

**STRONGH REVOCABLE TRUST
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10:16 am, Jun 24, 2009

**Alameda County
Environmental Health**

Ms. Barbara Jakub
Alameda County Health Care Services Agency
1131 Harbor Bay Parkway
Alameda, CA 9502-6577

Subject: Former Val Strong Chevrolet Site
327 34th Street, Oakland, CA
Site ID #3035, RO#0000134

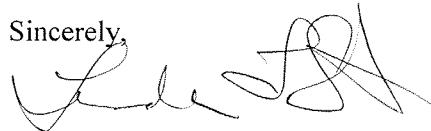
Dear Ms. Jakub:

This letter is to accompany the *Second Quarter 2009 Groundwater Monitoring Report* for the above-referenced site prepared by LRM Consulting, Inc. of Burlingame, CA.

I declare, under penalty of perjury, that the information and/or recommendations contained in the attached document or report is true and correct to the best of my knowledge.

If you have any questions, please contact Mr. Mehrdad Javaherian of LRM Consulting, Inc. at 650-343-4633.

Sincerely,



Linda L. Strong, Trustee

cc: Mehrdad Javaherian, LRM Consulting, Inc.,
1534 Plaza Lane, #145, Burlingame, CA 94010

Greggory Brandt, Wendel Rosen Black & Dean,
1111 Broadway, 24th Floor, Oakland, CA 94607



2nd QUARTER 2009 GROUNDWATER MONITORING REPORT

Former Val Strough Chevrolet Site
327 34th Street, Oakland, California
Fuel Leak Case No. RO0000134

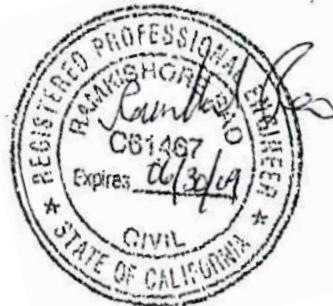
Prepared by
**LRM Consulting, Inc.
1534 Plaza Lane, #145
Burlingame, CA 94010**

June 2009

**2nd QUARTER 2009
GROUNDWATER
MONITORING REPORT**

Former Val Strough Chevrolet Site
327 34th Street, Oakland, California
Fuel Leak Case No. RO0000134

Prepared by
LRM Consulting, Inc.
1534 Plaza Lane, #145
Burlingame, CA 94010



M. Javaherian
Mehrdad M. Javaherian, Ph.D/MPH candidate
Principal-in-Charge

Ram Rao
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Principal Engineer

June 2009

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1.0 INTRODUCTION

At the request of the Strough Family Trust of 1983, LRM Consulting, Inc. (LRM) has prepared this *2nd Quarter 2009 Groundwater Monitoring Report* for the former Val Strough Chevrolet located in Oakland, California. This report documents the procedures and findings of the June 2, 2009 groundwater monitoring event reflecting water quality reporting and water level gauging for all site wells per the existing Alameda County Health Care Services Agency (ACHCSA)-approved monitoring program for the site.

The scope of groundwater monitoring for this quarter corresponded to the ACHCSA-approved program, which for this quarter corresponds to gauging and sampling from all eight site wells, including the third round of monitoring at newly installed well MW-8. Also worth noting is that this monitoring reflects groundwater conditions approximately three years following cessation of the dual phase extraction (DPE) system at the site; the operation of the DPE system was ceased on 30 June 2006. Groundwater monitoring data and well construction details are shown on the figures and presented in the tables. Groundwater monitoring protocols, field data, and analytical results are provided in the appendices.

1.1 General Site Information

Site name:	Former Val Strough Chevrolet
Site address:	327 34 th Street, Oakland, California
Current property owner:	Strough Family Trust of 1983
Current site use:	Automotive Dealership and Service Center
Current phase of project:	Groundwater monitoring and evaluation of need and approaches for additional remediation
Tanks at site:	Two former tanks (1 gasoline, 1 waste-oil) removed in 1993
Number of wells:	8 (all onsite)
Site ID #:	3035
RO #:	0000134

1.2 Site Contacts

Consultant:	Ram Rao, PE, Principal Engineer Mehrdad Javaherian, Ph.D/MPH _(candidate) Principal LRM Consulting, Inc. 1534 Plaza Lane, # 145 Burlingame, CA 94010 (650) 343-4633
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Regulatory agency: Barbara Jakub, P.G.
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1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577
(510) 567-6746

2.0 SITE BACKGROUND

2.1 Site Description

Site Location and Land Use: The former Val Strough Chevrolet site is currently an active Honda automobile dealership and service center located on the southwestern corner of the intersection of Broadway (Auto Row) and 34th Street (Figure 1). The property is located south of Interstate 580. Land use in the area is primarily commercial.

The site is situated approximately two miles east of San Francisco Bay at approximately 61 feet above mean sea level (msl) (EDR, 2003). The land surface in the vicinity slopes toward the south. The nearest surface water body is Lake Merritt, located approximately 1 mile south of the site (Figure 1).

Site Features: The site consists of a multi-level building and an adjacent parking lot (Figure 2). The former fuel dispenser and underground storage tanks (USTs) were located in the northwestern portion of the site. Seven groundwater monitoring wells are located at the site. Construction details for the wells are presented in Table 1.

Underground Utilities: A box culvert for a former tributary of Glen Echo Creek is located approximately 17 feet below ground surface (bgs) in the eastern portion of the site (Figure 2). The culvert consists of a reinforced concrete box measuring 5 feet by 6 feet. During the winter of 1983, a section of the culvert collapsed and was replaced with a 5-foot-diameter pipeline.

Sanitary sewer, electrical, and natural gas utilities are generally present at depths less than 2 feet bgs at the site. Approximately 40 feet north of the site, along the northern edge of 34th Street, a storm sewer pipeline flows toward the east and into the box culvert. Sanitary sewer lines run parallel to both 34th Street and Broadway, north and east of the site, respectively. A lateral pipeline located along the western edge of the site connects to the sanitary sewer line below 34th Street. Natural gas service is located on the east side of the property. Water service appears to enter the site from the north.

Water Supply Well Search: A 2003 report compiled by EDR indicates that there are no federal U.S. Geological Survey wells and no public water supply wells located within a 1-mile radius of the site. No water supply wells were identified by the Alameda County Department of Public Works within a ½-mile radius of the site (ETIC, 2003).

2.2 Summary of Previous Investigations and Monitoring Activities

As presented in previous reports, the USTs were removed and multiple investigations, including the installation of seven groundwater monitoring wells, were conducted. In addition, a routine groundwater monitoring program has been in place since 1993. The following paragraphs summarize the findings of these activities.

Site Hydrogeology: In general, the site is underlain by silt and clay to depths ranging from approximately 15 to 20 feet bgs. Silty sand and fine-grained sand interbedded with thin clay intervals are encountered from approximately 20 feet bgs to the total explored depth of 35 feet bgs.

The depth to groundwater beneath the site has ranged from approximately 12.5 to 23 feet bgs. As shown in the modified rose diagram on Figure 2, the direction of groundwater flow is generally toward the southwest to south-southeast, with average hydraulic gradients ranging from approximately 0.01 to 0.03 foot/foot.

Primary Sources: Two USTs (one gasoline and one waste-oil) were located beneath the sidewalk on the northern side of the property. A fuel dispenser was located inside the building (Figure 2). These primary sources of petroleum hydrocarbons were removed from the site in 1993.

Constituents of Potential Concern: Based on the type of fuel stored in the USTs and the results of previous subsurface investigations, the constituents of potential concern (COPCs) at the site include total petroleum hydrocarbons as gasoline (TPH-g), benzene, toluene, ethylbenzene, and total xylenes (BTEX), and methyl t-butyl ether (MTBE). TPH as diesel (TPH-d) and TPH as motor oil (TPH-mo) are not routinely detected in groundwater samples and are considered secondary COPCs for the site.

Residual Source Area: Elevated concentrations of TPH-g, BTEX, and MTBE have been observed in soil in the vadose zone and upper portion of the water-bearing zone near the former USTs and fuel dispenser. Separate phase petroleum hydrocarbons (SPH) have been intermittently detected in wells MW-2 and MW-3, but none since March 2004 in MW-3 and June 2006 in MW-2. These data suggest that most of the residual petroleum hydrocarbon mass is present near the former USTs and fuel dispenser, herein referred to as the residual source area. This is corroborated by the dissolved groundwater data discussed below.

Petroleum Hydrocarbon Distribution in Groundwater: The highest concentrations of petroleum hydrocarbons have been detected in samples collected from wells MW-2 and MW-3. Generally significantly lower levels of petroleum hydrocarbons have been detected in samples collected from well MW-4, and the other site wells. The extent of dissolved-phase petroleum hydrocarbons in groundwater is largely defined by relatively low and stable TPH-g, BTEX, and MTBE concentrations detected in downgradient and cross-gradient monitoring wells MW-5, MW-6, MW-7, and MW-8 (Tables 2 and 3).

2.3 Summary of Interim Remedial Action Activities

In addition to the routine groundwater monitoring activities, remediation pilot testing and remediation activities were conducted at the site between 2004 and 2006. A summary of these activities and associated regulatory correspondence with the ACHCSA are presented below:

DPE Pilot Test: In March 2004, ETIC Engineering, Inc. (ETIC) performed a DPE pilot test at the site. As summarized in the June 2004 *Dual Phase Extraction Pilot Test and Interim Remedial Action Plan* (DPE and IRAP Report), vacuum was applied to source area wells MW-2 and MW-3 while water and vacuum levels were measured in nearby monitoring wells. The DPE pilot test induced more than 1 foot of drawdown up to 50 feet from the extraction wells and an estimated radius of vacuum influence of 55 to 70 feet. Based on vapor flow rates and petroleum hydrocarbon concentrations in the vapor stream during the short-term pilot test, removal rates of approximately 90 pounds of petroleum hydrocarbons per day were estimated.

June 2004 DPE and IRAP Report: The DPE and interim remedial action plan (IRAP) Report (ETIC, 2004) described the planned reduction of residual petroleum hydrocarbon mass in the source area through temporary DPE system installation and operation and dual phase extraction from source area wells MW-2 and MW-3 to extract soil vapor and groundwater simultaneously. The system was designed to consist of a knockout vessel to be used for separation of the soil vapor and water streams. A thermal oxidizer (with propane as a supplemental fuel) was proposed for treatment of extracted vapor, and aqueous-phase granular activated carbon was proposed for treatment of extracted groundwater.

Interim Remedial Action: Between February 2005 and June 2006, ETIC operated a DPE system on site. Vacuum was applied to remove groundwater and soil vapor from up to two wells (MW-2 and/or MW-3). The system was temporarily shutdown on 30 January 2006 for conversion of vapor treatment from thermal oxidation to carbon filtration, and remained offline until 22 May 2006, when it was restarted. Because the mass removal rates by the DPE system had reached asymptotic levels and high petroleum hydrocarbon concentrations continued to exist in extraction wells MW-2 and MW-3 despite the DPE operation, the benefit of continuation of DPE in its current configuration was considered to be low and the DPE operation was ceased on 30 June 2006. ETIC subsequently dismantled the remediation system and removed the skid mounted DPE unit from the site.

August 2006 LRM Consulting, Inc. Correspondence and 11 December 2006 LRM Supplemental Source Area Investigation Work Plan: In a August 25, 2006 correspondence, LRM notified the ACHCSA of a project consultant change from ETIC to LRM. Also, based on a review of the available site data, the response of the hydrocarbon concentrations to past DPE operations, and the ACHCSA's comments on ETIC's Work Plan, LRM recommended a technical meeting with the ACHCSA to discuss the project direction. However, because of other commitments of Don Hwang and other ACHCSA staff, a technical meeting could not be scheduled. During a October 19, 2006 telephone conversation with Don Hwang, LRM presented an approach to conduct a supplemental investigation to define the magnitude and extent of the residual source area in the vicinity of the former fuel dispenser and wells MW-2 and MW-3. Based on these discussions and as agreed by Mr. Hwang, a supplemental source area investigation work plan outlining the proposed scope of work was prepared and submitted to ACHCSA on 11 December 2006; this work plan was revised through multiple discussions with Donna Drogos of the ACHCSA and was finalized in December of 2007. The subject investigation was conducted beginning on December 12, 2007, the results of

which were documented in a report to ACHCSA (LRM, 2008a).

August 2008 LRM Consulting, Inc. IRAP: In a August 25, 2008 IRAP report, LRM, in response to a request by Barbara Jakub of the ACHCSA, proposed a series of site investigation and pilot testing activities to address the residual source area at the site. These activities included: 1) soil and grab groundwater sampling to vertically characterize the extent of hydrocarbons within the residual source area previously encountered during the supplemental investigation referenced above; 2) grab groundwater sampling along the existing culvert at the site to evaluate the potential for preferential migration of hydrocarbons along the culvert backfill; 3), placement of a groundwater monitoring well (MW-8) at the downgradient site boundary to define the downgradient extent of hydrocarbons; and 4) pilot testing activities including injection and observation well installation and pilot testing protocols for implementation of in-situ oxygen curtain (iSOC) technology within the residual source area. In a letter dated December 5, 2008, the ACHCSA approved the proposed site investigation activities with select modifications listed. Additional information was also requested for the iSOC pilot testing, which were provided by LRM in its response to ACHCSA comment dated December 5, 2008. The investigation activities associated with the IRAP have been completed and reported to the ACHCSA. The ACHCSA has requested that an additional monitoring well be installed to monitor the proposed iSOC pilot testing. The workplan for installation of the additional monitoring well is currently under review by ACHCSA.

3.0 PROTOCOLS FOR GROUNDWATER MONITORING

The following sections of this report present information relevant to the methods employed during the collection of groundwater samples from site wells on June 2, 2009. The scope of work for the quarterly groundwater monitoring event at the site are listed below, with monitoring protocols summarized in Appendix A:

- Checking all wells for SPH.
- Gauging the depth to groundwater in all eight site wells.
- Purgging the monitoring wells prior to sampling.
- Collecting and analyzing groundwater samples from all eight onsite wells.
- Estimating the hydraulic gradient and general flow direction.
- Evaluating the data and preparing a written report summarizing the results of the monitoring event.

3.1 Groundwater Gauging

For this round of monitoring, groundwater gauging was performed for all eight onsite wells. The monitoring wells were opened prior to gauging to allow the groundwater level to equilibrate with atmospheric pressure. The depth to groundwater and depth to SPH, if present, were then measured to the nearest 0.01 feet using an electronic water level meter or optical interface probe. The measurements were made from a fixed reference point at the top of the well casing.

The groundwater elevation map (Figure 2) for this monitoring event was constructed using depth-to-groundwater measurements collected during the current sampling event. Depth-to-groundwater measurements and calculated groundwater elevations are presented in Table 2. Field data forms are presented in Appendix B. Per the request of ACHCSA, the newly installed well (MW-8) and all existing site wells were resurveyed to the dateum NAVD 88 prior to the 1st Quarter 2008 monitoring event and were reported in the accompanying report for that monitoring event.

