66	9	33-106/30
117-81-7	bis(2-Ethylhexyl)phthalate	25	25.2	101	26.2	105	4	29-116/30
206-44-0	Fluoranthene	25	22.3	89	22.6	90	1	35-114/30
86-73-7	Fluorene	25	22.1	88	22.4	90	1	31-106/30
118-74-1	Hexachlorobenzene	25	21.7	87	22.0	88	1	32-107/30
87-68-3	Hexachlorobutadiene	25	22.6	90	22.7	91	0	28-107/30
77-47-4	Hexachlorocyclopentadiene	25	16.8	67	16.8	67	0	19-94/30
67-72-1	Hexachloroethane	25	20.4	82	20.6	82	1	25-101/30
193-39-5	Indeno(1,2,3-cd)pyrene	25	25.5	102	23.9	96	6	31-113/30
78-59-1	Isophorone	25	21.5	86	21.9	88	2	26-111/30
90-12-0	1-Methylnaphthalene	25	21.9	88	22.2	89	1	22-102/30
91-57-6	2-Methylnaphthalene	25	21.3	85	21.5	86	1	26-112/30
88-74-4	2-Nitroaniline	25	23.3	93	23.8	95	2	30-109/30
99-09-2	3-Nitroaniline	25	23.3	93	24.1	96	3	22-107/30
100-01-6	4-Nitroaniline	25	24.5	98	25.3	101	3	29-111/30
91-20-3	Naphthalene	25	24.6	98	24.6	98	0	20-104/30
98-95-3	Nitrobenzene	25	21.2	85	21.7	87	2	22-105/30
62-75-9	N-Nitrosodimethylamine	25	15.3	61	15.8	63	3	20-71/30
621-64-7	N-Nitroso-di-n-propylamine	25	21.6	86	22.7	91	5	16-130/30
85-01-8	Phenanthrene	25	22.6	90	22.7	91	0	35-108/30
129-00-0	Pyrene	25	24.4	98	24.0	96	2	35-130/30
110-86-1	Pyridine	25	11.0	44	12.4	50	12	15-77/30
120-82-1	1,2,4-Trichlorobenzene	25	19.9	80	19.9	80	0	15-130/30

5.2.2  
5

## Blank Spike/Blank Spike Duplicate Summary

**Job Number:** C20117  
**Account:** SWCICAFO Sierra West Consultants, Inc.  
**Project:** T0000003190-F&M Auto Service., 1839 Foothill Blvd, Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP5298-BS	Y12265.D	1	02/02/12	LB	02/01/12	OP5298	EY588
OP5298-BSD	Y12266.D	1	02/02/12	LB	02/01/12	OP5298	EY588

The QC reported here applies to the following samples:

Method: SW846 8270C

C20117-3

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
367-12-4	2-Fluorophenol	51%	52%	10-100%
4165-62-2	Phenol-d5	37%	37%	7-100%
118-79-6	2,4,6-Tribromophenol	82%	81%	25-115%
4165-60-0	Nitrobenzene-d5	80%	81%	25-100%
321-60-8	2-Fluorobiphenyl	80%	79%	25-106%
1718-51-0	Terphenyl-d14	95%	94%	35-130%

(a) Outside laboratory control limits (high bias).

## GC Semi-volatiles

---

### QC Data Summaries

---

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

## Method Blank Summary

**Job Number:** C20117  
**Account:** SWCICAFO Sierra West Consultants, Inc.  
**Project:** T0000003190-F&M Auto Service., 1839 Foothill Blvd, Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP5300-MB	MM002264.DI		02/01/12	RV	02/01/12	OP5300	GMM69

The QC reported here applies to the following samples:

Method: SW846 8082

C20117-3

CAS No.	Compound	Result	RL	MDL	Units	Q
12674-11-2	Aroclor 1016	ND	0.10	0.020	ug/l	
11104-28-2	Aroclor 1221	ND	0.10	0.050	ug/l	
11141-16-5	Aroclor 1232	ND	0.10	0.050	ug/l	
53469-21-9	Aroclor 1242	ND	0.10	0.050	ug/l	
12672-29-6	Aroclor 1248	ND	0.10	0.050	ug/l	
11097-69-1	Aroclor 1254	ND	0.10	0.050	ug/l	
11096-82-5	Aroclor 1260	ND	0.10	0.030	ug/l	

CAS No.	Surrogate Recoveries		Limits
877-09-8	Tetrachloro-m-xylene	77%	41-134%
877-09-8	Tetrachloro-m-xylene	76%	41-134%
2051-24-3	Decachlorobiphenyl	86%	41-134%
2051-24-3	Decachlorobiphenyl	86%	41-134%

# Method Blank Summary

**Job Number:** C20117  
**Account:** SWCICAFO Sierra West Consultants, Inc.  
**Project:** T0000003190-F&M Auto Service., 1839 Foothill Blvd, Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP5309-MB	HH21034.D	1	02/02/12	JH	02/02/12	OP5309	GHH666

The QC reported here applies to the following samples:

Method: SW846 8015B M

C20117-1, C20117-2, C20117-3, C20117-4

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (C10-C28)	0.0270	0.10	0.025	mg/l	J

CAS No.	Surrogate Recoveries	Limits
630-01-3	Hexacosane	96% 45-140%



# Blank Spike/Blank Spike Duplicate Summary

**Job Number:** C20117  
**Account:** SWCICAFO Sierra West Consultants, Inc.  
**Project:** T0000003190-F&M Auto Service., 1839 Foothill Blvd, Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP5300-BS	MM002400.DI		02/03/12	RV	02/02/12	OP5300	GMM72
OP5300-BSD	MM002401.DI		02/03/12	RV	02/02/12	OP5300	GMM72

The QC reported here applies to the following samples: Method: SW846 8082

C20117-3

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
12674-11-2	Aroclor 1016	0.4	0.37	93	0.36	90	3	40-140/30
11096-82-5	Aroclor 1260	0.4	0.37	93	0.39	98	5	40-140/30

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
877-09-8	Tetrachloro-m-xylene	72%	82%	41-134%
877-09-8	Tetrachloro-m-xylene	76%	81%	41-134%
2051-24-3	Decachlorobiphenyl	85%	88%	41-134%
2051-24-3	Decachlorobiphenyl	102%	92%	41-134%

6.2.1  
6

# Blank Spike/Blank Spike Duplicate Summary

**Job Number:** C20117  
**Account:** SWCICAFO Sierra West Consultants, Inc.  
**Project:** T0000003190-F&M Auto Service., 1839 Foothill Blvd, Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP5309-BS	HH21035.D	1	02/02/12	JH	02/02/12	OP5309	GHH666
OP5309-BSD	HH21036.D	1	02/02/12	JH	02/02/12	OP5309	GHH666

The QC reported here applies to the following samples:

Method: SW846 8015B M

C20117-1, C20117-2, C20117-3, C20117-4

CAS No.	Compound	Spike mg/l	BSP mg/l	BSP %	BSD mg/l	BSD %	RPD	Limits Rec/RPD
	TPH (C10-C28)	1	0.915	92	0.918	92	0	45-140/30

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
630-01-3	Hexacosane	76%	81%	45-140%

6.2.2

6

# Matrix Spike/Matrix Spike Duplicate Summary

**Job Number:** C20117  
**Account:** SWCICAFO Sierra West Consultants, Inc.  
**Project:** T0000003190-F&M Auto Service., 1839 Foothill Blvd, Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP5309-MS	HH21059.D	1	02/02/12	JH	02/02/12	OP5309	GHH666
OP5309-MSD	HH21060.D	1	02/02/12	JH	02/02/12	OP5309	GHH666
C20118-6	HH21046.D	1	02/02/12	JH	02/02/12	OP5309	GHH666

The QC reported here applies to the following samples:

Method: SW846 8015B M

C20117-1, C20117-2, C20117-3, C20117-4

CAS No.	Compound	C20118-6 mg/l	Spike Q	mg/l	MS mg/l	MS %	MSD mg/l	MSD %	RPD	Limits Rec/RPD
	TPH (C10-C28)	0.0429	J	2	1.77	86	1.59	77	11	45-140/25

CAS No.	Surrogate Recoveries	MS	MSD	C20118-6	Limits
630-01-3	Hexacosane	72%	67%	72%	45-140%

## Metals Analysis

---

## QC Data Summaries

---

Includes the following where applicable:

- Method Blank Summaries
- Matrix Spike and Duplicate Summaries
- Blank Spike and Lab Control Sample Summaries
- Serial Dilution Summaries

BLANK RESULTS SUMMARY  
Part 2 - Method Blanks

Login Number: C20117  
Account: SWCICAFO - Sierra West Consultants, Inc.  
Project: T0000003190-F&M Auto Service., 1839 Foothill Blvd, Oakland, CA

QC Batch ID: MP4505  
Matrix Type: AQUEOUS

Methods: SW846 6010B  
Units: ug/l

Prep Date: 02/07/12

Metal	RL	IDL	MDL	MB raw	final
Aluminum	200	13	8.5		
Antimony	6.0	.7	.51		
Arsenic	10	.7	.65		
Barium	200	.4	.35		
Beryllium	5.0	.2	.4		
Boron	100	.9	.64		
Cadmium	2.0	.2	.15	0.0	<2.0
Calcium	5000	7.1	12		
Chromium	10	.3	.41	0.30	<10
Cobalt	5.0	.2	.3		
Copper	10	1.2	3		
Iron	200	6.4	12		
Lead	10	.7	.85	0.0	<10
Magnesium	5000	27	36		
Manganese	15	.1	1.3		
Molybdenum	20	.2	.22		
Nickel	5.0	.2	.12	0.40	<5.0
Potassium	10000	18	44		
Selenium	10	1.8	2.2		
Silicon	100	1.2	6.9		
Silver	5.0	.3	.47		
Sodium	10000	15	13		
Strontium	10	.2	.24		
Thallium	10	.5	.54		
Tin	50	.2	.7		
Titanium	10	.4	.34		
Vanadium	10	.3	.3		
Zinc	20	.3	4.2	2.6	<20

Associated samples MP4505: C20117-1F, C20117-2F, C20117-3F, C20117-4F

Results < IDL are shown as zero for calculation purposes  
(\* ) Outside of QC limits  
(anr) Analyte not requested

7.1.1  
7

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: C20117  
 Account: SWCICAFO - Sierra West Consultants, Inc.  
 Project: T0000003190-F&M Auto Service., 1839 Foothill Blvd, Oakland, CA

QC Batch ID: MP4505  
 Matrix Type: AQUEOUS

Methods: SW846 6010B  
 Units: ug/l

Prep Date: 02/07/12

Metal	C20154-1 Original MS		Spike MPIR4A	% Rec	QC Limits
Aluminum					
Antimony	anr				
Arsenic	anr				
Barium	anr				
Beryllium	anr				
Boron					
Cadmium	0.30	509	500	101.7	75-125
Calcium					
Chromium	4.5	488	500	96.7	75-125
Cobalt	anr				
Copper	anr				
Iron					
Lead	0.0	489	500	97.8	75-125
Magnesium					
Manganese					
Molybdenum	anr				
Nickel	3.4	481	500	95.5	75-125
Potassium					
Selenium	anr				
Silicon					
Silver	anr				
Sodium					
Strontium					
Thallium	anr				
Tin					
Titanium					
Vanadium	anr				
Zinc	6.5	525	500	103.7	75-125

Associated samples MP4505: C20117-1F, C20117-2F, C20117-3F, C20117-4F

Results < IDL are shown as zero for calculation purposes  
 (\*) Outside of QC limits  
 (N) Matrix Spike Rec. outside of QC limits  
 (anr) Analyte not requested

7.1.2  
7

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: C20117  
 Account: SWCICAFO - Sierra West Consultants, Inc.  
 Project: T0000003190-F&M Auto Service., 1839 Foothill Blvd, Oakland, CA

