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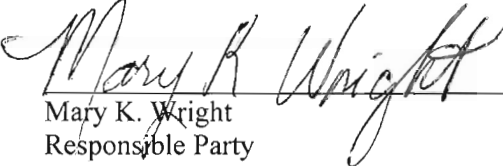
August 28, 2012

Reference: Third 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



August 28, 2012

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

Subject: Third 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 *Third 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, and groundwater sampling and analytical testing results.

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, likely contained unleaded gasoline during operation of the service station, and were located at the southern end of the Site. UST#3 had a capacity of 550-gallons, and was located in the central portion of the Site. UST#3 likely contained leaded 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 July 23, 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 0.061 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 July 23, 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,
- Total lead for soil samples and dissolved lead for groundwater samples, by EPA Method 6010B.

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

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

A copy of the certified laboratory analytical report 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 TPHg and BTEX. 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 not a current or potential source of drinking water.

Summary of Results from the Third 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	262	5,760	615	137	55.9	92.8	245	<20	<20	<20	<100	<10
MW-2	603	3,280	30.6	1.4 ^J	17.2	10.4	72.4	<10	2.6 ^J	<10	<50	<10
MW-3	87.6 ^J	<50	<1.0	<1.0	<1.0	<2.0	2.7	<2.0	<2.0	<2.0	<10	<10
MW-4	<94	<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.

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. Concentrations of TPHd, TPHg, and BTEX constituents all exceeded their respective ESLs in the sample collected from MW-1. Constituent concentrations exceeding their respective ESLs were also observed in the sample collected from MW-2, near the former location of UST#3.

Samples collected from MW-3 and MW-4 did not have any constituent concentrations exceeding their respective ESLs. TPHd and MTBE were detected in the sample from MW-3, at concentrations of 87.6 and 2.7 micrograms per liter (µg/L), respectively. The semivolatile compounds benzoic acid, 3&4-methylphenol, phenol, diethyl phthalate, and bis (2-ethylhexyl) phthalate were also detected in the sample from MW-3 relatively low concentrations for the first time since monitoring began. No constituents were detected above laboratory reporting limits in the sample collected from MW-4.

Groundwater analytical results are generally consistent with data collected during UST removal in April 2011 and monitoring well installation in January 2012. A groundwater concentration map, including iso-concentration lines for TPHg, is included as **Figure 4**.

Conclusions and Future Work


Based on the sample results from the drilling work and groundwater monitoring events, constituent impacts to groundwater appear greatest in the vicinity of former UST#1. Based on soil analytical results collected during monitoring well installation during January 2012, the vertical extent of petroleum hydrocarbon impacts appears defined to depths of approximately 20 feet or less. The lateral extent of constituent impacts to soil and groundwater downgradient of MW-1 remain undefined. Near the source area, constituent concentrations in soil and groundwater indicate that vadose zone impacts may be present.

The *Site Conceptual Model with Soil and Groundwater Investigation Results Report* (SCM Report) was submitted to ACEH on March 9, 2012. The SCM Report indicated that installation of downgradient monitoring wells and performance of a soil vapor survey in the source area may be warranted. Sierra West is still awaiting response and directive from ACEH, and is ready to conduct the additional assessment work at the Site.


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 are needed from ACEH for the March 9, 2012 SCM Report.

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
Project Geologist

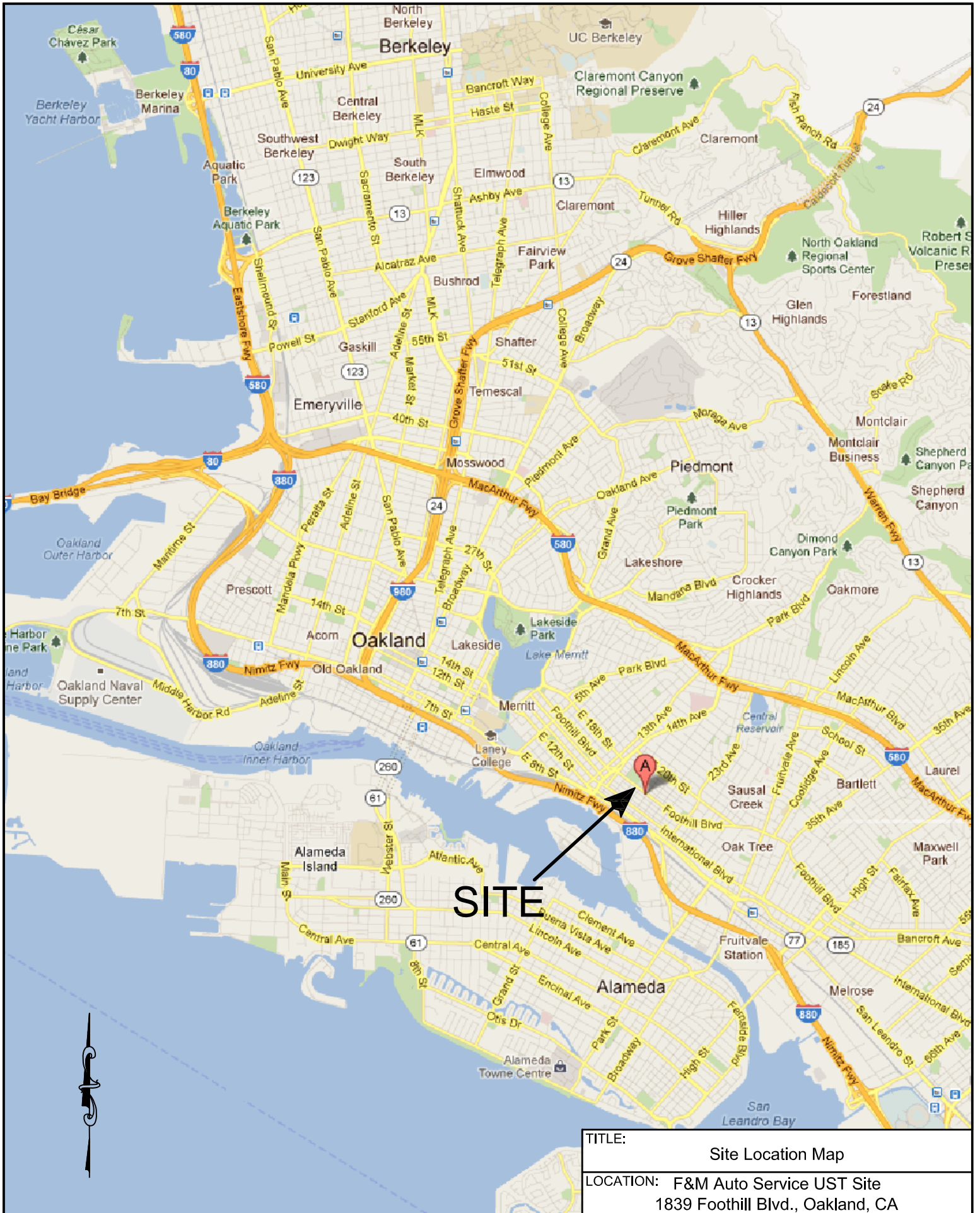
Cc: Ms. Mary Wright, Property Owner
Mr. James Balsley, Prospective Property Owner
Ms. Marissa Rodarte, Orphan Site Cleanup Fund

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

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

Figures



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

Source: Google Maps, 2012
 SCALE 1" = 1 mile
 (Scale is approximate)

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:

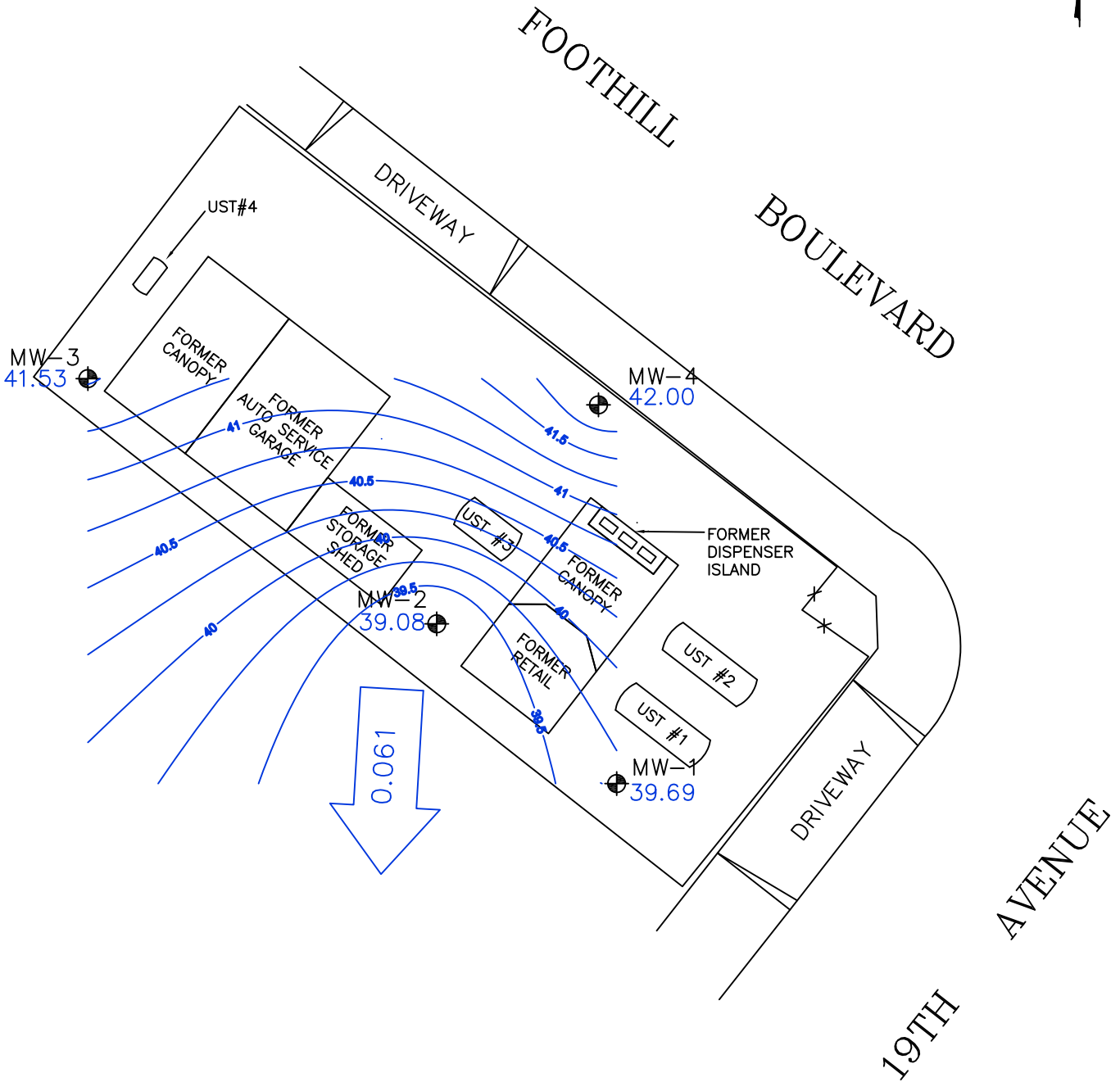
F&M Auto Service UST Site
1839 Foothill Blvd., Oakland, CA



SIERRA WEST
CONSULTANTS, INC.

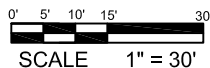
FIGURE:

2



Legend:

⊕ - Monitoring Well



Notes:

- 1) Groundwater elevation was measured on July 23, 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:

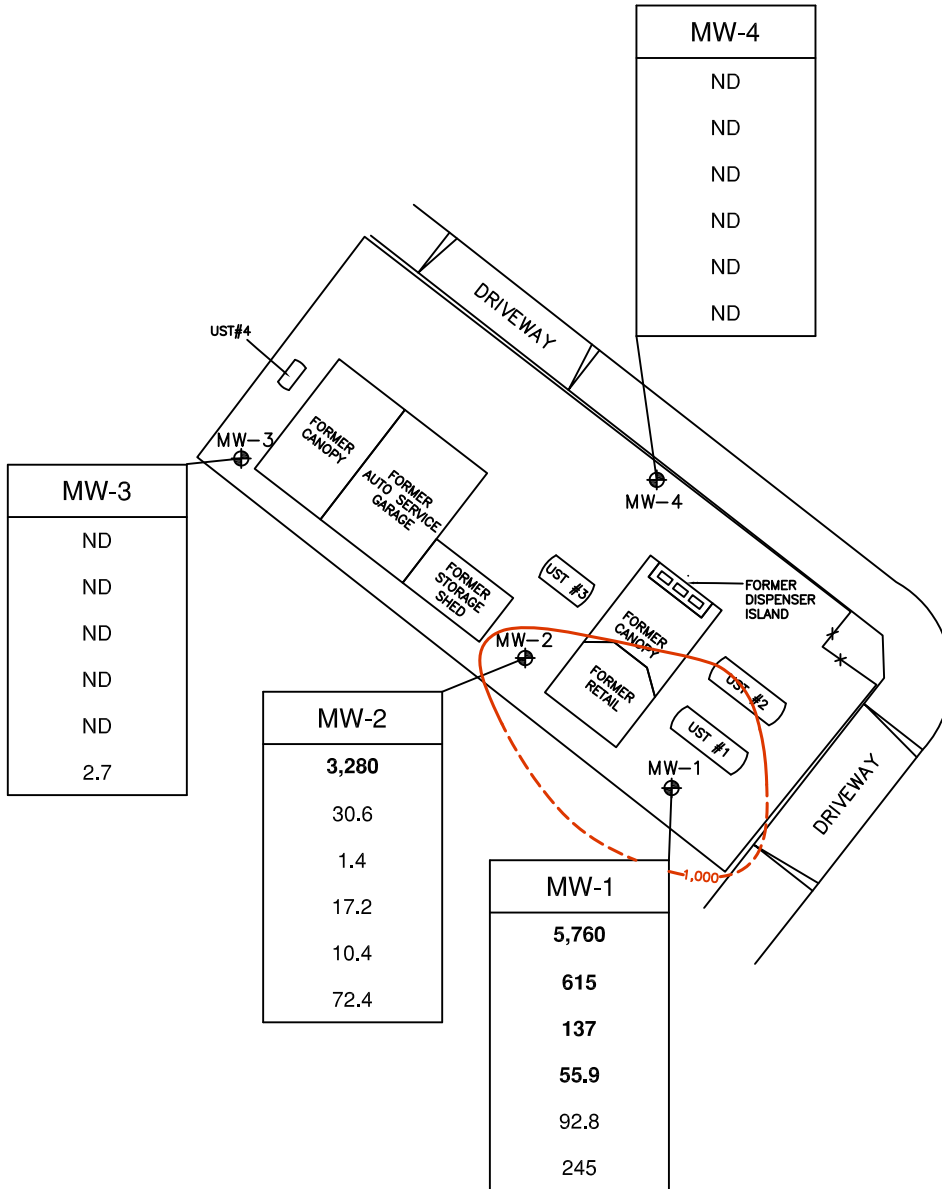
F&M Auto Service UST Site
1839 Foothill Blvd., Oakland, CA



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
July 23, 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
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
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
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
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**.

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

ft. msl = Feet above mean sea level

µg/L = Micrograms per liter

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

**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: 7-23-12

Project: F&M Auto

Recorded by: Edgar Olineka

Well No.	Time	Well Elev. TOC	Depth to Groundwater	Measured Total Depth	Groundwater Elevation	Depth to Product	Product Thickness	Comments
MU-1	10:01		10.02	23.70				
MU-2	10:05		11.45	23.81				
MU-3	10:07		9.06	23.70				
MU-4	10:10		8.47	23.83				

Notes:

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

Sampling Date: 7-23-12
 Project No.: _____
 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): 8 EMCO
 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: 10:01 Time: 11:10 Calculated purge: 6.5
 Depth of well: 23.70 Depth to water: 11.08 Actual purge: 6.5
 Depth to water: 10.02

Start purge: 1013 Sampling time: 1112

Time	Temperature	E.C.	pH	DO	ORP	Volume
1014	22.4	530	6.82	3.70	-80	1
1016	22.3	607	6.80	3.12	-56	2
1019	22.1	610	6.79	3.11	-54	3

Sample appearance: clear Lock: NA

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: EO

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

Sampling Date: 7-23-12
 Project No.: _____
 Well Designation: MU-2

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): 6" MORRISON
 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: 1005 Time: 1116 Calculated purge: 5.9
 Depth of well: 23.81 Depth to water: 12.10 Actual purge: 6.0
 Depth to water: 11.45

Start purge: 1024 Sampling time: 11:17

Time	Temperature	E.C.	pH	DO	ORP	Volume
1026	23.2	7.19	6.83	3.15	95	1
1030	22.1	7.08	6.84	2.13	98	2
1035	22.1	7.07	6.85	2.06	100	3

Sample appearance: Clear Lock: NA

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: EO

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

Sampling Date: 7-23-12
Project No.: _____
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): 6' MORRISON
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: 10:07 Time: 1130 Calculated purge: 7.0
Depth of well: 23.70 Depth to water: 10.01 Actual purge: 7.0
Depth to water: 9.06

Start purge: 1055 Sampling time: 1133

Time	Temperature	E.C.	pH	DO	ORP	Volume
1057	21.5	776	6.82	3.10	56	1
1059	21.6	774	6.81	3.01	60	2
1102	21.6	743	6.80	2.90	61	3

Sample appearance: clear Lock: NA

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: EO

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

Sampling Date: 7-23-12
Project No.: _____
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): 6" MORRISON
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: 10:10 Time: 1120 Calculated purge: 10.2
Depth of well: 23.83 Depth to water: 9.80 Actual purge: 10.2
Depth to water: 8.47

Start purge: 1038 Sampling time: 1121

Time	Temperature	E.C.	pH	DO	ORP	Volume
1040	22.5	690	6.94	3.14	56	1
1043	22.1	691	6.94	3.01	50	2
1049	22.1	6.89	6.93	2.50	51	3

Sample appearance: Clear Lock: NA

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: EO

**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: C22854

Sampling Date: 07/23/12

Report to:

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

Total number of pages in report: 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.