3.2 Well Purging

For this round of monitoring, groundwater sampling and field parameters were analyzed for all eight onsite wells; MW-1 through MW-8. Three well casing volumes of water were purged from all wells and field parameters including temperature, pH, specific conductance, and dissolved oxygen (DO) were measured. Groundwater monitoring protocols are presented in Appendix A.

3.3 Groundwater Sampling

After purging, groundwater was sampled at each of the eight wells using dedicated tubing and a WaTerra inertial pump, or a disposable bailer. Sample containers were sealed, labeled, stored in a cooler and transported under chain-of-custody protocol to Kiff Analytical LLC (Kiff), a state-certified analytical laboratory in Davis, California. Groundwater analytical results and chain-of-custody documentation are presented in Appendix C.

4.0 MONITORING RESULTS

4.1 Separate-Phase Hydrocarbon Monitoring

The wells were monitored for the presence of SPH using a disposable bailer and/or interface probe. SPHs were not detected in any wells during this monitoring event. In fact, no SPHs have been detected at the site since the observation of sheen in June 2006 (see Table 2).

4.2 Groundwater Elevation and Hydraulic Gradient

On June 2, 2009, the depth to groundwater beneath the site ranged from 15.46 (MW-8) to 22.70 (MW-5) feet bgs (Table 2). Correspondingly, groundwater elevations in the site wells ranged from 41.60 feet above msl in well MW-8 to 45.21 feet above msl in well MW-2 (Figure 2); these depth to groundwater measurements mark a decline in water levels by approximately 1 foot in most wells relative to the previous quarter. Using the results from the 2nd Quarter 2009 monitoring event, the hydraulic gradient is estimated at 0.02 ft/ft, with a general flow direction away from the residual source area toward the southeast (see Figure 2).

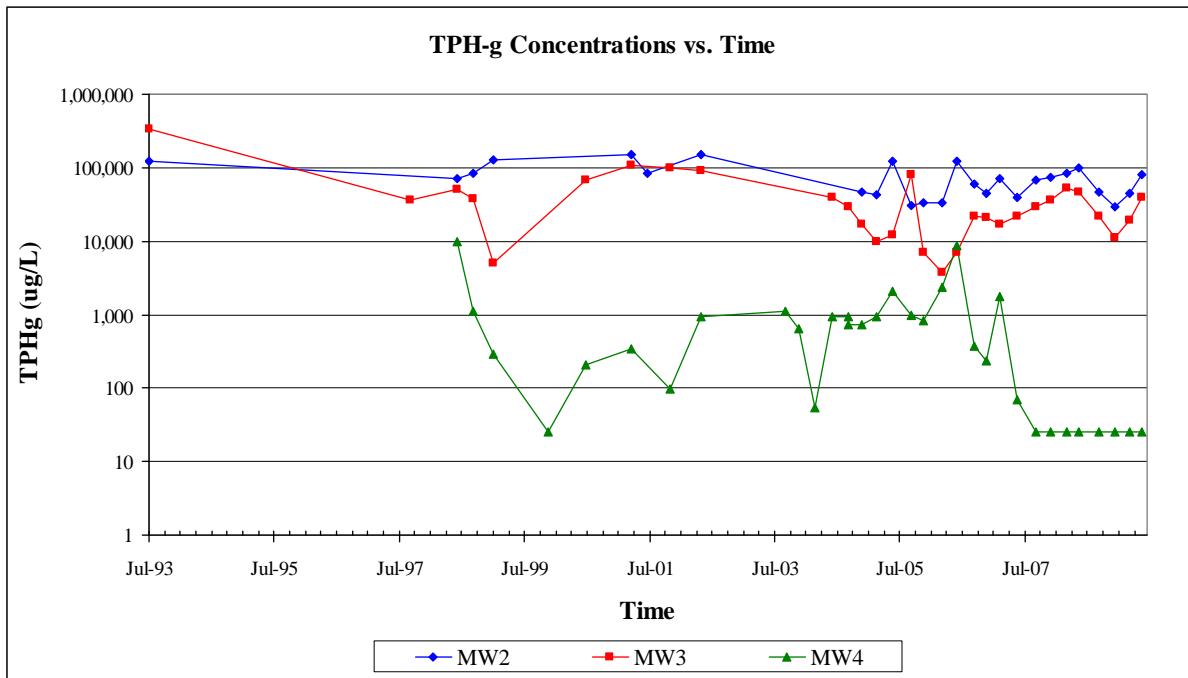
4.3 Groundwater Analytical Results

On June 2, 2009, groundwater samples were collected from MW-1 through MW-8 and analyzed by Kiff for TPH-g, BTEX, and MTBE by EPA Method 8260B and for TPH-d and TPH-mo by modified EPA Method 8015. Analytical results for this event are presented on Figure 3, and historical results, including field parameters such as DO, are presented in Table 2. Copies of the chain-of-custody and laboratory analytical reports for the groundwater samples are presented in Appendix C. Laboratory analytical results are summarized below:

- TPH-g was detected in samples collected from well MW-2 at 80,000 µg/L, and MW-3 at 39,000 µg/L. TPH-g remained below the detection limit of 50 µg/L in all six other site wells.
- Benzene was detected in the samples collected from well MW-2 at 680 µg/L, MW-3 at 2,800 µg/L, and MW-4 at 0.64 µg/L. Benzene was below the detection limit of 0.5 µg/L in all five other site wells.
- Toluene was detected at 3,100 µg/L in MW-2 and 6,800 µg/L in MW-3, but remained below the detection limit of 0.50 µg/L in all six other site wells.
- Ethylbenzene was detected at 1,200 µg/L in MW-2 and 1,300 µg/L in MW-3, but remained below the detection limit of 0.50 µg/L in all six other site wells.
- Total xylenes were detected at 10,000 µg/L in MW-2 and 5,600 µg/L in MW-3, but remained below the detection limit of 0.50 µg/L in all six other site wells.

- MTBE was detected in the samples collected from well MW-2 at 330 µg/L, MW-3 at 240 µg/L, MW-4 at 320 µg/L, and MW-6 at 59 µg/L. MTBE remained below the detection limit of 0.5 µg/L at MW-1, MW-5, MW-7, and MW-8.
- Tert-butanol (TBA) was detected at 180 µg/L in MW-2 and 180 ug/L in MW-3, but remained below the detection limit of 5.0 µg/L in all other site wells.
- TPH-d was not detected in groundwater samples collected from any of the eight wells this quarter, although detection limits in samples from wells MW-2 and MW-3 were elevated due to interference from gasoline-range hydrocarbons (see Appendix C).
- TPH-mo was detected at a concentration of 480 ug/L in MW-2, but remained below the detection limit of 100 µg/L in all other site wells.

The figure below depicts TPH-g concentration trends for wells MW-2 and MW-3 located within the residual source area, and MW-4 located immediately downgradient of this location.



As indicated on the graph, TPH-g concentrations have increased in wells MW-2 and MW-3 relative to those in the 4th quarter 2008 and 1st quarter 2009 events. Specifically, at MW-2, TPH-g has increased from 29,000 µg/L to 80,000 µg/L over this time frame, while TPH-g concentrations at MW-3 have increased from 11,000 µg/L to 39,000 µg/L between the 4th quarter 2008 and 2nd quarter 2009 events; however, worth noting is that these 2nd quarter 2009 concentrations in MW-2 and MW-3 are lower than the 98,000 ug/L and 47,000 ug/L, reported in these wells, respectively, during the 2nd quarter 2008. These declines have

occurred while groundwater level elevations have risen to approximately the same elevations as those measured in the June 2008 monitoring event.

Moreover, as shown on Table 2, benzene concentrations for both wells exhibit a similar trend to TPH-g concentrations, increasing in the last two quarters but when compared to data from June 2008, they have declined. These observations suggests that natural attenuation within the residual source area is occurring and is consistent with suppression of DO levels in both MW-2 and MW-3 (see Table 2) compared to wells that are not impacted or are less impacted by hydrocarbons (e.g., MW-1, MW-5, MW-7- see Table 2). This finding is consistent with the proposed pilot testing of iSOC technology in the IRAP (LRM, 2008d), which would significantly increase the DO levels in the residual source area and help enhance aerobic biodegradation of hydrocarbons at the location which they are most concentrated.

Away from the residual source area, TPH-g levels in MW-4 also continued their observed decline over time and remain below detection limits over the past several rounds of monitoring (see above graph). Data from wells MW-5 and MW-6 also indicate the general absence of TPH-g and petroleum hydrocarbon compounds above detection limits over the past several years, with recent detections of TPH-g and benzene declining to non-detect levels in the 2nd Quarter of 2009. Also worth noting is that cross-gradient well MW-7 and the most downgradient onsite well MW-8 remained below detection limits for all compounds analyzed.

In summary, in the absence of SPHs over the past several years, petroleum hydrocarbon concentrations within the residual source area wells have begun to decline over time. Specifically, when water levels are at lower elevations (e.g. during 3rd and 4th quarter events), hydrocarbon concentrations in the residual source area decline dramatically. Upon recovery of water levels in the 1st quarter and 2nd quarter events, TPH-g and benzene concentrations rebound; however, a comparison of 2nd quarter data for 2008 and 2009 from within the residual source area indicates an overall declining trend. Importantly, away from the residual source area, hydrocarbon detections in wells remain largely undetected, with sporadic detections over time typically well below Environmental Screening Levels (ESLs) for groundwater used as a drinking water resource (Regional Water Quality Control Board San Francisco Bay Region, 2008). Accordingly, the hydrocarbon plume is largely confined to within the site boundaries and is stable. To the extent that higher levels of hydrocarbons have been detected in localized, depth-discrete grab groundwater samples within the residual source area (LRM, 2008a), proposed pilot testing activities for enhancing degradation of hydrocarbons within the residual source area (via an IRAP) are pending final approval by the ACHCSA.

5.0 PLANNED ACTIVITIES

5.1 Additional Investigation/Remediation Activities

As previously indicated, LRM has submitted a workplan for installation of an additional monitoring well in support of the planned iSOC pilot testing. This workplan remains under ACHCSA review. Once approved, LRM will install the proposed monitoring well and initiate pilot testing activities.

5.2 Planned Monitoring Activities

Quarterly monitoring per the ACHCSA-approved plan will continue, with the next round scheduled for September 2009.

6.0 REFERENCES

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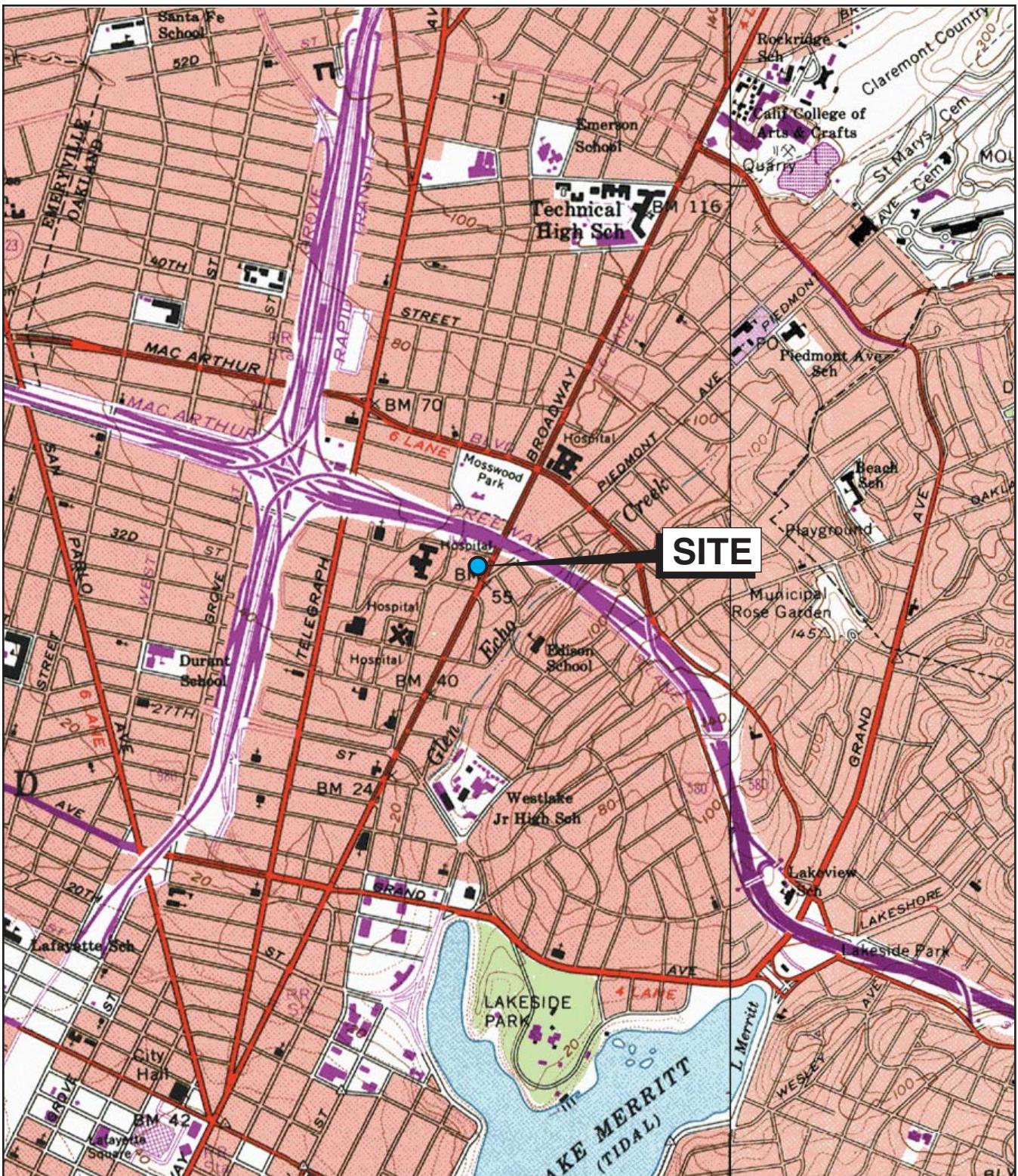
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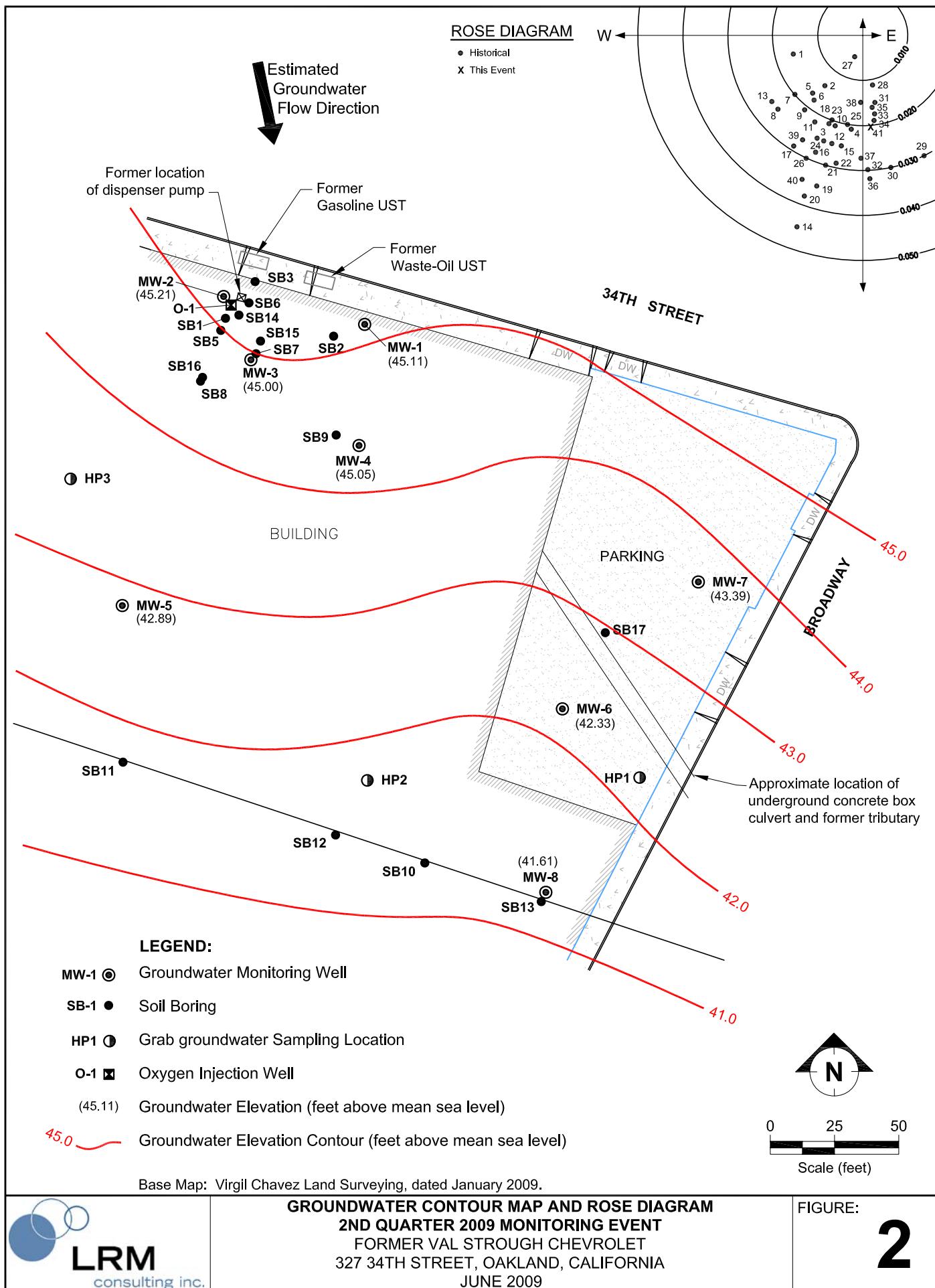
FIGURES