QC Batch ID: MP4505  
 Matrix Type: AQUEOUS

Methods: SW846 6010B  
 Units: ug/l

Prep Date: 02/07/12

Metal	C20154-1 Original MSD	SpikeLot MPIR4A	% Rec	MSD RPD	QC Limit	
Aluminum						
Antimony	anr					
Arsenic	anr					
Barium	anr					
Beryllium	anr					
Boron						
Cadmium	0.30	500	500	99.9	1.8	20
Calcium						
Chromium	4.5	481	500	95.3	1.4	20
Cobalt	anr					
Copper	anr					
Iron						
Lead	0.0	481	500	96.2	1.6	20
Magnesium						
Manganese						
Molybdenum	anr					
Nickel	3.4	474	500	94.1	1.5	20
Potassium						
Selenium	anr					
Silicon						
Silver	anr					
Sodium						
Strontium						
Thallium	anr					
Tin						
Titanium						
Vanadium	anr					
Zinc	6.5	516	500	101.9	1.7	20

Associated samples MP4505: C20117-1F, C20117-2F, C20117-3F, C20117-4F

Results < IDL are shown as zero for calculation purposes  
 (\*) Outside of QC limits  
 (N) Matrix Spike Rec. outside of QC limits  
 (anr) Analyte not requested

7.1.2  
7

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: C20117  
 Account: SWCICAFO - Sierra West Consultants, Inc.  
 Project: T0000003190-F&M Auto Service., 1839 Foothill Blvd, Oakland, CA

QC Batch ID: MP4505 Methods: SW846 6010B  
 Matrix Type: AQUEOUS Units: ug/l

Prep Date: 02/07/12 02/07/12

Metal	BSP Result	Spikelot MPIR4A	% Rec	QC Limits	BSD Result	Spikelot MPIR4A	% Rec	BSD RPD	QC Limit
Aluminum									
Antimony	anr								
Arsenic	anr								
Barium	anr								
Beryllium	anr								
Boron									
Cadmium	502	500	100.4	80-120	502	500	100.4	0.0	
Calcium									
Chromium	477	500	95.4	80-120	489	500	97.8	2.5	
Cobalt	anr								
Copper	anr								
Iron									
Lead	483	500	96.6	80-120	484	500	96.8	0.2	
Magnesium									
Manganese									
Molybdenum	anr								
Nickel	470	500	94.0	80-120	473	500	94.6	0.6	
Potassium									
Selenium	anr								
Silicon									
Silver	anr								
Sodium									
Strontium									
Thallium	anr								
Tin									
Titanium									
Vanadium	anr								
Zinc	513	500	102.6	80-120	515	500	103.0	0.4	

Associated samples MP4505: C20117-1F, C20117-2F, C20117-3F, C20117-4F

Results < IDL are shown as zero for calculation purposes  
 (\*) Outside of QC limits  
 (anr) Analyte not requested

7.1.3  
 7



SERIAL DILUTION RESULTS SUMMARY

Login Number: C20117  
 Account: SWCICAFO - Sierra West Consultants, Inc.  
 Project: T0000003190-F&M Auto Service., 1839 Foothill Blvd, Oakland, CA

QC Batch ID: MP4505  
 Matrix Type: AQUEOUS

Methods: SW846 6010B  
 Units: ug/l

Prep Date: 02/07/12

Metal	C20154-1 Original SDL 1:5		%DIF	QC Limits
Aluminum				
Antimony	anr			
Arsenic	anr			
Barium	anr			
Beryllium	anr			
Boron				
Cadmium	0.300	0.00	100.0(a)	0-10
Calcium				
Chromium	4.50	5.30	17.8 (a)	0-10
Cobalt	anr			
Copper	anr			
Iron				
Lead	0.00	7.60		0-10
Magnesium				
Manganese				
Molybdenum	anr			
Nickel	3.40	2.20	35.3 (a)	0-10
Potassium				
Selenium	anr			
Silicon				
Silver	anr			
Sodium				
Strontium				
Thallium	anr			
Tin				
Titanium				
Vanadium	anr			
Zinc	6.50	7.20	10.8 (a)	0-10

Associated samples MP4505: C20117-1F, C20117-2F, C20117-3F, C20117-4F

Results < IDL are shown as zero for calculation purposes  
 (\*) Outside of QC limits  
 (anr) Analyte not requested  
 (a) Percent difference acceptable due to low initial sample concentration (< 50 times IDL).

7.1.4  
7

## General Chemistry

---

### QC Data Summaries

---

Includes the following where applicable:

- Method Blank and Blank Spike Summaries
- Duplicate Summaries
- Matrix Spike Summaries

METHOD BLANK AND SPIKE RESULTS SUMMARY  
GENERAL CHEMISTRY

Login Number: C20117  
Account: SWCICAFO - Sierra West Consultants, Inc.  
Project: T0000003190-F&M Auto Service., 1839 Foothill Blvd, Oakland, CA

Analyte	Batch ID	RL	MB Result	Units	Spike Amount	BSP Result	BSP %Recov	QC Limits
HEM Oil and Grease	GP3462/GN7597	5.0	0.0	mg/l	40.0	33.9	84.8	78-114%
HEM Petroleum Hydrocarbons	GP3464/GN7599	5.0	0.0	mg/l	20.0	19.6	98.0	64-132%

Associated Samples:  
Batch GP3462: C20117-3  
Batch GP3464: C20117-3  
(\* ) Outside of QC limits

8.1

8

BLANK SPIKE DUPLICATE RESULTS SUMMARY  
GENERAL CHEMISTRY

Login Number: C20117  
Account: SWCICAFO - Sierra West Consultants, Inc.  
Project: T0000003190-F&M Auto Service., 1839 Foothill Blvd, Oakland, CA

Analyte	Batch ID	Units	Spike Amount	BSD Result	RPD	QC Limit
HEM Oil and Grease	GP3462/GN7597	mg/l	40.0	35.1	3.5	18%
HEM Petroleum Hydrocarbons	GP3464/GN7599	mg/l	20.0	19.5	0.5	28%

Associated Samples:  
Batch GP3462: C20117-3  
Batch GP3464: C20117-3  
(\* ) Outside of QC limits

8.2  
8

MATRIX SPIKE RESULTS SUMMARY  
GENERAL CHEMISTRY

Login Number: C20117  
Account: SWCICAFO - Sierra West Consultants, Inc.  
Project: T0000003190-F&M Auto Service., 1839 Foothill Blvd, Oakland, CA

Analyte	Batch ID	QC Sample	Units	Original Result	Spike Amount	MS Result	%Rec	QC Limits
HEM Oil and Grease	GP3462/GN7597	C20073-1	mg/l	1.1	40.0	35.6	86.3	78-114%

Associated Samples:

Batch GP3462: C20117-3

(\*) Outside of QC limits

(N) Matrix Spike Rec. outside of QC limits



## **Appendix G**

### **Well Development and Sampling Field Sheets**

### Well Development Field Form

Site Location: F&M Auto Service  
1839 Foothill Blvd, Oakland

Date: 1/31/12  
 Personnel: B. Whalen

Well ID	Time	Volume Removed (gallons)	Temperature (F° C°)	pH	Electric Conductivity (µS/cm <sup>2</sup> )	Turbidity (ntu)	DTW (ft. below TOC)	TD (ft. below TOC)
MW-1	1045	0	—	—	—	—	8.73	23.62
	1054	2.5	18.7	6.60	647	>999	—	
	1057	5.0	19.4	6.62	702	>999	12.17	
	1059	7.5	19.8	6.58	784	>999	—	
	1101	10.0	19.9	6.52	639	>999	18.83	
	1104	12.5	20.4	6.55	698	>999	—	
	1107	15.0	21.5	6.63	705	>999	21.29	
	1112	17.5	21.7	6.65	713	>999	Dry	23.76
~~~~~								
	1151						11.08	
	1200	Collect Sample						

Casing Volume ≈ 2.4 gal  
 80% Recharge = 11.71 ft.

### Well Development Field Form

Site Location: FLM Auto Service UST Site  
839 Foothill Blvd, Oakland, CA

Date: 1/31/12  
 Personnel: B. Whelan

Well ID	Time	Volume Removed (gallons)	Temperature (F° C°)	pH	Electric Conductivity (µS/cm <sup>2</sup> )	Turbidity (ntu)	DTW (ft. below TOC)	TD (ft. below TOC)
MW-2	1120	0	—	—	—	—	8.97	23.75
	1128	2.5	20.5	6.61	797	>999	13.91	
	1130	5.0	19.4	6.57	787	>999	17.50	
	1132	7.5	19.1	6.55	769	>999	20.46	
	1134	10.0	19.9	6.57	742	>999	Dry	23.78
~~~~~								
	1229						10.74	
	1235	Collect Sample						

Casing Volume  $\approx$  2.4 gal  
 80% Recharge = 11.93 ft.



### Well Development Field Form

Site Location: FGM Auto Service UST Site  
1839 Foothill Blvd., Oakland, CA

Date: 1/31/12  
 Personnel: B. Wlalen

Well ID	Time	Volume Removed (gallons)	Temperature (F° C°)	pH	Electric Conductivity (µS/cm <sup>2</sup> )	Turbidity (ntu)	DTW (ft. below TOC)	TD (ft. below TOC)
MW-3	1140	0	—	—	—	—	7.25	23.70
	1155	2.5	19.2	6.70	800	>999	13.17	
	1158	5.0	18.8	6.61	789	>999	16.94	
	1200	7.5	18.8	6.65	879	>999	18.91	
	1203	10.0	18.9	6.64	874	>999	Dry	23.71
~~~~~								
	1245						9.91	
	1300	Collect Sample						

Casing Volume ≈ 2.6 gallons  
 80% Recharge = 10.54 ft.

### Well Development Field Form

Site Location: F&M Auto Service UST Site  
1839 Foothill Blvd., Oakland, CA

Date: 1/31/12  
 Personnel: B. Whalen

Well ID	Time	Volume Removed (gallons)	Temperature (F° C°)	pH	Electric Conductivity (µS/cm <sup>2</sup> )	Turbidity (ntu)	DTW (ft. below TOC)	TD (ft. below TOC)
MW-4	1210	0	—	—	—	—	6.52	23.80
	1218	2.75	20.1	6.77	776	>999	12.32	
	1221	5.5	19.9	6.74	844	>999	17.81	
	1223	8.25	20.8	6.78	847	>999	21.04	
	1225	10.0	20.6	6.82	842	>999	Dry	23.79
~~~~~								
	1312						9.98	
	1315	Collect Sample						

Casing Volume  $\approx$  2.75 gallons  
 80% Recharge = 9.98 ft.

**Appendix H**  
**Monitoring Well Survey Report**

**Virgil Chavez Land Surveying**

721 Tuolumne Street

Vallejo, California 94590

(707) 553-2476 • Fax (707) 553-8698

February 3, 2012

Project No.: 3222-00

Brian Whalen  
Sierra West Consultants, Inc.  
4227 Sunrise Blvd., Suite 220  
Fair Oaks, CA 95628

Subject: Monitoring Well Survey  
1839 Foothill Blvd.  
Oakland, CA

Dear Brian:

This is to confirm that we have proceeded at your request to survey the ground water monitoring wells located at the above referenced location. The survey was completed on January 31, 2012. The benchmark for this survey was a pin in monument well located at centerline of International Boulevard and Miller Avenue. The latitude, longitude and coordinates are for top of casings and are based on the California State Coordinate System, Zone III (NAD83).

Benchmark Elevation = 25.86 feet (NGVD 29).