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

Client Service contact: Nutan Kabir 408-588-0200

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

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Test results relate only to samples analyzed.

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3.3: C22854-2: MW-2	10
3.4: C22854-2F: MW-2	12
3.5: C22854-3: MW-3	13
3.6: C22854-3F: MW-3	21
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Sample Summary

Sierra West Consultants, Inc.

Job No: C22854

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

Sample Number	Collected		Received	Matrix		Client Sample ID
	Date	Time By		Code	Type	
C22854-1	07/23/12	11:12 EO	07/24/12	AQ	Ground Water	MW-1
C22854-1F	07/23/12	11:12 EO	07/24/12	AQ	Groundwater Filtered	MW-1
C22854-2	07/23/12	11:17 EO	07/24/12	AQ	Ground Water	MW-2
C22854-2F	07/23/12	11:17 EO	07/24/12	AQ	Groundwater Filtered	MW-2
C22854-3	07/23/12	11:33 EO	07/24/12	AQ	Ground Water	MW-3
C22854-3F	07/23/12	11:33 EO	07/24/12	AQ	Groundwater Filtered	MW-3
C22854-4	07/23/12	11:21 EO	07/24/12	AQ	Ground Water	MW-4
C22854-4F	07/23/12	11:21 EO	07/24/12	AQ	Groundwater Filtered	MW-4

Summary of Hits

Job Number: C22854
Account: Sierra West Consultants, Inc.
Project: T0000003190-F&M Auto Service., 1839 Foothill Blvd, Oakland, CA
Collected: 07/23/12

Lab Sample ID	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
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C22854-1 MW-1

Benzene	615	10	2.0	ug/l	SW846 8260B
Toluene	137	10	2.0	ug/l	SW846 8260B
Ethylbenzene	55.9	10	2.0	ug/l	SW846 8260B
Xylene (total)	92.8	20	4.6	ug/l	SW846 8260B
Methyl Tert Butyl Ether	245	10	2.0	ug/l	SW846 8260B
TPH-GRO (C6-C10)	5670	500	250	ug/l	SW846 8260B
TPH (C10-C28)	0.262	0.094	0.024	mg/l	SW846 8015B M

C22854-1F MW-1

No hits reported in this sample.

C22854-2 MW-2

Benzene	30.6	5.0	1.0	ug/l	SW846 8260B
Toluene	1.4 J	5.0	1.0	ug/l	SW846 8260B
Ethylbenzene	17.2	5.0	1.0	ug/l	SW846 8260B
Xylene (total)	10.4	10	2.3	ug/l	SW846 8260B
Ethyl Tert Butyl Ether	2.6 J	10	1.1	ug/l	SW846 8260B
Methyl Tert Butyl Ether	72.4	5.0	1.0	ug/l	SW846 8260B
TPH-GRO (C6-C10)	3280	250	130	ug/l	SW846 8260B
TPH (C10-C28)	0.603	0.094	0.024	mg/l	SW846 8015B M

C22854-2F MW-2

No hits reported in this sample.

C22854-3 MW-3

Methyl Tert Butyl Ether	2.7	1.0	0.20	ug/l	SW846 8260B
Benzoic Acid	52.6	19	3.8	ug/l	SW846 8270C
3&4-Methylphenol	21.1	9.4	1.5	ug/l	SW846 8270C
Phenol	7.1	4.7	0.94	ug/l	SW846 8270C
Diethyl phthalate	1.7 J	4.7	1.0	ug/l	SW846 8270C
bis(2-Ethylhexyl)phthalate	2.0 J	9.4	1.9	ug/l	SW846 8270C
TPH (C10-C28)	0.0876 J	0.094	0.024	mg/l	SW846 8015B M

C22854-3F MW-3

Nickel	32.8	5.0	0.12	ug/l	SW846 6010B
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Summary of Hits

Job Number: C22854
Account: Sierra West Consultants, Inc.
Project: T0000003190-F&M Auto Service., 1839 Foothill Blvd, Oakland, CA
Collected: 07/23/12

Lab Sample ID	Client Sample ID	Result/ Analyte	RL	MDL	Units	Method
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C22854-4 MW-4

No hits reported in this sample.

C22854-4F MW-4

No hits reported in this sample.

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID: MW-1		
Lab Sample ID: C22854-1		Date Sampled: 07/23/12
Matrix: AQ - Ground Water		Date Received: 07/24/12
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	W32298.D	10	07/27/12	KN	n/a	n/a	VW1121
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	615	10	2.0	ug/l	
108-88-3	Toluene	137	10	2.0	ug/l	
100-41-4	Ethylbenzene	55.9	10	2.0	ug/l	
1330-20-7	Xylene (total)	92.8	20	4.6	ug/l	
108-20-3	Di-Isopropyl ether	ND	20	2.2	ug/l	
637-92-3	Ethyl Tert Butyl Ether	ND	20	2.2	ug/l	
1634-04-4	Methyl Tert Butyl Ether	245	10	2.0	ug/l	
994-05-8	Tert-Amyl Methyl Ether	ND	20	4.0	ug/l	
75-65-0	Tert-Butyl Alcohol	ND	100	24	ug/l	
	TPH-GRO (C6-C10)	5670	500	250	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	96%		60-130%
2037-26-5	Toluene-D8	100%		60-130%
460-00-4	4-Bromofluorobenzene	105%		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-1		Date Sampled: 07/23/12
Lab Sample ID: C22854-1		Date Received: 07/24/12
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	HH024374.D	1	07/26/12	JH	07/26/12	OP6345	GHH775
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)	0.262	0.094	0.024	mg/l	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
630-01-3	Hexacosane	63%		45-140%		

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

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

Report of Analysis

Client Sample ID: MW-1		Date Sampled: 07/23/12
Lab Sample ID: C22854-1F		Date Received: 07/24/12
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	07/27/12	07/27/12 RS	SW846 6010B ¹	SW3010A ²

(1) Instrument QC Batch: MA2627

(2) Prep QC Batch: MP5124

RL = Reporting Limit

Report of Analysis

Client Sample ID: MW-2		Date Sampled: 07/23/12
Lab Sample ID: C22854-2		Date Received: 07/24/12
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	W32299.D	5	07/27/12	KN	n/a	n/a	VW1121
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	30.6	5.0	1.0	ug/l	
108-88-3	Toluene	1.4	5.0	1.0	ug/l	J
100-41-4	Ethylbenzene	17.2	5.0	1.0	ug/l	
1330-20-7	Xylene (total)	10.4	10	2.3	ug/l	
108-20-3	Di-Isopropyl ether	ND	10	1.1	ug/l	
637-92-3	Ethyl Tert Butyl Ether	2.6	10	1.1	ug/l	J
1634-04-4	Methyl Tert Butyl Ether	72.4	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)	3280	250	130	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	95%		60-130%
2037-26-5	Toluene-D8	99%		60-130%
460-00-4	4-Bromofluorobenzene	103%		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: 07/23/12
Lab Sample ID: C22854-2		Date Received: 07/24/12
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	HH024397.D	1	07/26/12	JH	07/26/12	OP6345	GHH775
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)	0.603	0.094	0.024	mg/l	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
630-01-3	Hexacosane	73%		45-140%		

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

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

Report of Analysis

Client Sample ID: MW-2	Date Sampled: 07/23/12
Lab Sample ID: C22854-2F	Date Received: 07/24/12
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	07/27/12	07/27/12 RS	SW846 6010B ¹	SW3010A ²