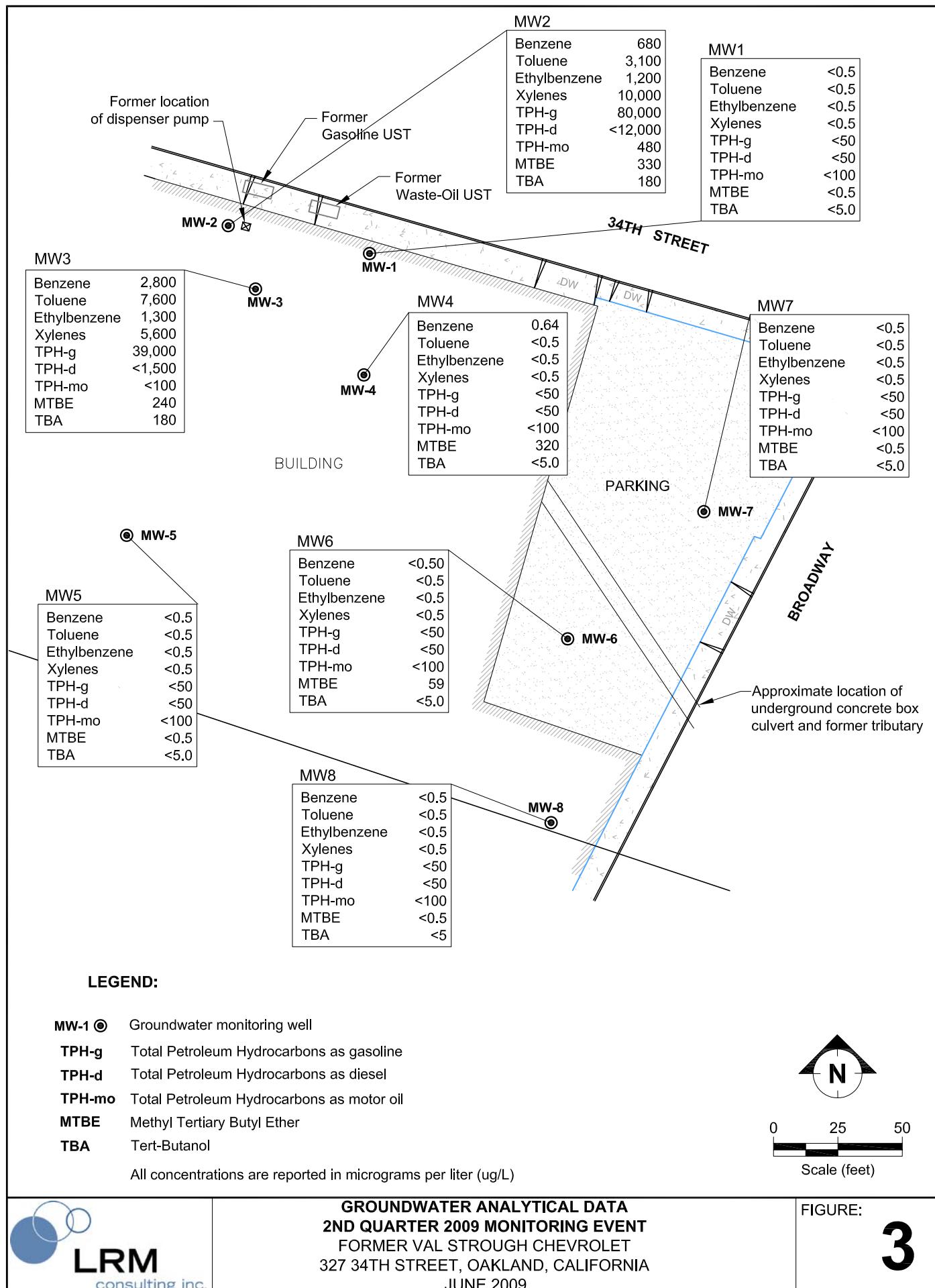


Base map: Maptech Inc., 2001



0 2,000
Scale (feet)





TABLES

TABLE 1 WELL CONSTRUCTION DETAILS
FORMER VAL STROUGH CHEVROLET, 327 34th STREET OAKLAND, CALIFORNIA

Well ID	Well Installation Date	Top-of-Casing Elevation* (feet)	Casing Material	Total Depth of Borehole (ft bgs)	Casing Diameter (inches)	Screened Interval (ft bgs)	Slot Size (inches)	Filter Pack Interval (ft bgs)	Filter Pack Material
MW1	07/19/93	64.71	PVC	32	2	17-32	0.020	15-32	Gravel Pack
MW2	07/20/93	65.71	PVC	33	2	18-33	0.020	16-33	Gravel Pack
MW3	07/20/93	65.7	PVC	34	2	18-34	0.020	16-34	Gravel Pack
MW4	06/26/98	64.37	PVC	31	2	15-31	0.020	13-31.5	Lonestar #3 Sand
MW5	06/26/98	65.59	PVC	31	2	15-31	0.020	13-31.5	Lonestar #3 Sand
MW6	07/17/00	59.60	PVC	31.5	2	10-30	0.020	8-30	Lonestar #3 Sand
MW7	07/17/00	59.49	PVC	36.5	2	15-35	0.020	13-35	Lonestar #3 Sand
MW8	12/17/09	57.07	PVC	26	1	11-26	0.010	9-26	#2/12 Sand

* Elevations Based on Survey Conducted in 1st Quarter 2009 relative to NAVD88 datum.

PVC Polyvinyl chloride.

ft bgs Feet below ground surface.

TABLE 2 CUMULATIVE GROUNDWATER ELEVATION AND ANALYTICAL DATA
FORMER VAL STRUTH CHEVROLET, 327 34th STREET OAKLAND, CALIFORNIA

Well Number	Date	Casing Elevation	Depth to Water	GW Elevation	SPH Thickness	Concentration ($\mu\text{g/L}$)								Concentration (mg/L)													
		(feet)	(feet)	(feet)	(feet)	Benzene	Toluene	Ethylbenzene	Total Xylenes	TPH-g	TPH-d	TPH-mo	MTBE	TBA	CO ₂ (lab)	DO (field)	ORP (mv) (field)	pH (field)	Fe(II)	Mn	SO ₄	N-NH ₃	N-NO ₂	o-PO ₄			
MW1	07/27/93	100.00	a	20.79	79.21	0.00	<0.50	<0.50	<0.50	<0.50	<50	<50	--	--	--	--	--	--	--	--	--	--	--	--			
MW1	10/02/97	100.00	a	21.22	78.78	0.00	<0.50	<0.50	<0.50	<0.50	<50	--	--	<2.0	--	--	--	--	--	--	--	--	--	--			
MW1	06/30/98	100.00	a	18.21	81.79	0.00	<0.50	<0.50	2.1	0.6	84	--	--	2.1	--	204	5	--	6.16	0.15	0.046	55	<0.10	<0.10	2		
MW1	07/29/98	100.00	a	18.74	81.26	0.00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--			
MW1	08/26/98	100.00	a	19.28	80.72	0.00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--			
MW1	10/01/98	100.00	a	19.93	80.07	0.00	<1.0	<1.0	<1.0	<1.0	<50	--	--	<2.0	--	192	3.6	--	6.49	--	--	--	--	--	--		
MW1	10/30/98	100.00	a	20.22	79.78	0.00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
MW1	11/30/98	100.00	a	19.99	80.01	0.00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
MW1	12/28/98	100.00	a	19.81	80.19	0.00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
MW1	01/25/99	100.00	a	19.62	80.38	0.00	<1.0	<1.0	<1.0	<1.0	<50	--	--	<2.0	--	389	3.4	--	6.72	--	--	--	--	--	--	--	
MW1	02/26/99	100.00	a	17.18	82.82	0.00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
MW1	03/24/99	100.00	a	17.28	82.72	0.00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
MW1	05/12/99	100.00	a	17.91	82.09	0.00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
MW1	12/15/99	100.00	a	21.01	78.99	0.00	<0.50	<0.50	<0.50	<0.50	<50	--	--	<0.50	--	--	3.31	--	6.52	--	--	--	--	--	--	--	
MW1	03/20/00	100.00	a	16.25	83.75	0.00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
MW1	07/20/00	100.00	a	19.63	80.37	0.00	<0.50	<0.50	<0.50	<0.50	<50	<50	<300	3.4	--	120	7.37	--	6.66	0.13	<0.01	54	<0.10	3.4	<0.2	--	
MW1	10/11/00	100.00	a	20.80	79.20	0.00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
MW1	04/10-11/01	100.00	a	18.81	81.19	0.00	<0.50	<0.50	<0.50	<0.50	<50	<50	<300	1.2	--	117	NR	--	NR	<0.10	0.045	57	<0.10	6.6	0.15	--	
MW1	07/10/01	100.00	a	20.51	79.49	0.00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
MW1	11/20/01	64.69	b	21.36	43.33	0.00	<0.50	1.3	<0.50	0.81	<50	<50	<300	<2.0	--	--	0.65	--	6.47	0.32	1.8	63	<0.10	--	<0.20	--	
MW1	02/19/02	64.69	b	18.95	45.74	0.00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
MW1	05/21/02	64.69	b	19.82	44.87	0.00	<0.50	<0.50	<0.50	<0.50	<50	<50	<300	<2.0	--	120	0.96	--	6.25	<0.10	0.5	58	<0.10	5.5	<0.20	--	
MW1	06/27/03	64.69	b	19.93	44.76	0.00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
MW1	09/29/03	64.69	b	21.24	43.45	0.00	<0.50	<0.50	<0.50	<1.0	<50	<50	<500	<0.50	--	--	--	--	--	--	--	--	--	--	--		
MW1	12/12/03	64.69	b	21.27	43.42	0.00	<0.50	<0.50	<0.50	1.1	<50	58	<500	<0.50	--	--	--	--	--	--	--	--	--	--	--		
MW1	03/15/04	64.69	b	18.18	46.51	0.00	<0.50	<0.50	<0.50	<1.0	<50	<50	<500	<0.50	--	--	0.14	--	--	--	--	--	--	--	--	--	
MW1	06/24/04	64.69	b	20.48	44.21	0.00	<0.50	<0.50	<0.50	<1.0	<50	<50	<500	<0.50	--	--	0.15	--	--	--	--	--	--	--	--	--	
MW1	09/29/04	64.69	b	21.37	43.32	0.00	<0.50	0.51	<0.50	<1.0	<50	<50	<500	<0.50	--	--	1.01	--	6.42	--	--	--	--	--	--	--	
MW1	12/13/04	64.69	b	20.63	44.06	0.00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
MW1	03/14/05	64.69	b	18.69	46.00	0.00	<0.50	<0.50	<1.0	<50	73	<500	<0.50	--	--	1.96	--	6.04	--	--	--	--	--	--	--	--	
MW1	06/15/05	64.69	b	20.32	44.37	0.00	--	--	--	--	--	--	--	--	--	--	1.84	317.4	6.43	--	--	--	--	--	--	--	
MW1	09/26/05	64.69	b	22.10	42.59	0.00	<0.50	<0.50	<0.50	<1.0	<50	<50	<500	<0.50	--	--	--	--	--	--	--	--	--	--	--	--	
MW1	12/12/05	64.69	b	22.39	42.30	0.00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
MW1	03/29/06	64.69	b	15.24	49.45	0.00	<0.50	<0.50	<0.50	<0.50	<50	<50	<100	74	--	--	1.57	--	6.73	--	--	--	--	--	--	--	
MW1	06/19/06	64.69	b	18.27	46.42	0.00	--	--	--	--	--	--	--	--	--	--	--	0.43	--	6.40	--	--	--	--	--	--	
MW1	09/29/06	64.69	b	20.06	44.63	0.00	<0.50	<0.50	<0.50	<0.50	<50	<50	<100	7.9	--	--	0.38	--	6.39	--	--	--	--	--	--	--	
MW1	12/12/06	64.69	b	20.32	44.37	0.00	<0.50	<0.50	<0.50	<0.50	<50	<50	<100	9.4	--	--	0.86	--	6.39	--	--	--	--	--	--	--	
MW1	03/01/07	64.69	b	18.68	46.01	0.00	<0.50	<0.50	<0.50	<0.50	<50	<50	<100	3.5	--	--	1.01	--	16.87	--	6.40	--	--	--	--	--	--
MW1	06/12/07	64.69	b	20.28	44.41	0.00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
MW1	09/25/07	64.69	b	21.37	43.32	0.00	<0.50	<0.50	<0.50	<0.50	<50	<50	<100	1.8	--	--	--	--	--	--	--	--	--	--	--	--	
MW1	12/20/07	64.69	b	21.48	43.21	0.00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
MW1	03/26/08	64.69	b	20.98	43.71	0.00	<0.50	<0.50	<0.50	<0.50	<50	<50	<100	<0.50	--	--	3.1	71.10	6.11	--	--	--	--	--	--	--	
MW1	06/03/08	64.69	b	20.70	43.99	0.00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
MW1	09/25/08	64.69	b	22.30	42.39	0.00	<0.50	<0.50	<0.50	<0.50	<50	<50	<100	0.57	<5.0	--	2.9	46.00	6.00	--	--	--	--	--	--	--	
MW1	12/29/08	64.69	b	21.77	42.92	0.00	<0.50	<0.50	<0.50	<0.50	<50	<50	<100	<0.50	<5.0	--	3.4	119.00	6.20	--	--	--	--	--	--	--	
MW1	03/24/09	64.71	I	18.68	46.03	0.00	<0.50	<0.50	<0.50	<0.50	<50	<50	<100	<0.50	<5.0	--	1.2	97.00	6.50	--	--	--	--	--	--	--	
MW1	06/02/09	64.71	I	19.60	45.11	0.00	<0.50	<0.50	<0.50	<0.50	<50	<50	<100	<0.50	<5.0	--	1.3	232.00	5.50	--	--	--	--	--	--	--	
MW2	07/27/93	101.27	a	22.10	79.17	0.00	10,000	27,000	2,900	20,000	120,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW2	10/02/97	101.27	a	22.91	78.36	0.43	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	
MW2	06/30/98	101.27	a	19.69	81.58	0.45	7,300	18,000	2,500	15,600	72,000	--	--	5,500	--	185	2.2	--	5.98	--	--	--	--	--	--	--	
MW2	07/29/98	101.27	a	20.11	81.16	0.29	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
MW2	08/26/98	101.27	a	20.54	80.73	0.08	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
MW2	10/01/98	101.27	a	21.52	79.75	0.42	6,400	17,000	2,600	17,000	84,000	--	--	2,000	--	--	2.7	--	6.47	--	--	--	--	--	--	--	
MW2	10/30/98	101.27	a	21.54	79.7																						