<u>Latitude</u>	<u>Longitude</u>	<u>Northing</u>	<u>Easting</u>	<u>Elev.</u>	<u>Desc.</u>
37.7880469	-122.2397472	2114080.38	6058959.73	50.09	RIM MW-1
				49.71	TOC MW-1
				50.96	RIM MW-2
37.7881015	-122.2398276	2114100.70	6058936.86	50.53	TOC MW-2
				50.90	RIM MW-3
37.7881848	-122.2399831	2114131.88	6058892.50	50.59	TOC MW-3
				50.74	RIM MW-4
37.7881790	-122.2397583	2114128.54	6058957.42	50.47	TOC MW-4



Sincerely,

*Virgil D. Chavez*  
 \_\_\_\_\_  
 Virgil D. Chavez, PLS 6323

## **Appendix I**

### **Waste Characterization Sample Laboratory Analytical Report**

**Technical Report for**

**Sierra West Consultants, Inc.**

**F&M Auto Service UST Site - 1839 Foothill Blvd, Oakland, CA**

**Accutest Job Number: C19983**

**Sampling Date: 01/24/12**

**Report to:**

**Sierra West Consultants, Inc.**  
**4227 Sunrise Blvd Suite#220**  
**Fair Oaks, CA 95628**  
**jbensch@sierra-west.net; bwhalen@sierra-west.net**  
**ATTN: Jeff Bensch**

**Total number of pages in report: 44**



Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Conference and/or state specific certification programs as applicable.

**Kesavalu M. Bagawandoss,**  
**Ph.D., J.D., Lab Director**

**Client Service contact: Nutan Kabir 408-588-0200**

Certifications: CA (08258CA) AZ (AZ0762) DoD/ISO/IEC 17025:2005 (L2242)

This report shall not be reproduced, except in its entirety, without the written approval of Accutest Laboratories.  
Test results relate only to samples analyzed.

# Table of Contents

-1-

<b>Section 1: Sample Summary .....</b>	<b>3</b>
<b>Section 2: Sample Results .....</b>	<b>4</b>
<b>2.1: C19983-1: WASTE-012412 .....</b>	<b>5</b>
<b>Section 3: Misc. Forms .....</b>	<b>13</b>
<b>3.1: Chain of Custody .....</b>	<b>14</b>
<b>Section 4: GC/MS Volatiles - QC Data Summaries .....</b>	<b>16</b>
<b>4.1: Method Blank Summary .....</b>	<b>17</b>
<b>4.2: Blank Spike/Blank Spike Duplicate Summary .....</b>	<b>19</b>
<b>4.3: Laboratory Control Sample Summary .....</b>	<b>21</b>
<b>4.4: Matrix Spike/Matrix Spike Duplicate Summary .....</b>	<b>22</b>
<b>Section 5: GC/MS Semi-volatiles - QC Data Summaries .....</b>	<b>24</b>
<b>5.1: Method Blank Summary .....</b>	<b>25</b>
<b>5.2: Blank Spike/Blank Spike Duplicate Summary .....</b>	<b>28</b>
<b>Section 6: GC Semi-volatiles - QC Data Summaries .....</b>	<b>32</b>
<b>6.1: Method Blank Summary .....</b>	<b>33</b>
<b>6.2: Blank Spike/Blank Spike Duplicate Summary .....</b>	<b>35</b>
<b>6.3: Matrix Spike/Matrix Spike Duplicate Summary .....</b>	<b>37</b>
<b>Section 7: Metals Analysis - QC Data Summaries .....</b>	<b>39</b>
<b>7.1: Prep QC MP4456: Cd,Cr,Pb,Ni,Zn .....</b>	<b>40</b>

1

2

3

4

5

6

7



## Sample Summary

Sierra West Consultants, Inc.

**Job No:** C19983

F&M Auto Service UST Site - 1839 Foothill Blvd, Oakland, CA

Sample Number	Collected		Matrix			Client Sample ID
	Date	Time By	Received	Code	Type	
C19983-1	01/24/12	15:30 BW	01/24/12	SO	Soil	WASTE-012412

---

Soil samples reported on a dry weight basis unless otherwise indicated on result page.



Sample Results

---

Report of Analysis

---

## Report of Analysis

<b>Client Sample ID:</b>	WASTE-012412	<b>Date Sampled:</b>	01/24/12
<b>Lab Sample ID:</b>	C19983-1	<b>Date Received:</b>	01/24/12
<b>Matrix:</b>	SO - Soil	<b>Percent Solids:</b>	n/a <sup>a</sup>
<b>Method:</b>	SW846 8260B		
<b>Project:</b>	F&M Auto Service UST Site - 1839 Foothill Blvd, Oakland, CA		

Run #1	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	M30975.D	1	01/26/12	XB	n/a	n/a	VM978
Run #2							

Run #1	Initial Weight	Final Volume	Methanol Aliquot
Run #1	7.40 g	5.0 ml	15.0 ul
Run #2			

## VOA Halogenated List

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1100	110	ug/kg	
75-27-4	Bromodichloromethane	ND	1100	110	ug/kg	
75-25-2	Bromoform	ND	1100	110	ug/kg	
108-90-7	Chlorobenzene	ND	1100	110	ug/kg	
75-00-3	Chloroethane	ND	1100	230	ug/kg	
67-66-3	Chloroform	ND	1100	110	ug/kg	
56-23-5	Carbon tetrachloride	ND	1100	110	ug/kg	
75-34-3	1,1-Dichloroethane	ND	1100	110	ug/kg	
75-35-4	1,1-Dichloroethylene	ND	1100	110	ug/kg	
106-93-4	1,2-Dibromoethane	ND	1100	110	ug/kg	
107-06-2	1,2-Dichloroethane	ND	1100	110	ug/kg	
78-87-5	1,2-Dichloropropane	ND	1100	110	ug/kg	
108-20-3	Di-Isopropyl ether	ND	1100	110	ug/kg	
124-48-1	Dibromochloromethane	ND	1100	110	ug/kg	
75-71-8	Dichlorodifluoromethane	ND	1100	230	ug/kg	
156-59-2	cis-1,2-Dichloroethylene	ND	1100	250	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	1100	110	ug/kg	
541-73-1	m-Dichlorobenzene	ND	1100	110	ug/kg	
95-50-1	o-Dichlorobenzene	ND	1100	110	ug/kg	
106-46-7	p-Dichlorobenzene	ND	1100	110	ug/kg	
156-60-5	trans-1,2-Dichloroethylene	ND	1100	110	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	1100	110	ug/kg	
100-41-4	Ethylbenzene	905	1100	110	ug/kg	J
637-92-3	Ethyl tert-Butyl Ether	ND	1100	110	ug/kg	
74-83-9	Methyl bromide	ND	1100	230	ug/kg	
74-87-3	Methyl chloride	ND	1100	230	ug/kg	
75-09-2	Methylene chloride	ND	4500	1100	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	1100	230	ug/kg	
994-05-8	Tert-Amyl Methyl Ether	ND	1100	110	ug/kg	
75-65-0	Tert Butyl Alcohol	ND	9000	2300	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	1100	110	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1100	110	ug/kg	

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> WASTE-012412	
<b>Lab Sample ID:</b> C19983-1	<b>Date Sampled:</b> 01/24/12
<b>Matrix:</b> SO - Soil	<b>Date Received:</b> 01/24/12
<b>Method:</b> SW846 8260B	<b>Percent Solids:</b> n/a <sup>a</sup>
<b>Project:</b> F&M Auto Service UST Site - 1839 Foothill Blvd, Oakland, CA	

### VOA Halogenated List

CAS No.	Compound	Result	RL	MDL	Units	Q
79-00-5	1,1,2-Trichloroethane	ND	1100	110	ug/kg	
127-18-4	Tetrachloroethylene	ND	1100	140	ug/kg	
108-88-3	Toluene	ND	1100	110	ug/kg	
79-01-6	Trichloroethylene	ND	1100	110	ug/kg	
75-69-4	Trichlorofluoromethane	ND	1100	230	ug/kg	
75-01-4	Vinyl chloride	ND	1100	230	ug/kg	
1330-20-7	Xylene (total)	1150	2300	230	ug/kg	J
	TPH-GRO (C6-C10)	233000	23000	11000	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	94%		60-130%
2037-26-5	Toluene-D8	101%		60-130%
460-00-4	4-Bromofluorobenzene	106%		60-130%

(a) All results reported on a wet weight basis.

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b>	WASTE-012412	<b>Date Sampled:</b>	01/24/12
<b>Lab Sample ID:</b>	C19983-1	<b>Date Received:</b>	01/24/12
<b>Matrix:</b>	SO - Soil	<b>Percent Solids:</b>	n/a <sup>a</sup>
<b>Method:</b>	SW846 8270C SW846 3550B		
<b>Project:</b>	F&M Auto Service UST Site - 1839 Foothill Blvd, Oakland, CA		

Run #1	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	Y12076.D	1	01/26/12	LB	01/26/12	OP5265	EY580
Run #2							

Run #1	Initial Weight	Final Volume
Run #1	30.0 g	1.0 ml
Run #2		

## ABN Full List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic acid	ND	670	160	ug/kg	
95-57-8	2-Chlorophenol	ND	170	71	ug/kg	
59-50-7	4-Chloro-3-methyl phenol	ND	170	72	ug/kg	
120-83-2	2,4-Dichlorophenol	ND	170	78	ug/kg	
105-67-9	2,4-Dimethylphenol	ND	170	65	ug/kg	
51-28-5	2,4-Dinitrophenol	ND	670	130	ug/kg	
534-52-1	4,6-Dinitro-o-cresol	ND	330	62	ug/kg	
95-48-7	2-Methylphenol	ND	170	88	ug/kg	
	3&4-Methylphenol	ND	330	79	ug/kg	
88-75-5	2-Nitrophenol	ND	170	79	ug/kg	
100-02-7	4-Nitrophenol	ND	330	40	ug/kg	
87-86-5	Pentachlorophenol	ND	330	34	ug/kg	
108-95-2	Phenol	ND	170	69	ug/kg	
95-95-4	2,4,5-Trichlorophenol	ND	170	75	ug/kg	
88-06-2	2,4,6-Trichlorophenol	ND	170	71	ug/kg	
83-32-9	Acenaphthene	ND	170	73	ug/kg	
208-96-8	Acenaphthylene	ND	170	78	ug/kg	
62-53-3	Aniline	ND	170	44	ug/kg	
120-12-7	Anthracene	ND	170	54	ug/kg	
103-33-3	Azobenzene	ND	170	59	ug/kg	
92-87-5	Benzidine	ND	670	79	ug/kg	
56-55-3	Benzo(a)anthracene	ND	170	33	ug/kg	
50-32-8	Benzo(a)pyrene	ND	170	33	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	170	33	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	170	43	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	170	33	ug/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	170	67	ug/kg	
85-68-7	Butyl benzyl phthalate	ND	170	33	ug/kg	
100-51-6	Benzyl Alcohol	ND	170	89	ug/kg	
91-58-7	2-Chloronaphthalene	ND	170	76	ug/kg	
106-47-8	4-Chloroaniline	ND	170	50	ug/kg	
86-74-8	Carbazole	ND	170	35	ug/kg	

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b>	WASTE-012412	<b>Date Sampled:</b>	01/24/12
<b>Lab Sample ID:</b>	C19983-1	<b>Date Received:</b>	01/24/12
<b>Matrix:</b>	SO - Soil	<b>Percent Solids:</b>	n/a <sup>a</sup>
<b>Method:</b>	SW846 8270C SW846 3550B		
<b>Project:</b>	F&M Auto Service UST Site - 1839 Foothill Blvd, Oakland, CA		

