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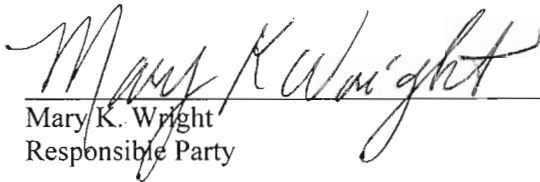
January 16, 2013

Reference: Fourth Quarter 2012 Groundwater Monitoring and Sampling 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



January 16, 2013

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

Subject: Fourth Quarter 2012 Groundwater Monitoring and Sampling Report
Former F&M Auto Service UST Site
Alameda County, Case # RO 3077
1839 Foothill Boulevard, Oakland, California

Dear Ms. Detterman:

On behalf of Ms. Mary Wright, current property owner, and Mr. James Balsley, prospective property owner, Sierra West Consultants, Inc. (Sierra West) is pleased to provide this *Fourth Quarter 2012 Groundwater Monitoring and Sampling 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 19th Avenue, in Oakland, California. A Site Location Map is included as **Figure 1**.

This quarterly report presents Site background information, groundwater level measurements, groundwater sampling and analytical testing results, and a request for modification of the groundwater monitoring program.

Site Background

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 that is estimated 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. 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, contained 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, and was located in the central portion of the Site. UST#3 contained gasoline during operation of the service station. UST#4 had a capacity of 100-gallons, and was located at the northern end of the Site. UST#4 likely contained oil during operation of the service station. The Site structures were demolished and the four USTs and surrounding soils were removed between March 29 and April 8, 2011.

During the subsequent environmental assessment performed in January 2012, soil borings B-1 through B-3 were drilled and monitoring wells MW-1 through MW-4 were installed at the Site. Analysis of soil and groundwater samples from the soil borings and monitoring wells showed that the greatest hydrocarbon impacts are present in the vicinity of former UST#1 and UST#2. Hydrocarbon impacts were also observed in the vicinity of former UST#3, and low level detections of methyl tertiary butyl ether (MTBE) near laboratory reporting limits were also observed near former UST#4. Results from this investigation are described in Sierra West's *Site Conceptual Model with Soil and Groundwater Investigation Results Report*, submitted to Alameda County Environmental Health (ACEH) on March 9, 2012. Locations of the monitoring wells, soil borings, and former Site features including structures and USTs, are shown on the Site Plan included as **Figure 2**.

Groundwater Level Measurements

Groundwater level measurements were taken on December 13, 2012, from groundwater wells MW-1 through MW-4. Free phase hydrocarbons were not encountered in any of the monitoring wells. A copy of the well gauging data sheet is included in **Attachment A**, and a summary of historical groundwater elevation data is presented in **Table 1**. Groundwater flow across the Site was generally to the south with a hydraulic gradient of approximately 0.118 feet per foot (ft/ft). A groundwater elevation contour map is included as **Figure 3**.

Groundwater Sampling

Groundwater samples were collected from monitoring wells MW-1 through MW-4 on December 13, 2012. Sampling was performed using the three-volume purge method with a centrifugal pump. Copies of the well sampling data sheets are included in **Attachment A**. The samples were delivered, under chain-of-custody (COC) protocol, to Accutest Laboratories, a State-of-California certified laboratory located in San Jose, California. Samples were analyzed 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,
- Dissolved lead 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 1,2-Dichloroethane (1,2-DCA) 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 with COC documentation is included as **Attachment B**. A summary of current and historical analytical results is included as **Table 1**.

Groundwater Analytical Results

The primary constituents of concern in groundwater beneath the Site are TPHd, TPHg, BTEX constituents, and MTBE. A tabular summary of groundwater testing results is presented below. The summary also includes a comparison with applicable environmental screening limits (ESLs), as defined by the San Francisco Bay Regional Water Quality Control Board (RWQCB) in *Screening for Environmental Concerns at Sites with Contaminated Soil and Groundwater – Table B* (November, 2007), for shallow soils where groundwater is a not a current or potential source of drinking water.

Analytical Results from the Fourth Quarterly Event of 2012

Well ID	TPHd µg/L	TPHg µg/L	B µg/L	T µg/L	E µg/L	X µg/L	MTBE µg/L	DIPE µg/L	ETBE µg/L	TAME µg/L	TBA µg/L	Dissolved Lead µg/L
MW-1	506	16,100	3,440	1,240	283	941	596	<100	<100	<100	<500	<10
MW-2	322	3,670	39.7	2.3 ^J	15.8	13.2	76.0	<10	2.9 ^J	<10	<50	<10
MW-3	<94	<50	<1.0	<1.0	<1.0	<2.0	3.1	<2.0	<2.0	<2.0	<10	<10
MW-4	<96	<50	<1.0	<1.0	<1.0	<2.0	<1.0	<2.0	<2.0	<2.0	<10	<10
ESL	180	180	46	130	43	100	1,800	NA	NA	NA	18,000	2.5

Notes: - ESLs for DIPE, ETBE, and TAME have not been established by the RWQCB.
- Concentrations exceeding their respective ESLs are presented in **bold**.
- ^J indicates an estimated value, as reported by laboratory.

Consistent with previous observations, the greatest constituent concentrations in groundwater were observed in MW-1. MW-1 is located immediately downgradient of the former location of UST#1 and UST#2, where the highest concentrations were observed during UST removal and excavation. The results from the fourth quarterly event of 2012 are summarized below:

- In the sample collected from MW-1, concentrations of TPHd, TPHg, and BTEX constituents all exceeded their respective ESLs.
- In the sample collected from MW-2, concentrations of TPHg and TPHd exceeded their respective ESLs. MTBE was present at a relatively low concentration of 76 micrograms per liter (µg/L).
- In the sample collected from MW-3, MTBE was detected at a concentration of 3.1 µg/L, but no other primary constituents of concern were detected above laboratory reporting limits. As shown in **Table 2**, none of the waste oil specific constituents at MW-3 were detected above their respective laboratory reporting limits, except dissolved nickel at a concentration of 60.8 µg/L.
- No constituents were observed above their laboratory reporting limits in the sample collected from MW-4.

A groundwater concentration map, including iso-concentration lines for TPHg, is included as **Figure 4**.

Modifications to Quarterly Groundwater Monitoring Program

Quarterly groundwater monitoring has been performed for one year, and sufficient data have been collected to verify the presence/absence of Site constituents. Based on groundwater analytical results, Sierra West proposes the following modifications to the groundwater monitoring program:

Remove DIPE, ETBE, TAME, and TBA Analyses for Each Well

The oxygenates DIPE, TAME, and TBA have not been detected in any of the samples collected from wells MW-1 through MW-4. ETBE has not been detected in any of the samples collected from MW-1, MW-3, or MW-4, but has been detected at low-level concentrations with the laboratory annotation "estimated value" in each of the groundwater samples collected from MW-2. Given that the concentrations of ETBE are low-level, have the "estimated value" annotation, and are only observed in one monitoring well, ETBE is not considered to be a primary constituent of concern. As such, ongoing analysis for DIPE, ETBE, TAME, and TBA is not warranted and these compounds should no longer be required as part of the groundwater monitoring program.

Remove Dissolved Lead Analysis for Each Well

During the first quarterly event of 2012, dissolved lead was detected in wells MW-1, MW-2, and MW-3 at concentrations of 86.4 µg/L, 63.5 µg/L, and 14.1 µg/L, respectively. During the second quarterly event of 2012, dissolved lead was only detected in well MW-1 at a concentration of 10.5 µg/L. Dissolved lead has not been detected above reporting limits in any of the samples collected from MW-1 through MW-4 during the third and fourth quarters of 2012. As such, ongoing analysis for dissolved lead is not warranted and these compounds should no longer be required as part of the groundwater monitoring program.

Remove Waste-Oil Specific Analyses for MW-3

Due to its proximity to the former waste oil tank, groundwater samples collected from MW-3 have been analyzed for oil and grease, Cd, Cr, Ni, Zn, EDB, 1,2-DCA, PCBs, PNAs, 1,4-dioxane, and creosote compounds. None of these additional compounds have been observed during four quarters of monitoring, with the exception of the chemicals described below:

- During the third quarter 2012 sampling event, low-level detections of the semivolatile compounds benzoic acid, 3&4-methylphenol, phenol, diethyl phthalate, and bis (2-ethylhexyl) phthalate were observed. None of these compounds were detected during the first, second, or fourth quarter events, and their presence during the third quarter event is anomalous.
- During each of the sampling events, dissolved nickel was detected in samples collected from MW-3 at concentrations ranging from 32.8 µg/L to 60.8 µg/L. However, the concentrations of nickel are not attributable to impacts from the former USTs. In the City of Oakland's *Survey of Studies on Naturally-occurring Metals Concentrations*¹, background nickel concentrations in soil are estimated to range from 69.7 parts per million (ppm) to 144.3 ppm. As no other chemical impacts have been observed in samples collected from MW-3 (with the exception of low-level detections of MTBE), it is evident that the dissolved nickel concentrations are attributable to background conditions.

Given the explanations presented above, the additional analyses currently performed for well MW-3 are not warranted and these compounds should no longer be required as part of the groundwater monitoring program.

¹ <http://www2.oaklandnet.com/oakca1/groups/pwa/documents/report/oak026330.pdf>

Proposed Groundwater Monitoring Program

For future groundwater monitoring events, Sierra West proposes that the following analyses be performed at each well:

- TPHg, BTEX, and MTBE by EPA Method 8260B; and,
- TPHd by EPA Method 8015M.

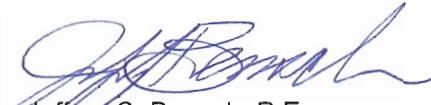
Reduction in the number of compounds analyzed during each quarterly groundwater monitoring event will not only simplify the reporting requirements, but will also reduce the overall cost of assessment activities.

Future Work


The lateral extent of constituent impacts to soil and groundwater downgradient of MW-1 remain undefined. Near the source area, constituent concentrations in soil and groundwater indicate that vadose zone impacts may be present. Sierra West submitted the *Site Conceptual Model and Data Gap Work Plan* (Work Plan) on November 19, 2012 to address these data gaps, and is currently awaiting response from ACEH prior to implementation of the proposed scope of work. The F&M Auto Service UST Site environmental investigation is funded by the Orphan Site Cleanup Fund (OSCF), and the timeframe for funding through OSCF limited. As such, review comments and/or approval of the Work Plan is needed from ACEH in a timely manner.

Sierra West appreciates this opportunity to provide environmental services at the Former F&M Auto Service UST Site. If you have any questions regarding this report, please contact Jeff Bensch or Brian Whalen at (916) 863-3220.

Sincerely,
Sierra West Consultants, Inc.



Jeffrey C. Bensch, P.E.
Principal Engineer



Brian Whalen, P.G.
Project Geologist

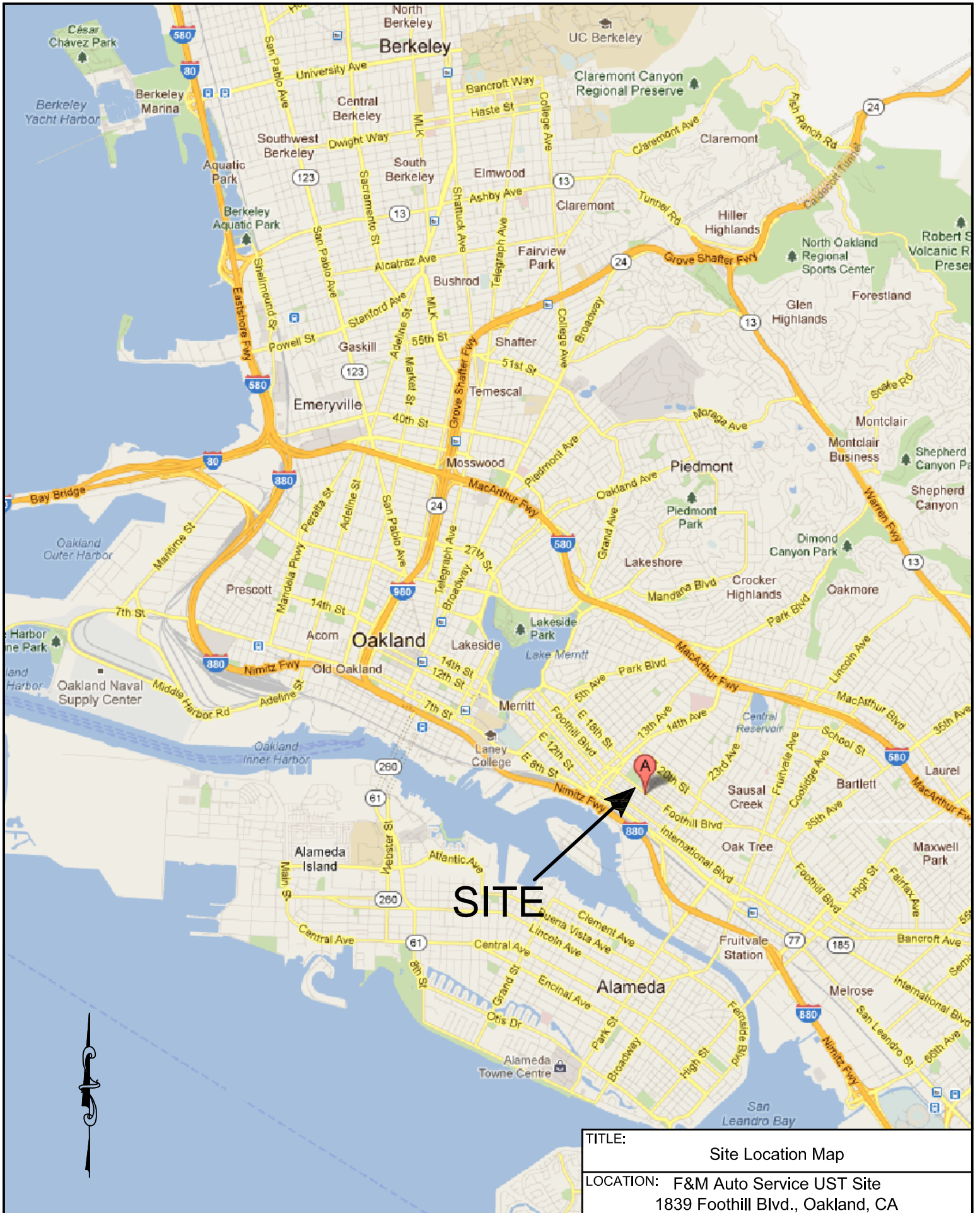
Cc: Ms. Mary Wright, Property Owner
Mr. James Balsley, Prospective Property Owner
Ms. Marissa Rodarte, Orphan Site Cleanup Fund