TABLE 2 CUMULATIVE GROUNDWATER ELEVATION AND ANALYTICAL DATA
FORMER VAL STROUGH CHEVROLET, 327 34TH STREET OAKLAND, CALIFORNIA

TABLE 2 CUMULATIVE GROUNDWATER ELEVATION AND ANALYTICAL DATA
FORMER VAL STRUTH CHEVROLET, 327 34th STREET OAKLAND, CALIFORNIA

Well Number	Date	Casing Elevation	Depth to Water	GW Elevation	SPH Thickness	Concentration ($\mu\text{g/L}$)										Concentration (mg/L)										
		(feet)	(feet)	(feet)	(feet)	Benzene	Toluene	Ethylbenzene	Total Xylenes	TPH-g	TPH-d	TPH-mo	MTBE	TBA	CO ₂ (lab)	DO (field)	ORP (mv) (field)	pH (field)	Fe(II)	Mn	SO ₄	N-NH ₃	N-NO ₂	o-PO ₄		
MW3	09/29/03	65.99	b	22.79	43.20	sheen	*	*	*	*	*	*	*	*	--	*	*	*	*	*	*	*	*	*	*	*
MW3 ^a	12/12/03	65.99	b	22.73	43.27	0.01	*	*	*	*	*	*	*	*	--	*	*	*	*	*	*	*	*	*	*	
MW3 ^a	03/15/04	65.99	b	19.32	46.67	sheen	*	*	*	*	*	*	*	*	--	*	*	*	*	*	*	*	*	*	*	
MW3	06/24/04	65.99	b	21.99	44.00	0.00	3,400	7,700	1,000	4,800	39,000	1,700	<500	1,100	--	--	0.07	--	--	--	--	--	--	--	--	
MW3	09/29/04	65.99	b	22.54	43.45	0.00	2,900	6,700	980	4,300	29,000	2,200	<500	1,100	--	--	0.80	--	6.42	--	--	--	--	--	--	
MW3	12/13/04	65.99	b	22.06	43.93	0.00	1,700	2,900	790	3,400	17,000	1,300	<500	490	--	--	0.16	--	6.7	--	--	--	--	--	--	
MW3 ^j	03/14/05	65.99	b	24.00	41.99	0.00	680	1,700	380	1,600	10,000	670	<500	67	--	--	--	--	--	--	--	--	--	--	--	
MW3	06/15/05	65.99	b	21.13	44.86	0.00	260	960	330	1,400	12,000	1,200	<500	31	--	--	1.93	-150.4	--	--	--	--	--	--	--	
MW3	07/18/05	65.99	b	NM	NM	1,000	5,600	1,100	4,300	23,000	1,700	--	81	--	--	--	--	--	--	--	--	--	--	--	--	
MW3	09/26/05	65.99	b	22.92	43.07	0.00	4,000	17,000	1,900	17,000	79,000	5,100	540	270	--	--	--	--	--	--	--	--	--	--	--	
MW3	12/12/05	65.99	b	23.30	42.69	0.00	200	710	450	1,400	7,000	550	<500	<10	--	--	--	--	--	--	--	--	--	--	--	
MW3	03/29/06	65.99	b	15.70	50.29	0.00	110	300	130	490	3,800	<200	<100	13	--	--	1.23	--	6.89	--	--	--	--	--	--	
MW3	06/19/06	65.99	b	19.11	46.88	0.00	160	500	320	840	7,000	<300	<100	3.1	--	--	2.30	--	6.40	--	--	--	--	--	--	
MW3	09/29/06	65.99	b	21.15	44.84	0.00	1,300	2,300	720	2,900	22,000	<1500	<100	110	--	--	1.05	--	6.78	--	--	--	--	--	--	
MW3	12/12/06	65.99	b	21.38	44.61	0.00	1,400	2,200	670	2,600	21,000	<1500	<100	130	--	--	0.6	--	6.72	--	--	--	--	--	--	
MW3	03/01/07	65.99	b	19.50	46.49	0.00	1,100	2,500	510	2,200	17,000	<600	<100	51	--	--	1.11	--	6.76	--	--	--	--	--	--	
MW3	06/12/07	65.99	b	21.00	44.99	0.00	1,800	4,000	800	3,300	22,000	<1500	<100	150	--	--	0.97	--	6.74	--	--	--	--	--	--	
MW3	09/25/07	65.99	b	22.59	43.40	0.00	2,400	5,000	1,000	4,600	29,000	<500	<100	220	--	--	1.62	--	6.63	--	--	--	--	--	--	
MW3	12/20/07	65.99	b	22.59	43.40	0.00	2,400	4,900	1,100	4,700	36,000	<2000	<100	240	--	--	0.9	--	6.62	--	--	--	--	--	--	
MW3	03/26/08	65.99	b	22.13	43.86	0.00	4,500	11,000	1,700	7,800	54,000	<1500	<100	340	--	--	2.2	3.1	6.35	--	--	--	--	--	--	
MW3	06/03/08	65.99	b	21.81	44.18	0.00	3,900	8,700	1,500	7,000	47,000	<1500	<100	470	--	--	0.88	-29.2	6.64	--	--	--	--	--	--	
MW3	09/25/08	65.99	b	23.30	42.69	0.00	1,600	3,700	700	3,300	22,000	<3000	<100	220	180	--	1.5	-176	6.00	--	--	--	--	--	--	
MW3	12/29/08	65.99	b	22.92	43.07	0.00	310	910	320	1,300	11,000	<1500	<100	35	23	--	1.6	-112	6.50	--	--	--	--	--	--	
MW3	03/24/09	65.70	1	19.43	46.27	0.00	1,400	4,200	600	2,500	19,000	<1,000	<100	160	60	--	0.5	-129	7.00	--	--	--	--	--	--	
MW3	06/02/09	65.70	1	20.70	45.00	0.00	2,800	7,600	1,300	5,600	39,000	<1,500	<100	240	180	--	1.1	-67	5.80	--	--	--	--	--	--	
MW4	06/30/98	98.65	a	16.93	81.72	0.00	2,200	930	850	2,100	10,000	--	--	1,800	--	222	2.6	--	6.18	0.14	4.3	14	0.8	0.8	1.5	
MW4	07/29/98	98.65	a	17.48	81.17	0.00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW4	08/26/98	98.65	a	18.65	80.00	0.00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW4	10/01/98	98.65	a	18.74	79.91	0.00	570	46	130	36	1,100	--	--	1,300	--	320	3.4	--	<0.001	--	--	--	--	--	--	--
MW4	10/30/98	98.65	a	19.02	79.63	0.00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW4	11/30/98	98.65	a	18.74	79.91	0.00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW4	12/28/98	98.65	a	18.60	80.05	0.00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW4	01/25-26/99	98.65	a	18.32	80.33	0.00	230	<8.3	<8.3	<8.3	290	--	--	1,300	--	475	6.7	--	7	--	--	--	--	--	--	--
MW4	02/26/99	98.65	a	15.81	82.84	0.00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW4	03/24/99	98.65	a	16.01	82.64	0.00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW4	05/12/99	98.65	a	17.71	80.94	0.00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW4	12/15-16/99	98.65	a	19.83	78.82	0.00	5.8	<0.50	<0.50	<0.50	<50	--	--	1,400	--	--	1.75	--	7.02	--	--	--	--	--	--	--
MW4	03/20/00	98.65	a	14.9	83.75	0.00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW4	07/20/00	98.65	a	18.38	80.27	0.00	91	4.6	19	12.9	210	<50	<300	1,500	--	126	3.88	--	6.67	9.5	5.3	11	<0.10	0.04	<0.20	
MW4	10/11/00	98.65	a	19.61	79.04	0.00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW4	04/10-11/01	98.65	a	17.55	81.10	0.00	110	<5.0	<5.0	<5.0	350	<50	<300	1,100	--	107	NR	--	NR	0.8	6.3	10	<0.10	<0.05	<0.20	
MW4	07/10/01	98.65	a	19.34	79.31	0.00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW4	11/20/01	63.35	b	20.16	43.19	0.00	<2.5	4	<2.5	3.7	96	<50	<300	2,500	--	130	0.83	--	6.51	1.6	10	11	<0.10	--	<0.20	
MW4	02/19/02	63.35	b	17.34	46.01	0.00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW4	05/21/02	63.35	b	18.57	44.78	0.00	340	5.7	70	<1.0	940	83	<300	1,600	--	150	1.65	--	6.32	3.1	8.4	9	<0.10	0.06	<0.20	
MW4	06/27/03	63.35	b	18.72	44.63	0.00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW4	09/29/03	63.35	b	20.11	43.24	0.00	<5.0	<5.0	<5.0	<10	1,100	<50	<500	1,700	--	--	--	--	--	--	--	--	--	--	--	
MW4	12/12/03	63.35	b	20.06	43.29	0.00	<13	<13	<13	<25	<1,300	<50	<500	1,000	--	--	--	--	--	--	--	--	--	--	--	
MW4	03/15/04	63.35	b	16.89	46.46	0.00	1.5	<0.50	<0.50	<1.0	54	<50	<500	41	--	--	0.16	--	--	--	--	--	--	--	--	
MW4	06/24/04	63.35	b	19.31	44.04	0.00	69	<5.0	<5.0	<10	920	<50	<500	1,100	--	--	0.15	--	--	--	--	--	--	--	--	
MW4	09/29/04	63.35	b	20.20	43.15	0.00	<5.0	<5.0	<5.0	<10	940	<50	<500	1,200	--	--	0.13	--	6.63	--	--	--	--	--	--	
MW4	12/13/04	**	b	20.44	NC	0.00	<5.0	<5.0	<5.0	<10	740	<50	<500	860	--	--	0.58	--	6.84	--	--	--	--	--	--	
MW4	03/14/05	**	b	18.30	NC	0.00	20	<5.0	<5.0	<10	930	<50	<500	930	--	--	0.28	--	6.34	--	--	--	--	--	--	
MW4	06/15/05	**	b	20.03																						

TABLE 2 CUMULATIVE GROUNDWATER ELEVATION AND ANALYTICAL DATA
FORMER VAL STRUTH CHEVROLET, 327 34th STREET OAKLAND, CALIFORNIA