## ABN Full List

CAS No.	Compound	Result	RL	MDL	Units	Q
218-01-9	Chrysene	ND	170	33	ug/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND	170	74	ug/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	170	67	ug/kg	
108-60-1	bis(2-Chloroisopropyl)ether	ND	170	67	ug/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	170	76	ug/kg	
95-50-1	1,2-Dichlorobenzene	ND	170	75	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	170	74	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	170	72	ug/kg	
121-14-2	2,4-Dinitrotoluene	ND	170	72	ug/kg	
606-20-2	2,6-Dinitrotoluene	ND	170	75	ug/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	330	70	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	170	41	ug/kg	
132-64-9	Dibenzofuran	ND	170	73	ug/kg	
122-39-4	Diphenylamine	ND	170	65	ug/kg	
84-74-2	Di-n-butyl phthalate	ND	170	33	ug/kg	
117-84-0	Di-n-octyl phthalate	ND	170	34	ug/kg	
84-66-2	Diethyl phthalate	ND	170	57	ug/kg	
131-11-3	Dimethyl phthalate	ND	170	69	ug/kg	
123-91-1	1,4-Dioxane	ND	170	43	ug/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	330	67	ug/kg	
206-44-0	Fluoranthene	ND	170	33	ug/kg	
86-73-7	Fluorene	ND	170	72	ug/kg	
118-74-1	Hexachlorobenzene	ND	170	71	ug/kg	
87-68-3	Hexachlorobutadiene	ND	170	96	ug/kg	
77-47-4	Hexachlorocyclopentadiene	ND	170	92	ug/kg	
67-72-1	Hexachloroethane	ND	170	71	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	170	43	ug/kg	
78-59-1	Isophorone	ND	170	69	ug/kg	
90-12-0	1-Methylnaphthalene	ND	170	76	ug/kg	
91-57-6	2-Methylnaphthalene	ND	170	80	ug/kg	
88-74-4	2-Nitroaniline	ND	170	67	ug/kg	
99-09-2	3-Nitroaniline	ND	170	50	ug/kg	
100-01-6	4-Nitroaniline	ND	170	43	ug/kg	
91-20-3	Naphthalene	ND	170	77	ug/kg	
98-95-3	Nitrobenzene	ND	170	78	ug/kg	
62-75-9	N-Nitrosodimethylamine	ND	170	66	ug/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	170	72	ug/kg	
85-01-8	Phenanthrene	ND	170	58	ug/kg	
129-00-0	Pyrene	ND	170	33	ug/kg	
110-86-1	Pyridine	ND	330	46	ug/kg	

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> WASTE-012412	
<b>Lab Sample ID:</b> C19983-1	<b>Date Sampled:</b> 01/24/12
<b>Matrix:</b> SO - Soil	<b>Date Received:</b> 01/24/12
<b>Method:</b> SW846 8270C SW846 3550B	<b>Percent Solids:</b> n/a <sup>a</sup>
<b>Project:</b> F&M Auto Service UST Site - 1839 Foothill Blvd, Oakland, CA	

### ABN Full List

CAS No.	Compound	Result	RL	MDL	Units	Q
120-82-1	1,2,4-Trichlorobenzene	ND	170	75	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	51%		20-100%
4165-62-2	Phenol-d5	55%		20-100%
118-79-6	2,4,6-Tribromophenol	55%		30-100%
4165-60-0	Nitrobenzene-d5	45%		20-100%
321-60-8	2-Fluorobiphenyl	44%		20-106%
1718-51-0	Terphenyl-d14	82%		55-130%

(a) All results reported on a wet weight basis.

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> WASTE-012412		<b>Date Sampled:</b> 01/24/12
<b>Lab Sample ID:</b> C19983-1		<b>Date Received:</b> 01/24/12
<b>Matrix:</b> SO - Soil		<b>Percent Solids:</b> n/a <sup>a</sup>
<b>Method:</b> SW846 8082 SW846 3550B		
<b>Project:</b> F&M Auto Service UST Site - 1839 Foothill Blvd, Oakland, CA		

Run #1	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	OO27791.D	1	01/26/12	RV	01/26/12	OP5266	G00879
Run #2							

Run #1	Initial Weight	Final Volume
Run #1	30.5 g	10.0 ml
Run #2		

**PCB List**

CAS No.	Compound	Result	RL	MDL	Units	Q
12674-11-2	Aroclor 1016	ND	33	6.6	ug/kg	
11104-28-2	Aroclor 1221	ND	33	16	ug/kg	
11141-16-5	Aroclor 1232	ND	33	16	ug/kg	
53469-21-9	Aroclor 1242	ND	33	16	ug/kg	
12672-29-6	Aroclor 1248	ND	33	16	ug/kg	
11097-69-1	Aroclor 1254	ND	33	16	ug/kg	
11096-82-5	Aroclor 1260	ND	33	6.6	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	69%		45-108%
877-09-8	Tetrachloro-m-xylene	75%		45-108%
2051-24-3	Decachlorobiphenyl	89%		54-121%
2051-24-3	Decachlorobiphenyl	88%		54-121%

(a) All results reported on a wet weight basis.

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b>	WASTE-012412	<b>Date Sampled:</b>	01/24/12
<b>Lab Sample ID:</b>	C19983-1	<b>Date Received:</b>	01/24/12
<b>Matrix:</b>	SO - Soil	<b>Percent Solids:</b>	n/a <sup>a</sup>
<b>Method:</b>	SW846 8015B M SW846 3545A		
<b>Project:</b>	F&M Auto Service UST Site - 1839 Foothill Blvd, Oakland, CA		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	GG31571.D	1	01/26/12	JH	01/26/12	OP5264	GGG846
Run #2							

Run #	Initial Weight	Final Volume
Run #1	10.1 g	1.0 ml
Run #2		

### TPH Extractable w/ Silica Gel Cleanup

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (C10-C28)	ND	9.9	2.5	mg/kg	
	TPH (> C28-C40)	ND	20	5.0	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
630-01-3	Hexacosane	66%		45-140%

(a) All results reported on a wet weight basis.

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound



## Report of Analysis

<b>Client Sample ID:</b> WASTE-012412	<b>Date Sampled:</b> 01/24/12
<b>Lab Sample ID:</b> C19983-1	<b>Date Received:</b> 01/24/12
<b>Matrix:</b> SO - Soil	<b>Percent Solids:</b> n/a <sup>a</sup>
<b>Project:</b> F&M Auto Service UST Site - 1839 Foothill Blvd, Oakland, CA	

### Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Cadmium	< 0.92	0.92	mg/kg	1	01/25/12	01/27/12 RS	SW846 6010B <sup>1</sup>	SW846 3050B <sup>2</sup>
Chromium	46.7	0.92	mg/kg	1	01/25/12	01/27/12 RS	SW846 6010B <sup>1</sup>	SW846 3050B <sup>2</sup>
Lead	25.6	1.8	mg/kg	1	01/25/12	01/27/12 RS	SW846 6010B <sup>1</sup>	SW846 3050B <sup>2</sup>
Nickel	53.5	0.92	mg/kg	1	01/25/12	01/27/12 RS	SW846 6010B <sup>1</sup>	SW846 3050B <sup>2</sup>
Zinc	47.9	1.8	mg/kg	1	01/25/12	01/27/12 RS	SW846 6010B <sup>1</sup>	SW846 3050B <sup>2</sup>

(1) Instrument QC Batch: MA2309

(2) Prep QC Batch: MP4456

(a) All results reported on a wet weight basis.

RL = Reporting Limit

## Misc. Forms

---

### Custody Documents and Other Forms

---

Includes the following where applicable:

- Chain of Custody



# ACCUTEST<sup>®</sup> LABORATORIES

## CHAIN OF CUSTODY

2105 Lundy Ave, San Jose, CA 95131  
(408) 588-0200 FAX: (408) 588-0201

FED-EX Tracking #	Bottle Order Control #
Accutest Quote #	Accutest NC Job #: C <b>C19983</b>

Client / Reporting Information		Project Information	
Company Name <b>Sierra West Consultants, Inc.</b>		Project Name: <b>F&amp;M Auto Service</b>	
Address <b>4227 Sunrise Blvd., Ste 220</b>		Street <b>1839 Foothill Blvd.</b>	
City <b>Fair Oakes</b>	State <b>CA</b>	City <b>Oakland</b>	State <b>CA</b>
Zip <b>95628</b>	Project #		
Project Contact: <b>Brian Whalen</b>	Project #		
Phone # <b>(916) 863-3220</b>	EMAIL: <b>BWhalen@Sierra-West.net</b>		
Samples Name <b>Brian Whalen</b>	Client Purchase Order #		

Requested Analysis		Matrix Codes
TPH <sub>4</sub> , BTEX, 5 oxys TPHol Oil + Grease w/SGC Chlorinated HC's EDB, EOC PCBs, PCP, PNA Cresolate, 1,4 Dioxane Cadmium, Chromium, Lead Nickel, Zinc	WW- Wastewater GW- Ground Water SW- Surface Water SO- Soil OL-Oil WP-Wipe LIQ- Non-aqueous Liquid AIR DW- Drinking Water (Perchlorate Only)	

Accutest Sample ID	Sample ID / Field Point / Point of Collection	Date	Time	Sampled by	Matrix	# of bottles	Number of preserved Bottles													LAB USE ONLY				
							HCl	NH <sub>4</sub> H	PH <sub>3</sub> S	PH <sub>3</sub> SO <sub>4</sub>	PH <sub>3</sub> SO <sub>3</sub>	NH <sub>4</sub> NO <sub>3</sub>	NH <sub>4</sub> NO <sub>2</sub>	MECH	ENCLOSURE	TPH <sub>4</sub>	TPH <sub>ol</sub>	Oil + Grease w/SGC	Chlorinated HC's		EDB, EOC	PCB's, PCP, PNA	Cresolate, 1,4 Dioxane	Cadmium, Chromium, Lead
-1	Waste-012412	1/24/12	1530	BW	SO	4																		

**3 DAYS**

~~1/24/12~~  
~~1/24/12~~

Turnaround Time (Business days)	Data Deliverable Information	Comments / Remarks
<input type="checkbox"/> Standard TAT 15 Business Days <input type="checkbox"/> 10 Day (Workload dependent) <input checked="" type="checkbox"/> 5 Day (Workload dependent) <input checked="" type="checkbox"/> 3 Day (125% markup) <input type="checkbox"/> 2 Day (150% markup) <input type="checkbox"/> 1 Day (200% markup) <input type="checkbox"/> Same Day (300% markup)	<input checked="" type="checkbox"/> Commercial "A" - Results only <input type="checkbox"/> Commercial "B" - Results with QC summaries <input type="checkbox"/> Commercial "B*" - Results, QC, and chromatograms <input type="checkbox"/> FULT1 - Level 4 data package <input type="checkbox"/> EDF for Geotracker <input type="checkbox"/> EDD Format Provide EDF Global ID _____ Provide EDF Logcode: _____	Analysis for waste disposal. Need results by COB 1/30/12

Sample Custody must be documented below each time samples change possession, including courier delivery.							
Relinquished by Sampler: <b>[Signature]</b>	Date Time: <b>1/24/12 1650</b>	Received By: <b>[Signature]</b>	Relinquished by: <b>[Signature]</b>	Date Time: <b>1748</b>	Received By: <b>[Signature]</b>	Relinquished by: <b>[Signature]</b>	Date Time: <b>01-24-12</b>
Relinquished by:	Date Time:	Received By:	Relinquished by:	Date Time:	Received By:	Relinquished by:	Date Time:
3		3	4		4	5	
Relinquished by:	Date Time:	Received By:	Custody Seal #	Appropriate Bottle / Pref / N	Headspace Y / N	On Ice Y / N	Cooler Temp.
5		5		Labels match Coc: <b>Y / N</b>	N/A	Separate Receiving Check List used: <b>Y / N</b>	<b>41-04-23.7</b>

C19983: Chain of Custody

Page 1 of 2

31  
3



## GC/MS Volatiles

---

### QC Data Summaries

---

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

## Method Blank Summary

**Job Number:** C19983  
**Account:** SWCICAFO Sierra West Consultants, Inc.  
**Project:** F&M Auto Service UST Site - 1839 Foothill Blvd, Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VM978-MB	M30962.D	1	01/26/12	XB	n/a	n/a	VM978

The QC reported here applies to the following samples:

Method: SW846 8260B

C19983-1

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	5.0	0.50	ug/kg	
75-27-4	Bromodichloromethane	ND	5.0	0.50	ug/kg	
75-25-2	Bromoform	ND	5.0	0.50	ug/kg	
108-90-7	Chlorobenzene	ND	5.0	0.50	ug/kg	
75-00-3	Chloroethane	ND	5.0	1.0	ug/kg	
67-66-3	Chloroform	ND	5.0	0.50	ug/kg	
56-23-5	Carbon tetrachloride	ND	5.0	0.50	ug/kg	
75-34-3	1,1-Dichloroethane	ND	5.0	0.50	ug/kg	
75-35-4	1,1-Dichloroethylene	ND	5.0	0.50	ug/kg	
106-93-4	1,2-Dibromoethane	ND	5.0	0.50	ug/kg	
107-06-2	1,2-Dichloroethane	ND	5.0	0.50	ug/kg	
78-87-5	1,2-Dichloropropane	ND	5.0	0.50	ug/kg	
108-20-3	Di-Isopropyl ether	ND	5.0	0.50	ug/kg	
124-48-1	Dibromochloromethane	ND	5.0	0.50	ug/kg	
75-71-8	Dichlorodifluoromethane	ND	5.0	1.0	ug/kg	
156-59-2	cis-1,2-Dichloroethylene	ND	5.0	1.1	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	5.0	0.50	ug/kg	
541-73-1	m-Dichlorobenzene	ND	5.0	0.50	ug/kg	
95-50-1	o-Dichlorobenzene	ND	5.0	0.50	ug/kg	
106-46-7	p-Dichlorobenzene	ND	5.0	0.50	ug/kg	
156-60-5	trans-1,2-Dichloroethylene	ND	5.0	0.50	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	5.0	0.50	ug/kg	
100-41-4	Ethylbenzene	ND	5.0	0.50	ug/kg	
637-92-3	Ethyl tert-Butyl Ether	ND	5.0	0.50	ug/kg	
74-83-9	Methyl bromide	ND	5.0	1.0	ug/kg	
74-87-3	Methyl chloride	ND	5.0	1.0	ug/kg	
75-09-2	Methylene chloride	ND	20	5.0	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	5.0	1.0	ug/kg	
994-05-8	Tert-Amyl Methyl Ether	ND	5.0	0.50	ug/kg	
75-65-0	Tert Butyl Alcohol	ND	40	10	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	5.0	0.50	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	5.0	0.50	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	5.0	0.50	ug/kg	
127-18-4	Tetrachloroethylene	ND	5.0	0.60	ug/kg	
108-88-3	Toluene	ND	5.0	0.50	ug/kg	
79-01-6	Trichloroethylene	ND	5.0	0.50	ug/kg	

4.1.1  
4

## Method Blank Summary

**Job Number:** C19983  
**Account:** SWCICAFO Sierra West Consultants, Inc.  
**Project:** F&M Auto Service UST Site - 1839 Foothill Blvd, Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VM978-MB	M30962.D	1	01/26/12	XB	n/a	n/a	VM978

The QC reported here applies to the following samples:

Method: SW846 8260B

C19983-1

CAS No.	Compound	Result	RL	MDL	Units	Q
75-69-4	Trichlorofluoromethane	ND	5.0	1.0	ug/kg	
75-01-4	Vinyl chloride	ND	5.0	1.0	ug/kg	
1330-20-7	Xylene (total)	ND	10	1.0	ug/kg	
	TPH-GRO (C6-C10)	ND	100	50	ug/kg	

CAS No.	Surrogate Recoveries	Limits	
1868-53-7	Dibromofluoromethane	95%	60-130%
2037-26-5	Toluene-D8	102%	60-130%
460-00-4	4-Bromofluorobenzene	99%	60-130%

# Blank Spike/Blank Spike Duplicate Summary

**Job Number:** C19983  
**Account:** SWCICAFO Sierra West Consultants, Inc.  
**Project:** F&M Auto Service UST Site - 1839 Foothill Blvd, Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VM978-BS	M30959.D	1	01/26/12	XB	n/a	n/a	VM978
VM978-BSD	M30960.D	1	01/26/12	XB	n/a	n/a	VM978

The QC reported here applies to the following samples:

Method: SW846 8260B

C19983-1

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	BSD ug/kg	BSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	40	43.4	109	43.8	110	1	60-130/30
75-27-4	Bromodichloromethane	40	44.1	110	45.2	113	2	60-130/30
75-25-2	Bromoform	40	42.3	106	42.3	106	0	60-130/30
108-90-7	Chlorobenzene	40	43.8	110	42.9	107	2	60-130/30
75-00-3	Chloroethane	40	41.5	104	42.4	106	2	60-130/30
67-66-3	Chloroform	40	41.7	104	42.6	107	2	60-130/30
56-23-5	Carbon tetrachloride	40	44.2	111	44.9	112	2	60-130/30
75-34-3	1,1-Dichloroethane	40	41.5	104	42.5	106	2	60-130/30
75-35-4	1,1-Dichloroethylene	40	40.3	101	41.5	104	3	60-130/30
106-93-4	1,2-Dibromoethane	40	43.3	108	43.4	109	0	60-130/30
107-06-2	1,2-Dichloroethane	40	44.6	112	45.9	115	3	60-130/30
78-87-5	1,2-Dichloropropane	40	43.9	110	44.7	112	2	60-130/30
108-20-3	Di-Isopropyl ether	40	42.8	107	43.0	108	0	60-130/30
124-48-1	Dibromochloromethane	40	44.4	111	44.2	111	0	60-130/30
75-71-8	Dichlorodifluoromethane	40	34.4	86	33.7	84	2	60-130/30
156-59-2	cis-1,2-Dichloroethylene	40	41.1	103	41.5	104	1	60-130/30
10061-01-5	cis-1,3-Dichloropropene	40	44.4	111	45.9	115	3	60-130/30
541-73-1	m-Dichlorobenzene	40	43.5	109	44.2	111	2	60-130/30
95-50-1	o-Dichlorobenzene	40	43.1	108	44.3	111	3	60-130/30
106-46-7	p-Dichlorobenzene	40	43.6	109	43.8	110	0	60-130/30
156-60-5	trans-1,2-Dichloroethylene	40	41.4	104	42.2	106	2	60-130/30
10061-02-6	trans-1,3-Dichloropropene	40	44.3	111	44.5	111	0	60-130/30
100-41-4	Ethylbenzene	40	44.3	111	43.9	110	1	60-130/30
637-92-3	Ethyl tert-Butyl Ether	40	44.7	112	46.1	115	3	60-130/30
74-83-9	Methyl bromide	40	43.8	110	44.6	112	2	60-130/30
74-87-3	Methyl chloride	40	41.9	105	42.1	105	0	60-130/30
75-09-2	Methylene chloride	40	38.7	97	39.8	100	3	60-130/30
1634-04-4	Methyl Tert Butyl Ether	40	42.9	107	44.5	111	4	60-130/30
994-05-8	Tert-Amyl Methyl Ether	40	44.0	110	45.1	113	2	60-130/30
75-65-0	Tert Butyl Alcohol	200	197	99	204	102	3	60-130/30
71-55-6	1,1,1-Trichloroethane	40	43.3	108	44.2	111	2	60-130/30
79-34-5	1,1,2,2-Tetrachloroethane	40	40.8	102	41.8	105	2	60-130/30
79-00-5	1,1,2-Trichloroethane	40	42.1	105	42.4	106	1	60-130/30
127-18-4	Tetrachloroethylene	40	44.2	111	43.4	109	2	60-130/30
108-88-3	Toluene	40	43.5	109	42.8	107	2	60-130/30
79-01-6	Trichloroethylene	40	44.2	111	45.0	113	2	60-130/30

4.2.1  
4



# Blank Spike/Blank Spike Duplicate Summary

**Job Number:** C19983  
**Account:** SWCICAFO Sierra West Consultants, Inc.  
**Project:** F&M Auto Service UST Site - 1839 Foothill Blvd, Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VM978-BS	M30959.D	1	01/26/12	XB	n/a	n/a	VM978
VM978-BSD	M30960.D	1	01/26/12	XB	n/a	n/a	VM978

The QC reported here applies to the following samples:

Method: SW846 8260B

C19983-1

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	BSD ug/kg	BSD %	RPD	Limits Rec/RPD
75-69-4	Trichlorofluoromethane	40	43.8	110	44.7	112	2	60-130/30
75-01-4	Vinyl chloride	40	36.1	90	36.5	91	1	60-130/30
1330-20-7	Xylene (total)	120	129	108	127	106	2	60-130/30

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
1868-53-7	Dibromofluoromethane	94%	96%	60-130%
2037-26-5	Toluene-D8	99%	97%	60-130%
460-00-4	4-Bromofluorobenzene	103%	102%	60-130%

# Laboratory Control Sample Summary

**Job Number:** C19983  
**Account:** SWCICAFO Sierra West Consultants, Inc.  
**Project:** F&M Auto Service UST Site - 1839 Foothill Blvd, Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VM978-LCS	M30961.D	1	01/26/12	XB	n/a	n/a	VM978

The QC reported here applies to the following samples:

Method: SW846 8260B

C19983-1

CAS No.	Compound	Spike ug/kg	LCS ug/kg	LCS %	Limits
	TPH-GRO (C6-C10)	250	268	107	60-130

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	93%	60-130%
2037-26-5	Toluene-D8	101%	60-130%
460-00-4	4-Bromofluorobenzene	100%	60-130%

# Matrix Spike/Matrix Spike Duplicate Summary

**Job Number:** C19983  
**Account:** SWCICAFO Sierra West Consultants, Inc.  
**Project:** F&M Auto Service UST Site - 1839 Foothill Blvd, Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
C20005-2MS	M30970.D	1	01/26/12	XB	n/a	n/a	VM978
C20005-2MSD	M30971.D	1	01/26/12	XB	n/a	n/a	VM978
C20005-2	M30964.D	1	01/26/12	XB	n/a	n/a	VM978

The QC reported here applies to the following samples:

Method: SW846 8260B

C19983-1

CAS No.	Compound	C20005-2 ug/kg	Spike Q ug/kg	MS ug/kg	MS %	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	ND	38.9	41.3	106	42.4	107	3	60-130/30
75-27-4	Bromodichloromethane	ND	38.9	41.2	106	41.7	105	1	60-130/30
75-25-2	Bromoform	ND	38.9	44.8	115	45.2	114	1	60-130/30
108-90-7	Chlorobenzene	ND	38.9	39.4	101	41.1	103	4	60-130/30
75-00-3	Chloroethane	ND	38.9	39.9	103	39.7	100	1	60-130/30
67-66-3	Chloroform	ND	38.9	39.6	102	40.9	103	3	60-130/30
56-23-5	Carbon tetrachloride	ND	38.9	42.3	109	43.6	110	3	60-130/30
75-34-3	1,1-Dichloroethane	ND	38.9	39.4	101	40.0	101	2	60-130/30
75-35-4	1,1-Dichloroethylene	ND	38.9	38.7	99	39.5	99	2	60-130/30
106-93-4	1,2-Dibromoethane	ND	38.9	45.3	116	46.1	116	2	60-130/30
107-06-2	1,2-Dichloroethane	ND	38.9	44.3	114	44.9	113	1	60-130/30
78-87-5	1,2-Dichloropropane	ND	38.9	41.5	107	42.4	107	2	60-130/30
108-20-3	Di-Isopropyl ether	ND	38.9	38.9	100	40.1	101	3	60-130/30
124-48-1	Dibromochloromethane	ND	38.9	42.2	108	42.8	108	1	60-130/30
75-71-8	Dichlorodifluoromethane	ND	38.9	22.4	58* a	21.4	54*	5	60-130/30
156-59-2	cis-1,2-Dichloroethylene	ND	38.9	40.0	103	40.9	103	2	60-130/30
10061-01-5	cis-1,3-Dichloropropene	ND	38.9	43.3	111	44.3	111	2	60-130/30
541-73-1	m-Dichlorobenzene	ND	38.9	38.7	99	40.7	102	5	60-130/30
95-50-1	o-Dichlorobenzene	ND	38.9	39.6	102	41.2	104	4	60-130/30
106-46-7	p-Dichlorobenzene	ND	38.9	38.6	99	40.7	102	5	60-130/30
156-60-5	trans-1,2-Dichloroethylene	ND	38.9	39.7	102	41.4	104	4	60-130/30
10061-02-6	trans-1,3-Dichloropropene	ND	38.9	39.3	101	40.5	102	3	60-130/30
100-41-4	Ethylbenzene	ND	38.9	40.5	104	42.0	106	4	60-130/30
637-92-3	Ethyl tert-Butyl Ether	ND	38.9	45.4	117	46.5	117	2	60-130/30
74-83-9	Methyl bromide	ND	38.9	39.0	100	38.2	96	2	60-130/30
74-87-3	Methyl chloride	ND	38.9	30.1	77	30.0	75	0	60-130/30
75-09-2	Methylene chloride	ND	38.9	37.6	97	38.9	98	3	60-130/30
1634-04-4	Methyl Tert Butyl Ether	ND	38.9	46.1	118	47.3	119	3	60-130/30
994-05-8	Tert-Amyl Methyl Ether	ND	38.9	45.4	117	45.9	115	1	60-130/30
75-65-0	Tert Butyl Alcohol	ND	195	244	125	264	133*	8	60-130/30
71-55-6	1,1,1-Trichloroethane	ND	38.9	42.3	109	43.6	110	3	60-130/30
79-34-5	1,1,2,2-Tetrachloroethane	ND	38.9	46.7	120	47.8	120	2	60-130/30
79-00-5	1,1,2-Trichloroethane	ND	38.9	43.3	111	43.5	109	0	60-130/30
127-18-4	Tetrachloroethylene	ND	38.9	39.1	100	40.5	102	4	60-130/30
108-88-3	Toluene	ND	38.9	40.4	104	41.7	105	3	60-130/30
79-01-6	Trichloroethylene	ND	38.9	42.1	108	43.3	109	3	60-130/30