Figures:
Figure 1 – Site Location Map
Figure 2 – Site Plan
Figure 3 – Groundwater Elevation Map
Figure 4 – Groundwater Concentration Map

Tables:
Table 1 – Groundwater Elevation and Analytical Results
Table 2 – MW-3 Analytical Results

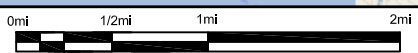
Attachments:
Attachment A – Well Sampling and Gauging Field Sheets
Attachment B – Groundwater Sampling Laboratory Analytical Report

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
- - Soil Boring

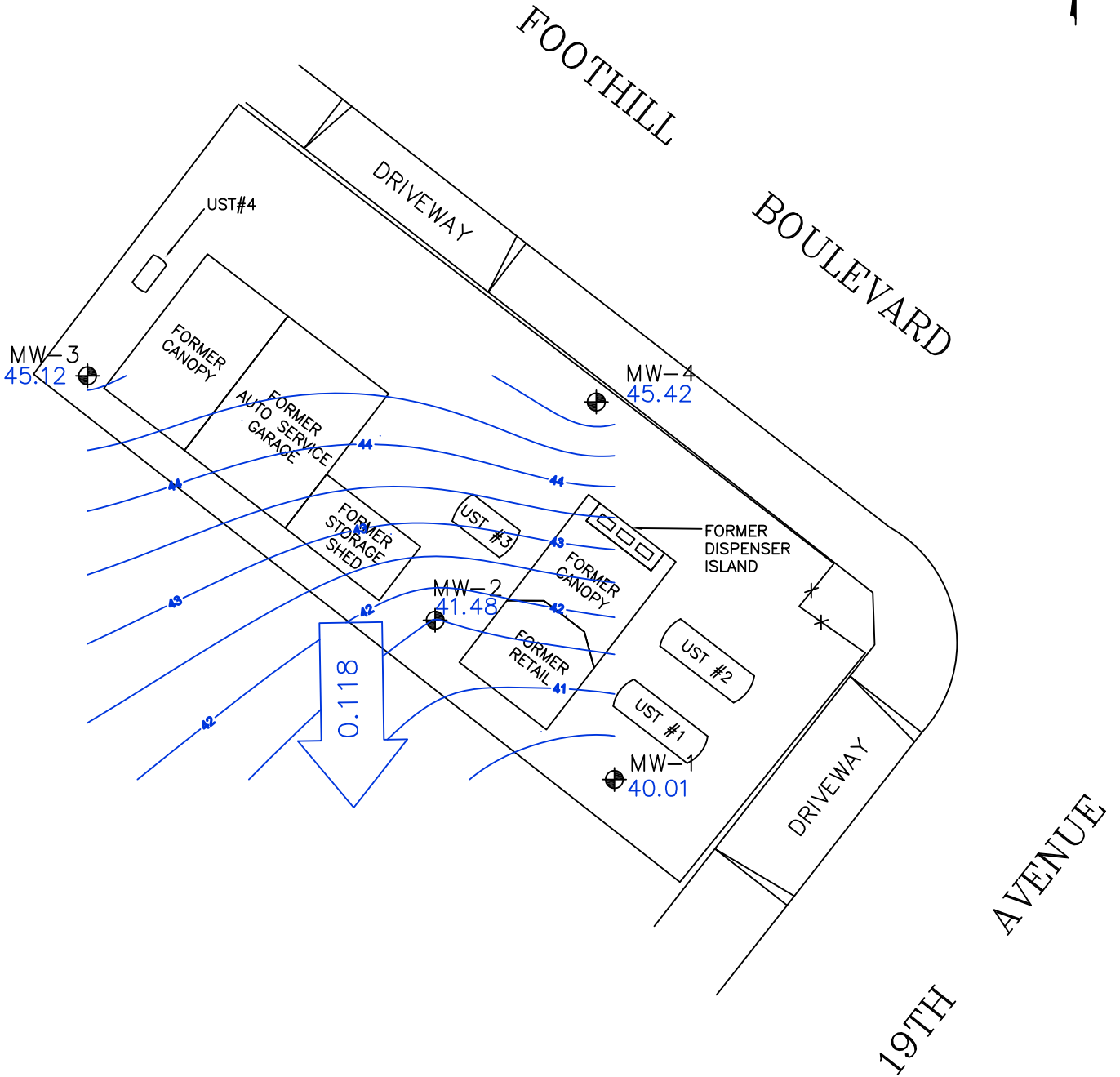
Notes:

- 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.



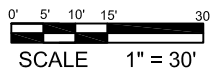
TITLE:	Site Plan
LOCATION:	F&M Auto Service UST Site 1839 Foothill Blvd., Oakland, CA
FIGURE:	2





Legend:

⊕ - Monitoring Well



Notes:

- 1) Groundwater elevation was measured on December 13, 2012.
- 2) Well locations based on survey data provided by Virgil Chavez Land Surveying on 1/31/2012.
- 3) Locations of USTs and former Site structures are approximate.
- 4) Former Site structures were demolished on March 31, 2011.
- 5) USTs were removed on April 6, 2011.

TITLE:

Groundwater Elevation Map

LOCATION:

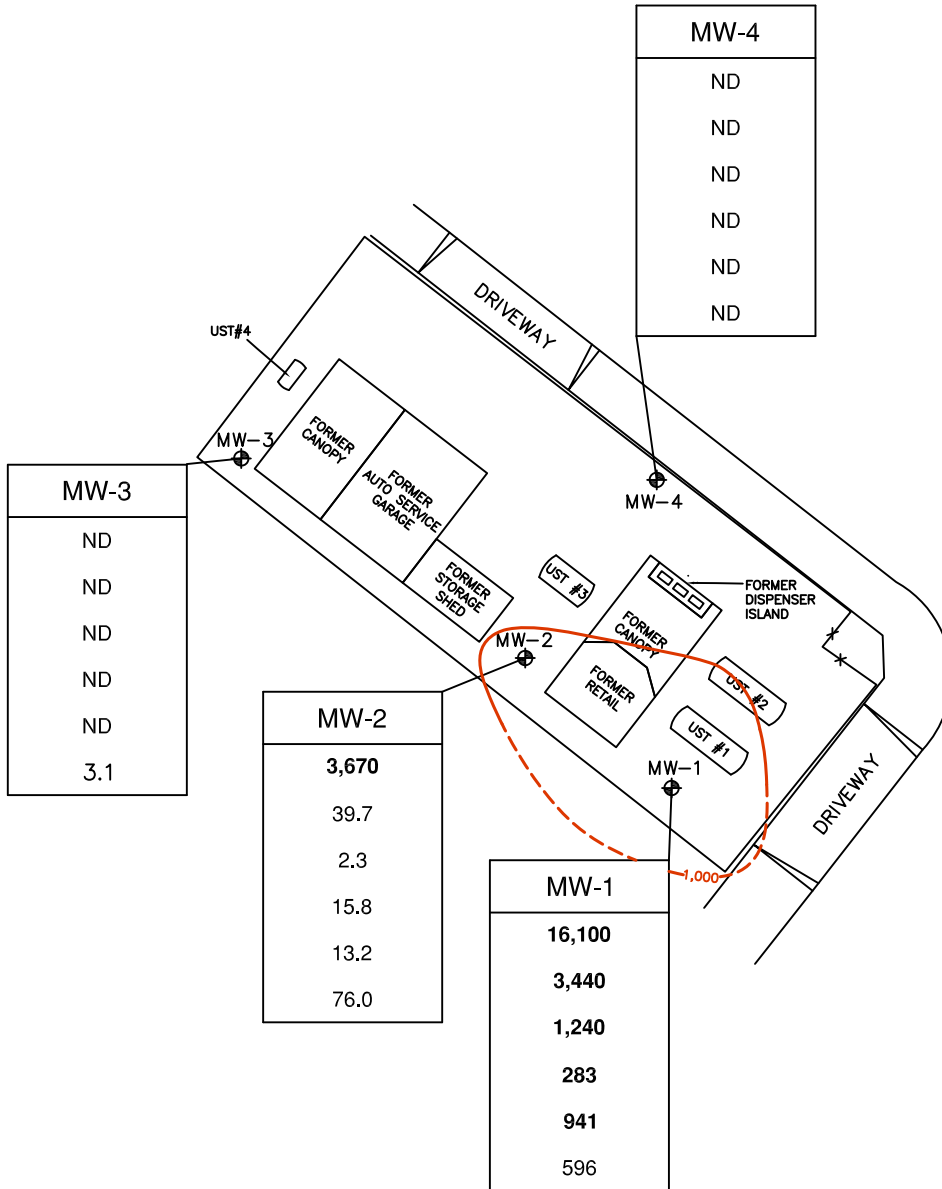
F&M Auto Service UST Site
1839 Foothill Blvd., Oakland, CA



SIERRA WEST
CONSULTANTS, INC.

FIGURE:

3



Legend:

- Monitoring Well



- 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: Groundwater Concentration Map
December 13, 2012

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



FIGURE:

Tables

**TABLE 1
GROUNDWATER ELEVATION AND ANALYTICAL RESULTS**

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

SAMPLE LOCATION (TOC Elevation) ¹	DATE SAMPLED	DEPTH TO WATER (ft. bgs)	GROUND-WATER ELEVATION (ft. msl)	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
	4/20/2012	6.45	43.26	802	11,100	2,280	795	207	544	563	<100	<100	<100	<500	10.5
	7/23/2012	10.02	39.69	262	5,760	615	137	55.9	92.8	245	<20	<20	<20	<100	<10
	12/13/2012	9.70	40.01	506	16,100	3,440	1,240	283	941	596	<100	<100	<100	<500	<10
MW-2 50.53	1/31/2012	8.97	41.56	1,120	3,390	38.8	2.8 ²	7.6 ²	9.5 ²	116	<20	4.5 ²	<20	<100	63.5
	4/20/2012	7.27	43.26	743	5,000	64.1	2.6 ²	36.3	27.1	115	<10	4.6 ²	<10	<50	<10
	7/23/2012	11.45	39.08	603	3,280	30.6	1.4 ²	17.2	10.4	72.4	<10	2.6 ²	<10	<50	<10
	12/13/2012	9.05	41.48	322	3,670	39.7	2.3 ²	15.8	13.2	76.0	<10	2.9 ²	<10	<50	<10
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
	4/20/2012	6.65	43.94	123	<50	<1.0	<1.0	<1.0	<2.0	4.7	<2.0	<2.0	<2.0	<10	<10
	7/23/2012	9.06	41.53	87.6 ²	<50	<1.0	<1.0	<1.0	<2.0	2.7	<2.0	<2.0	<2.0	<10	<10
	12/13/2012	5.47	45.12	<94	<50	<1.0	<1.0	<1.0	<2.0	3.1	<2.0	<2.0	<2.0	<10	<10
MW-4 50.47	1/31/2012	6.52	43.95	50.2 ²	<50	<1.0	<1.0	<1.0	<2.0	<1.0	<2.0	<2.0	<2.0	<10	<10
	4/20/2012	5.62	44.85	45.5 ²	<50	<1.0	<1.0	<1.0	<2.0	<1.0	<2.0	<2.0	<2.0	<10	<10
	7/23/2012	8.47	42.00	<94	<50	<1.0	<1.0	<1.0	<2.0	<1.0	<2.0	<2.0	<2.0	<10	<10
	7/23/2012	5.05	45.42	<96	<50	<1.0	<1.0	<1.0	<2.0	<1.0	<2.0	<2.0	<2.0	<10	<10
Environmental Screening Limits ³				180	180	46	130	43	100	1,800	--	--	--	18,000	2.5

Notes:

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

² = Estimated value

³ = 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. Concentrations exceeding their respective ESLs are presented in **bold**.

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

ft. bgs = Feet below ground surface (measured from top of casing)

ft. msl = Feet above mean sea level

µg/L = Micrograms per liter

Table 2
MW-3 Analytical Results
Former F&M Auto Service UST Site
1839 Foothill Boulevard, Oakland, California

Chemical Compound	Date Sampled			
	1/31/2012	4/20/2012	7/23/2012	12/13/2012
Standard Analyses				
TPHg	<50	<50	<50	<50
TPHd	324	123	87.6 ^J	<94
Benzene	<1.0	<1.0	<1.0	<1.0
Toluene	<1.0	<1.0	<1.0	<1.0
Ethylbenzene	<1.0	<1.0	<1.0	<1.0
Xylene (total)	<2.0	<2.0	<2.0	<2.0
Methyl Tert Butyl Ether	6.1	4.7	2.7	3.1
GC/MS Volatiles				
Bromodichloromethane	<0.20	<0.20	<0.20	<0.20
Bromoform	<0.22	<0.22	<0.22	<0.22
Chlorobenzene	<0.20	<0.20	<0.20	<0.20
Chloroethane	<0.20	<0.20	<0.20	<0.20
Chloroform	<0.20	<0.20	<0.20	<0.20
Carbon tetrachloride	<0.20	<0.20	<0.20	<0.20
1,1-Dichloroethane	<0.20	<0.20	<0.20	<0.20
1,1-Dichloroethylene	<0.20	<0.20	<0.20	<0.20
1,2-Dibromoethane	<0.20	<0.20	<0.20	<0.20
1,2-Dichloroethane	<0.20	<0.20	<0.20	<0.20
1,2-Dichloropropane	<0.20	<0.20	<0.20	<0.20
Di-Isopropyl ether	<0.22	<0.22	<0.22	<0.22
Dibromochloromethane	<0.20	<0.20	<0.20	<0.20
Dichlorodifluoromethane	<0.20	<0.20	<0.20	<0.20
cis-1,2-Dichloroethylene	<0.20	<0.20	<0.20	<0.20
cis-1,3-Dichloropropene	<0.20	<0.20	<0.20	<0.20
m-Dichlorobenzene	<0.20	<0.20	<0.20	<0.20
o-Dichlorobenzene	<0.20	<0.20	<0.20	<0.20
p-Dichlorobenzene	<0.20	<0.20	<0.20	<0.20
trans-1,2-Dichloroethylene	<0.20	<0.20	<0.20	<0.20
trans-1,3-Dichloropropene	<0.30	<0.30	<0.30	<0.30
Ethyl Tert Butyl Ether	<0.22	<0.22	<0.22	<0.22
Methyl bromide	<0.20	<0.20	<0.20	<0.20
Methyl chloride	<0.20	<0.20	<0.20	<0.20
Methylene chloride	<2.0	<2.0	<2.0	<2.0

Table 2
MW-3 Analytical Results
Former F&M Auto Service UST Site
1839 Foothill Boulevard, Oakland, California

Chemical Compound	Date Sampled			
	1/31/2012	4/20/2012	7/23/2012	12/13/2012
Tert-Amyl Methyl Ether	<0.40	<0.40	<0.40	<0.40
Tert-Butyl Alcohol	<2.4	<2.4	<2.4	<2.4
1,1,1-Trichloroethane	<0.20	<0.20	<0.20	<0.20
1,1,2,2-Tetrachloroethane	<0.20	<0.20	<0.20	<0.20
1,1,2-Trichloroethane	<0.22	<0.22	<0.22	<0.22
Tetrachloroethylene	<0.54	<0.30	<0.30	<0.30
Trichloroethylene	<0.20	<0.20	<0.20	<0.20
Trichlorofluoromethane	<0.20	<0.20	<0.20	<0.20
Vinyl chloride	<0.20	<0.20	<0.20	<0.20
GC/MS Semi-volatiles				
Benzoic Acid	<3.8	<3.8	52.6	<3.8
2-Chlorophenol	<1.3	<1.3	<1.3	<1.3
4-Chloro-3-methyl phenol	<1.3	<1.3	<1.3	<1.3
2,4-Dichlorophenol	<1.1	<1.1	<1.1	<1.1
2,4-Dimethylphenol	<1.0	<1.0	<1.0	<1.0
2,4-Dinitrophenol	<3.8	<3.8	<3.8	<3.8
4,6-Dinitro-o-cresol	<1.2	<1.2	<1.2	<1.2
2-Methylphenol	<1.6	<1.6	<1.6	<1.6
3&4-Methylphenol	<1.5	<1.5	21.1	<1.5
2-Nitrophenol	<0.94	<0.94	<0.94	<0.94
4-Nitrophenol	<0.94	<0.94	<0.94	<0.94
Pentachlorophenol	<1.6	<1.6	<1.6	<1.6
Phenol	<0.94	<0.94	7.1	<0.94
2,4,5-Trichlorophenol	<0.94	<0.94	<0.94	<0.94
2,4,6-Trichlorophenol	<0.94	<0.94	<0.94	<0.94
Acenaphthene	<1.3	<1.3	<1.3	<1.3
Acenaphthylene	<1.1	<1.1	<1.1	<1.1
Aniline	<1.1	<1.1	<1.1	<1.1
Anthracene	<1.2	<1.2	<1.2	<1.2
Azobenzene	<1.1	<1.1	<1.1	<1.1
Benzidine	<2.2	<2.2	<2.2	<2.2
Benzo(a)anthracene	<1.3	<1.3	<1.3	<1.3
Benzo(a)pyrene	<1.0	<1.0	<1.0	<1.0
Benzo(b)fluoranthene	<1.2	<1.2	<1.2	<1.2
Benzo(g,h,i)perylene	<1.4	<1.4	<1.4	<1.4
Benzo(k)fluoranthene	<1.3	<1.3	<1.3	<1.3
4-Bromophenyl phenyl ether	<1.5	<1.5	<1.5	<1.5

Table 2
MW-3 Analytical Results
Former F&M Auto Service UST Site
1839 Foothill Boulevard, Oakland, California

Chemical Compound	Date Sampled			
	1/31/2012	4/20/2012	7/23/2012	12/13/2012
Butyl benzyl phthalate	<1.2	<1.2	<1.2	<1.2
Benzyl Alcohol	<1.6	<1.6	<1.6	<1.6
2-Chloronaphthalene	<1.3	<1.3	<1.3	<1.3
4-Chloroaniline	<1.0	<1.0	<1.0	<1.0
Carbazole	<1.4	<1.4	<1.4	<1.4
Chrysene	<1.5	<1.5	<1.5	<1.5
bis(2-Chloroethoxy)methane	<1.1	<1.1	<1.1	<1.1
bis(2-Chloroethyl)ether	<1.0	<1.0	<1.0	<1.0
bis(2-Chloroisopropyl)ether	<0.94	<0.94	<0.94	<0.94
4-Chlorophenyl phenyl ether	<1.4	<1.4	<1.4	<1.4
1,2-Dichlorobenzene	<1.1	<1.1	<1.1	<1.1
1,3-Dichlorobenzene	<1.2	<1.2	<1.2	<1.2
1,4-Dichlorobenzene	<1.2	<1.2	<1.2	<1.2
2,4-Dinitrotoluene	<1.2	<1.2	<1.2	<1.2
2,6-Dinitrotoluene	<1.2	<1.2	<1.2	<1.2
3,3'-Dichlorobenzidine	<1.9	<1.9	<1.9	<1.9
Dibenzo(a,h)anthracene	<1.2	<1.2	<1.2	<1.2
Dibenzofuran	<1.3	<1.3	<1.3	<1.3
Diphenylamine	<1.3	<1.3	<1.3	<1.3
Di-n-butyl phthalate	<1.3	<1.3	<1.3	<1.3
Di-n-octyl phthalate	<1.7	<1.7	<1.7	<1.7
Diethyl phthalate	<1.0	<1.0	1.7 ^J	<1.0
Dimethyl phthalate	<1.7	<1.7	<1.7	<1.7
1,4-Dioxane	<0.94	<0.94	<0.94	<0.94
bis(2-Ethylhexyl)phthalate	<1.9	<1.9	2.0 ^J	<1.9
Fluoranthene	<1.4	<1.4	<1.4	<1.4
Fluorene	<1.4	<1.4	<1.4	<1.4
Hexachlorobenzene	<1.3	<1.3	<1.3	<1.3
Hexachlorobutadiene	<1.5	<1.5	<1.5	<1.5
Hexachlorocyclopentadiene	<0.94	<0.94	<0.94	<0.94
Hexachloroethane	<1.1	<1.1	<1.1	<1.1
Indeno(1,2,3-cd)pyrene	<1.3	<1.3	<1.3	<1.3
Isophorone	<1.0	<1.0	<1.0	<1.0
1-Methylnaphthalene	<1.2	<1.2	<1.2	<1.2
2-Methylnaphthalene	<1.2	<1.2	<1.2	<1.2
2-Nitroaniline	<1.0	<1.0	<1.0	<1.0
3-Nitroaniline	<1.2	<1.2	<1.2	<1.2
4-Nitroaniline	<1.1	<1.1	<1.1	<1.1
Naphthalene	<1.2	<1.2	<1.2	<1.2

Table 2
MW-3 Analytical Results
Former F&M Auto Service UST Site
1839 Foothill Boulevard, Oakland, California

Chemical Compound	Date Sampled			
	1/31/2012	4/20/2012	7/23/2012	12/13/2012
Nitrobenzene	<0.94	<0.94	<0.94	<0.94
N-Nitrosodimethylamine	<0.94	<0.94	<0.94	<0.94
N-Nitroso-di-n-propylamine	<0.99	<0.99	<0.99	<0.99
Phenanthrene	<1.2	<1.2	<1.2	<1.2
Pyrene	<1.5	<1.5	<1.5	<1.5
Pyridine	<0.94	<0.94	<0.94	<0.94
1,2,4-Trichlorobenzene	<1.2	<1.2	<1.2	<1.2
PCB Compounds				
Aroclor 1016	<0.019	<0.019	<0.019	<0.019
Aroclor 1221	<0.047	<0.047	<0.047	<0.048
Aroclor 1232	<0.047	<0.047	<0.047	<0.048
Aroclor 1242	<0.047	<0.047	<0.047	<0.048
Aroclor 1248	<0.047	<0.047	<0.047	<0.048
Aroclor 1254	<0.047	<0.047	<0.047	<0.048
Aroclor 1260	<0.028	<0.028	<0.028	<0.029
Metals Analysis				
Cadmium	<2.0	<2.0	<2.0	<2.0
Chromium	<10	<10	<10	<10
Lead	14.1	<10	<10	<10
Nickel	46.3	50.2	32.8	60.8
Zinc	<20	<20	<20	<20
General Chemistry				
HEM Oil and Grease	<5,000	<5,700	<5,000	<4,700
HEM Petroleum Hydrocarbons	<5,000	<5,700	<5,000	<4,700

Notes:

- All concentrations are shown in micrograms per liter (µg/L).
- Concentrations above their respective method detection limits or laboratory reporting limits are shaded.
- Concentrations with a laboratory annotation of "estimated value" are noted with a "J" flag.

**Attachment A –
Well Sampling and Gauging Field Sheets**

SIERRA WEST CONSULTANTS
Groundwater/Liquid Level Data
(Measurements in feet)

Project Address: F&M Auto
1839 Foothill Blvd.
Oakland, CA

Date: 12-13-12

Project: F&M Auto

Recorded by: Jerrr Gonzales

Well No.	Time	Well Elev. TOC	Depth to Groundwater	Measured Total Depth	Groundwater Elevation	Depth to Product	Product Thickness	Comments
MW-1	8.24		9.50	23.70				
MW-2	8.26		9.05	23.81				
MW-3	8.28		5.47	23.70				
MW-4	8.22		5.05	23.83				

Notes:

Site: F&M Auto

Sampling Date: 12.13.12

1839 Foothill Blvd.

Project No.: _____

Oakland, CA

Well Designation: MU-1

Is there standing water in the well box? NO YES Above TOC Below TOC
 Is top of casing cut level? NO YES If no, see remarks
 Is well cap sealed and locked? NO YES If no, see remarks
 Height of well casing riser (in inches): 3
 Well cover type: 8" or 12" UV 12" EMCO 8" or 12" BK 8" Christy
 12" Christy 8" M&D 12" M&D 12" DWP
 12" CNI 36" CNI 12" Pomeco Other: _____
 General condition of wellhead assembly: Excellent Good Fair Poor

Purging Equipment: _____ 2" disposable bailer _____ Submersible pump
 _____ 2" PVC bailer _____ Dedicated bailer
 _____ 4" PVC bailer Centrifugal pump

Sampled with: Disposable bailer Teflon bailer _____ Disposable Tubing _____

Well Diameter: 2" 4" _____ 6" _____ 8" _____
 Purge Vol. Multiplier: 0.16 0.65 1.47 2.61 gal/ft.

Initial Measurement Recharge Measurement
 Time: 8:24 Time: 10:20 Calculated purge: 6.7
 Depth of well: 23.70 Depth to water: 9.25 Actual purge: 7.0
 Depth to water: 9.70


Start purge: 848 Sampling time: 1025

Time	Temperature	E.C.	pH	DO	ORP	Volume
8:50	17.51	640	8.46	6.80	-51.3	
8:51	17.68	675	8.39	4.52	-15.3	
8:52	17.29	677	8.39		-112.8	

Sample appearance: Clear Lock: _____

Equipment replaced: (check all that apply) Note condition of replaced item(s)
 2" Locking Cap: _____ Lock: _____ 7/32 Allenhead: _____
 4" Locking Cap: _____ Lock-Dolphin: _____ 9/16 Bolt: _____
 6" Locking Cap: _____ Pinned Allenhead (DWP): _____

Remarks: Strong odor in well - LT Sheen

Signature: 

Site: F&M Auto

Sampling Date: 12-13-12

1839 Foothill Blvd.

Project No.: _____

Oakland, CA

Well Designation: MW-2

Is there standing water in the well box?	NO	<input checked="" type="checkbox"/> YES	Above TOC	Below TOC
Is top of casing cut level?	NO	<input checked="" type="checkbox"/> YES	If no, see remarks	
Is well cap sealed and locked?	NO	<input checked="" type="checkbox"/> YES	If no, see remarks	
Height of well casing riser (in inches):	<u>2</u>			
Well cover type: 8" or 12" UV	12" EMCO	8" or 12" BK	8" Christy	
12" Christy	8" M&D <input checked="" type="checkbox"/>	12" M&D	12" DWP	
12" CNI	36" CNI	12" Pomeco	Other: _____	
General condition of wellhead assembly:	Excellent	Good <input checked="" type="checkbox"/>	Fair	Poor

Purging Equipment: _____ 2" disposable bailer _____ Submersible pump
 _____ 2" PVC bailer _____ Dedicated bailer
 _____ 4" PVC bailer _____ Centrifugal pump
 Sampled with: Disposable bailer Teflon bailer _____ Disposable Tubing _____

Well Diameter: 2" 4" _____ 6" _____ 8" _____
 Purge Vol. Multiplier: 0.16 0.65 1.47 2.61 gal/ft.
Initial Measurement Recharge Measurement
 Time: 8:26 Time: 10:28 Calculated purge: 7.0
 Depth of well: 23.81 Depth to water: 7.75 Actual purge: 7.0
 Depth to water: 9.05

Start purge: 9:05 Sampling time: 10:30

Time	Temperature	E.C.	pH	DO	ORP	Volume
9:07	18.48	684	8.32	2.64	-28.1	1
9:09	18.09	682	8.36	2.79	-26.2	2
9:11	18.55	710	8.27		-23.5	3

Sample appearance: Clear Lock: _____

Equipment replaced: (check all that apply)	Note condition of replaced item(s)
2" Locking Cap: _____	Lock: _____ 7/32 Allenhead: _____
4" Locking Cap: _____	Lock-Dolphin: _____ 9/16 Bolt: _____
6" Locking Cap: _____	Pinned Allenhead (DWP): _____

Remarks: _____

Signature: 

Site: F&M Auto

Sampling Date: 12-13-12

1839 Foothill Blvd.

Project No.: _____

Oakland, CA

Well Designation: MW-3

Is there standing water in the well box? NO YES Above TOC Below TOC
 Is top of casing cut level? NO YES If no, see remarks
 Is well cap sealed and locked? NO YES If no, see remarks
 Height of well casing riser (in inches): 3
 Well cover type: 8" or 12" UV _____ 12" EMCO _____ 8" or 12" BK _____ 8" Christy _____
 12" Christy _____ 8" M&D 12" M&D _____ 12" DWP _____
 12" CNI _____ 36" CNI _____ 12" Pomeco _____ Other: _____
 General condition of wellhead assembly: Excellent _____ Good Fair _____ Poor _____

Purging Equipment: _____ 2" disposable bailer _____ Submersible pump
 _____ 2" PVC bailer _____ Dedicated bailer
 _____ 4" PVC bailer Centrifugal pump
 Sampled with: Disposable bailer Teflon bailer _____ Disposable Tubing _____

Well Diameter: 2" 4" _____ 6" _____ 8" _____
 Purge Vol. Multiplier: 0.16 0.65 1.47 2.61 gal/ft.

Initial Measurement Recharge Measurement
 Time: 828 Time: 1048 Calculated purge: 8.7
 Depth of well: 23.70 Depth to water: 5.47 Actual purge: 9.0
 Depth to water: 5.47


Start purge: 9:18 Sampling time: 1050

Time	Temperature	E.C.	pH	DO	ORP	Volume
920	17.36	720	8.50	4.89	15.1	
921	17.11	721	8.42	1.29	23.5	
923	18.09	721	8.41	1.04	22.1	

Sample appearance: Clear Lock: _____

Equipment replaced: (check all that apply) Note condition of replaced item(s)
 2" Locking Cap: _____ Lock: _____ 7/32 Allenhead: _____
 4" Locking Cap: _____ Lock-Dolphin: _____ 9/16 Bolt: _____
 6" Locking Cap: _____ Pinned Allenhead (DWP): _____

Remarks: _____

Signature: 

Site: F&M Auto

Sampling Date: 12-13-12

1839 Foothill Blvd.

Project No.: _____

Oakland, CA

Well Designation: MW-4

Is there standing water in the well box? NO YES Above TOC Below TOC
 Is top of casing cut level? NO YES If no, see remarks
 Is well cap sealed and locked? NO YES If no, see remarks
 Height of well casing riser (in inches): 2
 Well cover type: 8" or 12" UV _____ 12" EMCO _____ 8" or 12" BK _____ 8" Christy _____
 12" Christy _____ 8" M&D 12" M&D _____ 12" DWP _____
 12" CNI _____ 36" CNI _____ 12" Pomeco _____ Other: _____
 General condition of wellhead assembly: Excellent _____ Good _____ Fair _____ Poor _____

Purging Equipment: _____ 2" disposable bailer _____ Submersible pump
 _____ 2" PVC bailer _____ Dedicated bailer
 _____ 4" PVC bailer _____ Centrifugal pump

Sampled with: Disposable bailer Teflon bailer _____ Disposable Tubing _____

Well Diameter: 2" 4" _____ 6" _____ 8" _____
 Purge Vol. Multiplier: 0.16 0.65 1.47 2.61 gal/ft.

Initial Measurement Recharge Measurement
 Time: 8:22 Time: 10:05 Calculated purge: 9.0
 Depth of well: 23.83 Depth to water: 5.65 Actual purge: 9.0
 Depth to water: 5.05

Start purge: 8:36 Sampling time: 10:10

Time	Temperature	E.C.	pH	DO	ORP	Volume
8:38	17.35	655	8.84	4.02	28.7	
8:40	19.10	670	7.85	2.85	23.7	
8:42	20.28	666	7.95	2.43	20.7	

Sample appearance: Clear Lock: _____

Equipment replaced: (check all that apply) Note condition of replaced item(s)
 2" Locking Cap: _____ Lock: _____ 7/32 Allenhead: _____
 4" Locking Cap: _____ Lock-Dolphin: _____ 9/16 Bolt: _____
 6" Locking Cap: _____ Pinned Allenhead (DWP): _____

Remarks: _____

Signature: [Signature]

**Attachment B –
Groundwater Sampling Laboratory Analytical Report**

Technical Report for

Sierra West Consultants, Inc.

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

Accutest Job Number: C25307

Sampling Date: 12/13/12

Report to:

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

Total number of pages in report: 63



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.



**James J. Rhudy
Lab Director**

Client Service contact: Nutan Kabir 408-588-0200

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

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Test results relate only to samples analyzed.

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Sample Summary

Sierra West Consultants, Inc.

Job No: C25307

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

Sample Number	Collected		Received	Matrix		Client Sample ID
	Date	Time By		Code	Type	
C25307-1	12/13/12	10:25 BW	12/13/12	AQ	Ground Water	MW-1
C25307-1F	12/13/12	10:25 BW	12/13/12	AQ	Groundwater Filtered	MW-1
C25307-2	12/13/12	10:30 BW	12/13/12	AQ	Ground Water	MW-2
C25307-2F	12/13/12	10:30 BW	12/13/12	AQ	Groundwater Filtered	MW-2
C25307-3	12/13/12	10:50 BW	12/13/12	AQ	Ground Water	MW-3
C25307-3F	12/13/12	10:50 BW	12/13/12	AQ	Groundwater Filtered	MW-3
C25307-4	12/13/12	10:10 BW	12/13/12	AQ	Ground Water	MW-4
C25307-4F	12/13/12	10:10 BW	12/13/12	AQ	Groundwater Filtered	MW-4

Summary of Hits

Job Number: C25307
Account: Sierra West Consultants, Inc.
Project: T0000003190-F&M Auto Service., 1839 Foothill Blvd, Oakland, CA
Collected: 12/13/12

Lab Sample ID	Client Sample ID	Result/ Analyte	RL	MDL	Units	Method
---------------	------------------	--------------------	----	-----	-------	--------

C25307-1 MW-1

Benzene	3440	50	10	ug/l	SW846 8260B
Toluene	1240	50	10	ug/l	SW846 8260B
Ethylbenzene	283	50	10	ug/l	SW846 8260B
Xylene (total)	941	100	23	ug/l	SW846 8260B
Methyl Tert Butyl Ether	596	50	10	ug/l	SW846 8260B
TPH-GRO (C6-C10)	16100	2500	1300	ug/l	SW846 8260B
TPH (C10-C28)	0.506	0.096	0.024	mg/l	SW846 8015B M

C25307-1F MW-1

No hits reported in this sample.

C25307-2 MW-2

Benzene	39.7	5.0	1.0	ug/l	SW846 8260B
Toluene	2.3 J	5.0	1.0	ug/l	SW846 8260B
Ethylbenzene	15.8	5.0	1.0	ug/l	SW846 8260B
Xylene (total)	13.2	10	2.3	ug/l	SW846 8260B
Ethyl Tert Butyl Ether	2.9 J	10	1.1	ug/l	SW846 8260B
Methyl Tert Butyl Ether	76.0	5.0	1.0	ug/l	SW846 8260B
TPH-GRO (C6-C10)	3670	250	130	ug/l	SW846 8260B
TPH (C10-C28)	0.322	0.094	0.024	mg/l	SW846 8015B M

C25307-2F MW-2

No hits reported in this sample.

C25307-3 MW-3

Methyl Tert Butyl Ether	3.1	1.0	0.20	ug/l	SW846 8260B
-------------------------	-----	-----	------	------	-------------

C25307-3F MW-3

Nickel	60.8	5.0		ug/l	SW846 6010B
--------	------	-----	--	------	-------------

C25307-4 MW-4

TPH (C10-C28)	0.144	0.096	0.024	mg/l	SW846 8015B M
---------------	-------	-------	-------	------	---------------

C25307-4F MW-4

No hits reported in this sample.

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID: MW-1		
Lab Sample ID: C25307-1		Date Sampled: 12/13/12
Matrix: AQ - Ground Water		Date Received: 12/13/12
Method: SW846 8260B		Percent Solids: n/a
Project: T0000003190-F&M Auto Service., 1839 Foothill Blvd, Oakland, CA		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	R13495.D	50	12/21/12	YP	n/a	n/a	VR482
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	3440	50	10	ug/l	
108-88-3	Toluene	1240	50	10	ug/l	
100-41-4	Ethylbenzene	283	50	10	ug/l	
1330-20-7	Xylene (total)	941	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	596	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)	16100	2500	1300	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	106%		60-130%
2037-26-5	Toluene-D8	99%		60-130%
460-00-4	4-Bromofluorobenzene	100%		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

3.1
3

Client Sample ID: MW-1		Date Sampled: 12/13/12
Lab Sample ID: C25307-1		Date Received: 12/13/12
Matrix: AQ - Ground Water		Percent Solids: n/a
Method: SW846 8015B M SW846 3510C		
Project: T0000003190-F&M Auto Service., 1839 Foothill Blvd, Oakland, CA		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	GG40085.D	1	12/15/12	LB	12/14/12	OP7212	GGG1059
Run #2							

Run #	Initial Volume	Final Volume
Run #1	1040 ml	1.0 ml
Run #2		

TPH Extractable

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (C10-C28)	0.506	0.096	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

Client Sample ID: MW-1		Date Sampled: 12/13/12
Lab Sample ID: C25307-1F		Date Received: 12/13/12
Matrix: AQ - Groundwater Filtered		Percent Solids: n/a
Project: 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	12/14/12	12/17/12 RS	SW846 6010B ¹	SW3010A ²

(1) Instrument QC Batch: MA2889

(2) Prep QC Batch: MP5637

RL = Reporting Limit

Report of Analysis

Client Sample ID: MW-2		
Lab Sample ID: C25307-2		Date Sampled: 12/13/12
Matrix: AQ - Ground Water		Date Received: 12/13/12
Method: SW846 8260B		Percent Solids: n/a
Project: T0000003190-F&M Auto Service., 1839 Foothill Blvd, Oakland, CA		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	R13469.D	5	12/20/12	YP	n/a	n/a	VR480
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	39.7	5.0	1.0	ug/l	
108-88-3	Toluene	2.3	5.0	1.0	ug/l	J
100-41-4	Ethylbenzene	15.8	5.0	1.0	ug/l	
1330-20-7	Xylene (total)	13.2	10	2.3	ug/l	
108-20-3	Di-Isopropyl ether	ND	10	1.1	ug/l	
637-92-3	Ethyl Tert Butyl Ether	2.9	10	1.1	ug/l	J
1634-04-4	Methyl Tert Butyl Ether	76.0	5.0	1.0	ug/l	
994-05-8	Tert-Amyl Methyl Ether	ND	10	2.0	ug/l	
75-65-0	Tert-Butyl Alcohol	ND	50	12	ug/l	
	TPH-GRO (C6-C10)	3670	250	130	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	100%		60-130%
2037-26-5	Toluene-D8	98%		60-130%
460-00-4	4-Bromofluorobenzene	102%		60-130%

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

Client Sample ID: MW-2		Date Sampled: 12/13/12
Lab Sample ID: C25307-2		Date Received: 12/13/12
Matrix: AQ - Ground Water		Percent Solids: n/a
Method: SW846 8015B M SW846 3510C		
Project: T0000003190-F&M Auto Service., 1839 Foothill Blvd, Oakland, CA		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	GG40087.D	1	12/15/12	LB	12/14/12	OP7212	GGG1059
Run #2							

Run #	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)	0.322	0.094	0.024	mg/l	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
630-01-3	Hexacosane	68%		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

Client Sample ID: MW-2		
Lab Sample ID: C25307-2F		Date Sampled: 12/13/12
Matrix: AQ - Groundwater Filtered		Date Received: 12/13/12
		Percent Solids: n/a
Project: 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	12/14/12	12/17/12 RS	SW846 6010B ¹	SW3010A ²

(1) Instrument QC Batch: MA2889

(2) Prep QC Batch: MP5637

RL = Reporting Limit

Report of Analysis

Client Sample ID: MW-3		Date Sampled: 12/13/12
Lab Sample ID: C25307-3		Date Received: 12/13/12
Matrix: AQ - Ground Water		Percent Solids: n/a
Method: SW846 8260B		
Project: 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	R13463.D	1	12/20/12	YP	n/a	n/a	VR480
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	3.1	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	1,1,2,2-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

Client Sample ID: MW-3		Date Sampled: 12/13/12
Lab Sample ID: C25307-3		Date Received: 12/13/12
Matrix: AQ - Ground Water		Percent Solids: n/a
Method: SW846 8260B		
Project: 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	0.30	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	106%		60-130%
2037-26-5	Toluene-D8	98%		60-130%
460-00-4	4-Bromofluorobenzene	96%		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

Client Sample ID: MW-3		
Lab Sample ID: C25307-3		Date Sampled: 12/13/12
Matrix: AQ - Ground Water		Date Received: 12/13/12
Method: SW846 8270C SW846 3510C		Percent Solids: n/a
Project: 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	Y18210.D	1	12/14/12	MT	12/14/12	OP7214	EY856
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

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

Report of Analysis

Client Sample ID: MW-3		Date Sampled: 12/13/12
Lab Sample ID: C25307-3		Date Received: 12/13/12
Matrix: AQ - Ground Water		Percent Solids: n/a
Method: SW846 8270C SW846 3510C		
Project: 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

Client Sample ID: MW-3		Date Sampled: 12/13/12
Lab Sample ID: C25307-3		Date Received: 12/13/12
Matrix: AQ - Ground Water		Percent Solids: n/a
Method: SW846 8270C SW846 3510C		
Project: 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	1% ^a		10-100%
4165-62-2	Phenol-d5	1% ^a		7-100%
118-79-6	2,4,6-Tribromophenol	8% ^a		25-115%
4165-60-0	Nitrobenzene-d5	83%		25-100%
321-60-8	2-Fluorobiphenyl	88%		25-106%
1718-51-0	Terphenyl-d14	95%		35-130%

(a) Surrogate outside control limits due to matrix interference. Emulsion formed during extraction process.

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

Client Sample ID: MW-3		
Lab Sample ID: C25307-3		Date Sampled: 12/13/12
Matrix: AQ - Ground Water		Date Received: 12/13/12
Method: SW846 8082 SW846 3510C		Percent Solids: n/a
Project: T0000003190-F&M Auto Service., 1839 Foothill Blvd, Oakland, CA		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	PP028623.D	1	12/13/12	AG	12/13/12	OP7210	GPP947
Run #2							

Run #	Initial Volume	Final Volume
Run #1	1050 ml	1.0 ml
Run #2		

PCB List

CAS No.	Compound	Result	RL	MDL	Units	Q
12674-11-2	Aroclor 1016	ND	0.095	0.019	ug/l	
11104-28-2	Aroclor 1221	ND	0.095	0.048	ug/l	
11141-16-5	Aroclor 1232	ND	0.095	0.048	ug/l	
53469-21-9	Aroclor 1242	ND	0.095	0.048	ug/l	
12672-29-6	Aroclor 1248	ND	0.095	0.048	ug/l	
11097-69-1	Aroclor 1254	ND	0.095	0.048	ug/l	
11096-82-5	Aroclor 1260	ND	0.095	0.029	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	72%		41-134%
877-09-8	Tetrachloro-m-xylene	59%		41-134%
2051-24-3	Decachlorobiphenyl	82%		41-134%
2051-24-3	Decachlorobiphenyl	74%		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

Client Sample ID: MW-3		Date Sampled: 12/13/12
Lab Sample ID: C25307-3		Date Received: 12/13/12
Matrix: AQ - Ground Water		Percent Solids: n/a
Method: SW846 8015B M SW846 3510C		
Project: T0000003190-F&M Auto Service., 1839 Foothill Blvd, Oakland, CA		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	GG40088.D	1	12/15/12	LB	12/14/12	OP7212	GGG1059
Run #2							

Run #	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)	ND	0.094	0.024	mg/l	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
630-01-3	Hexacosane	57%		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

Client Sample ID: MW-3	Date Sampled: 12/13/12
Lab Sample ID: C25307-3	Date Received: 12/13/12
Matrix: AQ - Ground Water	Percent Solids: n/a
Project: T0000003190-F&M Auto Service., 1839 Foothill Blvd, Oakland, CA	

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
HEM Oil and Grease	< 4.7	4.7	mg/l	1	12/17/12	AC	EPA 1664A
HEM Petroleum Hydrocarbons	< 4.7	4.7	mg/l	1	12/17/12	AC	EPA 1664A

RL = Reporting Limit

Report of Analysis

Client Sample ID: MW-3	Date Sampled: 12/13/12
Lab Sample ID: C25307-3F	Date Received: 12/13/12
Matrix: AQ - Groundwater Filtered	Percent Solids: n/a
Project: 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	12/14/12	12/17/12 RS	SW846 6010B ¹	SW3010A ³
Chromium	< 10	10	ug/l	1	12/14/12	12/17/12 RS	SW846 6010B ¹	SW3010A ³
Lead	< 10	10	ug/l	1	12/14/12	12/17/12 RS	SW846 6010B ¹	SW3010A ³
Nickel	60.8	5.0	ug/l	1	12/14/12	12/17/12 RS	SW846 6010B ¹	SW3010A ³
Zinc	< 20	20	ug/l	1	12/14/12	12/18/12 RS	SW846 6010B ²	SW3010A ³

- (1) Instrument QC Batch: MA2889
- (2) Instrument QC Batch: MA2892
- (3) Prep QC Batch: MP5637

RL = Reporting Limit

Report of Analysis

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3

Client Sample ID: MW-4		Date Sampled: 12/13/12
Lab Sample ID: C25307-4		Date Received: 12/13/12
Matrix: AQ - Ground Water		Percent Solids: n/a
Method: SW846 8260B		
Project: T0000003190-F&M Auto Service., 1839 Foothill Blvd, Oakland, CA		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	R13464.D	1	12/20/12	YP	n/a	n/a	VR480
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	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	104%		60-130%
2037-26-5	Toluene-D8	97%		60-130%
460-00-4	4-Bromofluorobenzene	95%		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

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Client Sample ID: MW-4		Date Sampled: 12/13/12
Lab Sample ID: C25307-4		Date Received: 12/13/12
Matrix: AQ - Ground Water		Percent Solids: n/a
Method: SW846 8015B M SW846 3510C		
Project: T0000003190-F&M Auto Service., 1839 Foothill Blvd, Oakland, CA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	GG40089.D	1	12/15/12	LB	12/14/12	OP7212	GGG1059
Run #2							

	Initial Volume	Final Volume
Run #1	1040 ml	1.0 ml
Run #2		

TPH Extractable

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (C10-C28)	0.144	0.096	0.024	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
630-01-3	Hexacosane	80%		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

Client Sample ID: MW-4	Date Sampled: 12/13/12
Lab Sample ID: C25307-4F	Date Received: 12/13/12
Matrix: AQ - Groundwater Filtered	Percent Solids: n/a
Project: 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	12/14/12	12/17/12 RS	SW846 6010B ¹	SW3010A ²

(1) Instrument QC Batch: MA2889

(2) Prep QC Batch: MP5637

RL = Reporting Limit

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody



Northern California

ACCUTEST Laboratories

CHAIN OF CUSTODY

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

SWCICAF03210

Table with tracking information: FED-EX Tracking #, Bottle Order Control # (C25307), Accutest Quote #, Accutest NC Job # (C20117 LS)

Client / Reporting Information and Project Information section containing company name (Sierra West Consultants Inc.), address (4227 Sunrise Blvd., Ste. 220), project name (F&M Auto), and contact details (Brian Whelan).

Main data table with columns for Sample ID, Date, Time, Matrix, # of bottles, and various analysis results (TPH-g, TPH-d, Dissolved Lead, etc.).

Turnaround Time, Data Deliverable Information, and Approved By/Date section with checkboxes for Standard TAT, 3 Day, 2 Day, and 1 Day options.

Chain of Custody table with columns for Relinquished By, Date Time, Received By, and Received By, showing the sequence of custody from 1 to 5.

4.1
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Accutest Laboratories Sample Receipt Summary

Accutest Job Number: C25307 **Client:** SIERRA WEST CONSULTANTS **Project:** F&M AUTO
Date / Time Received: 12/13/2012 **Delivery Method:** Client **Airbill #'s:**

Cooler Temps (Initial/Adjusted): #1: (2.6/2.6); #2: (2.1/2.1); 0

<u>Cooler Security</u>	<u>Y or N</u>		<u>Y or N</u>	
1. Custody Seals Present:	<input type="checkbox"/>	<input checked="" type="checkbox"/>	3. COC Present:	<input checked="" type="checkbox"/> <input type="checkbox"/>
2. Custody Seals Intact:	<input type="checkbox"/>	<input type="checkbox"/>	4. Smp'l Dates/Time OK	<input checked="" type="checkbox"/> <input type="checkbox"/>

<u>Cooler Temperature</u>	<u>Y or N</u>	
1. Temp criteria achieved:	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2. Cooler temp verification:	IR Gun	
3. Cooler media:	Ice (Bag)	
4. No. Coolers:	2	

<u>Quality Control Preservation</u>	<u>Y</u>	<u>or</u>	<u>N</u>	<u>N/A</u>
1. Trip Blank present / cooler:	<input type="checkbox"/>		<input checked="" type="checkbox"/>	<input type="checkbox"/>
2. Trip Blank listed on COC:	<input type="checkbox"/>		<input checked="" type="checkbox"/>	<input type="checkbox"/>
3. Samples preserved properly:	<input checked="" type="checkbox"/>		<input type="checkbox"/>	
4. VOCs headspace free:	<input checked="" type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>

<u>Sample Integrity - Documentation</u>	<u>Y</u>	<u>or</u>	<u>N</u>
1. Sample labels present on bottles:	<input checked="" type="checkbox"/>		<input type="checkbox"/>
2. Container labeling complete:	<input checked="" type="checkbox"/>		<input type="checkbox"/>
3. Sample container label / COC agree:	<input checked="" type="checkbox"/>		<input type="checkbox"/>

<u>Sample Integrity - Condition</u>	<u>Y</u>	<u>or</u>	<u>N</u>
1. Sample recvd within HT:	<input checked="" type="checkbox"/>		<input type="checkbox"/>
2. All containers accounted for:	<input checked="" type="checkbox"/>		<input type="checkbox"/>
3. Condition of sample:	Intact		

<u>Sample Integrity - Instructions</u>	<u>Y</u>	<u>or</u>	<u>N</u>	<u>N/A</u>
1. Analysis requested is clear:	<input checked="" type="checkbox"/>		<input type="checkbox"/>	
2. Bottles received for unspecified tests	<input type="checkbox"/>		<input checked="" type="checkbox"/>	
3. Sufficient volume recvd for analysis:	<input checked="" type="checkbox"/>		<input type="checkbox"/>	
4. Compositing instructions clear:	<input type="checkbox"/>		<input type="checkbox"/>	<input checked="" type="checkbox"/>
5. Filtering instructions clear:	<input type="checkbox"/>		<input type="checkbox"/>	<input checked="" type="checkbox"/>

Comments

4.1
4

GC/MS Volatiles

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QC Data Summaries

Includes the following where applicable:

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

Method Blank Summary

Job Number: C25307**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
VR480-MB	R13458.D	1	12/20/12	YP	n/a	n/a	VR480

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

C25307-2, C25307-3, C25307-4

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	0.30	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: C25307
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
VR480-MB	R13458.D	1	12/20/12	YP	n/a	n/a	VR480

The QC reported here applies to the following samples:

Method: SW846 8260B

C25307-2, C25307-3, C25307-4

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	104% 60-130%
2037-26-5	Toluene-D8	97% 60-130%
460-00-4	4-Bromofluorobenzene	95% 60-130%

Method Blank Summary

Job Number: C25307

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
VR482-MB	R13490.D	1	12/21/12	YP	n/a	n/a	VR482

The QC reported here applies to the following samples:

Method: SW846 8260B

C25307-1

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	0.20	ug/l	
108-20-3	Di-Isopropyl ether	ND	2.0	0.22	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	
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	
108-88-3	Toluene	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	100% 60-130%
2037-26-5	Toluene-D8	97% 60-130%
460-00-4	4-Bromofluorobenzene	95% 60-130%

Blank Spike/Blank Spike Duplicate Summary

Job Number: C25307

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
VR480-BS	R13456.D	1	12/20/12	YP	n/a	n/a	VR480
VR480-BSD	R13459.D	1	12/20/12	YP	n/a	n/a	VR480

The QC reported here applies to the following samples:

Method: SW846 8260B

C25307-2, C25307-3, C25307-4

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	20	17.1	86	17.4	87	2	60-130/30
75-27-4	Bromodichloromethane	20	17.1	86	17.4	87	2	60-130/30
75-25-2	Bromoform	20	17.8	89	18.3	92	3	60-130/30
108-90-7	Chlorobenzene	20	15.5	78	15.9	80	3	60-130/30
75-00-3	Chloroethane	20	16.3	82	16.5	83	1	60-130/30
67-66-3	Chloroform	20	17.3	87	17.3	87	0	60-130/30
56-23-5	Carbon tetrachloride	20	17.7	89	17.8	89	1	60-130/30
75-34-3	1,1-Dichloroethane	20	16.7	84	16.8	84	1	60-130/30
75-35-4	1,1-Dichloroethylene	20	16.6	83	16.4	82	1	60-130/30
106-93-4	1,2-Dibromoethane	20	17.1	86	17.5	88	2	60-130/30
107-06-2	1,2-Dichloroethane	20	17.3	87	17.8	89	3	60-130/30
78-87-5	1,2-Dichloropropane	20	16.8	84	17.0	85	1	60-130/30
108-20-3	Di-Isopropyl ether	20	16.0	80	16.3	82	2	60-130/30
124-48-1	Dibromochloromethane	20	16.8	84	17.3	87	3	60-130/30
75-71-8	Dichlorodifluoromethane	20	15.1	76	16.2	81	7	60-130/30
156-59-2	cis-1,2-Dichloroethylene	20	17.1	86	17.3	87	1	60-130/30
10061-01-5	cis-1,3-Dichloropropene	20	19.6	98	19.9	100	2	60-130/30
541-73-1	m-Dichlorobenzene	20	15.1	76	15.3	77	1	60-130/30
95-50-1	o-Dichlorobenzene	20	15.2	76	15.4	77	1	60-130/30
106-46-7	p-Dichlorobenzene	20	16.4	82	16.7	84	2	60-130/30
156-60-5	trans-1,2-Dichloroethylene	20	17.6	88	17.7	89	1	60-130/30
10061-02-6	trans-1,3-Dichloropropene	20	16.9	85	17.2	86	2	60-130/30
100-41-4	Ethylbenzene	20	17.6	88	18.0	90	2	60-130/30
637-92-3	Ethyl Tert Butyl Ether	20	17.7	89	17.8	89	1	60-130/30
74-83-9	Methyl bromide	20	15.9	80	16.5	83	4	60-130/30
74-87-3	Methyl chloride	20	15.7	79	16.2	81	3	60-130/30
75-09-2	Methylene chloride	20	17.1	86	17.2	86	1	60-130/30
1634-04-4	Methyl Tert Butyl Ether	20	17.1	86	17.2	86	1	60-130/30
994-05-8	Tert-Amyl Methyl Ether	20	17.2	86	17.4	87	1	60-130/30
75-65-0	Tert-Butyl Alcohol	100	85.1	85	82.6	83	3	60-130/30
71-55-6	1,1,1-Trichloroethane	20	17.5	88	17.6	88	1	60-130/30
79-34-5	1,1,2,2-Tetrachloroethane	20	16.4	82	16.9	85	3	60-130/30
79-00-5	1,1,2-Trichloroethane	20	16.5	83	17.1	86	4	60-130/30
127-18-4	Tetrachloroethylene	20	17.4	87	17.7	89	2	60-130/30
108-88-3	Toluene	20	17.1	86	17.4	87	2	60-130/30
79-01-6	Trichloroethylene	20	17.2	86	17.7	89	3	60-130/30

* = Outside of Control Limits.

5.2.1
 5

Blank Spike/Blank Spike Duplicate Summary

Job Number: C25307
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
VR480-BS	R13456.D	1	12/20/12	YP	n/a	n/a	VR480
VR480-BSD	R13459.D	1	12/20/12	YP	n/a	n/a	VR480

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

C25307-2, C25307-3, C25307-4

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
75-69-4	Trichlorofluoromethane	20	17.0	85	18.1	91	6	60-130/30
75-01-4	Vinyl chloride	20	17.3	87	18.0	90	4	60-130/30
1330-20-7	Xylene (total)	60	49.1	82	50.2	84	2	60-130/30

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
1868-53-7	Dibromofluoromethane	101%	100%	60-130%
2037-26-5	Toluene-D8	99%	97%	60-130%
460-00-4	4-Bromofluorobenzene	101%	100%	60-130%

* = Outside of Control Limits.

5.2.1
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Blank Spike/Blank Spike Duplicate Summary

Job Number: C25307

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
VR482-BS	R13488.D	1	12/21/12	YP	n/a	n/a	VR482
VR482-BSD	R13491.D	1	12/21/12	YP	n/a	n/a	VR482

The QC reported here applies to the following samples:

Method: SW846 8260B

C25307-1

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	20	18.4	92	17.6	88	4	60-130/30
108-20-3	Di-Isopropyl ether	20	17.3	87	17.0	85	2	60-130/30
100-41-4	Ethylbenzene	20	19.0	95	18.4	92	3	60-130/30
637-92-3	Ethyl Tert Butyl Ether	20	19.1	96	18.6	93	3	60-130/30
1634-04-4	Methyl Tert Butyl Ether	20	18.4	92	17.8	89	3	60-130/30
994-05-8	Tert-Amyl Methyl Ether	20	18.7	94	18.1	91	3	60-130/30
75-65-0	Tert-Butyl Alcohol	100	94.3	94	87.7	88	7	60-130/30
108-88-3	Toluene	20	18.5	93	17.8	89	4	60-130/30
1330-20-7	Xylene (total)	60	53.2	89	51.1	85	4	60-130/30

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

* = Outside of Control Limits.

5.2.2
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Laboratory Control Sample Summary

Job Number: C25307
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
VR480-LCS	R13457.D	1	12/20/12	YP	n/a	n/a	VR480

The QC reported here applies to the following samples:

Method: SW846 8260B

C25307-2, C25307-3, C25307-4

CAS No.	Compound	Spike ug/l	LCS ug/l	LCS %	Limits
	TPH-GRO (C6-C10)	125	148	118	60-130

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

* = Outside of Control Limits.

Laboratory Control Sample Summary

Job Number: C25307
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
VR482-LCS	R13489.D	1	12/21/12	YP	n/a	n/a	VR482

The QC reported here applies to the following samples:

Method: SW846 8260B

C25307-1

CAS No.	Compound	Spike ug/l	LCS ug/l	LCS %	Limits
	TPH-GRO (C6-C10)	125	137	110	60-130

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	100%	60-130%
2037-26-5	Toluene-D8	99%	60-130%
460-00-4	4-Bromofluorobenzene	97%	60-130%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: C25307

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
C25307-4MS	R13478.D	1	12/20/12	YP	n/a	n/a	VR480
C25307-4MSD	R13479.D	1	12/20/12	YP	n/a	n/a	VR480
C25307-4	R13464.D	1	12/20/12	YP	n/a	n/a	VR480

The QC reported here applies to the following samples:

Method: SW846 8260B

C25307-2, C25307-3, C25307-4

CAS No.	Compound	C25307-4		MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
		ug/l	Q						
71-43-2	Benzene	ND		17.2	86	17.4	87	1	60-130/25
75-27-4	Bromodichloromethane	ND		17.0	85	17.3	87	2	60-130/25
75-25-2	Bromoform	ND		17.0	85	17.5	88	3	60-130/25
108-90-7	Chlorobenzene	ND		16.1	81	15.8	79	2	60-130/25
75-00-3	Chloroethane	ND		16.4	82	16.4	82	0	60-130/25
67-66-3	Chloroform	ND		17.8	89	17.5	88	2	60-130/25
56-23-5	Carbon tetrachloride	ND		17.6	88	17.7	89	1	60-130/25
75-34-3	1,1-Dichloroethane	ND		17.0	85	16.9	85	1	60-130/25
75-35-4	1,1-Dichloroethylene	ND		16.3	82	16.2	81	1	60-130/25
106-93-4	1,2-Dibromoethane	ND		17.6	88	17.5	88	1	60-130/25
107-06-2	1,2-Dichloroethane	ND		17.5	88	18.0	90	3	60-130/25
78-87-5	1,2-Dichloropropane	ND		16.7	84	17.0	85	2	60-130/25
108-20-3	Di-Isopropyl ether	ND		16.3	82	16.5	83	1	60-130/25
124-48-1	Dibromochloromethane	ND		17.0	85	16.9	85	1	60-130/25
75-71-8	Dichlorodifluoromethane	ND		12.5	63	12.9	65	3	60-130/25
156-59-2	cis-1,2-Dichloroethylene	ND		17.5	88	17.3	87	1	60-130/25
10061-01-5	cis-1,3-Dichloropropene	ND		19.0	95	19.3	97	2	60-130/25
541-73-1	m-Dichlorobenzene	ND		15.4	77	15.2	76	1	60-130/25
95-50-1	o-Dichlorobenzene	ND		15.5	78	15.1	76	3	60-130/25
106-46-7	p-Dichlorobenzene	ND		16.7	84	16.5	83	1	60-130/25
156-60-5	trans-1,2-Dichloroethylene	ND		17.9	90	17.8	89	1	60-130/25
10061-02-6	trans-1,3-Dichloropropene	ND		16.5	83	16.5	83	0	60-130/25
100-41-4	Ethylbenzene	ND		18.4	92	18.0	90	2	60-130/25
637-92-3	Ethyl Tert Butyl Ether	ND		17.8	89	18.2	91	2	60-130/25
74-83-9	Methyl bromide	ND		16.2	81	16.0	80	1	60-130/25
74-87-3	Methyl chloride	ND		16.0	80	16.1	81	1	60-130/25
75-09-2	Methylene chloride	ND		17.0	85	17.0	85	0	60-130/25
1634-04-4	Methyl Tert Butyl Ether	ND		17.2	86	17.6	88	2	60-130/25
994-05-8	Tert-Amyl Methyl Ether	ND		17.4	87	17.6	88	1	60-130/25
75-65-0	Tert-Butyl Alcohol	ND	100	85.1	85	85.5	86	0	60-130/25
71-55-6	1,1,1-Trichloroethane	ND		18.1	91	17.8	89	2	60-130/25
79-34-5	1,1,2,2-Tetrachloroethane	ND		16.3	82	16.4	82	1	60-130/25
79-00-5	1,1,2-Trichloroethane	ND		17.1	86	17.2	86	1	60-130/25
127-18-4	Tetrachloroethylene	ND		17.9	90	17.8	89	1	60-130/25
108-88-3	Toluene	ND		17.7	89	17.3	87	2	60-130/25
79-01-6	Trichloroethylene	0.39	J	20	18.0	18.1	89	1	60-130/25

* = Outside of Control Limits.

5.4.1
5

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: C25307

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
C25307-4MS	R13478.D	1	12/20/12	YP	n/a	n/a	VR480
C25307-4MSD	R13479.D	1	12/20/12	YP	n/a	n/a	VR480
C25307-4	R13464.D	1	12/20/12	YP	n/a	n/a	VR480

The QC reported here applies to the following samples:

Method: SW846 8260B

C25307-2, C25307-3, C25307-4

CAS No.	Compound	C25307-4 ug/l	Spike Q ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
75-69-4	Trichlorofluoromethane	ND	20	15.2	76	15.3	77	1	60-130/25
75-01-4	Vinyl chloride	ND	20	17.3	87	17.3	87	0	60-130/25
1330-20-7	Xylene (total)	ND	60	50.5	84	50.1	84	1	60-130/25

CAS No.	Surrogate Recoveries	MS	MSD	C25307-4	Limits
1868-53-7	Dibromofluoromethane	101%	102%	104%	60-130%
2037-26-5	Toluene-D8	102%	99%	97%	60-130%
460-00-4	4-Bromofluorobenzene	104%	101%	95%	60-130%

* = Outside of Control Limits.

5.4.1
5

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: C25307

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
C25351-7MS	R13510.D	1	12/21/12	YP	n/a	n/a	VR482
C25351-7MSD	R13511.D	1	12/21/12	YP	n/a	n/a	VR482
C25351-7	R13496.D	1	12/21/12	YP	n/a	n/a	VR482

The QC reported here applies to the following samples:

Method: SW846 8260B

C25307-1

CAS No.	Compound	C25351-7 ug/l	Spike Q	ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	0.28	J	20	16.5	81	18.6	92	12	60-130/25
108-20-3	Di-Isopropyl ether	2.0 U		20	14.9	75	17.3	87	15	60-130/25
100-41-4	Ethylbenzene	1.0 U		20	16.8	84	19.3	97	14	60-130/25
637-92-3	Ethyl Tert Butyl Ether	2.0 U		20	16.3	82	19.2	96	16	60-130/25
1634-04-4	Methyl Tert Butyl Ether	0.24	J	20	16.0	79	18.7	92	16	60-130/25
994-05-8	Tert-Amyl Methyl Ether	2.0 U		20	15.8	79	18.5	93	16	60-130/25
75-65-0	Tert-Butyl Alcohol	10 U		100	83.8	84	91.3	91	9	60-130/25
108-88-3	Toluene	1.0 U		20	16.1	81	18.5	93	14	60-130/25
1330-20-7	Xylene (total)	2.0 U		60	45.3	76	51.7	86	13	60-130/25

CAS No.	Surrogate Recoveries	MS	MSD	C25351-7	Limits
1868-53-7	Dibromofluoromethane	100%	101%	103%	60-130%
2037-26-5	Toluene-D8	98%	99%	98%	60-130%
460-00-4	4-Bromofluorobenzene	102%	104%	98%	60-130%

* = Outside of Control Limits.

5.4.2
5

GC/MS 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: C25307

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
OP7214-MB	Y18195.D	1	12/14/12	MT	12/14/12	OP7214	EY856

The QC reported here applies to the following samples:

Method: SW846 8270C

C25307-3

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: C25307

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
OP7214-MB	Y18195.D	1	12/14/12	MT	12/14/12	OP7214	EY856

The QC reported here applies to the following samples:

Method: SW846 8270C

C25307-3

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: C25307
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
OP7214-MB	Y18195.D	1	12/14/12	MT	12/14/12	OP7214	EY856

The QC reported here applies to the following samples:

Method: SW846 8270C

C25307-3

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	44%	10-100%
4165-62-2	Phenol-d5	31%	7-100%
118-79-6	2,4,6-Tribromophenol	83%	25-115%
4165-60-0	Nitrobenzene-d5	83%	25-100%
321-60-8	2-Fluorobiphenyl	89%	25-106%
1718-51-0	Terphenyl-d14	98%	35-130%

Blank Spike/Blank Spike Duplicate Summary

Job Number: C25307

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
OP7214-BS	Y18196.D	1	12/14/12	MT	12/14/12	OP7214	EY856
OP7214-BSD	Y18197.D	1	12/14/12	MT	12/14/12	OP7214	EY856

The QC reported here applies to the following samples:

Method: SW846 8270C

C25307-3

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
65-85-0	Benzoic Acid	50	13.0	26	10.5	21	21	10-100/30
95-57-8	2-Chlorophenol	25	17.5	70	16.2	65	8	23-103/30
59-50-7	4-Chloro-3-methyl phenol	25	19.5	78	18.4	74	6	17-130/30
120-83-2	2,4-Dichlorophenol	25	20.2	81	19.5	78	4	23-108/30
105-67-9	2,4-Dimethylphenol	25	17.3	69	16.5	66	5	17-91/30
51-28-5	2,4-Dinitrophenol	25	23.7	95	21.0	84	12	17-111/30
534-52-1	4,6-Dinitro-o-cresol	25	25.4	102	23.1	92	9	22-115/30
95-48-7	2-Methylphenol	25	14.9	60	14.0	56	6	25-101/30
	3&4-Methylphenol	25	14.0	56	13.0	52	7	22-105/30
88-75-5	2-Nitrophenol	25	21.6	86	22.1	88	2	19-111/30
100-02-7	4-Nitrophenol	25	6.9	28	5.9	24	16	13-130/30
87-86-5	Pentachlorophenol	25	19.5	78	17.8	71	9	24-130/30
108-95-2	Phenol	25	8.9	36	8.6	34	3	5-130/30
95-95-4	2,4,5-Trichlorophenol	25	20.5	82	21.0	84	2	19-106/30
88-06-2	2,4,6-Trichlorophenol	25	22.0	88	22.0	88	0	18-107/30
83-32-9	Acenaphthene	25	18.8	75	19.6	78	4	25-130/30
208-96-8	Acenaphthylene	25	20.3	81	21.4	86	5	28-105/30
62-53-3	Aniline	25	16.5	66	15.5	62	6	23-98/30
120-12-7	Anthracene	25	23.5	94	24.1	96	3	35-108/30
103-33-3	Azobenzene	25	21.4	86	22.2	89	4	31-110/30
92-87-5	Azidine	50	54.5	109* a	51.3	103* a	6	15-73/30
56-55-3	Benzo(a)anthracene	25	24.2	97	23.9	96	1	33-111/30
50-32-8	Benzo(a)pyrene	25	24.1	96	23.6	94	2	32-106/30
205-99-2	Benzo(b)fluoranthene	25	23.0	92	22.7	91	1	33-109/30
191-24-2	Benzo(g,h,i)perylene	25	28.6	114* a	27.7	111	3	31-111/30
207-08-9	Benzo(k)fluoranthene	25	23.3	93	23.5	94	1	34-111/30
101-55-3	4-Bromophenyl phenyl ether	25	23.9	96	24.4	98	2	34-107/30
85-68-7	Butyl benzyl phthalate	25	23.3	93	20.8	83	11	29-114/30
100-51-6	Benzyl Alcohol	25	16.5	66	16.6	66	1	24-108/30
91-58-7	2-Chloronaphthalene	25	20.8	83	22.0	88	6	23-130/30
106-47-8	4-Chloroaniline	25	20.7	83	19.3	77	7	23-103/30
86-74-8	Carbazole	25	24.8	99	25.0	100	1	36-109/30
218-01-9	Chrysene	25	23.0	92	23.1	92	0	34-111/30
111-91-1	bis(2-Chloroethoxy)methane	25	20.1	80	20.9	84	4	28-101/30
111-44-4	bis(2-Chloroethyl)ether	25	19.1	76	20.4	82	7	31-108/30
108-60-1	bis(2-Chloroisopropyl)ether	25	17.7	71	19.1	76	8	33-106/30

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: C25307

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
OP7214-BS	Y18196.D	1	12/14/12	MT	12/14/12	OP7214	EY856
OP7214-BSD	Y18197.D	1	12/14/12	MT	12/14/12	OP7214	EY856

The QC reported here applies to the following samples:

Method: SW846 8270C

C25307-3

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	22.6	90	23.5	94	4	31-107/30
95-50-1	1,2-Dichlorobenzene	25	19.0	76	20.0	80	5	21-102/30
541-73-1	1,3-Dichlorobenzene	25	18.5	74	19.8	79	7	28-100/30
106-46-7	1,4-Dichlorobenzene	25	18.8	75	19.8	79	5	24-130/30
121-14-2	2,4-Dinitrotoluene	25	25.0	100	25.0	100	0	26-130/30
606-20-2	2,6-Dinitrotoluene	25	23.5	94	24.4	98	4	28-104/30
91-94-1	3,3'-Dichlorobenzidine	50	49.2	98	48.7	97	1	27-105/30
53-70-3	Dibenzo(a,h)anthracene	25	27.7	111	26.8	107	3	32-112/30
132-64-9	Dibenzofuran	25	22.1	88	23.0	92	4	31-108/30
122-39-4	Diphenylamine	25	23.0	92	23.6	94	3	27-110/30
84-74-2	Di-n-butyl phthalate	25	26.4	106	25.0	100	5	32-109/30
117-84-0	Di-n-octyl phthalate	25	23.9	96	23.2	93	3	30-120/30
84-66-2	Diethyl phthalate	25	21.0	84	20.3	81	3	32-109/30
131-11-3	Dimethyl phthalate	25	15.7	63	17.5	70	11	33-106/30
123-91-1	1,4-Dioxane	25	9.8	39	10.1	40	3	20-69/30
117-81-7	bis(2-Ethylhexyl)phthalate	25	26.2	105	25.5	102	3	29-116/30
206-44-0	Fluoranthene	25	26.3	105	25.9	104	2	35-114/30
86-73-7	Fluorene	25	22.1	88	23.1	92	4	31-106/30
118-74-1	Hexachlorobenzene	25	23.3	93	23.8	95	2	32-107/30
87-68-3	Hexachlorobutadiene	25	18.2	73	18.8	75	3	28-107/30
77-47-4	Hexachlorocyclopentadiene	25	17.4	70	18.7	75	7	19-94/30
67-72-1	Hexachloroethane	25	19.0	76	20.0	80	5	25-101/30
193-39-5	Indeno(1,2,3-cd)pyrene	25	26.0	104	25.9	104	0	31-113/30
78-59-1	Isophorone	25	21.3	85	22.0	88	3	26-111/30
90-12-0	1-Methylnaphthalene	25	20.4	82	21.7	87	6	22-102/30
91-57-6	2-Methylnaphthalene	25	21.0	84	22.1	88	5	26-112/30
88-74-4	2-Nitroaniline	25	21.6	86	22.1	88	2	30-109/30
99-09-2	3-Nitroaniline	25	22.0	88	21.2	85	4	22-107/30
100-01-6	4-Nitroaniline	25	21.9	88	20.9	84	5	29-111/30
91-20-3	Naphthalene	25	17.8	71	18.7	75	5	20-104/30
98-95-3	Nitrobenzene	25	19.5	78	20.5	82	5	22-105/30
62-75-9	N-Nitrosodimethylamine	25	11.9	48	12.1	48	2	20-71/30
621-64-7	N-Nitroso-di-n-propylamine	25	20.3	81	21.4	86	5	16-130/30
85-01-8	Phenanthrene	25	23.0	92	23.5	94	2	35-108/30
129-00-0	Pyrene	25	21.6	86	21.9	88	1	35-130/30
110-86-1	Pyridine	25	9.0	36	8.7	35	3	15-77/30

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: C25307

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
OP7214-BS	Y18196.D	1	12/14/12	MT	12/14/12	OP7214	EY856
OP7214-BSD	Y18197.D	1	12/14/12	MT	12/14/12	OP7214	EY856

The QC reported here applies to the following samples:

Method: SW846 8270C

C25307-3

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
120-82-1	1,2,4-Trichlorobenzene	25	20.0	80	21.3	85	6	15-130/30

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
367-12-4	2-Fluorophenol	44%	41%	10-100%
4165-62-2	Phenol-d5	31%	31%	7-100%
118-79-6	2,4,6-Tribromophenol	104%	103%	25-115%
4165-60-0	Nitrobenzene-d5	80%	85%	25-100%
321-60-8	2-Fluorobiphenyl	87%	92%	25-106%
1718-51-0	Terphenyl-d14	94%	94%	35-130%

(a) Outside laboratory control limits (high bias); not detected in associated samples.

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: C25307
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
OP7214-MS	Y18227.D	1	12/17/12	MT	12/14/12	OP7214	EY857
OP7214-MSD	Y18228.D	1	12/17/12	MT	12/14/12	OP7214	EY857
C25285-14	Y18211.D	1	12/14/12	MT	12/14/12	OP7214	EY856

The QC reported here applies to the following samples:

Method: SW846 8270C

C25307-3

CAS No.	Compound	C25285-14 ug/l	Spike Q ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
65-85-0	Benzoic Acid	ND	50	12.9	26	12.6	25	2	10-100/40
95-57-8	2-Chlorophenol	ND	25	16.2	65	13.2	53	20	23-103/29
59-50-7	4-Chloro-3-methyl phenol	ND	25	18.7	75	16.7	67	11	17-130/36
120-83-2	2,4-Dichlorophenol	ND	25	19.2	77	17.4	70	10	23-108/26
105-67-9	2,4-Dimethylphenol	ND	25	15.8	63	12.9	52	20	17-91/28
51-28-5	2,4-Dinitrophenol	ND	25	21.9	88	22.8	91	4	17-111/30
534-52-1	4,6-Dinitro-o-cresol	ND	25	24.2	97	25.3	101	4	22-115/26
95-48-7	2-Methylphenol	ND	25	13.9	56	10.7	43	26	25-101/30
	3&4-Methylphenol	ND	25	12.9	52	10.1	40	24	22-105/29
88-75-5	2-Nitrophenol	ND	25	20.5	82	18.9	76	8	19-111/30
100-02-7	4-Nitrophenol	ND	25	5.7	23	4.6	18	21	13-130/34
87-86-5	Pentachlorophenol	ND	25	18.0	72	20.3	81	12	24-130/36
108-95-2	Phenol	ND	25	8.2	33	6.6	26	22	5-130/47
95-95-4	2,4,5-Trichlorophenol	ND	25	19.6	78	20.0	80	2	19-106/23
88-06-2	2,4,6-Trichlorophenol	ND	25	20.6	82	21.1	84	2	18-107/24
83-32-9	Acenaphthene	ND	25	18.1	72	18.0	72	1	25-130/32
208-96-8	Acenaphthylene	ND	25	19.8	79	19.6	78	1	28-105/21
62-53-3	Aniline	ND	25	15.2	61	11.8	47	25	23-98/28
120-12-7	Anthracene	ND	25	23.9	96	24.0	96	0	35-108/19
103-33-3	Azobenzene	ND	25	21.0	84	21.0	84	0	31-110/20
92-87-5	Benzidine	ND	50	53.1	106* a	44.9	90* a	17	15-73/23
56-55-3	Benzo(a)anthracene	ND	25	23.9	96	23.8	95	0	33-111/19
50-32-8	Benzo(a)pyrene	ND	25	23.9	96	23.8	95	0	32-106/20
205-99-2	Benzo(b)fluoranthene	ND	25	23.1	92	22.9	92	1	33-109/20
191-24-2	Benzo(g,h,i)perylene	ND	25	24.3	97	25.4	102	4	31-111/21
207-08-9	Benzo(k)fluoranthene	ND	25	24.8	99	23.7	95	5	34-111/20
101-55-3	4-Bromophenyl phenyl ether	ND	25	23.6	94	23.7	95	0	34-107/20
85-68-7	Butyl benzyl phthalate	ND	25	21.4	86	19.7	79	8	29-114/20
100-51-6	Benzyl Alcohol	ND	25	15.0	60	12.5	50	18	24-108/27
91-58-7	2-Chloronaphthalene	ND	25	20.4	82	19.5	78	5	23-130/29
106-47-8	4-Chloroaniline	ND	25	20.0	80	16.0	64	22	23-103/22
86-74-8	Carbazole	ND	25	26.6	106	25.9	104	3	36-109/20
218-01-9	Chrysene	ND	25	22.9	92	22.8	91	0	34-111/19
111-91-1	bis(2-Chloroethoxy)methane	ND	25	19.1	76	17.8	71	7	28-101/28
111-44-4	bis(2-Chloroethyl)ether	ND	25	17.9	72	16.4	66	9	31-108/27
108-60-1	bis(2-Chloroisopropyl)ether	ND	25	16.6	66	15.2	61	9	33-106/27

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: C25307

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
OP7214-MS	Y18227.D	1	12/17/12	MT	12/14/12	OP7214	EY857
OP7214-MSD	Y18228.D	1	12/17/12	MT	12/14/12	OP7214	EY857
C25285-14	Y18211.D	1	12/14/12	MT	12/14/12	OP7214	EY856

The QC reported here applies to the following samples:

Method: SW846 8270C

C25307-3

CAS No.	Compound	C25285-14 ug/l	Spike Q	ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
7005-72-3	4-Chlorophenyl phenyl ether	ND	25	22.5	90	22.5	90	0	31-107/20	
95-50-1	1,2-Dichlorobenzene	ND	25	17.7	71	16.1	64	9	21-102/28	
541-73-1	1,3-Dichlorobenzene	ND	25	17.2	69	15.7	63	9	28-100/28	
106-46-7	1,4-Dichlorobenzene	ND	25	17.3	69	16.0	64	8	24-130/38	
121-14-2	2,4-Dinitrotoluene	ND	25	25.1	100	24.6	98	2	26-130/37	
606-20-2	2,6-Dinitrotoluene	ND	25	23.4	94	23.0	92	2	28-104/21	
91-94-1	3,3'-Dichlorobenzidine	ND	50	56.8	114* a	58.7	117* a	3	27-105/25	
53-70-3	Dibenzo(a,h)anthracene	ND	25	23.0	92	23.8	95	3	32-112/20	
132-64-9	Dibenzofuran	ND	25	21.7	87	21.7	87	0	31-108/20	
122-39-4	Diphenylamine	ND	25	23.6	94	23.3	93	1	27-110/29	
84-74-2	Di-n-butyl phthalate	ND	25	24.8	99	25.0	100	1	32-109/20	
117-84-0	Di-n-octyl phthalate	ND	25	20.7	83	19.3	77	7	30-120/24	
84-66-2	Diethyl phthalate	ND	25	21.2	85	19.3	77	9	32-109/19	
131-11-3	Dimethyl phthalate	ND	25	15.8	63	14.7	59	7	33-106/19	
123-91-1	1,4-Dioxane	ND	25	9.4	38	7.4	30	24	20-69/32	
117-81-7	bis(2-Ethylhexyl)phthalate	11.5	25	22.0	42	21.4	40	3	29-116/21	
206-44-0	Fluoranthene	ND	25	25.2	101	25.5	102	1	35-114/21	
86-73-7	Fluorene	ND	25	21.9	88	22.0	88	0	31-106/19	
118-74-1	Hexachlorobenzene	ND	25	23.4	94	23.3	93	0	32-107/20	
87-68-3	Hexachlorobutadiene	ND	25	17.2	69	15.9	64	8	28-107/30	
77-47-4	Hexachlorocyclopentadiene	ND	25	15.9	64	13.9	56	13	19-94/35	
67-72-1	Hexachloroethane	ND	25	17.2	69	15.8	63	8	25-101/29	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	25	24.5	98	21.9	88	11	31-113/20	
78-59-1	Isophorone	ND	25	20.4	82	19.0	76	7	26-111/26	
90-12-0	1-Methylnaphthalene	ND	25	19.9	80	18.9	76	5	22-102/25	
91-57-6	2-Methylnaphthalene	ND	25	20.3	81	19.4	78	5	26-112/26	
88-74-4	2-Nitroaniline	ND	25	21.4	86	20.8	83	3	30-109/20	
99-09-2	3-Nitroaniline	ND	25	23.0	92	19.6	78	16	22-107/21	
100-01-6	4-Nitroaniline	ND	25	23.0	92	20.7	83	11	29-111/21	
91-20-3	Naphthalene	ND	25	17.0	68	15.8	63	7	20-104/28	
98-95-3	Nitrobenzene	ND	25	18.2	73	16.9	68	7	22-105/28	
62-75-9	N-Nitrosodimethylamine	ND	25	11.2	45	9.2	37	20	20-71/32	
621-64-7	N-Nitroso-di-n-propylamine	ND	25	19.4	78	17.8	71	9	16-130/38	
85-01-8	Phenanthrene	ND	25	23.0	92	23.0	92	0	35-108/20	
129-00-0	Pyrene	ND	25	22.9	92	21.6	86	6	35-130/29	
110-86-1	Pyridine	ND	25	7.9	32	6.3	25	23	15-77/40	

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: C25307
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
OP7214-MS	Y18227.D	1	12/17/12	MT	12/14/12	OP7214	EY857
OP7214-MSD	Y18228.D	1	12/17/12	MT	12/14/12	OP7214	EY857
C25285-14	Y18211.D	1	12/14/12	MT	12/14/12	OP7214	EY856

The QC reported here applies to the following samples:

Method: SW846 8270C

C25307-3

CAS No.	Compound	C25285-14 ug/l	Spike Q ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
120-82-1	1,2,4-Trichlorobenzene	ND	25	19.1	76	17.7	71	8	15-130/29

CAS No.	Surrogate Recoveries	MS	MSD	C25285-14	Limits
367-12-4	2-Fluorophenol	41%	30%	34%	10-100%
4165-62-2	Phenol-d5	30%	24%	24%	7-100%
118-79-6	2,4,6-Tribromophenol	104%	106%	96%	25-115%
4165-60-0	Nitrobenzene-d5	78%	71%	65%	25-100%
321-60-8	2-Fluorobiphenyl	87%	82%	76%	25-106%
1718-51-0	Terphenyl-d14	100%	94%	101%	35-130%

(a) Outside laboratory control limits (high bias); not detected in associated samples.

* = Outside of 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: C25307
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
OP7210-MB2	PP028624.D	1	12/13/12	AG	12/13/12	OP7210	GPP947

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

C25307-3

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	87%	41-134%
877-09-8	Tetrachloro-m-xylene	82%	41-134%
2051-24-3	Decachlorobiphenyl	85%	41-134%
2051-24-3	Decachlorobiphenyl	77%	41-134%

7.1.1
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Method Blank Summary

Job Number: C25307
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
OP7212-MB	GG40027.D	1	12/14/12	LB	12/14/12	OP7212	GGG1059

The QC reported here applies to the following samples:

Method: SW846 8015B M

C25307-1, C25307-2, C25307-3, C25307-4

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	75% 45-140%

Blank Spike/Blank Spike Duplicate Summary

Job Number: C25307
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
OP7210-BS2	PP028625.D	1	12/13/12	AG	12/13/12	OP7210	GPP947
OP7210-BSD2	PP028626.D	1	12/13/12	AG	12/13/12	OP7210	GPP947

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

C25307-3

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	0.33	83	0.31	78	6	40-140/30
11096-82-5	Aroclor 1260	0.4	0.32	80	0.31	78	3	40-140/30

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
877-09-8	Tetrachloro-m-xylene	85%	78%	41-134%
877-09-8	Tetrachloro-m-xylene	81%	75%	41-134%
2051-24-3	Decachlorobiphenyl	85%	79%	41-134%
2051-24-3	Decachlorobiphenyl	75%	73%	41-134%

* = Outside of Control Limits.

7.2.1
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Blank Spike/Blank Spike Duplicate Summary

Job Number: C25307
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
OP7212-BS	GG40025.D	1	12/14/12	LB	12/14/12	OP7212	GGG1059
OP7212-BSD	GG40026.D	1	12/14/12	LB	12/14/12	OP7212	GGG1059

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

C25307-1, C25307-2, C25307-3, C25307-4

CAS No.	Compound	Spike mg/l	BSP mg/l	BSP %	BSD mg/l	BSD %	RPD	Limits Rec/RPD
	TPH (C10-C28)	1	0.736	74	0.756	76	3	45-140/30

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
630-01-3	Hexacosane	78%	79%	45-140%

7.2.2
7

* = Outside of Control Limits.

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: C25307
Account: SWCICAFO - Sierra West Consultants, Inc.
Project: T0000003190-F&M Auto Service., 1839 Foothill Blvd, Oakland, CA

QC Batch ID: MP5637
Matrix Type: AQUEOUS

Methods: SW846 6010B
Units: ug/l

Prep Date: 12/14/12

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		
Bismuth	20		2.9		
Boron	100	.9	.64		
Cadmium	2.0	.2	.15	0.0	<2.0
Calcium	5000	7.1	12		
Chromium	10	.3	.41	0.40	<10
Cobalt	5.0	.2	.3		
Copper	10	1.2	3		
Iron	200	6.4	12		
Lead	10	.7	.85	2.3	<10
Lithium	50		2		
Magnesium	5000	27	36		
Manganese	15	.1	1.3		
Molybdenum	20	.2	.22		
Nickel	5.0	.2	.12	-0.20	<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	3.0	<20

Associated samples MP5637: C25307-1F, C25307-2F, C25307-3F, C25307-4F

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

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: C25307
 Account: SWCICAFO - Sierra West Consultants, Inc.
 Project: T0000003190-F&M Auto Service., 1839 Foothill Blvd, Oakland, CA

QC Batch ID: MP5637
 Matrix Type: AQUEOUS

Methods: SW846 6010B
 Units: ug/l

Prep Date: 12/14/12

Metal	C25307-3F Original MS		SpikeLot MPIR4A	% Rec	QC Limits
Aluminum					
Antimony					
Arsenic					
Barium					
Beryllium					
Bismuth					
Boron					
Cadmium	0.20	528	500	105.5	75-125
Calcium					
Chromium	0.80	580	500	116.0	75-125
Cobalt					
Copper	anr				
Iron	anr				
Lead	0.0	551	500	110.2	75-125
Lithium					
Magnesium					
Manganese	anr				
Molybdenum					
Nickel	60.8	614	500	110.6	75-125
Potassium					
Selenium					
Silicon					
Silver	anr				
Sodium					
Strontium					
Thallium					
Tin					
Titanium					
Vanadium					
Zinc	3.7	496	500	98.5	75-125

Associated samples MP5637: C25307-1F, C25307-2F, C25307-3F, C25307-4F

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

8.12
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MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: C25307
 Account: SWCICAFO - Sierra West Consultants, Inc.
 Project: T0000003190-F&M Auto Service., 1839 Foothill Blvd, Oakland, CA

QC Batch ID: MP5637
 Matrix Type: AQUEOUS

Methods: SW846 6010B
 Units: ug/l

Prep Date: 12/14/12

Metal	C25307-3F Original MSD		SpikeLot MPIR4A % Rec		MSD RPD	QC Limit
Aluminum						
Antimony						
Arsenic						
Barium						
Beryllium						
Bismuth						
Boron						
Cadmium	0.20	522	500	104.3	1.1	20
Calcium						
Chromium	0.80	574	500	114.8	1.0	20
Cobalt						
Copper	anr					
Iron	anr					
Lead	0.0	545	500	109.0	1.1	20
Lithium						
Magnesium						
Manganese	anr					
Molybdenum						
Nickel	60.8	608	500	109.4	1.0	20
Potassium						
Selenium						
Silicon						
Silver	anr					
Sodium						
Strontium						
Thallium						
Tin						
Titanium						
Vanadium						
Zinc	3.7	494	500	98.1	0.4	20

Associated samples MP5637: C25307-1F, C25307-2F, C25307-3F, C25307-4F

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

8.12
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SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: C25307
 Account: SWCICAFO - Sierra West Consultants, Inc.
 Project: T0000003190-F&M Auto Service., 1839 Foothill Blvd, Oakland, CA

QC Batch ID: MP5637 Methods: SW846 6010B
 Matrix Type: AQUEOUS Units: ug/l

Prep Date: 12/14/12 12/14/12

Metal	BSP Result	Spikelot MPIR4A	% Rec	QC Limits	BSD Result	Spikelot MPIR4A	% Rec	BSD RPD	QC Limit
Aluminum									
Antimony									
Arsenic									
Barium									
Beryllium									
Bismuth									
Boron									
Cadmium	515	500	103.0	80-120	507	500	101.4	1.6	
Calcium									
Chromium	578	500	115.6	80-120	572	500	114.4	1.0	
Cobalt									
Copper	anr								
Iron	anr								
Lead	548	500	109.6	80-120	543	500	108.6	0.9	
Lithium									
Magnesium									
Manganese	anr								
Molybdenum									
Nickel	535	500	107.0	80-120	528	500	105.6	1.3	
Potassium									
Selenium									
Silicon									
Silver	anr								
Sodium									
Strontium									
Thallium									
Tin									
Titanium									
Vanadium									
Zinc	490	500	98.0	80-120	485	500	97.0	21.0	

Associated samples MP5637: C25307-1F, C25307-2F, C25307-3F, C25307-4F

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

SERIAL DILUTION RESULTS SUMMARY

Login Number: C25307
 Account: SWCICAFO - Sierra West Consultants, Inc.
 Project: T0000003190-F&M Auto Service., 1839 Foothill Blvd, Oakland, CA

QC Batch ID: MP5637
 Matrix Type: AQUEOUS

Methods: SW846 6010B
 Units: ug/l

Prep Date: 12/14/12

Metal	C25307-3F Original SDL 1:5		%DIF	QC Limits
Aluminum				
Antimony				
Arsenic				
Barium				
Beryllium				
Bismuth				
Boron				
Cadmium	0.200	0.00	100.0(a)	0-10
Calcium				
Chromium	0.800	0.00	NC	0-10
Cobalt				
Copper	anr			
Iron	anr			
Lead	0.00	0.00	NC	0-10
Lithium				
Magnesium				
Manganese	anr			
Molybdenum				
Nickel	60.8	55.7	8.4	0-10
Potassium				
Selenium				
Silicon				
Silver	anr			
Sodium				
Strontium				
Thallium				
Tin				
Titanium				
Vanadium				
Zinc	3.70	6.20	67.6 (a)	0-10

Associated samples MP5637: C25307-1F, C25307-2F, C25307-3F, C25307-4F

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).

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: C25307
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	GP4434/GN9698	5.0	0.0	mg/l	40	32.5	81.2	78-114%
HEM Petroleum Hydrocarbons	GP4436/GN9699	5.0	0.0	mg/l	20	14.7	73.5	64-132%

Associated Samples:
Batch GP4434: C25307-3
Batch GP4436: C25307-3
(*) Outside of QC limits

BLANK SPIKE DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: C25307
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	GP4434/GN9698	mg/l	40	33.3	2.4	18%
HEM Petroleum Hydrocarbons	GP4436/GN9699	mg/l	20	14.6	0.7	28%

Associated Samples:
Batch GP4434: C25307-3
Batch GP4436: C25307-3
(*) Outside of QC limits

MATRIX SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: C25307
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	GP4434/GN9698	C25296-5	mg/l	0.0	40	34.1	85.2	78-114%

Associated Samples:

Batch GP4434: C25307-3

(*) Outside of QC limits

(N) Matrix Spike Rec. outside of QC limits