Well Number	Date	Casing Elevation	Depth to Water	GW Elevation	SPH Thickness	Concentration ($\mu\text{g/L}$)									Concentration (mg/L)											
		(feet)	(feet)	(feet)	(feet)	Benzene	Toluene	Ethylbenzene	Total Xylenes	TPH-g	TPH-d	TPH-mo	MTBE	TBA	CO ₂ (lab)	DO (field)	ORP (mv) (field)	pH (field)	Fe(II)	Mn	SO ₄	N-NH ₃	N-NO ₂	o-PO ₄		
MW4	09/29/06	63.35	b	19.85	43.50	0.00	18.0	2.6	1.5	3.5	370.0	<50	<100	180	--	--	0.25	--	6.66	--	--	--	--	--	--	
MW4	12/12/06	63.35	b	20.03	43.32	0.00	11.0	0.77	<0.5	<0.5	230.0	<50	<100	260	--	--	0.90	--	6.61	--	--	--	--	--	--	
MW4	03/01/07	63.35	b	18.33	45.02	0.00	63.0	7.10	40.0	190.0	1,800.0	<50	<100	130	--	--	0.76	--	6.6	--	--	--	--	--	--	
MW4	06/12/07	63.35	b	19.70	43.65	0.00	9.3	<0.5	<0.5	<0.5	70.0	<50	<100	150	--	--	1.06	--	6.9	--	--	--	--	--	--	
MW4	09/25/07	63.35	b	21.27	42.08	0.00	<0.5	<0.5	<0.5	<0.5	<50	<50	<100	300	--	--	6.67	--	6.59	--	--	--	--	--	--	
MW4	12/20/07	63.35	b	21.30	42.05	0.00	<0.5	<0.5	<0.5	<0.5	<50	<50	<100	370	--	--	1.45	--	6.57	--	--	--	--	--	--	
MW4	03/26/08	63.35	b	20.89	42.46	0.00	<0.5	<0.5	<0.5	<0.5	<50	<50	<100	260	--	--	4.56	65	6.35	--	--	--	--	--	--	
MW4	06/03/08	63.35	b	20.51	42.84	0.00	<0.5	<0.5	<0.5	<0.5	<50	<50	<100	190	--	--	1.34	101.3	6.49	--	--	--	--	--	--	
MW4	09/25/08	63.35	b	22.03	41.32	0.00	<0.5	<0.5	<0.5	<0.5	<50	<50	<100	380	<5.0	--	2.2	-134	6.1	--	--	--	--	--	--	
MW4	12/29/08	63.35	b	21.62	41.73	0.00	<0.5	<0.5	<0.5	<0.5	<50	<50	<100	230	<5.0	--	2.9	-7	6.4	--	--	--	--	--	--	
MW4	03/24/09	64.37	1	18.38	45.99	0.00	<0.5	<0.5	<0.5	<0.5	<50	<50	<100	370	<5.0	--	0.9	33	6.8	--	--	--	--	--	--	
MW4	06/02/09	64.37	1	19.32	45.05	0.00	0.64	<0.5	<0.5	<0.5	<50	<50	<100	320	<5.0	--	1.1	78	5.73	--	--	--	--	--	--	--
MW5	06/30/98	100.9	a	20.60	80.30	0.00	<0.50	<0.50	<0.50	<0.50	<50	--	--	23	--	220	4.3	--	6.1	--	--	--	--	--	--	
MW5	07/29/98	100.9	a	21.52	79.38	0.00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
MW5	08/26/98	100.9	a	22.21	78.69	0.00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
MW5	10/01/98	100.9	a	22.95	77.95	0.00	<1.0	<1.0	<1.0	<1.0	<50	--	--	<2.0	--	256	4.8	--	6.71	--	--	--	--	--	--	
MW5	10/30/98	100.9	a	23.23	77.67	0.00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
MW5	11/30/98	100.9	a	23.12	77.78	0.00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
MW5	12/28/98	100.9	a	23.18	77.72	0.00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
MW5	01/25-26/99	100.9	a	22.61	78.29	0.00	<1.0	<1.0	<1.0	<1.0	<50	--	--	<2.0	--	305	9.7	--	7.04	--	--	--	--	--	--	
MW5	02/26/99	100.9	a	19.78	81.12	0.00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
MW5	03/24/99	100.9	a	20.25	80.65	0.00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
MW5	05/12/99	100.9	a	21.06	79.84	0.00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
MW5	12/15-16/99	100.9	a	24.19	76.71	0.00	<0.50	<0.50	<0.50	<0.50	<50	--	--	<0.50	--	--	2.72	--	7.19	--	--	--	--	--	--	
MW5	03/20/00	100.9	a	19.15	81.75	0.00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
MW5	07/20/00	100.9	a	21.84	79.06	0.00	<0.50	0.98	<0.50	<0.50	<50	<50	<300	1.9	--	134	5.58	--	6.35	0.11	0.017	49	<0.10	3.9	<0.20	
MW5	10/11/00	100.9	a	23.4	77.50	0.00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
MW5	04/10-11/01	100.9	a	22.3	78.60	0.00	<0.50	2.6	<0.50	0.6	<50	<50	<300	1.5	--	183	66	--	NR	<0.10	0.042	45	<0.10	2.9	0.11	
MW5	07/10/01	100.9	a	23.64	77.26	0.00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
MW5	11/20/01	65.59	b	24.65	40.94	0.00	0.83	12	1.2	11	140	860	2,500	10	--	^s 66	--	6.01	0.2	2.5	42	<0.10	--	<0.20		
MW5	02/19/02	65.59	b	22.37	43.22	0.00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
MW5	05/21/02	65.59	b	23.10	42.49	0.00	<0.50	<0.50	<0.50	<0.50	<50	2,200	<300	<2.0	--	140	66	--	6.3	<0.1	0.22	44	<0.10	3	<0.20	
MW5	06/27/03	65.59	b	23.07	42.52	0.00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
MW5	09/29/03	65.59	b	24.38	41.21	0.00	<0.50	0.52	7.1	35	100	<50	<500	1.4	--	--	--	--	--	--	--	--	--	--		
MW5	12/12/03	65.59	b	23.90	41.69	0.00	<0.50	<0.50	<0.50	<1	<50	<50	<500	1.5	--	--	--	--	--	--	--	--	--	--		
MW5	03/15/04	65.59	b	20.82	44.77	0.00	<0.50	<0.50	<0.50	<1.0	<50	<50	<500	<0.50	--	--	6.4	--	--	--	--	--	--	--		
MW5	06/24/04	65.59	b	23.57	42.02	0.00	<0.50	<0.50	<0.50	<1.0	<50	130	<500	0.79	--	--	5.56	--	--	--	--	--	--	--		
MW5	09/29/04	65.59	b	24.44	41.15	0.00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--			
MW5	12/13/04	65.59	b	23.87	41.72	0.00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--			
MW5	03/14/05	65.59	b	20.18	45.41	0.00	<0.50	1.3	1.5	8.6	82	<50	<500	<0.50	--	--	3.91	--	5.57	--	--	--	--	--		
MW5	06/15/05	65.59	b	12.96	52.63	0.00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--			
MW5	09/26/05	65.59	b	23.60	41.99	0.00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--			
MW5	12/12/05	65.59	b	23.84	41.75	0.00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--			
MW5	03/29/06	65.59	b	17.19	48.40	0.00	<0.50	<0.50	<0.50	<0.50	73	<50	<100	<0.50	--	--	2.3	--	6.3	--	--	--	--	--		
MW5	06/19/06	65.59	b	20.22	45.37	0.00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--			
MW5	09/29/06	65.59	b	22.80	42.79	0.00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--			
MW5	12/12/06	65.59	b	23.08	42.51	0.00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--			
MW5	03/01/07	65.59	b	21.02	44.57	0.00	<0.50	<0.50	<0.50	<0.50	54	<50	<100	<0.50	--	--	4.35	--	6.08	--	--	--	--	--		
MW5	06/12/07	65.59	b	22.78	42.81	0.00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--			
MW5	09/25/07	65.59	b	24.45	41.14	0.00	<0.50	1.5	<0.50	<0.50	<50	<50	<100	0.64	--	--	18.71	--	6.26	--	--	--	--	--		
MW5	12/20/07	65.59	b	24.52	41.07	0.00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--			
MW5	03/26/08	65.59	b	24.08	41.51	0.00	<0.50	1.5	<0.50	<0.50	<50	<50	<100	<0.5	--	--	7.93	88	5.86	--	--	--	--	--		
MW5	06/03/08	65.59	b	23.68	41.91	0.00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--			
MW5	09/25/08	65.59	b	25.00	40.59	0.00	<0.50	<0.50	<0.50	<0.50	<50	<50	<100	0.66	<5.0	--	2.3	-54	5.5	--	--	--	--	--		
MW5	12/29/08	65.59	b	24.92	40.67	0.00	<0.50	<0.50	<0.50	<0.50	71	<50	<100	<0.5	<5.0	--	4.8	167	6.1	--	--	--	--	--		
MW5	03/24/09	65.59	1	21.85	43.74	0.00	<0.5																			

TABLE 2 CUMULATIVE GROUNDWATER ELEVATION AND ANALYTICAL DATA
FORMER VAL STROUGH CHEVROLET, 327 34th STREET OAKLAND, CALIFORNIA

TABLE 2 CUMULATIVE GROUNDWATER ELEVATION AND ANALYTICAL DATA
FORMER VAL STRUTH CHEVROLET, 327 34th STREET OAKLAND, CALIFORNIA

Well Number	Date	Casing Elevation	Depth to Water	GW Elevation	SPH Thickness	Concentration ($\mu\text{g/L}$)								Concentration (mg/L)										
		(feet)	(feet)	(feet)	(feet)	Benzene	Toluene	Ethylbenzene	Total Xylenes	TPH-g	TPH-d	TPH-mo	MTBE	TBA	CO ₂ (lab)	DO (field)	ORP (mv) (field)	pH (field)	Fe(II)	Mn	SO ₄	N-NH ₃	N-NO ₃	o-PO ₄
MW7	09/25/08	59.47	b	17.07	42.40	0.00	<0.50	<0.50	<0.50	<50	<50	<100	<0.50	<5.0	--	1.5	-186	6.3	--	--	--	--	--	--
MW7	12/29/08	59.47	b	15.64	43.83	0.00	<0.50	<0.50	<0.50	<50	<50	<100	<0.50	<5.0	--	6.4	-50	6.9	--	--	--	--	--	--
MW7	03/24/09	59.49	1	14.57	44.92	0.00	<0.50	<0.50	<0.50	<50	<50	<100	<0.50	<5.0	--	1.7	-16	7.1	--	--	--	--	--	--
MW7	06/02/09	59.49	1	16.10	43.39	0.00	<0.50	<0.50	<0.50	<50	<50	<100	<0.50	<5.0	--	2.1	3	6.1	--	--	--	--	--	--
MW8	12/29/08	NS	b	15.71	NC	0.00	<0.50	0.64	<0.50	0.78	<50	<50	<100	1.5	<5.0	--	1.5	-3	6.6	--	--	--	--	--
MW8	03/24/09	57.07	1	16.08	40.99	0.00	<0.50	<0.50	<0.50	<50	<50	<100	<0.50	<5.0	--	1.8	-2	7.2	--	--	--	--	--	--
MW8	06/02/09	57.07	1	15.46	41.61	0.00	<0.50	<0.50	<0.50	<50	<50	<100	<0.50	<5.0	--	1.4	80	5.5	--	--	--	--	--	--

SPH Separate-phase hydrocarbons.

CO₂ Carbon dioxide.

DO Dissolved oxygen.

Fe(II) Ferrous iron.

Mn Manganese.

SO₄ Sulfate.

N-NH₃ Ammonia.

N-NO₃ Nitrate.

o-PO₄ Ortho-Phosphate.

GW Groundwater.

TPH-g Total Petroleum Hydrocarbons as gasoline.

TPH-d Total Petroleum Hydrocarbons as diesel.

TPH-mo Total Petroleum Hydrocarbons as motor oil.

MTBE Methyl tertiary butyl ether.

NC Not calculated.

NM Not measured.

NR Not reported.

NS Not yet surveyed

$\mu\text{g/L}$ Micrograms per liter.

mg/L Milligrams per liter.

* SPH present; not sampled.

** Well MW4 elevation modified due to site renovation activities. Not Surveyed.

-- Not analyzed or not sampled.

< Less than the laboratory reporting limits.

a Elevations are referenced to monitoring well MW1, with assumed datum of 100.00 feet.

b Elevations based on a survey conducted August 2002 and referenced benchmark with known elevation (NGVD 29) of 60.40 feet above mean sea level.

c Analysis not conducted due to broken sample containers.

d Hydrocarbon reported in the gasoline range does not match laboratory gasoline standard.

e Groundwater elevation in wells with LPH are corrected by multiplying the specific gravity of gasoline (0.69) by the LPH thickness and adding this value to the water elevation.

f Hydrocarbon reported is in the early diesel range, and does not match the laboratory diesel standard.

g Sample contained discrete peak in gasoline range and identified by lab as MTBE.

h Quantity of unknown hydrocarbon(s) in sample based on diesel.

i The concentration reported reflect(s) individual or discrete unidentified peaks not matching a typical fuel pattern.

j Depth to groundwater is based on the depth of the stingers.

k Quantity of unknown hydrocarbon(s) in sample based on mtor oil.

l Resurveyed Prior to 1st Quarter 2009 Measurements

TABLE 3 HISTORICAL GRAB GROUNDWATER ANALYTICAL DATA
FORMER VAL STROUGH CHEVROLET, 327 34th STREET OAKLAND, CALIFORNIA

Boring		Depth (feet)	Concentrations ($\mu\text{g/L}$)							
ID	Date		Benzene	Toluene	Ethyl-benzene	Total Xylenes	MTBE	TPH-g	TPH-d	TPH-mo
HP1	12/18/2003	26-30	<5.0	<5.0	<5.0	11	480	410	180	<500
HP3	12/18/2003	32-36	<0.50	<0.50	<0.50	<1.0	0.55	<50	75	<500
SB3	12/26/2007	24	0.75	28	35	180	0.59	1800	<1000	<100
SB3	12/26/2007	40	<0.50	1.1	5.3	33	1	240	<400	<100
SB4	12/26/2007	23	160	120	200	240	1.8	3500	<1500	<100
SB4	12/26/2007	40	250	1400	280	2000	3.2	9900	<1500	<100
SB5	12/26/2007	24	660	11000	4200	20000	34	110000	<100000	310
SB5	12/26/2007	40	74	1000	380	2400	31	13000	<3000	<100
SB6	12/26/2007	25	<0.5	6.6	3.6	27	1.2	210	<100	<100
SB6	12/26/2007	40	85	1500	620	6900	15	35000	<18000	<100
SB7	12/26/2007	40	120	1100	470	2900	7.9	20000	<6000	<100
SB8	12/26/2007	40	320	1300	920	3100	100	17000	<3000	<100
SB9	12/26/2007	34	<0.5	<0.5	<0.5	<0.5	92	<50	69	<100
SB10	12/26/2007	21.3	<0.5	<0.5	<0.5	<0.5	30	<50	2200	5000
SB11	12/26/2007	17	<0.5	<0.5	<0.5	<0.5	<50	<50	200	220
SB12	12/26/2007	20	<0.5	<0.5	<0.5	<0.5	43	67	950	1200
SB13	12/26/2007	26	<0.5	<0.5	<0.5	<0.5	160	<50	3800	6600

TPH-g Total Petroleum Hydrocarbons as gasoline.

TPH-d Total Petroleum Hydrocarbons as diesel.

TPH-mo Total Petroleum Hydrocarbons as motor oil.

< less than the laboratory reporting limits.

660 Bold values reflect maximum detected concentrations

TABLE 4 GROUNDWATER MONITORING SCHEDULE
FORMER VAL STROUGH CHEVROLET, 327 34th STREET OAKLAND, CALIFORNIA

Well Number	Groundwater Gauging Frequency	Groundwater Sampling and Analysis Frequency		
		BTEX and TPH-g	MTBE	TEPH
MW1	Q	S	S	S
MW2	Q	Q	Q	Q
MW3	Q	Q	Q	Q
MW4	Q	Q	Q	Q
MW5	Q	A	A	A
MW6	Q	S	S	S
MW7	Q	A	A	A
MW8	Q	A	A	A

Q = Quarterly.

S = Semiannual.

A = Annual.

BTEX = Benzene, toluene, ethylbenzene, total xylenes.

MTBE = Methyl tertiary butyl ether.

TPH-g = Total Petroleum Hydrocarbons as gasoline.

TEPH = Total Extractable Petroleum Hydrocarbons, includes TPH-diesel and TPH-motor oil.

APPENDIX A
PROTOCOLS FOR GROUNDWATER MONITORING



APPENDIX A

PROTOCOLS FOR GROUNDWATER MONITORING

GROUNDWATER GAUGING

Wells are opened prior to gauging to allow the groundwater level in the wells to equilibrate with atmospheric pressure. The depth to groundwater and depth to liquid-phase hydrocarbons, if present, are then measured to the nearest 0.01 feet using an electronic water level meter or optical interface probe. The measurements are made from a permanent reference point at the top of the well casing. If less than 1 foot of water is measured in a well, the water is bailed from the well and, if the well does not recover, the well is considered “functionally dry.” Wells with a sheen or measurable liquid-phase hydrocarbons are generally not purged or sampled.