4.4.1  
4

# Matrix Spike/Matrix Spike Duplicate Summary

**Job Number:** C19983  
**Account:** SWCICAF0 Sierra West Consultants, Inc.  
**Project:** F&M Auto Service UST Site - 1839 Foothill Blvd, Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
C20005-2MS	M30970.D	1	01/26/12	XB	n/a	n/a	VM978
C20005-2MSD	M30971.D	1	01/26/12	XB	n/a	n/a	VM978
C20005-2	M30964.D	1	01/26/12	XB	n/a	n/a	VM978

The QC reported here applies to the following samples: Method: SW846 8260B

C19983-1

CAS No.	Compound	C20005-2 ug/kg	Spike Q ug/kg	MS ug/kg	MS %	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
75-69-4	Trichlorofluoromethane	ND	38.9	40.3	104	39.4	99	2	60-130/30
75-01-4	Vinyl chloride	ND	38.9	37.1	95	36.1	91	3	60-130/30
1330-20-7	Xylene (total)	ND	117	119	102	123	103	3	60-130/30

CAS No.	Surrogate Recoveries	MS	MSD	C20005-2	Limits
1868-53-7	Dibromofluoromethane	98%	95%	97%	60-130%
2037-26-5	Toluene-D8	97%	97%	101%	60-130%
460-00-4	4-Bromofluorobenzene	104%	103%	98%	60-130%

(a) Outside laboratory control limits.

4.4.1  
4

## GC/MS Semi-volatiles

5

### QC Data Summaries

---

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

## Method Blank Summary

**Job Number:** C19983

**Account:** SWCICAFO Sierra West Consultants, Inc.

**Project:** F&M Auto Service UST Site - 1839 Foothill Blvd, Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP5265-MB	Y12072.D	1	01/26/12	LB	01/26/12	OP5265	EY580

The QC reported here applies to the following samples:

Method: SW846 8270C

C19983-1

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic acid	ND	670	160	ug/kg	
95-57-8	2-Chlorophenol	ND	170	71	ug/kg	
59-50-7	4-Chloro-3-methyl phenol	ND	170	72	ug/kg	
120-83-2	2,4-Dichlorophenol	ND	170	78	ug/kg	
105-67-9	2,4-Dimethylphenol	ND	170	65	ug/kg	
51-28-5	2,4-Dinitrophenol	ND	670	130	ug/kg	
534-52-1	4,6-Dinitro-o-cresol	ND	330	62	ug/kg	
95-48-7	2-Methylphenol	ND	170	88	ug/kg	
	3&4-Methylphenol	ND	330	79	ug/kg	
88-75-5	2-Nitrophenol	ND	170	79	ug/kg	
100-02-7	4-Nitrophenol	ND	330	40	ug/kg	
87-86-5	Pentachlorophenol	ND	330	34	ug/kg	
108-95-2	Phenol	ND	170	69	ug/kg	
95-95-4	2,4,5-Trichlorophenol	ND	170	75	ug/kg	
88-06-2	2,4,6-Trichlorophenol	ND	170	71	ug/kg	
83-32-9	Acenaphthene	ND	170	73	ug/kg	
208-96-8	Acenaphthylene	ND	170	78	ug/kg	
62-53-3	Aniline	ND	170	44	ug/kg	
120-12-7	Anthracene	ND	170	54	ug/kg	
103-33-3	Azobenzene	ND	170	59	ug/kg	
92-87-5	Benzidine	ND	670	79	ug/kg	
56-55-3	Benzo(a)anthracene	ND	170	33	ug/kg	
50-32-8	Benzo(a)pyrene	ND	170	33	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	170	33	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	170	43	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	170	33	ug/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	170	67	ug/kg	
85-68-7	Butyl benzyl phthalate	ND	170	33	ug/kg	
100-51-6	Benzyl Alcohol	ND	170	89	ug/kg	
91-58-7	2-Chloronaphthalene	ND	170	76	ug/kg	
106-47-8	4-Chloroaniline	ND	170	50	ug/kg	
86-74-8	Carbazole	ND	170	35	ug/kg	
218-01-9	Chrysene	ND	170	33	ug/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND	170	74	ug/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	170	67	ug/kg	
108-60-1	bis(2-Chloroisopropyl)ether	ND	170	67	ug/kg	

## Method Blank Summary

**Job Number:** C19983

**Account:** SWCICAFO Sierra West Consultants, Inc.

**Project:** F&M Auto Service UST Site - 1839 Foothill Blvd, Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP5265-MB	Y12072.D	1	01/26/12	LB	01/26/12	OP5265	EY580

The QC reported here applies to the following samples:

Method: SW846 8270C

C19983-1

CAS No.	Compound	Result	RL	MDL	Units	Q
7005-72-3	4-Chlorophenyl phenyl ether	ND	170	76	ug/kg	
95-50-1	1,2-Dichlorobenzene	ND	170	75	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	170	74	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	170	72	ug/kg	
121-14-2	2,4-Dinitrotoluene	ND	170	72	ug/kg	
606-20-2	2,6-Dinitrotoluene	ND	170	75	ug/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	330	70	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	170	41	ug/kg	
132-64-9	Dibenzofuran	ND	170	73	ug/kg	
122-39-4	Diphenylamine	ND	170	65	ug/kg	
84-74-2	Di-n-butyl phthalate	ND	170	33	ug/kg	
117-84-0	Di-n-octyl phthalate	ND	170	34	ug/kg	
84-66-2	Diethyl phthalate	ND	170	57	ug/kg	
131-11-3	Dimethyl phthalate	ND	170	69	ug/kg	
123-91-1	1,4-Dioxane	ND	170	43	ug/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	330	67	ug/kg	
206-44-0	Fluoranthene	ND	170	33	ug/kg	
86-73-7	Fluorene	ND	170	72	ug/kg	
118-74-1	Hexachlorobenzene	ND	170	71	ug/kg	
87-68-3	Hexachlorobutadiene	ND	170	96	ug/kg	
77-47-4	Hexachlorocyclopentadiene	ND	170	92	ug/kg	
67-72-1	Hexachloroethane	ND	170	71	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	170	43	ug/kg	
78-59-1	Isophorone	ND	170	69	ug/kg	
90-12-0	1-Methylnaphthalene	ND	170	76	ug/kg	
91-57-6	2-Methylnaphthalene	ND	170	80	ug/kg	
88-74-4	2-Nitroaniline	ND	170	67	ug/kg	
99-09-2	3-Nitroaniline	ND	170	50	ug/kg	
100-01-6	4-Nitroaniline	ND	170	43	ug/kg	
91-20-3	Naphthalene	ND	170	77	ug/kg	
98-95-3	Nitrobenzene	ND	170	78	ug/kg	
62-75-9	N-Nitrosodimethylamine	ND	170	66	ug/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	170	72	ug/kg	
85-01-8	Phenanthrene	ND	170	58	ug/kg	
129-00-0	Pyrene	ND	170	33	ug/kg	
110-86-1	Pyridine	ND	330	46	ug/kg	

## Method Blank Summary

**Job Number:** C19983  
**Account:** SWCICAFO Sierra West Consultants, Inc.  
**Project:** F&M Auto Service UST Site - 1839 Foothill Blvd, Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP5265-MB	Y12072.D	1	01/26/12	LB	01/26/12	OP5265	EY580

The QC reported here applies to the following samples:

Method: SW846 8270C

C19983-1

CAS No.	Compound	Result	RL	MDL	Units	Q
120-82-1	1,2,4-Trichlorobenzene	ND	170	75	ug/kg	

CAS No.	Surrogate Recoveries	Limits	
367-12-4	2-Fluorophenol	45%	20-100%
4165-62-2	Phenol-d5	51%	20-100%
118-79-6	2,4,6-Tribromophenol	57%	30-100%
4165-60-0	Nitrobenzene-d5	46%	20-100%
321-60-8	2-Fluorobiphenyl	47%	20-106%
1718-51-0	Terphenyl-d14	99%	55-130%



# Blank Spike/Blank Spike Duplicate Summary

**Job Number:** C19983  
**Account:** SWCICAFO Sierra West Consultants, Inc.  
**Project:** F&M Auto Service UST Site - 1839 Foothill Blvd, Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP5265-BS	Y12073.D	1	01/26/12	LB	01/26/12	OP5265	EY580
OP5265-BSD	Y12074.D	1	01/26/12	LB	01/26/12	OP5265	EY580

The QC reported here applies to the following samples:

Method: SW846 8270C

C19983-1

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	BSD ug/kg	BSD %	RPD	Limits Rec/RPD
65-85-0	Benzoic acid	1670	896	54	934	56	4	24-116/30
95-57-8	2-Chlorophenol	833	298	36	345	41	15	31-130/30
59-50-7	4-Chloro-3-methyl phenol	833	527	63	528	63	0	35-117/30
120-83-2	2,4-Dichlorophenol	833	391	47	423	51	8	40-111/30
105-67-9	2,4-Dimethylphenol	833	408	49	441	53	8	29-109/30
51-28-5	2,4-Dinitrophenol	833	620	74	629	75	1	19-117/30
534-52-1	4,6-Dinitro-o-cresol	833	805	97	776	93	4	28-119/30
95-48-7	2-Methylphenol	833	336	40	388	47	14	33-114/30
	3&4-Methylphenol	833	369	44	408	49	10	34-115/30
88-75-5	2-Nitrophenol	833	320	38	360	43	12	20-116/30
100-02-7	4-Nitrophenol	833	766	92	773	93	1	6-114/30
87-86-5	Pentachlorophenol	833	843	101	842	101	0	10-115/30
108-95-2	Phenol	833	338	41	393	47	15	28-122/30
95-95-4	2,4,5-Trichlorophenol	833	572	69	549	66	4	30-111/30
88-06-2	2,4,6-Trichlorophenol	833	486	58	490	59	1	30-110/30
83-32-9	Acenaphthene	833	500	60	495	59	1	34-129/30
208-96-8	Acenaphthylene	833	488	59	492	59	1	38-118/30
62-53-3	Aniline	833	305	37	358	43	16	28-112/30
120-12-7	Anthracene	833	739	89	709	85	4	41-114/30
103-33-3	Azobenzene	833	629	75	611	73	3	28-114/30
92-87-5	Benzidine	1670	1080	65	1120	67	4	10-156/30
56-55-3	Benzo(a)anthracene	833	854	102	840	101	2	40-116/30
50-32-8	Benzo(a)pyrene	833	839	101	839	101	0	39-112/30
205-99-2	Benzo(b)fluoranthene	833	812	97	834	100	3	40-117/30
191-24-2	Benzo(g,h,i)perylene	833	841	101	833	100	1	36-113/30
207-08-9	Benzo(k)fluoranthene	833	869	104	848	102	2	41-117/30
101-55-3	4-Bromophenyl phenyl ether	833	633	76	613	74	3	30-114/30
85-68-7	Butyl benzyl phthalate	833	841	101	843	101	0	27-110/30
100-51-6	Benzyl Alcohol	833	338	41	390	47	14	31-112/30
91-58-7	2-Chloronaphthalene	833	415	50	424	51	2	37-115/30
106-47-8	4-Chloroaniline	833	389	47	419	50	7	29-95/30
86-74-8	Carbazole	833	845	101	826	99	2	40-116/30
218-01-9	Chrysene	833	857	103	843	101	2	40-117/30
111-91-1	bis(2-Chloroethoxy)methane	833	356	43	390	47	9	31-99/30
111-44-4	bis(2-Chloroethyl)ether	833	268	32	312	37	15	30-106/30
108-60-1	bis(2-Chloroisopropyl)ether	833	282	34	330	40	16	24-104/30

5.2.1  
5

# Blank Spike/Blank Spike Duplicate Summary

**Job Number:** C19983

**Account:** SWCICAFO Sierra West Consultants, Inc.

**Project:** F&M Auto Service UST Site - 1839 Foothill Blvd, Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP5265-BS	Y12073.D	1	01/26/12	LB	01/26/12	OP5265	EY580
OP5265-BSD	Y12074.D	1	01/26/12	LB	01/26/12	OP5265	EY580

The QC reported here applies to the following samples:

Method: SW846 8270C

C19983-1

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	BSD ug/kg	BSD %	RPD	Limits Rec/RPD
7005-72-3	4-Chlorophenyl phenyl ether	833	570	68	555	67	3	30-111/30
95-50-1	1,2-Dichlorobenzene	833	241	29	272	33	12	27-111/30
541-73-1	1,3-Dichlorobenzene	833	219	26	246	30	12	25-116/30
106-46-7	1,4-Dichlorobenzene	833	231	28	257	31	11	27-120/30
121-14-2	2,4-Dinitrotoluene	833	734	88	707	85	4	27-114/30
606-20-2	2,6-Dinitrotoluene	833	654	78	626	75	4	27-114/30
91-94-1	3,3'-Dichlorobenzidine	1670	1560	94	1550	93	1	24-118/30
53-70-3	Dibenzo(a,h)anthracene	833	831	100	843	101	1	37-115/30
132-64-9	Dibenzofuran	833	544	65	533	64	2	28-113/30
122-39-4	Diphenylamine	833	689	83	654	78	5	23-117/30
84-74-2	Di-n-butyl phthalate	833	780	94	768	92	2	29-115/30
117-84-0	Di-n-octyl phthalate	833	829	99	849	102	2	29-127/30
84-66-2	Diethyl phthalate	833	698	84	675	81	3	29-116/30
131-11-3	Dimethyl phthalate	833	614	74	592	71	4	30-110/30
117-81-7	bis(2-Ethylhexyl)phthalate	833	847	102	849	102	0	27-121/30
206-44-0	Fluoranthene	833	804	96	780	94	3	40-120/30
86-73-7	Fluorene	833	595	71	570	68	4	40-119/30
118-74-1	Hexachlorobenzene	833	684	82	654	78	4	28-113/30
87-68-3	Hexachlorobutadiene	833	314	38	342	41	9	29-115/30
77-47-4	Hexachlorocyclopentadiene	833	225	27	261	31	15	26-114/30
67-72-1	Hexachloroethane	833	221	27	252	30	13	24-109/30
193-39-5	Indeno(1,2,3-cd)pyrene	833	837	100	813	98	3	37-114/30
78-59-1	Isophorone	833	378	45	406	49	7	28-117/30
90-12-0	1-Methylnaphthalene	833	388	47	406	49	5	25-113/30
91-57-6	2-Methylnaphthalene	833	370	44	391	47	6	27-113/30
88-74-4	2-Nitroaniline	833	615	74	609	73	1	23-116/30
99-09-2	3-Nitroaniline	833	672	81	654	78	3	29-115/30
100-01-6	4-Nitroaniline	833	783	94	765	92	2	29-114/30
91-20-3	Naphthalene	833	359	43	391	47	9	24-113/30
98-95-3	Nitrobenzene	833	295	35	338	41	14	23-112/30
62-75-9	N-Nitrosodimethylamine	833	254	30	297	36	16	20-108/30
621-64-7	N-Nitroso-di-n-propylamine	833	341	41	374	45	9	26-127/30
85-01-8	Phenanthrene	833	734	88	698	84	5	41-113/30
129-00-0	Pyrene	833	799	96	782	94	2	45-134/30
110-86-1	Pyridine	833	170	20	200	24	16	20-78/30
120-82-1	1,2,4-Trichlorobenzene	833	282	34	307	37	8	31-122/30

# Blank Spike/Blank Spike Duplicate Summary

**Job Number:** C19983  
**Account:** SWCICAFO Sierra West Consultants, Inc.  
**Project:** F&M Auto Service UST Site - 1839 Foothill Blvd, Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP5265-BS	Y12073.D	1	01/26/12	LB	01/26/12	OP5265	EY580
OP5265-BSD	Y12074.D	1	01/26/12	LB	01/26/12	OP5265	EY580

The QC reported here applies to the following samples:

Method: SW846 8270C

C19983-1

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
367-12-4	2-Fluorophenol	31%	39%	20-100%
4165-62-2	Phenol-d5	39%	45%	20-100%
118-79-6	2,4,6-Tribromophenol	78%	76%	30-100%
4165-60-0	Nitrobenzene-d5	33%	39%	20-100%
321-60-8	2-Fluorobiphenyl	45%	47%	20-106%
1718-51-0	Terphenyl-d14	93%	95%	55-130%

5.2.1  
5

# Blank Spike/Blank Spike Duplicate Summary

**Job Number:** C19983  
**Account:** SWCICAFO Sierra West Consultants, Inc.  
**Project:** F&M Auto Service UST Site - 1839 Foothill Blvd, Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP5265-BS2	Y12093.D	1	01/27/12	LB	01/26/12	OP5265	EY581
OP5265-BSD2	Y12094.D	1	01/27/12	LB	01/26/12	OP5265	EY581

The QC reported here applies to the following samples: Method: SW846 8270C

C19983-1

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	BSD ug/kg	BSD %	RPD	Limits Rec/RPD
123-91-1	1,4-Dioxane	833	173	21	256	31	39* a	19-70/30

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
367-12-4	2-Fluorophenol	46%	66%	20-100%
4165-62-2	Phenol-d5	51%	69%	20-100%
118-79-6	2,4,6-Tribromophenol	72%	78%	30-100%
4165-60-0	Nitrobenzene-d5	43%	62%	20-100%
321-60-8	2-Fluorobiphenyl	43%	62%	20-106%
1718-51-0	Terphenyl-d14	96%	93%	55-130%

(a) Outside laboratory control limits.

5.2.2  
5

## GC Semi-volatiles

---

### QC Data Summaries

---

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

# Method Blank Summary

**Job Number:** C19983  
**Account:** SWCICAFO Sierra West Consultants, Inc.  
**Project:** F&M Auto Service UST Site - 1839 Foothill Blvd, Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP5266-MB	OO27802.D	1	01/26/12	RV	01/26/12	OP5266	G00879

The QC reported here applies to the following samples:

Method: SW846 8082

C19983-1

CAS No.	Compound	Result	RL	MDL	Units	Q
12674-11-2	Aroclor 1016	ND	33	6.7	ug/kg	
11104-28-2	Aroclor 1221	ND	33	17	ug/kg	
11141-16-5	Aroclor 1232	ND	33	17	ug/kg	
53469-21-9	Aroclor 1242	ND	33	17	ug/kg	
12672-29-6	Aroclor 1248	ND	33	17	ug/kg	
11097-69-1	Aroclor 1254	ND	33	17	ug/kg	
11096-82-5	Aroclor 1260	ND	33	6.7	ug/kg	

CAS No.	Surrogate Recoveries	Limits	
877-09-8	Tetrachloro-m-xylene	69%	45-108%
877-09-8	Tetrachloro-m-xylene	70%	45-108%
2051-24-3	Decachlorobiphenyl	89%	54-121%
2051-24-3	Decachlorobiphenyl	72%	54-121%

## Method Blank Summary

**Job Number:** C19983  
**Account:** SWCICAFO Sierra West Consultants, Inc.  
**Project:** F&M Auto Service UST Site - 1839 Foothill Blvd, Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP5264-MB	GG31568.D	1	01/26/12	JH	01/26/12	OP5264	GGG846

The QC reported here applies to the following samples:

Method: SW846 8015B M

C19983-1

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (C10-C28)	ND	10	2.5	mg/kg	
	TPH (> C28-C40)	ND	20	5.0	mg/kg	

CAS No.	Surrogate Recoveries	Limits
630-01-3	Hexacosane	73% 45-140%

# Blank Spike/Blank Spike Duplicate Summary

**Job Number:** C19983  
**Account:** SWCICAFO Sierra West Consultants, Inc.  
**Project:** F&M Auto Service UST Site - 1839 Foothill Blvd, Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP5266-BS	OO27803.D	1	01/26/12	RV	01/26/12	OP5266	G00879
OP5266-BSD	OO27804.D	1	01/26/12	RV	01/26/12	OP5266	G00879

The QC reported here applies to the following samples:

Method: SW846 8082

C19983-1

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	BSD ug/kg	BSD %	RPD	Limits Rec/RPD
12674-11-2	Aroclor 1016	133	82.0	62	95.0	71	15	40-145/30
11096-82-5	Aroclor 1260	133	103	77	109	82	6	40-145/30

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
877-09-8	Tetrachloro-m-xylene	64%	74%	45-108%
877-09-8	Tetrachloro-m-xylene	61%	73%	45-108%
2051-24-3	Decachlorobiphenyl	88%	95%	54-121%
2051-24-3	Decachlorobiphenyl	72%	80%	54-121%



# Blank Spike/Blank Spike Duplicate Summary

**Job Number:** C19983  
**Account:** SWCICAFO Sierra West Consultants, Inc.  
**Project:** F&M Auto Service UST Site - 1839 Foothill Blvd, Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP5264-BS	GG31569.D	1	01/26/12	JH	01/26/12	OP5264	GGG846
OP5264-BSD	GG31570.D	1	01/26/12	JH	01/26/12	OP5264	GGG846

The QC reported here applies to the following samples:

Method: SW846 8015B M

C19983-1

CAS No.	Compound	Spike mg/kg	BSP mg/kg	BSP %	BSD mg/kg	BSD %	RPD	Limits Rec/RPD
	TPH (C10-C28)	100	67.8	68	63.4	63	7	45-140/30
	TPH (> C28-C40)	100	60.7	61	56.5	57	7	45-140/30

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
630-01-3	Hexacosane	72%	66%	45-140%

6.2.2

6

# Matrix Spike/Matrix Spike Duplicate Summary

**Job Number:** C19983  
**Account:** SWCICAFO Sierra West Consultants, Inc.  
**Project:** F&M Auto Service UST Site - 1839 Foothill Blvd, Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP5266-MS	OO27792.D	1	01/26/12	RV	01/26/12	OP5266	G00879
OP5266-MSD	OO27793.D	1	01/26/12	RV	01/26/12	OP5266	G00879
C19857-55	OO27790.D	1	01/26/12	RV	01/26/12	OP5266	G00879

The QC reported here applies to the following samples:

Method: SW846 8082

C19983-1

CAS No.	Compound	C19857-55 ug/kg	Spike Q ug/kg	MS ug/kg	MS %	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
12674-11-2	Aroclor 1016	ND	133	92.1	69	92.9	70	1	40-145/40
11096-82-5	Aroclor 1260	ND	133	121	91	123	92	2	40-145/40

CAS No.	Surrogate Recoveries	MS	MSD	C19857-55	Limits
877-09-8	Tetrachloro-m-xylene	62%	60%	64%	45-108%
877-09-8	Tetrachloro-m-xylene	68%	67%	70%	45-108%
2051-24-3	Decachlorobiphenyl	96%	96%	97%	54-121%
2051-24-3	Decachlorobiphenyl	88%	87%	94%	54-121%

# Matrix Spike/Matrix Spike Duplicate Summary

**Job Number:** C19983  
**Account:** SWCICAFO Sierra West Consultants, Inc.  
**Project:** F&M Auto Service UST Site - 1839 Foothill Blvd, Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP5264-MS	HH20877.D	1	01/27/12	JH	01/26/12	OP5264	GHH661
OP5264-MSD	HH20878.D	1	01/27/12	JH	01/26/12	OP5264	GHH661
C19981-16	GG31600.D	1	01/27/12	JH	01/26/12	OP5264	GGG847

The QC reported here applies to the following samples:

Method: SW846 8015B M

C19983-1

CAS No.	Compound	C19981-16 mg/kg	Spike mg/kg	MS mg/kg	MS %	MSD mg/kg	MSD %	RPD	Limits Rec/RPD
	TPH (C10-C28)	ND	100	72.9	73	73.5	74	1	45-140/30
	TPH (> C28-C40)	ND	100	87.3	87	84.5	85	3	45-140/30

CAS No.	Surrogate Recoveries	MS	MSD	C19981-16	Limits
630-01-3	Hexacosane	85%	88%	76%	45-140%

6.3.2

6

## Metals Analysis

---

## QC Data Summaries

---

Includes the following where applicable:

- Method Blank Summaries
- Matrix Spike and Duplicate Summaries
- Blank Spike and Lab Control Sample Summaries
- Serial Dilution Summaries

BLANK RESULTS SUMMARY  
Part 2 - Method Blanks

Login Number: C19983  
Account: SWCICAFO - Sierra West Consultants, Inc.  
Project: F&M Auto Service UST Site - 1839 Foothill Blvd, Oakland, CA

QC Batch ID: MP4456  
Matrix Type: SOLID

Methods: SW846 6010B  
Units: mg/kg

Prep Date: 01/25/12

Metal	RL	IDL	MDL	MB raw	final
Aluminum	20	1.3	2		
Antimony	2.0	.07	.087		
Arsenic	2.0	.07	.07		
Barium	20	.04	.035		
Beryllium	1.0	.02	.012		
Boron	10	.09	.2		
Cadmium	1.0	.02	.015	0.020	<1.0
Calcium	500	.71	7.6		
Chromium	1.0	.03	.054	0.030	<1.0
Cobalt	1.0	.02	.022		
Copper	2.5	.12	.19		
Iron	20	.64	1.6		
Lead	2.0	.07	.054	0.070	<2.0
Magnesium	500	2.7	1.5		
Manganese	1.5	.01	.054		
Molybdenum	2.0	.02	.024		
Nickel	1.0	.02	.024	0.050	<1.0
Potassium	1000	1.8	1.3		
Selenium	2.0	.18	.23		
Silicon		.12			
Silver	1.0	.03	.044		
Sodium	1000	1.5	4.8		
Strontium	1.0	.02	.017		
Thallium	2.0	.05	.073		
Tin	50	.02	.41		
Titanium	1.0	.04	.079		
Vanadium	1.0	.03	.025		
Zinc	2.0	.03	.098	0.51	<2.0

Associated samples MP4456: C19983-1

Results < IDL are shown as zero for calculation purposes  
(\* ) Outside of QC limits  
(anr) Analyte not requested

7.1.1  
7

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: C19983  
 Account: SWCICAFO - Sierra West Consultants, Inc.  
 Project: F&M Auto Service UST Site - 1839 Foothill Blvd, Oakland, CA

QC Batch ID: MP4456  
 Matrix Type: SOLID

Methods: SW846 6010B  
 Units: mg/kg

Prep Date: 01/25/12

Metal	C19956-23 Original MS		Spike/lot MPIR4A % Rec		QC Limits
Aluminum					
Antimony	anr				
Arsenic	anr				
Barium	anr				
Beryllium	anr				
Boron					
Cadmium	0.072	44.8	50.8	88.0	75-125
Calcium					
Chromium	45.1	89.7	50.8	87.8	75-125
Cobalt	anr				
Copper	anr				
Iron					
Lead	3.3	49.4	50.8	90.7	75-125
Magnesium					
Manganese					
Molybdenum	anr				
Nickel	36.8	81.0	50.8	87.0	75-125
Potassium					
Selenium	anr				
Silicon					
Silver	anr				
Sodium					
Strontium					
Thallium	anr				
Tin					
Titanium					
Vanadium	anr				
Zinc	26.5	73.6	50.8	92.7	75-125

Associated samples MP4456: C19983-1

Results < IDL are shown as zero for calculation purposes  
 (\*) Outside of QC limits  
 (N) Matrix Spike Rec. outside of QC limits  
 (anr) Analyte not requested

7.1.2  
7

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: C19983  
 Account: SWCICAFO - Sierra West Consultants, Inc.  
 Project: F&M Auto Service UST Site - 1839 Foothill Blvd, Oakland, CA

QC Batch ID: MP4456  
 Matrix Type: SOLID

Methods: SW846 6010B  
 Units: mg/kg

Prep Date: 01/25/12

Metal	C19956-23 Original MSD		SpikeLot MPIR4A % Rec		MSD RPD	QC Limit
Aluminum						
Antimony	anr					
Arsenic	anr					
Barium	anr					
Beryllium	anr					
Boron						
Cadmium	0.072	48.5	55.7	86.9	7.9	20
Calcium						
Chromium	45.1	92.8	55.7	85.6	3.4	20
Cobalt	anr					
Copper	anr					
Iron						
Lead	3.3	53.5	55.7	90.1	8.0	20
Magnesium						
Manganese						
Molybdenum	anr					
Nickel	36.8	83.9	55.7	84.5	3.5	20
Potassium						
Selenium	anr					
Silicon						
Silver	anr					
Sodium						
Strontium						
Thallium	anr					
Tin						
Titanium						
Vanadium	anr					
Zinc	26.5	76.5	55.7	89.8	3.9	20

Associated samples MP4456: C19983-1

Results < IDL are shown as zero for calculation purposes  
 (\*) Outside of QC limits  
 (N) Matrix Spike Rec. outside of QC limits  
 (anr) Analyte not requested

7.1.2  
7

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: C19983  
 Account: SWCICAFO - Sierra West Consultants, Inc.  
 Project: F&M Auto Service UST Site - 1839 Foothill Blvd, Oakland, CA

QC Batch ID: MP4456  
 Matrix Type: SOLID

Methods: SW846 6010B  
 Units: mg/kg

Prep Date: 01/25/12 01/25/12

Metal	BSP Result	Spikelot MPIR4A	% Rec	QC Limits	BSD Result	Spikelot MPIR4A	% Rec	BSD RPD	QC Limit
Aluminum									
Antimony	anr								
Arsenic	anr								
Barium	anr								
Beryllium	anr								
Boron									
Cadmium	45.8	50	91.6	80-120	45.5	50	91.0	0.7	
Calcium									
Chromium	45.6	50	91.2	80-120	45.9	50	91.8	0.7	
Cobalt	anr								
Copper	anr								
Iron									
Lead	44.5	50	89.0	80-120	44.4	50	88.8	0.2	
Magnesium									
Manganese									
Molybdenum	anr								
Nickel	42.7	50	85.4	80-120	42.5	50	85.0	0.5	
Potassium									
Selenium	anr								
Silicon									
Silver	anr								
Sodium									
Strontium									
Thallium	anr								
Tin									
Titanium									
Vanadium	anr								
Zinc	47.7	50	95.4	80-120	47.6	50	95.2	0.2	

Associated samples MP4456: C19983-1

Results < IDL are shown as zero for calculation purposes  
 (\*) Outside of QC limits  
 (anr) Analyte not requested

7.1.3  
 7



SERIAL DILUTION RESULTS SUMMARY

Login Number: C19983  
 Account: SWCICAFO - Sierra West Consultants, Inc.  
 Project: F&M Auto Service UST Site - 1839 Foothill Blvd, Oakland, CA

QC Batch ID: MP4456  
 Matrix Type: SOLID

Methods: SW846 6010B  
 Units: ug/l

Prep Date: 01/25/12

Metal	C19956-23 Original	SDL 1:5	%DIF	QC Limits
Aluminum				
Antimony	anr			
Arsenic	anr			
Barium	anr			
Beryllium	anr			
Boron				
Cadmium	0.700	0.00	100.0(a)	0-10
Calcium				
Chromium	436	445	2.0	0-10
Cobalt	anr			
Copper	anr			
Iron				
Lead	32.3	28.8	10.8 (a)	0-10
Magnesium				
Manganese				
Molybdenum	anr			
Nickel	356	280	21.4*(b)	0-10
Potassium				
Selenium	anr			
Silicon				
Silver	anr			
Sodium				
Strontium				
Thallium	anr			
Tin				
Titanium				
Vanadium	anr			
Zinc	256	226	11.7*(b)	0-10

Associated samples MP4456: C19983-1

Results < IDL are shown as zero for calculation purposes

(\*) Outside of QC limits

(anr) Analyte not requested

(a) Percent difference acceptable due to low initial sample concentration (< 50 times IDL).

(b) Serial dilution indicates possible matrix interference.

7.1.4  
7

**Appendix J**  
**Waste Disposal Documentation**

# NON-HAZARDOUS WATER TRANSPORT FORM

## GENERATOR

Name: F&M Auto Service  
Address: 1839 Foothill Blvd  
Oakland, CA  
Phone: \_\_\_\_\_

## CUSTOMER

Name: \_\_\_\_\_  
Address: \_\_\_\_\_  
Phone: \_\_\_\_\_

## DESCRIPTION

Description of Water : Purge water from monitoring wells

Volume/Weight: 50 Units: gallons Container(s): poly tank

This non-hazardous waste water is monitoring well purge water, auger rinsate, sampling equipment rinsate, tank rinsate, combination thereof, or as described above. Described water may contain dissolved hydrocarbons. I certify that the above named material has been properly described and classified according to applicable regulations, and possesses no characteristics that would require its handling as hazardous waste.

Generator/Authorized Agent : Hal Hansen Hal H 2/17/12  
Print Sign Date

## TRANSPORTER

Name: \_\_\_\_\_  
Address: \_\_\_\_\_  
Phone: \_\_\_\_\_

Job No: F&M Auto Service (Sierra West)  
Pick-up Date: \_\_\_\_\_  
Truck ID: \_\_\_\_\_  
Driver: \_\_\_\_\_ 2/17/12  
Sign Date

## DISPOSAL FACILITY

Name: Inviro-tec Disposal  
Address: 2480 Athens Way  
Lincoln, CA

Quantity: 50  
Units: \_\_\_\_\_  
Disposal Method: \_\_\_\_\_

Received by: Christopher Miller Christopher Miller 2-17-12  
Print Sign Date

DW Oakland

SAC CNTG WST KIEFER  
9555 QUETHE RD  
SACRAMENTO, CA. 95827-3561  
916-875-7104

Merchant ID: 8006373396  
Term ID: 000215000006373396001

30 PM  
30 PM  
5

Sale

xxxxxxxxxxxx7741  
VISA

Entry Method: Swiped

Total: \$ 91.20

02/04/12

09:53:00

Inv #: 000004

Appr Code: 09051G

Apprvd: Online

Batch#: 000013

Customer Copy

THANK YOU!

DATE IN: 02/04/2012 TIME IN: 09:36:37  
DATE OUT: 02/04/2012 TIME OUT: 09:53:04

INBOUND TICKET Number: 02-11104440

SCALE 1 GROSS WT. 19160 LB  
SCALE 2 TARE WT. 13080 LB  
NET WEIGHT 6080 LB

Qty	Description	Amount
3.040	Normal Refuse	91.20

NET CASH AMOUNT: 91.20

AMT. TENDERED: 91.20  
CHANGE AMOUNT: 0.00  
CHECK # V09051G

X \_\_\_\_\_