(1) Instrument QC Batch: MA2627

(2) Prep QC Batch: MP5124

RL = Reporting Limit

Report of Analysis

Client Sample ID: MW-3		Date Sampled: 07/23/12
Lab Sample ID: C22854-3		Date Received: 07/24/12
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	W32266.D	1	07/26/12	KN	n/a	n/a	VW1119
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	2.7	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: 07/23/12
Lab Sample ID: C22854-3		Date Received: 07/24/12
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	93%		60-130%
2037-26-5	Toluene-D8	98%		60-130%
460-00-4	4-Bromofluorobenzene	101%		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		Date Sampled: 07/23/12
Lab Sample ID: C22854-3		Date Received: 07/24/12
Matrix: AQ - Ground Water		Percent Solids: n/a
Method: SW846 8270C SW846 3510C		
Project: T0000003190-F&M Auto Service., 1839 Foothill Blvd, Oakland, CA		

Run #1	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	Z490.D	1	07/26/12	MT	07/26/12	OP6343	EZ19
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	52.6	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	21.1	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	7.1	4.7	0.94	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	4.7	0.94	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	4.7	0.94	ug/l	
83-32-9	Acenaphthene	ND	4.7	1.3	ug/l	
208-96-8	Acenaphthylene	ND	4.7	1.1	ug/l	
62-53-3	Aniline	ND	4.7	1.1	ug/l	
120-12-7	Anthracene	ND	4.7	1.2	ug/l	
103-33-3	Azobenzene	ND	4.7	1.1	ug/l	
92-87-5	Benzidine	ND	19	2.2	ug/l	
56-55-3	Benzo(a)anthracene	ND	4.7	1.3	ug/l	
50-32-8	Benzo(a)pyrene	ND	4.7	1.0	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	4.7	1.2	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	4.7	1.4	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	4.7	1.3	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	4.7	1.5	ug/l	
85-68-7	Butyl benzyl phthalate	ND	4.7	1.2	ug/l	
100-51-6	Benzyl Alcohol	ND	4.7	1.6	ug/l	
91-58-7	2-Chloronaphthalene	ND	4.7	1.3	ug/l	
106-47-8	4-Chloroaniline	ND	4.7	1.0	ug/l	
86-74-8	Carbazole	ND	4.7	1.4	ug/l	

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: MW-3		Date Sampled: 07/23/12
Lab Sample ID: C22854-3		Date Received: 07/24/12
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	1.7	4.7	1.0	ug/l	J
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	2.0	9.4	1.9	ug/l	J
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: 07/23/12
Lab Sample ID: C22854-3		Date Received: 07/24/12
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	21%		10-100%
4165-62-2	Phenol-d5	14%		7-100%
118-79-6	2,4,6-Tribromophenol	54%		25-115%
4165-60-0	Nitrobenzene-d5	33%		25-100%
321-60-8	2-Fluorobiphenyl	30%		25-106%
1718-51-0	Terphenyl-d14	72%		35-130%

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

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

Report of Analysis

Client Sample ID: MW-3		
Lab Sample ID: C22854-3		Date Sampled: 07/23/12
Matrix: AQ - Ground Water		Date Received: 07/24/12
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 ^a	PP026822.D	1	08/13/12	RV	08/12/12	OP6449	GPP891
Run #2							

Run #	Initial Volume	Final Volume
Run #1	1060 ml	1.0 ml
Run #2		

PCB List

CAS No.	Compound	Result	RL	MDL	Units	Q
12674-11-2	Aroclor 1016	ND	0.094	0.019	ug/l	
11104-28-2	Aroclor 1221	ND	0.094	0.047	ug/l	
11141-16-5	Aroclor 1232	ND	0.094	0.047	ug/l	
53469-21-9	Aroclor 1242	ND	0.094	0.047	ug/l	
12672-29-6	Aroclor 1248	ND	0.094	0.047	ug/l	
11097-69-1	Aroclor 1254	ND	0.094	0.047	ug/l	
11096-82-5	Aroclor 1260	ND	0.094	0.028	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	72%		41-134%
877-09-8	Tetrachloro-m-xylene	73%		41-134%
2051-24-3	Decachlorobiphenyl	81%		41-134%
2051-24-3	Decachlorobiphenyl	84%		41-134%

(a) Sample extracted for analysis beyond the 7-day hold-time due to laboratory login error.

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

3.5
3

Client Sample ID: MW-3	Date Sampled: 07/23/12
Lab Sample ID: C22854-3	Date Received: 07/24/12
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	HH024398.D	1	07/26/12	JH	07/26/12	OP6345	GHH775
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)	0.0876	0.094	0.024	mg/l	J
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-3	Date Sampled: 07/23/12
Lab Sample ID: C22854-3	Date Received: 07/24/12
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	< 5.0	5.0	mg/l	1	07/30/12	RL	EPA 1664A
HEM Petroleum Hydrocarbons	< 5.0	5.0	mg/l	1	07/30/12	RL	EPA 1664A

RL = Reporting Limit

Report of Analysis

Client Sample ID: MW-3		Date Sampled: 07/23/12
Lab Sample ID: C22854-3F		Date Received: 07/24/12
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	07/27/12	07/27/12 RS	SW846 6010B ¹	SW3010A ²
Chromium	< 10	10	ug/l	1	07/27/12	07/27/12 RS	SW846 6010B ¹	SW3010A ²
Lead	< 10	10	ug/l	1	07/27/12	07/27/12 RS	SW846 6010B ¹	SW3010A ²
Nickel	32.8	5.0	ug/l	1	07/27/12	07/27/12 RS	SW846 6010B ¹	SW3010A ²
Zinc	< 20	20	ug/l	1	07/27/12	07/27/12 RS	SW846 6010B ¹	SW3010A ²

(1) Instrument QC Batch: MA2627

(2) Prep QC Batch: MP5124

RL = Reporting Limit

Report of Analysis

Client Sample ID: MW-4		Date Sampled: 07/23/12
Lab Sample ID: C22854-4		Date Received: 07/24/12
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	W32267.D	1	07/26/12	KN	n/a	n/a	VW1119
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	92%		60-130%
2037-26-5	Toluene-D8	98%		60-130%
460-00-4	4-Bromofluorobenzene	101%		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-4		Date Sampled: 07/23/12
Lab Sample ID: C22854-4		Date Received: 07/24/12
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	HH024375.D	1	07/26/12	JH	07/26/12	OP6345	GHH775
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	64%		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-4		
Lab Sample ID: C22854-4F		Date Sampled: 07/23/12
Matrix: AQ - Groundwater Filtered		Date Received: 07/24/12
		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	07/27/12	07/27/12 RS	SW846 6010B ¹	SW3010A ²

(1) Instrument QC Batch: MA2627

(2) Prep QC Batch: MP5124

RL = Reporting Limit

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody

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: C22854**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
VW1119-MB	W32254.D	1	07/26/12	KN	n/a	n/a	VW1119

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

C22854-3, C22854-4

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: C22854
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
VW1119-MB	W32254.D	1	07/26/12	KN	n/a	n/a	VW1119

The QC reported here applies to the following samples:

Method: SW846 8260B

C22854-3, C22854-4

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	94% 60-130%
2037-26-5	Toluene-D8	99% 60-130%
460-00-4	4-Bromofluorobenzene	99% 60-130%

Method Blank Summary

Job Number: C22854
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
VW1121-MB	W32286.D	1	07/27/12	KN	n/a	n/a	VW1121

The QC reported here applies to the following samples:

Method: SW846 8260B

C22854-1, C22854-2

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	93%	60-130%
2037-26-5	Toluene-D8	98%	60-130%
460-00-4	4-Bromofluorobenzene	99%	60-130%

Blank Spike/Blank Spike Duplicate Summary

Job Number: C22854

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
VW1119-BS	W32251.D	1	07/26/12	KN	n/a	n/a	VW1119
VW1119-BSD	W32252.D	1	07/26/12	KN	n/a	n/a	VW1119

The QC reported here applies to the following samples:

Method: SW846 8260B

C22854-3, C22854-4

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	20	19.6	98	20.1	101	3	60-130/30
75-27-4	Bromodichloromethane	20	20.5	103	20.8	104	1	60-130/30
75-25-2	Bromoform	20	22.9	115	22.5	113	2	60-130/30
108-90-7	Chlorobenzene	20	20.3	102	20.8	104	2	60-130/30
75-00-3	Chloroethane	20	19.0	95	17.9	90	6	60-130/30
67-66-3	Chloroform	20	20.0	100	20.5	103	2	60-130/30
56-23-5	Carbon tetrachloride	20	21.8	109	22.4	112	3	60-130/30
75-34-3	1,1-Dichloroethane	20	19.3	97	19.9	100	3	60-130/30
75-35-4	1,1-Dichloroethylene	20	19.2	96	20.2	101	5	60-130/30
106-93-4	1,2-Dibromoethane	20	20.9	105	20.3	102	3	60-130/30
107-06-2	1,2-Dichloroethane	20	21.1	106	21.0	105	0	60-130/30
78-87-5	1,2-Dichloropropane	20	19.9	100	20.5	103	3	60-130/30
108-20-3	Di-Isopropyl ether	20	18.1	91	18.5	93	2	60-130/30
124-48-1	Dibromochloromethane	20	21.5	108	21.7	109	1	60-130/30
75-71-8	Dichlorodifluoromethane	20	22.0	110	19.8	99	11	60-130/30
156-59-2	cis-1,2-Dichloroethylene	20	19.5	98	20.0	100	3	60-130/30
10061-01-5	cis-1,3-Dichloropropene	20	21.6	108	21.9	110	1	60-130/30
541-73-1	m-Dichlorobenzene	20	19.7	99	20.1	101	2	60-130/30
95-50-1	o-Dichlorobenzene	20	20.0	100	20.2	101	1	60-130/30
106-46-7	p-Dichlorobenzene	20	19.7	99	20.0	100	2	60-130/30
156-60-5	trans-1,2-Dichloroethylene	20	20.3	102	21.0	105	3	60-130/30
10061-02-6	trans-1,3-Dichloropropene	20	20.2	101	20.0	100	1	60-130/30
100-41-4	Ethylbenzene	20	20.3	102	20.9	105	3	60-130/30
637-92-3	Ethyl Tert Butyl Ether	20	21.1	106	21.3	107	1	60-130/30
74-83-9	Methyl bromide	20	19.3	97	18.7	94	3	60-130/30
74-87-3	Methyl chloride	20	19.3	97	19.0	95	2	60-130/30
75-09-2	Methylene chloride	20	20.4	102	20.6	103	1	60-130/30
1634-04-4	Methyl Tert Butyl Ether	20	20.5	103	20.3	102	1	60-130/30
994-05-8	Tert-Amyl Methyl Ether	20	20.2	101	20.2	101	0	60-130/30
75-65-0	Tert-Butyl Alcohol	100	95.3	95	84.0	84	13	60-130/30
71-55-6	1,1,1-Trichloroethane	20	21.2	106	21.8	109	3	60-130/30
79-34-5	1,1,2,2-Tetrachloroethane	20	20.5	103	19.4	97	6	60-130/30
79-00-5	1,1,2-Trichloroethane	20	20.7	104	20.1	101	3	60-130/30
127-18-4	Tetrachloroethylene	20	21.3	107	22.0	110	3	60-130/30
108-88-3	Toluene	20	20.0	100	20.7	104	3	60-130/30
79-01-6	Trichloroethylene	20	20.6	103	21.2	106	3	60-130/30

* = Outside of Control Limits.

5.2.1
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Blank Spike/Blank Spike Duplicate Summary

Job Number: C22854
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
VW1119-BS	W32251.D	1	07/26/12	KN	n/a	n/a	VW1119
VW1119-BSD	W32252.D	1	07/26/12	KN	n/a	n/a	VW1119

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

C22854-3, C22854-4

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
75-69-4	Trichlorofluoromethane	20	20.4	102	19.0	95	7	60-130/30
75-01-4	Vinyl chloride	20	21.7	109	20.4	102	6	60-130/30
1330-20-7	Xylene (total)	60	60.5	101	62.3	104	3	60-130/30

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
1868-53-7	Dibromofluoromethane	96%	95%	60-130%
2037-26-5	Toluene-D8	99%	98%	60-130%
460-00-4	4-Bromofluorobenzene	101%	99%	60-130%

* = Outside of Control Limits.

5.2.1
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Blank Spike/Blank Spike Duplicate Summary

Job Number: C22854
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
VW1121-BS	W32283.D	1	07/27/12	KN	n/a	n/a	VW1121
VW1121-BSD	W32284.D	1	07/27/12	KN	n/a	n/a	VW1121

The QC reported here applies to the following samples:

Method: SW846 8260B

C22854-1, C22854-2

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	20	20.3	102	20.1	101	1	60-130/30
108-20-3	Di-Isopropyl ether	20	18.8	94	18.5	93	2	60-130/30
100-41-4	Ethylbenzene	20	20.9	105	20.4	102	2	60-130/30
637-92-3	Ethyl Tert Butyl Ether	20	22.3	112	21.9	110	2	60-130/30
1634-04-4	Methyl Tert Butyl Ether	20	21.8	109	21.1	106	3	60-130/30
994-05-8	Tert-Amyl Methyl Ether	20	21.5	108	20.9	105	3	60-130/30
75-65-0	Tert-Butyl Alcohol	100	94.6	95	88.4	88	7	60-130/30
108-88-3	Toluene	20	20.4	102	20.0	100	2	60-130/30
1330-20-7	Xylene (total)	60	62.2	104	60.8	101	2	60-130/30

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
1868-53-7	Dibromofluoromethane	99%	97%	60-130%
2037-26-5	Toluene-D8	98%	98%	60-130%
460-00-4	4-Bromofluorobenzene	100%	100%	60-130%

* = Outside of Control Limits.

5.2.2
 5

Laboratory Control Sample Summary

Job Number: C22854
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
VW1119-LCS	W32253.D	1	07/26/12	KN	n/a	n/a	VW1119

The QC reported here applies to the following samples:

Method: SW846 8260B

C22854-3, C22854-4

CAS No.	Compound	Spike ug/l	LCS ug/l	LCS %	Limits
	TPH-GRO (C6-C10)	125	120	96	60-130

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	94%	60-130%
2037-26-5	Toluene-D8	99%	60-130%
460-00-4	4-Bromofluorobenzene	100%	60-130%

* = Outside of Control Limits.

5.3.1
 5

Laboratory Control Sample Summary

Job Number: C22854
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
VW1121-LCS	W32285.D	1	07/27/12	KN	n/a	n/a	VW1121

The QC reported here applies to the following samples:

Method: SW846 8260B

C22854-1, C22854-2

CAS No.	Compound	Spike ug/l	LCS ug/l	LCS %	Limits
	TPH-GRO (C6-C10)	125	120	96	60-130

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	94%	60-130%
2037-26-5	Toluene-D8	99%	60-130%
460-00-4	4-Bromofluorobenzene	100%	60-130%

* = Outside of Control Limits.

5.3.2
 5

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: C22854

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
C22840-1MS	W32270.D	1	07/26/12	KN	n/a	n/a	VW1119
C22840-1MSD	W32271.D	1	07/26/12	KN	n/a	n/a	VW1119
C22840-1	W32261.D	1	07/26/12	KN	n/a	n/a	VW1119

The QC reported here applies to the following samples:

Method: SW846 8260B

C22854-3, C22854-4

CAS No.	Compound	C22840-1		MS ug/l	MS %	MSD		RPD	Limits Rec/RPD	
		ug/l	Q			ug/l	%			
71-43-2	Benzene	ND		20	19.6	98	19.6	98	0	60-130/25
75-27-4	Bromodichloromethane	ND		20	20.6	103	20.8	104	1	60-130/25
75-25-2	Bromoform	ND		20	22.7	114	23.1	116	2	60-130/25
108-90-7	Chlorobenzene	ND		20	20.0	100	20.1	101	0	60-130/25
75-00-3	Chloroethane	ND		20	16.5	83	16.0	80	3	60-130/25
67-66-3	Chloroform	ND		20	19.9	100	20.0	100	1	60-130/25
56-23-5	Carbon tetrachloride	ND		20	21.7	109	21.5	108	1	60-130/25
75-34-3	1,1-Dichloroethane	ND		20	19.1	96	19.1	96	0	60-130/25
75-35-4	1,1-Dichloroethylene	ND		20	18.6	93	18.6	93	0	60-130/25
106-93-4	1,2-Dibromoethane	ND		20	20.4	102	20.8	104	2	60-130/25
107-06-2	1,2-Dichloroethane	ND		20	21.2	106	21.7	109	2	60-130/25
78-87-5	1,2-Dichloropropane	ND		20	20.1	101	20.2	101	0	60-130/25
108-20-3	Di-Isopropyl ether	ND		20	18.0	90	18.2	91	1	60-130/25
124-48-1	Dibromochloromethane	ND		20	21.4	107	21.8	109	2	60-130/25
75-71-8	Dichlorodifluoromethane	ND		20	17.8	89	17.5	88	2	60-130/25
156-59-2	cis-1,2-Dichloroethylene	ND		20	19.4	97	19.4	97	0	60-130/25
10061-01-5	cis-1,3-Dichloropropene	ND		20	20.8	104	21.1	106	1	60-130/25
541-73-1	m-Dichlorobenzene	ND		20	19.0	95	19.3	97	2	60-130/25
95-50-1	o-Dichlorobenzene	ND		20	19.3	97	20.0	100	4	60-130/25
106-46-7	p-Dichlorobenzene	ND		20	18.8	94	19.3	97	3	60-130/25
156-60-5	trans-1,2-Dichloroethylene	ND		20	19.8	99	19.7	99	1	60-130/25
10061-02-6	trans-1,3-Dichloropropene	ND		20	19.1	96	19.4	97	2	60-130/25
100-41-4	Ethylbenzene	ND		20	20.2	101	20.0	100	1	60-130/25
637-92-3	Ethyl Tert Butyl Ether	ND		20	21.0	105	21.5	108	2	60-130/25
74-83-9	Methyl bromide	ND		20	16.9	85	16.5	83	2	60-130/25
74-87-3	Methyl chloride	ND		20	17.5	88	17.1	86	2	60-130/25
75-09-2	Methylene chloride	ND		20	19.1	96	19.4	97	2	60-130/25
1634-04-4	Methyl Tert Butyl Ether	ND		20	20.5	103	20.9	105	2	60-130/25
994-05-8	Tert-Amyl Methyl Ether	ND		20	20.2	101	20.4	102	1	60-130/25
75-65-0	Tert-Butyl Alcohol	ND		100	84.1	84	90.3	90	7	60-130/25
71-55-6	1,1,1-Trichloroethane	ND		20	20.5	103	20.3	102	1	60-130/25
79-34-5	1,1,2,2-Tetrachloroethane	ND		20	19.5	98	20.4	102	5	60-130/25
79-00-5	1,1,2-Trichloroethane	ND		20	20.2	101	20.7	104	2	60-130/25
127-18-4	Tetrachloroethylene	ND		20	20.8	104	20.5	103	1	60-130/25
108-88-3	Toluene	ND		20	19.7	99	19.8	99	1	60-130/25
79-01-6	Trichloroethylene	ND		20	20.5	103	20.3	102	1	60-130/25

* = Outside of Control Limits.

5.4.1
5

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: C22854
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
C22840-1MS	W32270.D	1	07/26/12	KN	n/a	n/a	VW1119
C22840-1MSD	W32271.D	1	07/26/12	KN	n/a	n/a	VW1119
C22840-1	W32261.D	1	07/26/12	KN	n/a	n/a	VW1119

The QC reported here applies to the following samples:

Method: SW846 8260B

C22854-3, C22854-4

CAS No.	Compound	C22840-1 ug/l	Spike Q ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
75-69-4	Trichlorofluoromethane	ND	20	17.1	86	16.7	84	2	60-130/25
75-01-4	Vinyl chloride	ND	20	19.0	95	18.4	92	3	60-130/25
1330-20-7	Xylene (total)	ND	60	60.0	100	59.7	100	1	60-130/25

CAS No.	Surrogate Recoveries	MS	MSD	C22840-1	Limits
1868-53-7	Dibromofluoromethane	96%	95%	90%	60-130%
2037-26-5	Toluene-D8	99%	98%	99%	60-130%
460-00-4	4-Bromofluorobenzene	101%	101%	101%	60-130%

* = Outside of Control Limits.

5.4.1
5

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: C22854
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
C22838-1MS	W32303.D	1	07/27/12	KN	n/a	n/a	VW1121
C22838-1MSD	W32304.D	1	07/27/12	KN	n/a	n/a	VW1121
C22838-1	W32287.D	1	07/27/12	KN	n/a	n/a	VW1121

The QC reported here applies to the following samples:

Method: SW846 8260B

C22854-1, C22854-2

CAS No.	Compound	C22838-1 ug/l	Spike Q ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	ND	20	20.0	100	19.5	98	3	60-130/25
108-20-3	Di-Isopropyl ether	ND	20	18.4	92	17.8	89	3	60-130/25
100-41-4	Ethylbenzene	ND	20	20.4	102	20.1	101	1	60-130/25
637-92-3	Ethyl Tert Butyl Ether	ND	20	21.9	110	21.0	105	4	60-130/25
1634-04-4	Methyl Tert Butyl Ether	ND	20	22.0	110	20.8	104	6	60-130/25
994-05-8	Tert-Amyl Methyl Ether	ND	20	21.3	107	20.3	102	5	60-130/25
75-65-0	Tert-Butyl Alcohol	ND	100	101	101	84.0	84	18	60-130/25
108-88-3	Toluene	ND	20	20.0	100	19.7	99	2	60-130/25
1330-20-7	Xylene (total)	ND	60	60.8	101	59.9	100	1	60-130/25

CAS No.	Surrogate Recoveries	MS	MSD	C22838-1	Limits
1868-53-7	Dibromofluoromethane	98%	97%	94%	60-130%
2037-26-5	Toluene-D8	97%	98%	98%	60-130%
460-00-4	4-Bromofluorobenzene	101%	101%	100%	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: C22854
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
OP6343-MB	Z483.D	1	07/26/12	MT	07/26/12	OP6343	EZ19

The QC reported here applies to the following samples:

Method: SW846 8270C

C22854-3

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: C22854

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
OP6343-MB	Z483.D	1	07/26/12	MT	07/26/12	OP6343	EZ19

The QC reported here applies to the following samples:

Method: SW846 8270C

C22854-3

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: C22854
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
OP6343-MB	Z483.D	1	07/26/12	MT	07/26/12	OP6343	EZ19

The QC reported here applies to the following samples:

Method: SW846 8270C

C22854-3

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	39%	10-100%
4165-62-2	Phenol-d5	28%	7-100%
118-79-6	2,4,6-Tribromophenol	66%	25-115%
4165-60-0	Nitrobenzene-d5	65%	25-100%
321-60-8	2-Fluorobiphenyl	65%	25-106%
1718-51-0	Terphenyl-d14	109%	35-130%

Blank Spike/Blank Spike Duplicate Summary

Job Number: C22854

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
OP6343-BS	Z481.D	1	07/26/12	MT	07/26/12	OP6343	EZ19
OP6343-BSD	Z482.D	1	07/26/12	MT	07/26/12	OP6343	EZ19

The QC reported here applies to the following samples:

Method: SW846 8270C

C22854-3

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	14.3	29	10	10-100/30
95-57-8	2-Chlorophenol	25	18.5	74	18.9	76	2	23-103/30
59-50-7	4-Chloro-3-methyl phenol	25	19.6	78	19.6	78	0	17-130/30
120-83-2	2,4-Dichlorophenol	25	20.8	83	21.6	86	4	23-108/30
105-67-9	2,4-Dimethylphenol	25	18.9	76	17.3	69	9	17-91/30
51-28-5	2,4-Dinitrophenol	25	17.8	71	20.0	80	12	17-111/30
534-52-1	4,6-Dinitro-o-cresol	25	19.4	78	22.8	91	16	22-115/30
95-48-7	2-Methylphenol	25	16.7	67	16.3	65	2	25-101/30
	3&4-Methylphenol	25	15.2	61	14.8	59	3	22-105/30
88-75-5	2-Nitrophenol	25	20.2	81	22.2	89	9	19-111/30
100-02-7	4-Nitrophenol	25	7.8	31	8.8	35	12	13-130/30
87-86-5	Pentachlorophenol	25	21.5	86	23.7	95	10	24-130/30
108-95-2	Phenol	25	9.0	36	8.9	36	1	5-130/30
95-95-4	2,4,5-Trichlorophenol	25	20.4	82	22.0	88	8	19-106/30
88-06-2	2,4,6-Trichlorophenol	25	19.2	77	20.9	84	8	18-107/30
83-32-9	Acenaphthene	25	19.3	77	20.0	80	4	25-130/30
208-96-8	Acenaphthylene	25	20.0	80	20.6	82	3	28-105/30
62-53-3	Aniline	25	14.9	60	13.6	54	9	23-98/30
120-12-7	Anthracene	25	20.1	80	21.0	84	4	35-108/30
103-33-3	Azobenzene	25	20.4	82	21.0	84	3	31-110/30
92-87-5	Benzidine	50	51.0	102* a	47.9	96* a	6	15-73/30
56-55-3	Benzo(a)anthracene	25	23.2	93	24.6	98	6	33-111/30
50-32-8	Benzo(a)pyrene	25	22.8	91	24.3	97	6	32-106/30
205-99-2	Benzo(b)fluoranthene	25	24.5	98	25.8	103	5	33-109/30
191-24-2	Benzo(g,h,i)perylene	25	22.9	92	23.1	92	1	31-111/30
207-08-9	Benzo(k)fluoranthene	25	23.4	94	25.6	102	9	34-111/30
101-55-3	4-Bromophenyl phenyl ether	25	19.5	78	19.6	78	1	34-107/30
85-68-7	Butyl benzyl phthalate	25	24.6	98	26.2	105	6	29-114/30
100-51-6	Benzyl Alcohol	25	18.1	72	17.0	68	6	24-108/30
91-58-7	2-Chloronaphthalene	25	19.4	78	19.8	79	2	23-130/30
106-47-8	4-Chloroaniline	25	20.5	82	18.5	74	10	23-103/30
86-74-8	Carbazole	25	23.0	92	24.1	96	5	36-109/30
218-01-9	Chrysene	25	23.5	94	24.9	100	6	34-111/30
111-91-1	bis(2-Chloroethoxy)methane	25	20.6	82	20.9	84	1	28-101/30
111-44-4	bis(2-Chloroethyl)ether	25	20.3	81	21.2	85	4	31-108/30
108-60-1	bis(2-Chloroisopropyl)ether	25	23.3	93	24.3	97	4	33-106/30

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: C22854
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
OP6343-BS	Z481.D	1	07/26/12	MT	07/26/12	OP6343	EZ19
OP6343-BSD	Z482.D	1	07/26/12	MT	07/26/12	OP6343	EZ19

The QC reported here applies to the following samples:

Method: SW846 8270C

C22854-3

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	19.4	78	19.2	77	1	31-107/30
95-50-1	1,2-Dichlorobenzene	25	19.2	77	19.9	80	4	21-102/30
541-73-1	1,3-Dichlorobenzene	25	18.8	75	19.2	77	2	28-100/30
106-46-7	1,4-Dichlorobenzene	25	18.5	74	19.5	78	5	24-130/30
121-14-2	2,4-Dinitrotoluene	25	21.3	85	22.7	91	6	26-130/30
606-20-2	2,6-Dinitrotoluene	25	20.2	81	21.4	86	6	28-104/30
91-94-1	3,3'-Dichlorobenzidine	50	45.8	92	50.5	101	10	27-105/30
53-70-3	Dibenzo(a,h)anthracene	25	23.6	94	23.7	95	0	32-112/30
132-64-9	Dibenzofuran	25	19.8	79	20.1	80	2	31-108/30
122-39-4	Diphenylamine	25	19.9	80	20.7	83	4	27-110/30
84-74-2	Di-n-butyl phthalate	25	20.7	83	21.7	87	5	32-109/30
117-84-0	Di-n-octyl phthalate	25	25.8	103	27.5	110	6	30-120/30
84-66-2	Diethyl phthalate	25	16.0	64	17.3	69	8	32-109/30
131-11-3	Dimethyl phthalate	25	13.0	52	14.7	59	12	33-106/30
123-91-1	1,4-Dioxane	25	9.5	38	9.0	36	5	20-69/30
117-81-7	bis(2-Ethylhexyl)phthalate	25	26.5	106	27.4	110	3	29-116/30
206-44-0	Fluoranthene	25	20.8	83	22.0	88	6	35-114/30
86-73-7	Fluorene	25	19.4	78	19.9	80	3	31-106/30
118-74-1	Hexachlorobenzene	25	19.7	79	19.7	79	0	32-107/30
87-68-3	Hexachlorobutadiene	25	20.1	80	20.1	80	0	28-107/30
77-47-4	Hexachlorocyclopentadiene	25	16.2	65	17.4	70	7	19-94/30
67-72-1	Hexachloroethane	25	18.5	74	19.3	77	4	25-101/30
193-39-5	Indeno(1,2,3-cd)pyrene	25	24.3	97	25.0	100	3	31-113/30
78-59-1	Isophorone	25	19.4	78	19.6	78	1	26-111/30
90-12-0	1-Methylnaphthalene	25	19.5	78	19.8	79	2	22-102/30
91-57-6	2-Methylnaphthalene	25	19.2	77	19.4	78	1	26-112/30
88-74-4	2-Nitroaniline	25	22.1	88	22.4	90	1	30-109/30
99-09-2	3-Nitroaniline	25	20.7	83	21.0	84	1	22-107/30
100-01-6	4-Nitroaniline	25	25.6	102	28.4	114* a	10	29-111/30
91-20-3	Naphthalene	25	22.0	88	22.3	89	1	20-104/30
98-95-3	Nitrobenzene	25	19.8	79	20.9	84	5	22-105/30
62-75-9	N-Nitrosodimethylamine	25	13.7	55	13.7	55	0	20-71/30
621-64-7	N-Nitroso-di-n-propylamine	25	19.9	80	21.4	86	7	16-130/30
85-01-8	Phenanthrene	25	20.5	82	21.0	84	2	35-108/30
129-00-0	Pyrene	25	23.2	93	23.9	96	3	35-130/30
110-86-1	Pyridine	25	10.1	40	9.2	37	9	15-77/30

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: C22854
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
OP6343-BS	Z481.D	1	07/26/12	MT	07/26/12	OP6343	EZ19
OP6343-BSD	Z482.D	1	07/26/12	MT	07/26/12	OP6343	EZ19

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

C22854-3

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	19.1	76	19.3	77	1	15-130/30

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
367-12-4	2-Fluorophenol	43%	42%	10-100%
4165-62-2	Phenol-d5	31%	31%	7-100%
118-79-6	2,4,6-Tribromophenol	77%	84%	25-115%
4165-60-0	Nitrobenzene-d5	71%	74%	25-100%
321-60-8	2-Fluorobiphenyl	68%	69%	25-106%
1718-51-0	Terphenyl-d14	92%	95%	35-130%

(a) Outside laboratory control limits.

* = 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: C22854
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
OP6449-MB	PP026823.D	1	08/13/12	RV	08/13/12	OP6449	GPP891

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

C22854-3

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	80%	41-134%
877-09-8	Tetrachloro-m-xylene	84%	41-134%
2051-24-3	Decachlorobiphenyl	86%	41-134%
2051-24-3	Decachlorobiphenyl	91%	41-134%

7.1.1
7

Method Blank Summary

Job Number: C22854
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
OP6345-MB	HH024367.D1		07/26/12	JH	07/26/12	OP6345	GHH775

The QC reported here applies to the following samples:

Method: SW846 8015B M

C22854-1, C22854-2, C22854-3, C22854-4

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	74% 45-140%

Blank Spike/Blank Spike Duplicate Summary

Job Number: C22854
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
OP6449-BS	PP026824.D	1	08/13/12	RV	08/13/12	OP6449	GPP891
OP6449-BSD	PP026825.D	1	08/13/12	RV	08/13/12	OP6449	GPP891

The QC reported here applies to the following samples:

Method: SW846 8082

C22854-3

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
12674-11-2	Aroclor 1016	0.4	0.37	93	0.37	93	0	40-140/30
11096-82-5	Aroclor 1260	0.4	0.39	98	0.38	95	3	40-140/30

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
877-09-8	Tetrachloro-m-xylene	83%	84%	41-134%
877-09-8	Tetrachloro-m-xylene	85%	86%	41-134%
2051-24-3	Decachlorobiphenyl	93%	91%	41-134%
2051-24-3	Decachlorobiphenyl	98%	96%	41-134%

* = Outside of Control Limits.

7.2.1
7

Blank Spike/Blank Spike Duplicate Summary

Job Number: C22854
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
OP6345-BS	HH024368.D1		07/26/12	JH	07/26/12	OP6345	GHH775
OP6345-BSD	HH024369.D1		07/26/12	JH	07/26/12	OP6345	GHH775

The QC reported here applies to the following samples:

Method: SW846 8015B M

C22854-1, C22854-2, C22854-3, C22854-4

CAS No.	Compound	Spike mg/l	BSP mg/l	BSP %	BSD mg/l	BSD %	RPD	Limits Rec/RPD
	TPH (C10-C28)	1	0.534	53	0.580	58	8	45-140/30

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
630-01-3	Hexacosane	75%	84%	45-140%

* = Outside of Control Limits.

7.2.2
 7

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: C22854
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
OP6345-MS	HH024420.D 1		07/27/12	JH	07/26/12	OP6345	GHH775
OP6345-MSD	HH024421.D 1		07/27/12	JH	07/26/12	OP6345	GHH775
C22867-1	HH024411.D 1		07/27/12	JH	07/26/12	OP6345	GHH775

The QC reported here applies to the following samples:

Method: SW846 8015B M

C22854-1, C22854-2, C22854-3, C22854-4

CAS No.	Compound	C22867-1 mg/l	Spike Q mg/l	MS mg/l	MS %	MSD mg/l	MSD %	RPD	Limits Rec/RPD
	TPH (C10-C28)	ND	2	1.40	70	1.36	68	3	45-140/25
CAS No.	Surrogate Recoveries	MS	MSD	C22867-1	Limits				
630-01-3	Hexacosane	95%	97%	88%	45-140%				

* = 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: C22854
Account: SWCICAFO - Sierra West Consultants, Inc.
Project: T0000003190-F&M Auto Service., 1839 Foothill Blvd, Oakland, CA

QC Batch ID: MP5124
Matrix Type: AQUEOUS

Methods: SW846 6010B
Units: ug/l

Prep Date: 07/27/12

Metal	RL	IDL	MDL	MB raw	final
Aluminum	200	13	8.5		
Antimony	6.0	.7	.51		
Arsenic	10	.7	.65		
Barium	200	.4	.35		
Beryllium	5.0	.2	.4		
Boron	100	.9	.64		
Cadmium	2.0	.2	.15	-0.50	<2.0
Calcium	5000	7.1	12		
Chromium	10	.3	.41	0.20	<10
Cobalt	5.0	.2	.3		
Copper	10	1.2	3		
Iron	200	6.4	12		
Lead	10	.7	.85	1.5	<10
Magnesium	5000	27	36		
Manganese	15	.1	1.3		
Molybdenum	20	.2	.22		
Nickel	5.0	.2	.12	-0.50	<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	1.4	<20

Associated samples MP5124: C22854-1F, C22854-2F, C22854-3F, C22854-4F

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

8.1.1
8

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: C22854
 Account: SWCICAFO - Sierra West Consultants, Inc.
 Project: T0000003190-F&M Auto Service., 1839 Foothill Blvd, Oakland, CA

QC Batch ID: MP5124
 Matrix Type: AQUEOUS

Methods: SW846 6010B
 Units: ug/l

Prep Date: 07/27/12

Metal	C22886-1 Original MS		SpikeLot MPIR4A	% Rec	QC Limits
Aluminum					
Antimony					
Arsenic					
Barium					
Beryllium					
Boron					
Cadmium	17.9	517	500	99.8	75-125
Calcium					
Chromium	9.8	521	500	102.2	75-125
Cobalt					
Copper	anr				
Iron					
Lead	8.8	512	500	100.6	75-125
Magnesium					
Manganese					
Molybdenum					
Nickel	17.8	514	500	99.2	75-125
Potassium					
Selenium					
Silicon					
Silver	anr				
Sodium					
Strontium					
Thallium					
Tin					
Titanium					
Vanadium					
Zinc	59.4	593	500	106.7	75-125

Associated samples MP5124: C22854-1F, C22854-2F, C22854-3F, C22854-4F

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
8

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: C22854
 Account: SWCICAFO - Sierra West Consultants, Inc.
 Project: T0000003190-F&M Auto Service., 1839 Foothill Blvd, Oakland, CA

QC Batch ID: MP5124
 Matrix Type: AQUEOUS

Methods: SW846 6010B
 Units: ug/l

Prep Date: 07/27/12

Metal	C22886-1 Original MSD		SpikeLot MPIR4A % Rec		MSD RPD	QC Limit
Aluminum						
Antimony						
Arsenic						
Barium						
Beryllium						
Boron						
Cadmium	17.9	497	500	95.8	3.9	20
Calcium						
Chromium	9.8	520	500	102.0	0.2	20
Cobalt						
Copper	anr					
Iron						
Lead	8.8	495	500	97.2	3.4	20
Magnesium						
Manganese						
Molybdenum						
Nickel	19.8	496	500	95.6	3.6	20
Potassium						
Selenium						
Silicon						
Silver	anr					
Sodium						
Strontium						
Thallium						
Tin						
Titanium						
Vanadium						
Zinc	59.4	573	500	102.7	3.4	20

Associated samples MP5124: C22854-1F, C22854-2F, C22854-3F, C22854-4F

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
8

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: C22854
 Account: SWCICAFO - Sierra West Consultants, Inc.
 Project: T0000003190-F&M Auto Service., 1839 Foothill Blvd, Oakland, CA

QC Batch ID: MP5124 Methods: SW846 6010B
 Matrix Type: AQUEOUS Units: ug/l

Prep Date: 07/27/12 07/27/12

Metal	BSP Result	Spikelot MPIR4A	% Rec	QC Limits	BSD Result	Spikelot MPIR4A	% Rec	BSD RPD	QC Limit
Aluminum									
Antimony									
Arsenic									
Barium									
Beryllium									
Boron									
Cadmium	489	500	97.8	80-120	497	500	99.4	1.6	
Calcium									
Chromium	522	500	104.4	80-120	526	500	105.2	0.8	
Cobalt									
Copper	anr								
Iron									
Lead	496	500	99.2	80-120	508	500	101.6	2.4	
Magnesium									
Manganese									
Molybdenum									
Nickel	483	500	96.6	80-120	494	500	98.8	2.3	
Potassium									
Selenium									
Silicon									
Silver	anr								
Sodium									
Strontium									
Thallium									
Tin									
Titanium									
Vanadium									
Zinc	536	500	107.2	80-120	546	500	109.2	1.8	

Associated samples MP5124: C22854-1F, C22854-2F, C22854-3F, C22854-4F

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

8.1.3
8

SERIAL DILUTION RESULTS SUMMARY

Login Number: C22854
 Account: SWCICAFO - Sierra West Consultants, Inc.
 Project: T0000003190-F&M Auto Service., 1839 Foothill Blvd, Oakland, CA

QC Batch ID: MP5124
 Matrix Type: AQUEOUS

Methods: SW846 6010B
 Units: ug/l

Prep Date: 07/27/12

Metal	C22886-1 Original SDL 1:5		%DIF	QC Limits
Aluminum				
Antimony				
Arsenic				
Barium				
Beryllium				
Boron				
Cadmium	17.9	15.9	11.2*(a)	0-10
Calcium				
Chromium	8.30	14.4	46.9 (b)	0-10
Cobalt				
Copper	anr			
Iron				
Lead	7.50	9.50	8.0	0-10
Magnesium				
Manganese				
Molybdenum				
Nickel	17.8	20.3	14.0*(a)	0-10
Potassium				
Selenium				
Silicon				
Silver	anr			
Sodium				
Strontium				
Thallium				
Tin				
Titanium				
Vanadium				
Zinc	59.4	65.5	10.3*(a)	0-10

Associated samples MP5124: C22854-1F, C22854-2F, C22854-3F, C22854-4F

Results < IDL are shown as zero for calculation purposes

(*) Outside of QC limits

(anr) Analyte not requested

(a) Serial dilution indicates possible matrix interference.

(b) Percent difference acceptable due to low initial sample concentration (< 50 times IDL).

8.1.4
8

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: C22854
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	GP3968/GN8755	5.0	0.0	mg/l	40.0	36.9	92.2	78-114%
HEM Petroleum Hydrocarbons	GP3970/GN8762	5.0	0.0	mg/l	20.0	18.3	91.5	64-132%

Associated Samples:
Batch GP3968: C22854-3
Batch GP3970: C22854-3
(*) Outside of QC limits

BLANK SPIKE DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: C22854
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	GP3968/GN8755	mg/l	40.0	36.6	0.8	18%
HEM Petroleum Hydrocarbons	GP3970/GN8762	mg/l	20.0	16.6	9.7	28%

Associated Samples:
Batch GP3968: C22854-3
Batch GP3970: C22854-3
(*) Outside of QC limits

MATRIX SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: C22854
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	GP3968/GN8755	C22915-1	mg/l	3.1	40.0	32.4	73.2*(a)	78-114%

Associated Samples:

Batch GP3968: C22854-3

(*) Outside of QC limits

(N) Matrix Spike Rec. outside of QC limits

(a) Spike recovery outside of acceptable QC criteria due to matrix interference. However, LCS/LCSD is within control limits.

MATRIX SPIKE DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: C22854
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	MSD Result	RPD	QC Limit
HEM Oil and Grease	GP3968/GN8755	C22915-1	mg/l	3.1	40.0	32.8	1.2*(a)	18%

Associated Samples:

Batch GP3968: C22854-3

(*) Outside of QC limits

(N) Matrix Spike Rec. outside of QC limits

(a) Spike recovery outside of acceptable QC criteria due to matrix interference. However, LCS/LCSD is within control limits.