WELL PURGING

After the wells are gauged, each well is purged of approximately 3 well casing volumes of water to provide representative groundwater samples for analysis. Field parameters of pH, temperature, and electrical conductance are measured during purging to ensure that these parameters have stabilized before groundwater in a well is sampled. Groundwater in each well is purged using an inertial pump (WaTerra), an electric submersible pump, or a bailer. After the well is purged, the water level is checked to ensure that the well has recharged to at least 80 percent of its original water level.

GROUNDWATER SAMPLING

After purging, groundwater in each well is sampled using dedicated tubing and an inertial pump (WaTerra) or a factory-cleaned disposable bailer. Samples from extraction wells are typically collected from sample ports associated with the groundwater remediation system. Samples collected for volatile organic analysis are placed in Teflon septum-sealed 40-milliliter glass vials. Samples collected for diesel analysis are placed in 1-liter amber glass bottles. Each sample bottle is labeled with the site name, well number, date, sampler’s initials, and preservative. The samples are placed in a cooler with ice for delivery to a state-certified laboratory. The information for each sample is entered on a chain-of-custody form prior to transport to the laboratory.

APPENDIX B

FIELD DOCUMENTS



Confluence Environmental, Inc.
3308 El Camino Ave, Suite 300 #148
Sacramento, CA 95821
916-760-7641 - main
916-473-8617 - fax
www.confluence-env.com

Chain of Custody

Page 1 of 1

Project Name: Former Strough Chevy - Oakland

Job Number: H1-090602

TAT: STANDARD 5 DAY 2 DAY 24 HOUR OTHER:

Lab: Kiff Address: 2795 2nd St, Suite 300, Davis CA 95616 Contact: Angelique Showman Phone/ Fax: 530-297-4800 x.127				Site Address: 327 34th St, Oakland California Global ID No.: T0600101644 Include EDF w/ Report: <u>Yes</u> <u>No</u> Consultant / PM: LRM / Merhdad Javaherian Phone / Fax: (415) 706-8935				Confluence PM: Jason Brown Phone / Fax: 916-760-7641 / 916-473-8617 Confluence Log Code: CESC Report to: Merhdad Javaherian Invoice to: Merhdad Javaherian					
Sample ID	Time	Date	Matrix	Laboratory No.	Preservative				Requested Analysis				Notes and Comments
					No. of Containers	Unpreserved	H ₂ SO ₄	HNO ₃	HCl	NaOH	TEPH Diesel & Motor Oil* (8015)	TEPH-G, BTEX (8260B)	
MW1	745	6/2	X		5		X			X X X X			
MW2	920		X		1		X			X X X X			
MW3	825		X				X			X X X X			
MW4	805		X				X			X < < X			
MW5	905		X				X			X > X X			
MW6	946		X				X			X < X <			
MW7	1005		X				X			X X X X			
MW8	1030		X		1		X			X < < X			
QCTB	-	6/2	X		2		X			X X X			
Sampler's Name: <u>B. Myers</u> Sampler's Company: Confluence Environmental Shipment Date: Shipment Method:				Relinquished By / Affiliation <u>Barber</u>				Date	Time	Accepted By / Affiliation <u>Osman Albor/Litt</u>		Date	Time
								06/09	1635			06/09	1635
Special Instructions: *Run TEPH w/ silica gel cleanup												Analytical	



Confluence Environmental, Inc.

Equipment Calibration Log

Notes/comments:

Well Maintenance Inspection Form

Client: Lkrt

Site: Fermer Steygh Chery

Date: 4/2/09

Job #: M1-090602

Technician: BM

Page of

Notes:



Repair codes: **rt**=retap/ bolts added or replaced **as**=annular seal repair.

 CONFIDENCE Environmental

3308 El Camino Ave. Suite 300 #148, Sacramento CA. 95821. 916-760-7641

Water Level Measurements

Job Number: 11-090602 Date: 6/2/09 Client: LPL

Site: Former Stough Chevy



Purging And Sampling Data Sheet

Job#: H1-090602	Sampler: B Myers	Client: LRM
Well ID: MW-1	Date: 6/2/09	Site: Former Strough Chevy, Oakland
Well diam: 1/4" 1" 2" 3" 4" 6" Other:	DTW: 19.60 Total Depth: 30.59	
Purge equip: ES - diam: Bladder disp bailer	Tubing: OD: New	Positive Air Displacement Ext. System
teflon bailer other:	Waterra	Dedicated NA
Purge method: 3-5 Case Volume	Micro/Low-Flow	Extraction Other:
Pump depth/ intake:	Multipliers: 1" = 0.04 2" = 0.16 3" = 0.37 4" = 0.65 5" = 1.02 6" = 1.47 Radius ² X 0.163	
(TD - DTW X Multiplier = 1 Volume)		80% Recovery (TD - DTW X 0.20 + DTW)

$$1 \text{ Volume} = 1.8 \quad \times 3 = 5.4 \quad (\text{Total Purge}) \quad 80\% = 21.80$$

Did well dewater? YES NO Total volume removed: 55 (gal / L)

Sample method: Disp Bailer Ded. Tubing New Tubing Ext. Port Other:

Sample date: 6/2/09 Sample time: 745 DTW at sample: —

Sample ID: 4w-1 Lab: Kiff Number of bottles: 5

Analysis: TPH-G, BTEX, MTBE, TBA, TEPH-D, TEPH-MO

更多資訊請上網查詢： www.taiwan.gov.tw

Equipment blank ID	@	Field blank ID	@
Duplicate ID:		Pre-purge DO:	Post purge DO:
Fe ²⁺ :		Pre-purge ORP:	Post purge ORP:
NAPL depth:	Volume of NAPL:	Volume removed:	ml



Purging And Sampling Data Sheet

Job#: H1-090602	Sampler:	B Myers	Client:	LRM
Well ID: 14W-2	Date: 6/2/09		Site:	Former Strough Chevy, Oakland
Well diam: 1/4" 1" 2" 3" 4" 6" Other:			DTW: 20.50	Total Depth: 31.74
Purge equip: ES - diam: Bladder Pump Waterra Positive Air Displacement Ext. System				
disp bailer teflon bailer other:		Tubing:	OD: New Dedicated NA	
Purge method: 3-5 Case Volume Micro/Low-Flow Extraction Other:				
Pump depth/ intake:	Multipliers: 1" = 0.04 2" = 0.16 3" = 0.37 4" = 0.65 5" = 1.02 6" = 1.47 Radius ² X 0.163			
(TD - DTW X Multiplier = 1 Volume	80% Recovery (TD - DTW X 0.20 + DTW)			

$$1 \text{ Volume} = 1.8 \times 3 = 5.4 \text{ (Total Purge)} \quad 80\% = 22.75$$

Did well dewater? YES NO Total volume removed: 5.5 (gal / L)

Sample method: Disp. Bailer Ded. Tubing New Tubing Ext. Port Other:

Sample date: 1/2/09 Sample time: 920 DTW at sample: —

Sample ID: Mut2 Lab: Kiff Number of bottles: 5

Analysis: TPH-G, BTEX, MTBE, TBA, TEPH-D, TEPH-MO

Page 11 of 12

Equipment blank ID	@	Field blank ID	@
Duplicate ID:		Pre-purge DO:	Post purge DO:
Fe2 ⁺ :		Pre-purge ORP:	Post purge ORP:
NAPL depth:	Volume of NAPL:	Volume removed:	ml



Purging And Sampling Data Sheet

Job#: A11-090602	Sampler: B Myers	Client: LRM
Well ID: HW-3	Date: 6/2/09	Site: Former Strough Chevy, Oakland
Well diam: 1/4" 1" 2" 3" 4" 6" Other:	DTW: 20.70 Total Depth: 31.88	
Purge equip: ES - diam: Bladder <input checked="" type="checkbox"/> Waterra Positive Air Displacement Ext. System		
<input checked="" type="checkbox"/> disp baller <input type="checkbox"/> teflon bailer <input type="checkbox"/> other:	Tubing:	OD: New Dedicated NA
Purge method: 3-5 Case Volume <input type="checkbox"/> Micro/Low-Flow <input type="checkbox"/> Extraction <input type="checkbox"/> Other:		
Pump depth/ intake:	Multipliers: 1" = 0.04 2" = 0.16 3" = 0.37 4" = 0.65 5" = 1.02 6" = 1.47 Radius ² X 0.163	
(TD - DTW X Multiplier = 1 Volume	80% Recovery (TD - DTW X 0.20 + DTW)	

$$1 \text{ Volume} = 1.6 \times 3 = 5.4 \quad (\text{Total Purge}) \qquad 80\% = 22.94$$

Did well dewater? YES NO

Sample method: Disp. Bailer Ded. Tubing New Tubing Ext. Port Other:

Sample date: 12/21/19 Sample time: 825 DTW at sample: —

Sample ID: W3 Lab: Kiff Number of bottles: 5

Analysis: TPH-G, BTEX, MTBE, TBA, TEPH-D, TEPH-MO

第1章 项目管理

Equipment blank ID	@	Field blank ID	@
Duplicate ID:		Pre-purge DO:	Post purge DO:
Fe2 ⁺ :		Pre-purge ORP:	Post purge ORP:
NAPL depth:	Volume of NAPL:	Volume removed:	ml



Purging And Sampling Data Sheet

Job#: 11-090602	Sampler:	B Myers	Client:	LRM
Well ID: HW-4	Date:	6/2/09	Site:	Former Strough Chevy, Oakland
Well diam: 1/4" 1" 2" 3" 4" 6" Other:	DTW: 19.32 Total Depth: 27.54			
Purge equip: ES - diam: Bladder Disp. Bailer	Teflon Bailer	Waterra Pump	Positive Air Displacement	Ext. System
other:	Tubing: OD: New Dedicated NA			
Purge method: 3-5 Case Volume	Micro/Low-Flow	Extraction	Other:	
Pump depth/ intake:	Multipliers: 1" = 0.04 2" = 0.16 3" = 0.37 4" = 0.65 5" = 1.02 6" = 1.47 Radius ² X 0.163			
(TD - DTW X Multiplier = 1 Volume	80% Recovery (TD - DTW X 0.20 + DTW)			

$$1 \text{ Volume} = 1.3 \quad \times 3 = 3.9 \quad (\text{Total Purge}) \quad 80\% = 20.96$$

Did well dewater? YES NO Total volume removed: 4 (gal / L)

Sample method: Disp Bailer Ded. Tubing New Tubing Ext. Port Other:

Sample date: 6/2/09 Sample time: 805 DTW at sample: —

Sample ID: Mar-1 Lab: Kiff Number of bottles: 5

Analysis: TPH-G, BTEX, MTBE, TBA, TEPH-D, TEPH-MO

Equipment blank ID: **12345** Field blank ID:

Equipment blank ID	Field blank ID	
Duplicate ID:	Pre-purge DO:	Post purge DO:
Fe ²⁺ :	Pre-purge ORP:	Post purge ORP:
NAPL depth:	Volume of NAPL:	Volume removed: ml



Purging And Sampling Data Sheet

Job#: M1-090602	Sampler:	B Myers	Client:	LRM
Well ID: HW5	Date: 07/09	Site:	Former Strough Chevy, Oakland	
Well diam: 1/4" 1" 2" 3" 4" 6" Other:	DTW: 22.70 Total Depth: 26.40			
Purge equip: ES - diam: Bladder Perf Waterra Positive Air Displacement Ext. System				
disp baller teflon bailer other:	Tubing:	OD:	New Dedicated	NA
Purge method: 3-5 Case Volume Micro/Low-Flow Extraction Other:				
Pump depth/ intake:	Multipliers: 1" = 0.04 2" = 0.16 3" = 0.37 4" = 0.65 5" = 1.02 6" = 1.47 Radius ² X 0.163			
(TD - DTW X Multiplier = 1 Volume		80% Recovery (TD - DTW X 0.20 + DTW)		

1 Volume = 0.6 X 3 = 1.8 (Total Purge) 80% = 23.40

Did well dewater? YES NO Total volume removed: 2 (gal / L)

Sample method: Disp Bailer Ded. Tubing New Tubing Ext. Port Other:

Sample date: 6/2/49 Sample time: 905 DTW at sample: —

Sample ID: Hws Lab: Kiff Number of bottles: 5

Analysis: TPH-G, BTEX, MTBE, TBA, TEPH-D, TEPH-MO

Equipment blank ID @	Field blank ID @
Duplicate ID:	Pre-purge DO: Post purge DO:
Fe ²⁺ :	Pre-purge ORP: Post purge ORP:
NAPL depth:	Volume of NAPL: Volume removed: ml



Purging And Sampling Data Sheet

Job#: MR-090602	Sampler:	B Myers	Client:	LRM
Well ID: MW-6	Date: 6/2/09	Site:	Former Strong Chevy, Oakland	
Well diam: 1/4" 1" 2" 3" 4" 6" Other:		DTW: 17.27	Total Depth: 26.55	
Purge equip: ES - diam: Bladder	Perf Waterra	Positive Air Displacement	Ext. System	
disp bailer teflon bailer other:	Tubing:	OD: New Dedicated NA		
Purge method: 3-5 Case Volume	Micro/Low-Flow	Extraction	Other:	
Pump depth/ intake:	Multipliers: 1" = 0.04 2" = 0.16 3" = 0.37 4" = 0.65 5" = 1.02 6" = 1.47 Radius ² X 0.163			
(TD - DTW X Multiplier = 1 Volume	80% Recovery (TD - DTW X 0.20 + DTW)			

$$1 \text{ Volume} = 1.5 \times 3 = 4.5 \text{ (Total Purge)} \quad 80\% = 19.13$$

Did well dewater? YES NO Total volume removed: 45 (gal / L)

Sample method: Disp Bailer Ded. Tubing New Tubing Ext. Port Other:

Sample date: 4/2/19 Sample time: 940 DTW at sample: —

Sample ID: 11-150 Lab: Kiff Number of bottles: 5

Analysis: TPH-G, BTEX, MTBE, TBA, TEPH-D, TEPH-MO

Equipment blank ID @	Field blank ID @		
Duplicate ID:	Pre-purge DO:	Post purge DO:	
Fe ²⁺ :	Pre-purge ORP:	Post purge ORP:	
NAPL depth:	Volume of NAPL:	Volume removed:	ml



Purging And Sampling Data Sheet



Purging And Sampling Data Sheet

Job#: H1-090602	Sampler:	B Myers	Client:	LRM
Well ID: HW-8	Date:	10/2/19	Site:	Former Strong Chevy, Oakland
Well diam: 1/4" 1" 2" 3" 4" 6" Other:	DTW: 15.46 Total Depth: 26.65			
Purge equip: ES - diam: Bladder Peri Waterra	Positive Air Displacement Ext. System			
disp baller teflon bailer other:	Tubing:	OD:	New Dedicated	NA
Purge method: 3-5 Case Volume Micro/Low-Flow Extraction Other:				
Pump depth/ intake:	Multipliers: 1" = 0.04 2" = 0.16 3" = 0.37 4" = 0.65 5" = 1.02 6" = 1.47 Radius ² X 0.163			
(TD - DTW X Multiplier = 1 Volume	80% Recovery (TD - DTW X 0.20 + DTW)			

$$1 \text{ Volume} = 0.4 \quad \times 3 = 1.2 \quad (\text{Total Purge}) \quad 80\% = 17.70$$

Did well dewater? YES NO Total volume removed: 1.2 (gal / L)

Sample method: Disp Bailer Ded. Tubing New Tubing Ext. Port Other:

Sample date: 10/2/09 Sample time: 1030 DTW at sample: —

Sample ID: 1414-8 Lab: Kiff Number of bottles: 5

Sample ID: M14-82 Lab: Kiff Number of bottles: 3

Terapias TRILÓGICAS MITOS TRADICIONAIS

Analysis: TPH-G, BTEX, MTBE, TBA, TEPH-D, TEPH-MO

Equipment blank ID @ **Field blank ID** @

Duplicate ID: Pre-purge PO: Post-purge PO:

Duplicate ID: Pre-purge DO: Post-purge DO:

Fe²⁺: Pre-purge ORP: Post purge ORP:

NAPI depth: Volume of NAPI: Volume removed: m





NON-HAZARDOUS WASTE MANIFEST

Please print or type (Form designed for use on elite (12 pitch) typewriter)

NON-HAZARDOUS WASTE MANIFEST		1. Generator's US EPA ID No.	Manifest Document No.	2. Page 1 of	
3. Generator's Name and Mailing Address <i>Former Straight Chevy 327 34th St.</i>					
4. Generator's Phone () <i>Oakland CA</i>					
5. Transporter 1 Company Name		6. US EPA ID Number	A. State Transporter's ID		
7. Transporter 2 Company Name		8. US EPA ID Number	B. Transporter 1 Phone <i>916-761-7640</i> C. State Transporter's ID		
9. Designated Facility Name and Site Address <i>TSF 1105 Airport Rd. Rio Vista CA</i>		10. US EPA ID Number	D. Transporter 2 Phone E. State Facility's ID		
11. WASTE DESCRIPTION <i>NON HAZ PURGEWATER</i>		12. Containers No.	13. Total Quantity	14. Unit Wt/Vol.	
a.		1	Poly	38	
b.					
c.					
d.					
G. Additional Descriptions for Materials Listed Above			H. Handling Codes for Wastes Listed Above		
15. Special Handling Instructions and Additional Information					
GENERATOR					
16. GENERATOR'S CERTIFICATION: I hereby certify that the contents of this shipment are fully and accurately described and are in all respects in proper condition for transport. The materials described on this manifest are not subject to federal hazardous waste regulations.					
Printed/Typed Name		Signature			
		Date	Month	Day	Year
17. Transporter 1 Acknowledgement of Receipt of Materials					Date
Printed/Typed Name		Signature			Date
<i>BRANDON MYERS</i>		<i>Brandon Jy</i>			<i>012 09</i>
18. Transporter 2 Acknowledgement of Receipt of Materials					Date
Printed/Typed Name		Signature			Date
19. Discrepancy Indication Space					
20. Facility Owner or Operator, Certification of receipt of the waste materials covered by this manifest, except as noted in item 19.					Date

APPENDIX C

LABORATORY ANALYTICAL REPORTS AND CHAIN-OF-CUSTODY DOCUMENTATION



Report Number : 68753

Date : 06/09/2009

Mehrdad Javaherian
LRM Consulting, Inc.
1534 Plaza Lane, #145
Burlingame, CA 94010

Subject : 9 Water Samples
Project Name : Former Strough Chevy - Oakland
Project Number : M1-090602

Dear Mr. Javaherian,

Chemical analysis of the samples referenced above has been completed. Summaries of the data are contained on the following pages. Sample(s) were received under documented chain-of-custody. US EPA protocols for sample storage and preservation were followed.

Kiff Analytical is certified by the State of California (# 2236). If you have any questions regarding procedures or results, please call me at 530-297-4800.

Sincerely,

A handwritten signature in black ink that reads "Joel Kiff". The signature is fluid and cursive, with a long loop on the left and two vertical lines on the right.



Report Number : 68753

Date : 06/09/2009

Subject : 9 Water Samples
Project Name : Former Strough Chevy - Oakland
Project Number : M1-090602

Case Narrative

Matrix Spike/Matrix Spike Duplicate results associated with sample QCTB for the analyte Methyl-t-butyl ether were affected by the analyte concentrations already present in the un-spiked sample.



Report Number : 68753

Date : 06/09/2009

Project Name : **Former Strough Chevy - Oakland**Project Number : **M1-090602**Sample : **MW-1**

Matrix : Water

Lab Number : 68753-01

Sample Date : 06/02/2009

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	< 0.50	0.50	ug/L	EPA 8260B	06/04/2009
Toluene	< 0.50	0.50	ug/L	EPA 8260B	06/04/2009
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	06/04/2009
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	06/04/2009
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	06/04/2009
Tert-Butanol	< 5.0	5.0	ug/L	EPA 8260B	06/04/2009
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	06/04/2009
1,2-Dichloroethane-d4 (Surr)	102		% Recovery	EPA 8260B	06/04/2009
Toluene - d8 (Surr)	102		% Recovery	EPA 8260B	06/04/2009
TPH as Diesel (w/ Silica Gel)	< 50	50	ug/L	M EPA 8015	06/06/2009
TPH as Motor Oil (w/ Silica Gel)	< 100	100	ug/L	M EPA 8015	06/06/2009
Octacosane (Silica Gel Surr)	94.8		% Recovery	M EPA 8015	06/06/2009



Report Number : 68753

Date : 06/09/2009

Project Name : Former Strong Chevy - Oakland

Project Number : M1-090602

Sample : MW-2

Matrix : Water

Lab Number : 68753-02

Sample Date : 06/02/2009

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	680	9.0	ug/L	EPA 8260B	06/05/2009
Toluene	3100	9.0	ug/L	EPA 8260B	06/05/2009
Ethylbenzene	1200	9.0	ug/L	EPA 8260B	06/05/2009
Total Xylenes	10000	20	ug/L	EPA 8260B	06/08/2009
Methyl-t-butyl ether (MTBE)	330	9.0	ug/L	EPA 8260B	06/05/2009
Tert-Butanol	180	90	ug/L	EPA 8260B	06/08/2009
TPH as Gasoline	80000	900	ug/L	EPA 8260B	06/05/2009
1,2-Dichloroethane-d4 (Surr)	102		% Recovery	EPA 8260B	06/05/2009
Toluene - d8 (Surr)	99.4		% Recovery	EPA 8260B	06/05/2009
TPH as Diesel (w/ Silica Gel)	< 12000	12000	ug/L	M EPA 8015	06/06/2009
(Note: MRL increased due to interference from Gasoline-range hydrocarbons.)					
TPH as Motor Oil (w/ Silica Gel)	480	100	ug/L	M EPA 8015	06/06/2009
Octacosane (Silica Gel Surr)	118		% Recovery	M EPA 8015	06/06/2009



Report Number : 68753

Date : 06/09/2009

Project Name : **Former Strough Chevy - Oakland**Project Number : **M1-090602**Sample : **MW-3**

Matrix : Water

Lab Number : 68753-03

Sample Date : 06/02/2009

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	2800	9.0	ug/L	EPA 8260B	06/05/2009
Toluene	7600	15	ug/L	EPA 8260B	06/06/2009
Ethylbenzene	1300	9.0	ug/L	EPA 8260B	06/05/2009
Total Xylenes	5600	9.0	ug/L	EPA 8260B	06/05/2009
Methyl-t-butyl ether (MTBE)	240	9.0	ug/L	EPA 8260B	06/05/2009
Tert-Butanol	180	70	ug/L	EPA 8260B	06/06/2009
TPH as Gasoline	39000	900	ug/L	EPA 8260B	06/05/2009
1,2-Dichloroethane-d4 (Surr)	95.6		% Recovery	EPA 8260B	06/05/2009
Toluene - d8 (Surr)	99.1		% Recovery	EPA 8260B	06/05/2009
TPH as Diesel (w/ Silica Gel)	< 1500	1500	ug/L	M EPA 8015	06/06/2009
(Note: MRL increased due to interference from Gasoline-range hydrocarbons.)					
TPH as Motor Oil (w/ Silica Gel)	< 100	100	ug/L	M EPA 8015	06/06/2009
Octacosane (Silica Gel Surr)	96.6		% Recovery	M EPA 8015	06/06/2009



Report Number : 68753

Date : 06/09/2009

Project Name : **Former Strough Chevy - Oakland**Project Number : **M1-090602**Sample : **MW-4**

Matrix : Water

Lab Number : 68753-04

Sample Date : 06/02/2009

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	0.64	0.50	ug/L	EPA 8260B	06/04/2009
Toluene	< 0.50	0.50	ug/L	EPA 8260B	06/04/2009
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	06/04/2009
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	06/04/2009
Methyl-t-butyl ether (MTBE)	320	0.50	ug/L	EPA 8260B	06/04/2009
Tert-Butanol	< 5.0	5.0	ug/L	EPA 8260B	06/04/2009
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	06/04/2009
1,2-Dichloroethane-d4 (Surr)	101		% Recovery	EPA 8260B	06/04/2009
Toluene - d8 (Surr)	99.3		% Recovery	EPA 8260B	06/04/2009
TPH as Diesel (w/ Silica Gel)	< 50	50	ug/L	M EPA 8015	06/06/2009
TPH as Motor Oil (w/ Silica Gel)	< 100	100	ug/L	M EPA 8015	06/06/2009
Octacosane (Silica Gel Surr)	97.6		% Recovery	M EPA 8015	06/06/2009



Report Number : 68753

Date : 06/09/2009

Project Name : **Former Strough Chevy - Oakland**

Project Number : **M1-090602**

Sample : **MW-5**

Matrix : Water

Lab Number : 68753-05

Sample Date : 06/02/2009

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	< 0.50	0.50	ug/L	EPA 8260B	06/04/2009
Toluene	< 0.50	0.50	ug/L	EPA 8260B	06/04/2009
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	06/04/2009
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	06/04/2009
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	06/04/2009
Tert-Butanol	< 5.0	5.0	ug/L	EPA 8260B	06/04/2009
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	06/04/2009
1,2-Dichloroethane-d4 (Surr)	100		% Recovery	EPA 8260B	06/04/2009
Toluene - d8 (Surr)	98.9		% Recovery	EPA 8260B	06/04/2009
TPH as Diesel (w/ Silica Gel)	< 50	50	ug/L	M EPA 8015	06/06/2009
TPH as Motor Oil (w/ Silica Gel)	< 100	100	ug/L	M EPA 8015	06/06/2009
Octacosane (Silica Gel Surr)	96.7		% Recovery	M EPA 8015	06/06/2009



Report Number : 68753

Date : 06/09/2009

Project Name : **Former Strough Chevy - Oakland**Project Number : **M1-090602**Sample : **MW-6**

Matrix : Water

Lab Number : 68753-06

Sample Date : 06/02/2009

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	< 0.50	0.50	ug/L	EPA 8260B	06/04/2009
Toluene	< 0.50	0.50	ug/L	EPA 8260B	06/04/2009
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	06/04/2009
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	06/04/2009
Methyl-t-butyl ether (MTBE)	59	0.50	ug/L	EPA 8260B	06/04/2009
Tert-Butanol	< 5.0	5.0	ug/L	EPA 8260B	06/04/2009
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	06/04/2009
1,2-Dichloroethane-d4 (Surr)	98.9		% Recovery	EPA 8260B	06/04/2009
Toluene - d8 (Surr)	100		% Recovery	EPA 8260B	06/04/2009
TPH as Diesel (w/ Silica Gel)	< 50	50	ug/L	M EPA 8015	06/06/2009
TPH as Motor Oil (w/ Silica Gel)	< 100	100	ug/L	M EPA 8015	06/06/2009
Octacosane (Silica Gel Surr)	97.2		% Recovery	M EPA 8015	06/06/2009



Report Number : 68753

Date : 06/09/2009

Project Name : **Former Strough Chevy - Oakland**

Project Number : **M1-090602**

Sample : **MW-7**

Matrix : Water

Lab Number : 68753-07

Sample Date : 06/02/2009

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	< 0.50	0.50	ug/L	EPA 8260B	06/04/2009
Toluene	< 0.50	0.50	ug/L	EPA 8260B	06/04/2009
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	06/04/2009
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	06/04/2009
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	06/04/2009
Tert-Butanol	< 5.0	5.0	ug/L	EPA 8260B	06/04/2009
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	06/04/2009
1,2-Dichloroethane-d4 (Surr)	100		% Recovery	EPA 8260B	06/04/2009
Toluene - d8 (Surr)	101		% Recovery	EPA 8260B	06/04/2009
TPH as Diesel (w/ Silica Gel)	< 50	50	ug/L	M EPA 8015	06/06/2009
TPH as Motor Oil (w/ Silica Gel)	< 100	100	ug/L	M EPA 8015	06/06/2009
Octacosane (Silica Gel Surr)	95.6		% Recovery	M EPA 8015	06/06/2009



Report Number : 68753

Date : 06/09/2009

Project Name : **Former Strough Chevy - Oakland**

Project Number : **M1-090602**

Sample : **MW-8**

Matrix : Water

Lab Number : 68753-08

Sample Date : 06/02/2009

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	< 0.50	0.50	ug/L	EPA 8260B	06/05/2009
Toluene	< 0.50	0.50	ug/L	EPA 8260B	06/05/2009
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	06/05/2009
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	06/05/2009
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	06/05/2009
Tert-Butanol	< 5.0	5.0	ug/L	EPA 8260B	06/05/2009
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	06/05/2009
1,2-Dichloroethane-d4 (Surr)	102		% Recovery	EPA 8260B	06/05/2009
Toluene - d8 (Surr)	99.9		% Recovery	EPA 8260B	06/05/2009
TPH as Diesel (w/ Silica Gel)	< 50	50	ug/L	M EPA 8015	06/06/2009
TPH as Motor Oil (w/ Silica Gel)	< 100	100	ug/L	M EPA 8015	06/06/2009
Octacosane (Silica Gel Surr)	96.3		% Recovery	M EPA 8015	06/06/2009



Report Number : 68753

Date : 06/09/2009

Project Name : **Former Strough Chevy - Oakland**

Project Number : **M1-090602**

Sample : **QCTB**

Matrix : Water

Lab Number : 68753-09

Sample Date : 06/02/2009

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	< 0.50	0.50	ug/L	EPA 8260B	06/04/2009
Toluene	< 0.50	0.50	ug/L	EPA 8260B	06/04/2009
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	06/04/2009
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	06/04/2009
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	06/04/2009
Tert-Butanol	< 5.0	5.0	ug/L	EPA 8260B	06/04/2009
TPH as Gasoline	84	50	ug/L	EPA 8260B	06/04/2009
(Note: Primarily compounds not found in typical Gasoline)					
1,2-Dichloroethane-d4 (Surr)	104		% Recovery	EPA 8260B	06/04/2009
Toluene - d8 (Surr)	101		% Recovery	EPA 8260B	06/04/2009

Report Number : 68753

Date : 06/09/2009

QC Report : Method Blank Data**Project Name : Former Strong Chevy - Oakland****Project Number : M1-090602**

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
TPH as Diesel (w/ Silica Gel)	< 50	50	ug/L	M EPA 8015	06/05/2009
TPH as Motor Oil (w/ Silica Gel)	< 100	100	ug/L	M EPA 8015	06/05/2009
Octacosane (Silica Gel Surr)	110		%	M EPA 8015	06/05/2009
Benzene	< 0.50	0.50	ug/L	EPA 8260B	06/04/2009
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	06/04/2009
Toluene	< 0.50	0.50	ug/L	EPA 8260B	06/04/2009
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	06/04/2009
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	06/04/2009
Tert-Butanol	< 5.0	5.0	ug/L	EPA 8260B	06/04/2009
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	06/04/2009
1,2-Dichloroethane-d4 (Surr)	98.6		%	EPA 8260B	06/04/2009
Toluene - d8 (Surr)	98.4		%	EPA 8260B	06/04/2009
Toluene	< 0.50	0.50	ug/L	EPA 8260B	06/05/2009
Tert-Butanol	< 5.0	5.0	ug/L	EPA 8260B	06/05/2009
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	06/08/2009
Tert-Butanol	< 5.0	5.0	ug/L	EPA 8260B	06/08/2009
Benzene	< 0.50	0.50	ug/L	EPA 8260B	06/04/2009
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	06/04/2009
Toluene	< 0.50	0.50	ug/L	EPA 8260B	06/04/2009
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	06/04/2009
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	06/04/2009
Tert-Butanol	< 5.0	5.0	ug/L	EPA 8260B	06/04/2009
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	06/04/2009
1,2-Dichloroethane-d4 (Surr)	103		%	EPA 8260B	06/04/2009
Toluene - d8 (Surr)	103		%	EPA 8260B	06/04/2009

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	< 0.50	0.50	ug/L	EPA 8260B	06/04/2009
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	06/04/2009
Toluene	< 0.50	0.50	ug/L	EPA 8260B	06/04/2009
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	06/04/2009
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	06/04/2009
Tert-Butanol	< 5.0	5.0	ug/L	EPA 8260B	06/04/2009
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	06/04/2009
1,2-Dichloroethane-d4 (Surr)	102		%	EPA 8260B	06/04/2009
Toluene - d8 (Surr)	102		%	EPA 8260B	06/04/2009

KIFF ANALYTICAL, LLC

2795 2nd Street, Suite 300 Davis, CA 95618 530-297-4800

QC Report : Matrix Spike/ Matrix Spike Duplicate

Date : 06/09/2009

Project Name : Former Strong Chevy - Oakland

Project Number : M1-090602

Parameter	Spiked Sample	Sample Value	Spike Level	Spike Dup. Level	Spiked Sample Value	Duplicate Spiked Sample Value	Units	Analysis Method	Date Analyzed	Spiked Sample Percent Recov.	Duplicate Spiked Sample Percent Recov.	Relative Percent Diff.	Spiked Sample Percent Recov. Limit	Relative Percent Diff. Limit
TPH-D (Si Gel)	BLANK	<50	1000	1000	1010	957	ug/L	M EPA 8015	6/5/09	101	95.7	5.36	70-130	25
Benzene	68753-01	<0.50	40.3	40.3	40.7	40.2	ug/L	EPA 8260B	6/4/09	101	99.7	1.32	70-130	25
Methyl-t-butyl ether	68753-01	<0.50	40.4	40.4	41.1	41.9	ug/L	EPA 8260B	6/4/09	102	104	1.87	70-130	25
Tert-Butanol	68753-01	<5.0	200	200	206	204	ug/L	EPA 8260B	6/4/09	103	102	0.922	70-130	25
Toluene	68753-01	<0.50	39.8	39.8	41.3	41.0	ug/L	EPA 8260B	6/4/09	104	103	0.711	70-130	25
Tert-Butanol	68763-01	<5.0	201	200	205	199	ug/L	EPA 8260B	6/5/09	102	99.4	2.56	70-130	25
Toluene	68763-01	<0.50	40.0	39.9	38.7	38.8	ug/L	EPA 8260B	6/5/09	96.7	97.2	0.528	70-130	25
Tert-Butanol	68794-02	7.9	200	200	208	206	ug/L	EPA 8260B	6/8/09	100	99.0	1.15	70-130	25
Toluene	68794-02	<0.50	39.9	39.9	40.2	40.0	ug/L	EPA 8260B	6/8/09	101	100	0.799	70-130	25
Benzene	68724-05	<0.50	40.6	40.6	41.2	40.7	ug/L	EPA 8260B	6/4/09	101	100	1.05	70-130	25
Methyl-t-butyl ether	68724-05	<0.50	40.7	40.7	36.8	41.1	ug/L	EPA 8260B	6/4/09	90.4	101	11.0	70-130	25
Tert-Butanol	68724-05	<5.0	201	201	203	203	ug/L	EPA 8260B	6/4/09	101	101	0.0591	70-130	25
Toluene	68724-05	<0.50	40.1	40.1	39.8	39.6	ug/L	EPA 8260B	6/4/09	99.3	98.7	0.578	70-130	25
Benzene	68724-08	0.60	40.6	40.6	46.1	40.6	ug/L	EPA 8260B	6/4/09	112	98.4	13.0	70-130	25
Methyl-t-butyl ether	68724-08	260	40.7	40.7	338	296	ug/L	EPA 8260B	6/4/09	179	75.0	81.7	70-130	25
Tert-Butanol	68724-08	160	201	201	391	342	ug/L	EPA 8260B	6/4/09	115	90.8	23.4	70-130	25
Toluene	68724-08	<0.50	40.1	40.1	45.8	40.5	ug/L	EPA 8260B	6/4/09	114	101	12.3	70-130	25

Project Name : **Former Strong Chevy - Oakland**Project Number : **M1-090602**

Parameter	Spike Level	Units	Analysis Method	Date Analyzed	LCS Percent Recov.	LCS Percent Recov. Limit
Benzene	40.6	ug/L	EPA 8260B	6/4/09	100	70-130
Methyl-t-butyl ether	40.7	ug/L	EPA 8260B	6/4/09	106	70-130
Tert-Butanol	201	ug/L	EPA 8260B	6/4/09	100	70-130
Toluene	40.1	ug/L	EPA 8260B	6/4/09	100	70-130
Tert-Butanol	201	ug/L	EPA 8260B	6/5/09	97.2	70-130
Toluene	40.1	ug/L	EPA 8260B	6/5/09	100	70-130
Tert-Butanol	201	ug/L	EPA 8260B	6/8/09	96.4	70-130
Toluene	40.1	ug/L	EPA 8260B	6/8/09	98.2	70-130
Benzene	40.1	ug/L	EPA 8260B	6/4/09	99.6	70-130
Methyl-t-butyl ether	40.8	ug/L	EPA 8260B	6/4/09	101	70-130
Tert-Butanol	202	ug/L	EPA 8260B	6/4/09	97.6	70-130
Toluene	40.1	ug/L	EPA 8260B	6/4/09	104	70-130
Benzene	40.5	ug/L	EPA 8260B	6/4/09	103	70-130
Methyl-t-butyl ether	40.6	ug/L	EPA 8260B	6/4/09	103	70-130
Tert-Butanol	201	ug/L	EPA 8260B	6/4/09	104	70-130
Toluene	40.0	ug/L	EPA 8260B	6/4/09	105	70-130



Confluence Environmental, Inc.
3308 El Camino Ave, Suite 300 #148
Sacramento, CA 95821
916-760-7641 - main
916-473-8617 - fax
www.confluence-env.com

Chain of Custody

68753

Page 1 of 1

Project Name: Former Strough Chevy - Oakland

Job Number: MI-090602

TAT: STANDARD 5 DAY 2 DAY 24 HOUR OTHER:

Lab: Kiff
Address: 2795 2nd St, Suite 300, Davis CA 95616
Contact: Angelique Showman
Phone/ Fax: 530-297-4800 x.127

Site Address: 327 34th St, Oakland
California Global ID No.: T0600101644
Include EDF w/ Report: Yes No
Consultant / PM: LRM / Merhdad Javaherian
Phone / Fax: (415) 706-8935

Confluence PM: Jason Brown
Phone / Fax: 916-760-7641 / 916-473-8617
Confluence Log Code: CESC
Report to: Merhdad Javaherian
Invoice to: Merhdad Javaherian

Sample ID	Time	Date	Matrix	Laboratory No.	No. of Containers	Preservative					Requested Analysis					Notes and Comments
						Unpreserved	H ₂ SO ₄	HNO ₃	HCl	NaOH	TEPH Diesel & Motor Oil* (8015)	TPH-G, BTEX (8260B)	MTBE (8260)	TBA (8260)		
MW-1	745	6/2	X		5			X			X	X	X	X		-01
MW-2	920		X					X			X	X	X	X		-02
MW-3	825		X					X			X	X	X	X		-03
MW-4	805		X					X			X	X	X	X		-04
MW-5	905		X					X			X	X	X	X		-05
MW-6	946		X					X			X	X	X	X		-06
MW-7	1005		X					X			X	X	X	X		-07
MW-8	1030		X					X			X	X	X	X		-08
QCTB	-	6/2	X		1			X			X	X	X	X		-09
					2			X								

Sampler's Name: B. Myers

Sampler's Company: Confluence Environmental

Shipment Date:

Shipment Method:

Special Instructions: *Run TEPH w/ silica gel cleanup

Relinquished By / Affiliation

B. Myers

Date

10/3/09

Time

1635

Accepted By / Affiliation

O'Sullivan Enviro/Kit

Date

060309

Time

1635

Analytical

SAMPLE RECEIPT CHECKLIST

RECEIVER
Initials
oa
Initials

SRG#: 68753 Date: 060309
 Project ID: Former Strough Chevy - oakland
 Method of Receipt: Courier Over-the-counter Shipper

COC Inspection

- | | | | | | | |
|---|---|--|--|---|---|---|
| Is COC present? | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No | <input checked="" type="checkbox"/> Intact | <input type="checkbox"/> Broken | <input type="checkbox"/> Not present | <input checked="" type="checkbox"/> N/A |
| Custody seals on shipping container? | <input type="checkbox"/> | <input checked="" type="checkbox"/> No | <input checked="" type="checkbox"/> Dated? | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> |
| Is COC Signed by Relinquisher? | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> No | <input type="checkbox"/> |
| Is sampler name legibly indicated on COC? | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> No | <input type="checkbox"/> |
| Is analysis or hold requested for all samples | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> No | <input type="checkbox"/> |
| Is the turnaround time indicated on COC? | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> No | <input type="checkbox"/> |
| Is COC free of whiteout and uninitialed cross-outs? | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No, Whiteout | <input type="checkbox"/> No, Cross-outs | <input type="checkbox"/> |

Sample Inspection

- | | | | | | | |
|---|--|---|---|--|---|--|
| Coolant Present: | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No (includes water) | <input type="checkbox"/> Intact | <input type="checkbox"/> Broken | <input checked="" type="checkbox"/> Not present | <input type="checkbox"/> N/A |
| Temperature °C | <u>42</u> | Therm. ID# <u>12-2</u> | Initial <u>OA</u> | Date/Time <u>060309/1630</u> | <input type="checkbox"/> | <input type="checkbox"/> N/A |
| Are there custody seals on sample containers? | <input type="checkbox"/> | <input checked="" type="checkbox"/> No | <input type="checkbox"/> No, COC lists absent sample(s) | <input type="checkbox"/> No, Extra sample(s) present | <input type="checkbox"/> | <input type="checkbox"/> |
| Do containers match COC? | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No | <input type="checkbox"/> | <input type="checkbox"/> |
| Are there samples matrices other than soil, water, air or carbon? | <input type="checkbox"/> | <input type="checkbox"/> Yes | <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No | <input type="checkbox"/> | <input type="checkbox"/> |
| Are any sample containers broken, leaking or damaged? | <input type="checkbox"/> | <input type="checkbox"/> Yes | <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No | <input type="checkbox"/> | <input type="checkbox"/> |
| Are preservatives indicated? | <input type="checkbox"/> Yes, on sample containers | <input checked="" type="checkbox"/> Yes, on COC | <input type="checkbox"/> Not indicated | <input type="checkbox"/> N/A | <input type="checkbox"/> | <input type="checkbox"/> |
| Are preservatives correct for analyses requested? | <input checked="" type="checkbox"/> Yes | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> N/A | <input type="checkbox"/> | <input type="checkbox"/> |
| Are samples within holding time for analyses requested? | <input checked="" type="checkbox"/> Yes | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Are the correct sample containers used for the analyses requested? | <input checked="" type="checkbox"/> Yes | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Is there sufficient sample to perform testing? | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> No |
| Does any sample contain product, have strong odor or are otherwise suspected to be hot? | <input type="checkbox"/> | <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

Receipt Details

- | | | |
|-------------------|---------------------------|------------------------------------|
| Matrix <u>H2O</u> | Container type <u>VoA</u> | # of containers received <u>42</u> |
| Matrix _____ | Container type _____ | # of containers received _____ |
| Matrix _____ | Container type _____ | # of containers received _____ |

Date and Time Sample Put into Temp Storage Date: 060309 Time: 1635

Quicklog

- | | | | | |
|---|---|---|---|--|
| Are the Sample ID's indicated: | <input type="checkbox"/> On COC | <input type="checkbox"/> On sample container(s) | <input checked="" type="checkbox"/> On Both | <input type="checkbox"/> Not indicated |
| If Sample ID's are listed on both COC and containers, do they all match? | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> N/A | <input type="checkbox"/> |
| Is the Project name indicated: | <input type="checkbox"/> On COC | <input type="checkbox"/> On sample container(s) | <input checked="" type="checkbox"/> On Both | <input type="checkbox"/> Not indicated |
| If project name is listed on both COC and containers, do they all match? | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> N/A | <input type="checkbox"/> |
| Are the sample collection dates indicated: | <input type="checkbox"/> On COC | <input type="checkbox"/> On sample container(s) | <input checked="" type="checkbox"/> On Both | <input type="checkbox"/> Not indicated |
| If collection dates are listed on both COC and containers, do they all match? | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> N/A | <input type="checkbox"/> |
| Are the sample collection times indicated: | <input type="checkbox"/> On COC | <input type="checkbox"/> On sample container(s) | <input checked="" type="checkbox"/> On Both | <input type="checkbox"/> Not indicated |
| If collection times are listed on both COC and containers, do they all match? | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> N/A | <input type="checkbox"/> |

COMMENTS:
