

4th Quarter 2008 Groundwater Monitoring Report Former Val Strough Chevrolet Site, Oakland, California Fuel Leak Case No. R00000134 January 2009

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4th QUARTER 2008 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



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Mehrdad M. Javaherian, Ph.D/MPH_{candidate}

Principal-in-Charge

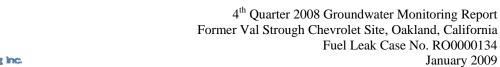
Mitra Javaherian, PE Senior Engineer

January 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 4th Quarter 2008 Groundwater Monitoring Report for the former Val Strough Chevrolet located in Oakland, California. This report documents the procedures and findings of the December 29, 2008 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 ACHCSAapproved program, which for this quarter corresponds to gauging and sampling from all eight site wells, including newly installed well MW8. Also worth noting is that this monitoring reflects groundwater conditions approximately two and one-half 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**

Former Val Strough Chevrolet Site name: 327 34th Street, Oakland, California Site address: Strough Family Trust of 1983 **Current property owner:**

Automotive Dealership and Service Center **Current site use:**

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: 7 (all onsite)

Site ID #: 3035 **RO** #: 0000134

1.2 **Site Contacts**

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Regulatory agency: Barbara Jakub, P.G.

Alameda County Health Services Agency 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.

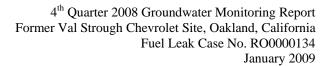
Underground Utilities: A box culvert for a former tributary of Glen Echo Creek is located approximately 17 feet below ground surface (bgs) in the eastern portion of the site (Figure 2). The culvert consists of a reinforced concrete box measuring 5 feet by 6 feet. During the winter of 1983, a section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

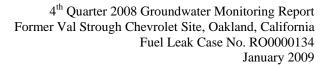
Constituents of Potential Concern: Based on the type of fuel stored in the USTs and the results of previous subsurface investigations, the constituents of potential concern (COPCs) at the site include total petroleum hydrocarbons as gasoline (TPH-g), benzene, toluene, ethylbenzene, and total xylenes (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 MW2 and MW3, but none since March 2004 in MW3 and June 2006 in MW2. 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 MW2 and MW3. Generally significantly lower levels of petroleum hydrocarbons have been detected in samples collected from well MW4, 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 MW5, MW6, and MW7 (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 MW2 and MW3 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 MW2 and MW3 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 (MW2 and/or MW3). 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 MW2 and MW3 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 MW2 and MW3. 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



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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 (MW8) 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, with related reporting currently under preparation. The results of sampling at the newly installed groundwater monitoring well (MW8) are included herein. Well installation details will be documented in the IRAP soil and groundwater investigation report.



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 December 29, 2008. The scope of work for the quarterly groundwater monitoring event at the site included:

- Checking all wells for SPH.
- Gauging the depth to groundwater in all eight site wells.
- Purging 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 (MW8) and all existing site wells are to be resurveyed to the datum NAVD 88. This resurveying is scheduled for later this month, with results to be included in the previously referenced IRAP soil and groundwater investigation report.

3.2 Well Purging

For this round of monitoring, groundwater sampling and field parameters were analyzed for all eight onsite wells; MW1 through MW8. 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,



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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 June 2006 (sheen in MW2-see Table 2).

4.2 Groundwater Elevation and Hydraulic Gradient

On December 29, 2008, the depth to groundwater beneath the site ranged from 15.64 (MW7) to 24.92 (MW5) feet bgs (Table 2). Correspondingly, groundwater elevations in the site wells ranged from 40.67 feet above msl in well MW5 to 43.83 feet above msl in well MW7 (Figure 2); these levels mark a slight (<1 foot) rise in water levels relative to the previous quarter. Using the results from the 4th Quarter 2008 monitoring event, the hydraulic gradient is estimated at 0.028 ft/ft, with a general flow direction toward the south-southwest (see Figure 2).

4.3 Groundwater Analytical Results

On December 29, 2008, groundwater samples were collected from MW1 through MW8 and

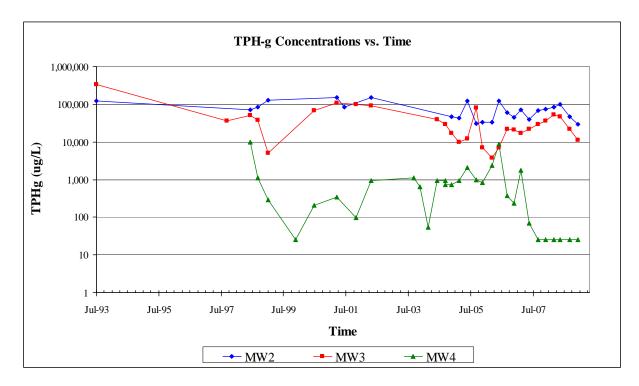
analyzed by Kiff for TPH-g, BTEX, and MTBE by EPA Method 8260B and for TPH-d and TPH-mo by modified EPA Method 8015. Analytical results for this event are presented on Figure 3, and historical results, including field parameters such as DO, are presented in Table 2. Copies of the chain-of-custody and 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 MW2 at 29,000 μg/L, MW3 at 11,000 μg/L, and MW5 at 71 μg/L. TPH-g remained below the detection limit of 50 μg/L in all five other site wells.
- Benzene was detected in the samples collected from well MW2 at 260 μg/L, MW3 at 310 μg/L, and MW6 at 0.77 μg/L. Benzene was below the detection limit of 0.5 μg/L in all five other site wells.
- Toluene was detected at 1,500 μg/L in MW2, 910 μg/L in MW3, and 0.64 μg/L in MW8, but remained below the detection limit of 0.50 μg/L in all five other site wells.
- Ethylbenzene was detected at 1,100 μ g/L in MW2 and 320 μ g/L in MW3, but remained below the detection limit of 0.50 μ g/L in all six other site wells.
- Total xylenes were detected at 6,400 μg/L in MW2, 1,300 μg/L in MW3, and 0.78 μg/L in MW8, but remained below the detection limit of 0.50 μg/L in all five other site wells.

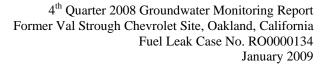


- MTBE was detected in the samples collected from well MW2 at 110 μg/L, MW3 at 35 μg/L, MW4 at 230 μg/L, MW6 at 44 μg/L, and MW8 at 1.5 μg/L. MTBE remained below the detection limit of 0.5 μg/L at MW1, MW5, and MW7.
- Tert-butanol (TBA) was detected at 23 μg/L in MW3, but remained below the detection limit of 50 μg/L at MW2 and below a 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 MW2 and MW3 were elevated due to interference from gasoline-range hydrocarbons (see Appendix C). Worth noting is that the detection of TPH-d (together with TPH-mo and MTBE) in a grab groundwater sample collected along the downgradient site boundary at concentrations higher than those present within the residual onsite source area (see Table 3) was not duplicated by the analytical results in the newly installed well MW8.
- TPH-mo remained below the detection limit of $100 \mu g/L$ in all eight site wells.

The figure below depicts TPH-g concentration trends for wells MW2 and MW3 located within the residual source area, and MW4 located immediately downgradient of this location.



As indicated on the graph, for the third consecutive quarter, TPH-g concentrations in MW2 and MW3 continued their decline over time. Specifically, at MW2, TPH-g has reduced from 98,000 μ g/L to 29,000 μ g/L over this time frame, while TPH-g concentrations at MW3 have declined from 47,000 μ g/L to 11,000 μ g/L over the past three quarters. Worth noting is that



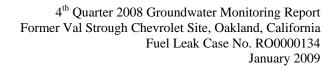


these concentration declines have occurred while groundwater level elevations have risen back to within approximately 0.5 to 0.75 foot of the elevations measured in the March 2008 monitoring event, when the post-remediation peak concentration occurred in each well. Moreover, as shown on Table 2, benzene concentrations for both wells exhibit a similar trend to TPH-g concentrations, declining significantly over the past several rounds of monitoring. These observations suggests that natural attenuation within the residual source area is occurring and is consistent with suppression of DO levels in both MW2 and MW3 (see Table 2) compared to wells that are not impacted or are less impacted by hydrocarbons (e.g., MW1, MW5, MW7- 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 MW4 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 MW5 and MW6 also indicate the general absence of TPH-g and petroleum hydrocarbon compounds above detection limits over the past several years, with recent detections limited to sporadic and low levels of TPH-g (71 μ g/L in MW5), benzene (0.77 μ g/L in MW6), and MTBE (44 μ g/L in MW6). Also worth noting is that cross-gradient well MW7 remains, as it has for the last several years, below detection limits for all compounds analyzed. Lastly, the first sample at newly installed well

MW8 at the downgradient site boundary reported the absence of TPH-g, TPH-d, TPH-mo, and benzene. With the only detections in this well limited to negligible levels of toluene (0.64 μ g/L), xylenes (0.78 μ g/L), and MTBE (1.5 μ g/L), the results from this well suggest that the extent of the hydrocarbon plume is essentially confined to locations within the site boundary.

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, exhibiting a distinct declining trend over the past three quarters despite no significant changes in water level elevations. 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). 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 under review by the ACHCSA





5.0 PLANNED ACTIVITIES

5.1 Additional Investigation/Remediation Activities

As previously indicated, LRM has submitted a response to ACHCSA comments on the IRAP on December 5, 2008 and has completed the ACHCSA-approved field investigation components of the IRAP. The report summarizing the findings of the field investigation is under preparation. Once the ACHCSA has reviewed the field investigation report and has approved the pilot testing component of the IRAP, LRM will implement the proposed 3- to 6-month iSOC pilot testing activities which will target the residual source area.

5.2 Planned Monitoring Activities

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



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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	64.69	PVC	32	2	17-32	0.020	15-32	Gravel Pack
MW2	07/20/93	65.95	PVC	33	2	18-33	0.020	16-33	Gravel Pack
MW3	07/20/93	65.99	PVC	34	2	18-34	0.020	16-34	Gravel Pack
MW4	06/26/98	63.35†	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	59.47	PVC	36.5	2	15-35	0.020	13-35	Lonestar #3 Sand
MW8	12/17/09	NS	PVC	26	1	11-26	0.010	9-26	#2/12 Sand

PVC Polyvinyl chloride.

ft bgs Feet below ground surface.

NS Not yet surveyed

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

[†] The casing elevation is uncertain.

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

		Casing	Depth to		SPH					centration (ug/L)								Concentra	tion (mg/L	.)			
Well		Elevation		Elevation				Ethyl-	Total	mp	mprr 1	mny		mp.	CO ₂		ORP (mv)		T					no.
Number	Date	(feet)	(feet)	(feet)	(feet)	Benzene	Toluene	benzene	Xylenes	TPH-g	TPH-d	TPH-mo	MTBE	TBA	(lab)	(field)	(field)	(field)	Fe(II)	Mn	SO_4	N-NH ₃	N-NO ₃	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		78.78	0.00	< 0.50	< 0.50	< 0.50	< 0.50	<50			<2.0											
MW1	06/30/98	100.00 a		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		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		20.22	79.78	0.00																			
MW1	11/30/98	100.00 a		80.01	0.00																			
MW1	12/28/98	100.00 a		80.19	0.00																			
MW1	01/25/99	100.00 a		80.38	0.00	<1.0	<1.0	<1.0	<1.0	<50			<2.0		389	3.4		6.72						
MW1 MW1	02/26/99 03/24/99		17.18	82.82	0.00																			
MW1	05/24/99	100.00 a		82.72 82.09	0.00																			
MW1	12/15/99		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		16.25	83.75	0.00	<0.50	<0.50	<0.50	<0.50				<0.50			5.51		0.32						
MW1	07/20/00		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		20.80	79.20	0.00																			
MW1	04/10-11/01		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 ł	21.36	43.33	0.00	< 0.50	1.3	< 0.50	0.81	< 50	< 50	< 300	< 2.0		C	0.65		6.47	0.32	1.8	63	< 0.10		< 0.20
MW1	02/19/02	64.69 ł	18.95	45.74	0.00																			
MW1	05/21/02	64.69 ł	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		19.93	44.76	0.00																			
MW1	09/29/03		21.24	43.45	0.00	< 0.50	< 0.50	< 0.50	<1.0	<50	<50	< 500	< 0.50											
MW1	12/12/03		21.27	43.42	0.00	<0.50	< 0.50	<0.50	1.1	<50	58	<500	< 0.50											
MW1	03/15/04		18.18	46.51	0.00	< 0.50	< 0.50	< 0.50	<1.0	<50	<50	<500	< 0.50			0.14								
MW1 MW1	06/24/04 09/29/04		20.48	44.21 43.32	0.00	<0.50 <0.50	<0.50 0.51	<0.50 <0.50	<1.0 <1.0	<50 <50	<50 <50	<500 <500	<0.50 <0.50			0.15 1.01		6.42						
MW1	12/13/04		20.63	44.06	0.00	<0.50	0.51	<0.50	<1.0	<30	<30	<300	<0.50			1.01		0.42						
MW1	03/14/05		18.69	46.00	0.00	< 0.50	< 0.50	< 0.50	<1.0	<50	73	<500	< 0.50			1.96		6.04						
MW1	06/15/05		20.32	44.37	0.00																			
MW1	09/26/05		22.10	42.59	0.00	< 0.50	< 0.50	< 0.50	<1.0	< 50	< 50	< 500	< 0.50			1.84	317.4	6.43						
MW1	12/12/05	64.69 ł	22.39	42.30	0.00																			
MW1	03/29/06	64.69 t	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 ł	18.27	46.42	0.00																			
MW1	09/29/06		20.06	44.63	0.00	< 0.50	< 0.50	< 0.50	< 0.50	< 50	< 50	<100	7.9			0.43		6.40						
MW1	12/12/06		20.32	44.37	0.00	< 0.50	< 0.50	< 0.50	< 0.50	< 50	< 50	<100	9.4			0.38		6.39						
MW1	03/01/07		18.68	46.01	0.00	< 0.50	< 0.50	< 0.50	< 0.50	<50	< 50	<100	3.5			0.86		6.39						
MW1	06/12/07		20.28	44.41	0.00																			
MW1	09/25/07		21.37	43.32 43.21	0.00	< 0.50	< 0.50	< 0.50	< 0.50	<50	<50	<100	1.8			16.87		6.40						
MW1 MW1	12/20/07 03/26/08		21.48	43.21	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		20.70	43.71	0.00	<0.50 	<0.50	<0.50 	<0.50 		<50	~100	~0.50 			5.1	71.10	0.11						
MW1	09/25/08		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		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						
				-																				
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		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 ε		81.16	0.29																			
MW2	08/26/98	101.27 a		80.73	0.08																			
MW2	10/01/98	101.27 a		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		79.73	0.10																			
MW2 MW2	11/30/98 12/28/98	101.27 a	21.21	80.06	0.04																			
MW2 MW2	01/25/99	101.27 a		80.17 80.47	0.02	9,000	26,000	3,800	27,500	130,000			5,800		386	0.3		6.69						
MW2 MW2	01/25/99	101.27 a		83.27	sheen	9,000	20,000	3,800	27,300	130,000			3,000		380	0.3		0.09			-			
MW2	02/26/99	101.27 a		83.27	trace																			
171 77 4	USI 24177	101.27	10.2/	05.00	насе																			

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

		Casing	Depth to		SPH					centration (μg/L)								Concentra	tion (mg/I	.)			
Well	ъ.	Elevation	Water	Elevation			m 1	Ethyl-	Total	TDII	TEDLE I	TDII	MEDE	TID 4	CO ₂	DO	ORP (mv)		E an			N NIII	NAMO	DO.
Number	Date	(feet)	(feet)	(feet)	(feet)	Benzene	Toluene	benzene	Xylenes	TPH-g	TPH-d	TPH-mo	MTBE	TBA	(lab)	(field)	(field)	(field)	Fe(II)	Mn	SO_4	N-NH ₃	N-NO ₃	o-PO ₄
MW2	05/12/99	101.27 a	19.08	82.19	trace																			
MW2	12/15-16/99	101.27		78.85	0.025	*	*	*	*	*	*	*	*		*	*	*	*	*	*	*	*	*	*
MW2	03/20/00	101.27 a		84.18	0.026																			
MW2	07/20/00	101.27 a	20.86	80.41	0.017	*	*	*	*	*	*	*	*		*	0.88	*	6.37	*	*	*	*	*	*
MW2	10/11/00	101.27 a	22.10	79.17	0.00																			
MW2	04/10-11/01		19.98	81.29	0.00	8,000	22,000	2,600	23,500	150,000	1,500	<600	3,600		168	NR		NR	3.1	2.5	16	0.14	0.19	< 0.20
MW2	07/10/01		21.85	79.42	0.00	5,900	15,000	2,300	12,100	83,000	5,700	<1,500	2,800											
MW2 MW2	11/20/01 02/19/02		22.75	43.20 45.83	0.00										120	NR		6.15	1.8	2	16	< 0.10		< 0.20
MW2	05/21/02		21.10	44.85	0.00	8,600	25,000	3,500	26,000	150,000	31,000	<3,000	4,800		160	0.88		5.99	3.9	1.7	13	< 0.10	0.54	< 0.20
MW2	06/27/03		21.48	44.47	0.35				20,000															
MW2	09/29/03		23.04	42.91	0.48	*	*	*	*	*	*	*	*		*	*	*	*	*	*	*	*	*	*
MW2 ^e	12/12/03	65.95 ł	22.75	43.31	0.16	*	*	*	*	*	*	*	*		*	*	*	*	*	*	*	*	*	*
MW2 ^e	03/15/04	65.95 t	19.24	46.72	0.01	*	*	*	*	*	*	*	*		*	*	*	*	*	*	*	*	*	*
MW2 ^e	06/24/04	65.95 b	22.10	44.06	0.31	*	*	*	*	*	*	*	*		*	*	*	*	*	*	*	*	*	*
MW2 ^e	09/29/04		22.81	43.14	sheen	*	*	*	*	*	*	*	*		*	*	*	*	*	*	*	*	*	*
MW2 ^e	12/13/04		22.06	43.95	0.08	3,700	12,000	1,900	10,000	47,000	2,600	< 500	1,200		*	0.27	*	6.63	*	*	*	*	*	*
MW2 ^J	03/14/05		25.00	40.95	0.00	780	3,700	920	6,400	43,000	43,000	<5,000	<200		*	*	*	*	*	*	*	*	*	*
MW2	06/15/05		21.14	44.81	0.00	2,900	15,000	2,400	22,000	120,000	13,000	<2,500	810			3.05	-147.6							
MW2 MW2	07/18/05 09/26/05	65.95 65.95	NM 22.93	NC 43.02	NM 0.00	2,700 570	13,000 4,000	1,800 620	15,000 6,200	120,000	17,000	28,000	530 <50											
MW2	12/12/05	65.95	25.40	40.55	0.00	670	5,300	1,100	9,800	31,000 34,000	63,000 2,800	<500	65											
MW2	03/29/06	65.95	15.66	50.29	sheen	620	2,800	540	4,700	33,000	<4,000	<100	37			7.59		6.9						
MW2	06/19/06	65.95	19.14	46.81	sheen	680	5,200	990	16,000	120,000	<30,000	1,900	170			1.78		6.21						
MW2	09/29/06		21.16	44.79	0.00	1,200	5,100	1,200	9,300	59,000	<8000	300	230			1.71		6.66						
MW2	12/12/06		21.46	44.49	0.00	850	4,400	1,100	8,900	45,000	<10000	360	110			1.5		6.61						
MW2	03/01/07	65.95 ł	19.48	46.47	0.00	1,400	5,200	980	9,500	71,000	<18000	460	160			1.2		6.7						
MW2	06/12/07	65.95 b	20.98	44.97	0.00	1,300	4,900	1,200	8,900	40,000	<3000	<100	130			1.12		6.7						
MW2	09/25/07	65.95 b	22.57	43.38	0.00	1,400	6,500	1,900	13,000	68,000	<12000	250	240			2.52		6.57						
MW2	12/20/07	65.95 ł	22.70	43.25	0.00	1,400	7,000	2,400	16,000	75,000	< 5000	650	270			1.1		6.47						
MW2	03/26/08		22.51	43.44	0.00	1,400	6,200	1,800	16,000	83,000	<10000	360	480			4.13	-5.7	6.18						
MW2	06/03/08		21.85	44.10	0.00	1,900	11,000	2,500	18,000	98,000	<12000	500	660			0.91	-24.6	6.43						
MW2	09/25/08		23.30	42.65	0.00	740	3,500	1,700	10,000	46,000	<8000	170	340	180		1.3	-146	6.1						
MW2	12/29/08	65.95 b	22.95	43.00	0.00	260	1,500	1,100	6,400	29,000	<4000	<100	110	<50		1.2	-80	6.4						
MW3	07/27/93	101.29 a	22.28	79.01	0.02	9,100	24,000	5,300	33,000	330,000														
MW3	10/02/97		22.71	78.58	0.03	4,200	11,000	1,800	10,600	36,000			3,500											
MW3	06/30/98	101.29 a	19.47	81.82	0.00	4,800	11,000	1,200	7,100	51,000			3,900		300	2		6.03	1.4	9.8	13	1.4	< 0.10	2.4
MW3	07/29/98	101.29 a	20.01	81.28	0.00																			
MW3	08/26/98	101.29 a	20.62	80.67	0.00																			
MW3	10/01/98	101.29 a		79.96	0.00	3,900	8,500	1,200	6,000	38,000			2,300		240	2		6.65						
MW3	10/30/98		21.62	79.67	0.00																			
MW3	11/30/98		21.31	79.98	0.00																			
MW3	12/28/98	101.29 a		80.14	0.06																			
MW3	01/25/99		20.79	80.50	0.00	4,000	10,000	1200	6700	5,100			2900		238	1		7.01						
MW3 MW3	02/26/99 03/24/99		18.02	83.27 82.92	0.00																			
MW3	05/12/99		18.37	82.92	0.00																			
MW3	12/15-16/99		22.43	78.86	0.003	*	*	*	*	*	*	*	*		*	*	*	*	*	*	*	*	*	*
MW3	03/20/00		17.14	84.15	0.00																			
MW3	07/20/00		20.98	80.31	0.00	5,700	14,000	1,600	9,300	69,000	2,900	<300	3,300		128	2.05		6.73	3.9	6.6	20	< 0.10	0.55	< 0.20
MW3	10/11/00		22.24	79.05	0.00																			
MW3	04/10-11/01		20.70	80.59	0.00	7,200	< 0.001	2,300	12,900	110,000	4,700	<1,500	4,300		137	NR		NR	1	6	8.2	< 0.10	0.13	< 0.20
MW3	07/10/01	101.29 a	21.97	79.32	0.00																			
MW3	11/20/01	65.99 ł	22.80	43.19	0.00	6,300	16,000	2,400	14,900	100,000	5,900	<900	4,000		120	2.93		6.67	0.84	12	31	< 0.10		< 0.20
MW3	02/19/02		20.11	45.88	0.00																			
MW3	05/21/02		21.20	44.79	0.00	6,500	17,000	2,200	12,700	91,000	14,000	<3,000	2,200		130	1.01		6.62	4.2	9.6	25	< 0.10	0.77	< 0.20
MW3	06/27/03	65.99 ł	21.32	44.67	sheen																			

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

		Casing	Depth		SPH					centration (ıg/L)								Concentrat	tion (mg/L	.)			
Well		Elevation	Wate					Ethyl-	Total						CO_2		ORP (mv)	•						
Number	Date	(feet)	(feet) (feet)	(feet)	Benzene	Toluene	benzene	Xylenes	TPH-g	TPH-d	TPH-mo	MTBE	TBA	(lab)	(field)	(field)	(field)	Fe(II)	Mn	SO_4	N-NH ₃	N-NO ₃	o-PO ₄
MW3	09/29/03	65.99 l	22.79	9 43.20	sheen	*	*	*	*	*	*	*	*		*	*	*	*	*	*	*	*	*	*
MW3 ^e	12/12/03		22.7		0.01	*	*	*	*	*	*	*	*		*	*	*	*	*	*	*	*	*	*
MW3 ^e	03/15/04		19.3		sheen	*	*	*	*	*	*	*	*		*	*	*	*	*	*	*	*	*	*
MW3	06/24/04		21.9		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 l	22.5	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 l	22.0	5 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 l	24.0	41.99	0.00	680	1,700	380	1,600	10,000	670	< 500	67											
MW3	06/15/05	65.99 l	21.1	3 44.86	0.00	260	960	330	1,400	12,000	1,200	< 500	31			1.93	-150.4							
MW3	07/18/05		o NM		NM	1,000	5,600	1,100	4,300	23,000	1,700		81											
MW3	09/26/05		22.9		0.00	4,000	17,000	1,900	17,000	79,000	5,100	540	270											
MW3	12/12/05		23.30		0.00	200	710	450	1,400	7,000	550	<500	<10											
MW3	03/29/06		15.70		0.00	110	300	130	490	3,800	<200	<100	13			1.23		6.89						
MW3 MW3	06/19/06 09/29/06		19.1		0.00	160 1,300	500	320 720	840 2,900	7,000 22,000	<300	<100	3.1			2.30		6.40						
MW3	12/12/06		21.1		0.00	1,400	2,300 2,200	670	2,600	21,000	<1500 <1500	<100 <100	110 130			1.05 0.6		6.78 6.72						
MW3	03/01/07		19.50		0.00	1,100	2,500	510	2,200	17,000	<600	<100	51			1.11		6.76						
MW3	06/12/07		21.0		0.00	1,800	4,000	800	3,300	22,000	<1500	<100	150			0.97		6.74						
MW3	09/25/07		22.5		0.00	2,400	5,000	1,000	4,600	29,000	<500	<100	220			1.62		6.63						
MW3	12/20/07		22.5		0.00	2,400	4,900	1.100	4,700	36,000	<2000	<100	240			0.9		6.62						
MW3	03/26/08		22.1		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 l	21.8	1 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 l	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 ł	22.9	2 43.07	0.00	310	910	320	1,300	11,000	<1500	<100	35	23		1.6	-112	6.50						
MW4	06/30/98		16.9		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		17.4		0.00																			
MW4	08/26/98		18.6		0.00																			
MW4	10/01/98		18.7		0.00	570	46	130	36	1,100			1,300		320	3.4		< 0.001						
MW4	10/30/98		19.0		0.00																			
MW4 MW4	11/30/98 12/28/98		18.74 18.60		0.00																			
MW4	01/25-26/99		i 18.3		0.00	230	<8.3	<8.3	<8.3	290			1,300		475	6.7		7						
MW4	02/26/99		1 15.3.		0.00	230	<0.5	\0.J	<0.5	290			1,500		4/3	0.7								
MW4	03/24/99		16.0		0.00																			
MW4	05/12/99		17.7		0.00																			
MW4	12/15-16/99		19.8		0.00	5.8	< 0.50	< 0.50	< 0.50	<50			1,400			1.75		7.02						
MW4	03/20/00	98.65	14.9	83.75	0.00																			
MW4	07/20/00	98.65	18.3	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	19.6	79.04	0.00																			
MW4	04/10-11/01	98.65	17.5	5 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		19.3		0.00																			
MW4	11/20/01		20.1		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		17.3		0.00																			
MW4	05/21/02		18.5		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		18.7		0.00		-5.0			1 100			1 700											
MW4 MW4	09/29/03 12/12/03		20.1		0.00	<5.0 <13	<5.0 <13	<5.0 <13	<10 <25	1,100 <1,300	<50 <50	<500 <500	1,700 1,000							-	-			
MW4 MW4	03/15/04	63.35 l			0.00	1.5	<0.50	<0.50	<1.0	<1,300 54	<50	<500	41			0.16								
MW4	06/24/04		19.3		0.00	69	<5.0	<5.0	<10	920	<50	<500	1,100			0.15								
MW4	09/29/04		20.20		0.00	<5.0	<5.0	<5.0	<10	940	<50	<500	1,200			0.13		6.63						
MW4	12/13/04		20.4		0.00	<5.0	<5.0	<5.0	<10	740	<50	<500	860			0.58		6.84						
MW4	03/14/05		18.30		0.00	20	<5.0	<5.0	<10	930	<50	<500	930			0.28		6.34						
MW4	06/15/05	** }	20.0		0.00	350	6.1	< 5.0	<10	2100	89	<500	1,100			0.46	-98.9							
MW4	07/18/05	**	NM		NM	11	< 5.0	< 5.0	<10	540	<50		1,100											
MW4	09/26/05	**	21.7		0.00	< 5.0	< 5.0	< 5.0	<10	960	< 50	< 500	660			2.20	210.4	6.73						
MW4	12/12/05	**	21.89) NC	0.00	< 5.0	< 5.0	< 5.0	<10	820	< 50	< 500	1,000			2.05		6.62						
MW4	03/29/06	**	14.8		0.00	49	160	120	300	2,400	<100	<100	130			1.07		6.82						
MW4	06/19/06	**	17.9	5 NC	0.00	100	940	540	1,800	8,800	<400	<100	55			2.49		5.76						

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

		Casing	Depth		SPH					entration (ug/L)								Concentra	tion (mg/L	.)			
Well	_	Elevation	Wate			_		Ethyl-	Total						CO_2		ORP (mv)							
Number	Date	(feet)	(feet) (feet)	(feet)	Benzene	Toluene	benzene	Xylenes	TPH-g	TPH-d	TPH-mo	MTBE	TBA	(lab)	(field)	(field)	(field)	Fe(II)	Mn	SO_4	N-NH ₃	N-NO ₃	o-PO ₄
MW4	09/29/06	63.35 h	19.84	5 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		20.03		0.00	11.0	0.77	<0.5	<0.5	230.0	<50	<100	260			0.90		6.61						
MW4	03/01/07		18.33		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 t	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 ł	21.2	42.08	0.00	< 0.5	< 0.5	< 0.5	< 0.5	< 50	< 50	<100	300			6.67		6.59						
MW4	12/20/07		21.30		0.00	< 0.5	< 0.5	< 0.5	< 0.5	< 50	< 50	<100	370			1.45		6.57						
MW4	03/26/08		20.89		0.00	< 0.5	< 0.5	< 0.5	< 0.5	< 50	< 50	<100	260			4.56	65	6.35						
MW4	06/03/08		20.5		0.00	<0.5	<0.5	<0.5	<0.5	<50	<50	<100	190			1.34	101.3	6.49						
MW4 MW4	09/25/08 12/29/08		22.03		0.00	<0.5 <0.5	<0.5 <0.5	<0.5 <0.5	<0.5 <0.5	<50 <50	<50 <50	<100 <100	380 230	<5.0 <5.0		2.2 2.9	-134 - 7	6.1 6.4						
IVI VV 4	12/29/06	05.55 1	21.02	41./3	0.00	<0.5	<0.5	<0.5	<0.5	<30	<30	<100	230	♥3.0		2.9	-/	0.4						
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		21.52		0.00																			
MW5	08/26/98		22.2		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		23.12		0.00																			
MW5	12/28/98		23.18		0.00																			
MW5	01/25-26/99		22.6		0.00	<1.0	<1.0	<1.0	<1.0	<50			<2.0		305	9.7		7.04						
MW5	02/26/99		19.78		0.00																			
MW5	03/24/99		20.25		0.00																			
MW5 MW5	05/12/99 12/15-16/99		21.00		0.00	<0.50	<0.50	< 0.50	<0.50	<50			<0.50			2.72		7.19						
MW5	03/20/00		1 24.15		0.00	<0.50	<0.50	<0.50	<0.50	<30			<0.50			2.12		7.19						
MW5	07/20/00		21.84		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		23.4		0.00																			
MW5	04/10-11/01		22.3		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		23.64		0.00																			
MW5	11/20/01	65.59 ł	24.65	40.94	0.00	0.83	12	1.2	11	140	860	2,500	10		c	66		6.01	0.2	2.5	42	< 0.10		< 0.20
MW5	02/19/02	65.59 t	22.3	43.22	0.00																			
MW5	05/21/02	65.59 ł	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		23.0		0.00																			
MW5	09/29/03		24.38		0.00	< 0.50	0.52	7.1	35	100	< 50	< 500	1.4											
MW5	12/12/03		23.90		0.00	< 0.50	< 0.50	< 0.50	<1	<50	<50	<500	1.5											
MW5	03/15/04		20.82		0.00	< 0.50	<0.50	<0.50	<1.0	<50	<50	<500	< 0.50			6.4								
MW5 MW5	06/24/04 09/29/04		23.5		0.00	< 0.50	< 0.50	< 0.50	<1.0	<50	130	< 500	0.79			5.56								
MW5	12/13/04		23.8		0.00																			
MW5	03/14/05		20.18		0.00	< 0.50	1.3	1.5	8.6	82	<50	<500	< 0.50			3.91		5.57						
MW5	06/15/05		12.90		0.00																			
MW5	09/26/05		23.60		0.00																			
MW5	12/12/05		23.84		0.00																			
MW5	03/29/06		17.19		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 ł	20.22	45.37	0.00																			
MW5	09/29/06		22.80		0.00																			
MW5	12/12/06		23.08		0.00																			
MW5	03/01/07		21.02		0.00	< 0.50	< 0.50	< 0.50	< 0.50	54	< 50	<100	< 0.50			4.35		6.08						
MW5	06/12/07		22.78		0.00																			
MW5	09/25/07		24.45		0.00	<0.50	1.5	<0.50	<0.50	<50	<50	<100	0.64			18.71		6.26						
MW5 MW5	12/20/07 03/26/08		24.52		0.00	< 0.50	1.5	< 0.50	<0.50	<50	<50	<100			-	7.93	88	5.86	-		-			-
MW5 MW5	05/26/08		23.68		0.00	<0.50	1.5	<0.50	<0.50	<50	<30	<100	<0.5			7.93		5.86						
MW5	09/25/08		25.00		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		24.92		0.00	<0.50	< 0.50	< 0.50	< 0.50	71	<50	<100	< 0.5	<5.0		4.8	167	6.1						
-										-							**							
MW6	07/20/00	96.60 a	18.30	78.30	0.00	< 0.50	< 0.50	< 0.50	< 0.50	< 50	< 50	<300	160		122	2.72		6.66	120	1.9	53	6	0.05	< 0.20
MW6	10/11/00	96.60 a	18.69	77.91	0.00																			
MW6	04/10-11/01	96.60 a	17.85	78.75	0.00	< 0.50	< 0.50	< 0.50	< 0.50	< 50	< 50	<300	180		142	NR		NR	22	2.2	0.69	5.2	< 0.05	< 0.20

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

		Casing	Depth	to GW	SPH				Con	centration (μg/L)								Concentra	tion (mg/l	L)			$\overline{}$
Well		Elevation	Wate					Ethyl-	Total						CO_2	DO	ORP (mv)	pН						
Number	Date	(feet)	(feet)	(feet)	(feet)	Benzene	Toluene	benzene	Xylenes	TPH-g	TPH-d	TPH-mo	MTBE	TBA	(lab)	(field)	(field)	(field)	Fe(II)	Mn	SO_4	N-NH ₃	N-NO ₃	o-PO_4
MW6	07/10/01		a 18.43		0.00																			
MW6 MW6	11/20/01 02/19/02		b 18.67 b 17.40		0.00	< 0.50	<0.50	< 0.50	<0.50	<50	<50	<300	450		100	2.03		6.44	29	5.2	1.1	3.4		< 0.20
MW6	05/21/02		b 17.40		0.00	<0.50	< 0.50	< 0.50	< 0.50	<50	<50	<300	170		100	0.76		6.6	11	3.4	1.4	8.9	0.65	< 0.20
MW6	06/27/03		b 17.73		0.00																			
MW6	09/29/03	59.60	b 18.48	41.12	0.00	<1.0	<1.0	<1.0	<2.0	230	< 50	< 500	340											
MW6	12/12/03	59.60	b 17.89	41.71	0.00	<2.5	<2.5	<2.5	< 5.0	<250	51	< 500	190											
MW6	03/15/04	59.60	b 16.46	43.14	0.00	<1.0	<1.0	<1.0	<2.0	200	< 50	< 500	220			0.11								
MW6	06/24/04		b 17.97		0.00	<1.0	<1.0	<1.0	<2.0	130	< 50	< 500	190			0.05								
MW6	09/29/04		b 18.55		0.00	< 0.50	0.61	< 0.50	1.2	210	< 50	< 500	190			0.37		6.60						
MW6 MW6	12/13/04 03/14/05		b 17.88 b 16.82		0.00	<0.50	< 0.50	< 0.50	1.8	160	<50	<500	190			0.08		5.65						
MW6	06/15/05		b 16.82 b 17.60		0.00	<0.50	<0.50	<0.50	1.8	100	<30	<300	190			0.08		3.03						
MW6	09/26/05		b NM	NM	0.00																			
MW6	12/12/05		b 18.33		0.00	0.62	< 0.50	< 0.50	1.0	81	<50	< 500	140			1.52		6.61						
MW6	03/29/06		b 14.53		0.00	< 0.50	< 0.50	< 0.50	< 0.50	<50	< 50	<100	120			6.93		6.06						
MW6	06/19/06	59.60	b 16.46	43.14	0.00																			
MW6	09/29/06	59.60	b 17.60	42.00	0.00	0.87	< 0.50	< 0.50	< 0.50	< 50	< 50	<100	140			0.16		6.49						
MW6	12/12/06		b 16.93		0.00	0.67	< 0.50	< 0.50	< 0.50	< 50	< 50	230	89			0.5		6.68						
MW6	03/01/07		b 16.30		0.00	< 0.50	< 0.50	< 0.50	< 0.50	< 50	< 50	<100	78			0.83		6.66						
MW6	06/12/07		b 17.38		0.00																			
MW6	09/25/07		b 18.36		0.00	< 0.50	< 0.50	< 0.50	< 0.50	<50	<50	<100	89			8.5		6.78						
MW6 MW6	12/20/07 03/26/08		b 17.90 b 17.37		0.00	<0.50	<0.50	<0.50	<0.50	<50	<50	<100	68			5.57	-35	6.38						
MW6	06/03/08		b 17.37 b 17.11		0.00	<0.50	<0.50	<0.50	<0.50	<30	<30	<100				5.57	-33	0.38						
MW6	09/25/08		b 18.82		0.00	< 0.50	< 0.50	< 0.50	< 0.50	<50	<50	<100	78	<5.0		1.6	-160	6.2						
MW6	12/29/08		b 18.30		0.00	0.77	< 0.50	< 0.50	< 0.50	<50	<50	<100	44	<5.0		1.2	-60	6.5						
MW7	07/20/00		a 15.93		0.00	< 0.50	< 0.50	< 0.50	< 0.50	< 50	< 50	<300	< 0.50		32.2	7.15		7.43	< 0.1	0.002	7.5	< 0.10	2.6	0.13
MW7	10/11/00		a 16.90		0.00																			
MW7	04/10-11/01		a 15.80		0.00	< 0.50	< 0.50	< 0.50	< 0.50	<50	< 50	<300	< 0.50		77.6	NR		NR	0.18	0.048	49	< 0.10	2.7	0.31
MW7	07/10/01		a 16.71		0.00	-0.50	-0.50		-0.50									7.11	0.16	1.0		-0.10		-0.20
MW7 MW7	11/20/01 02/19/02		b 16.17 b 14.92		0.00	<0.50	<0.50	<0.50	<0.50	<50	<50	<300	<2.0		62	0.96		7.11	0.16	1.8	63	<0.10		< 0.20
MW7	05/21/02		b 15.18		0.00	< 0.50	< 0.50	< 0.50	< 0.50	<50	<50	<300	< 0.50		68	1.03		7.57	0.11	0.35	51	< 0.10	2.8	0.11
MW7	06/27/03		b 16.28		0.00																			0.11
MW7	09/29/03		b 16.88		0.00	< 0.50	< 0.50	< 0.50	<1.0	<50	< 50	< 500	0.62											
MW7	12/12/03	59.47	b 14.95	44.52	0.00	< 0.50	< 0.50	< 0.50	<1.0	< 50	< 50	< 500	< 0.50											
MW7	03/15/04	59.47	b 14.77	44.70	0.00	< 0.50	< 0.50	< 0.50	<1.0	< 50	< 50	< 500	< 0.50			0.54								
MW7	06/24/04	59.47	b 16.33	43.14	0.00	< 0.50	< 0.50	< 0.50	<1.0	< 50	300	< 500	< 0.50			0.20								
MW7	09/29/04		b 16.88		0.00																			
MW7	12/13/04		b 15.26		0.00																			
MW7	03/14/05		b 15.00		0.00	< 0.50	< 0.50	< 0.50	<1.0	<50	< 50	< 500	< 0.50			0.47		6.15						
MW7	06/15/05		b 15.32		0.00																			
MW7 MW7	09/26/05 12/12/05		b NM b 15.99	NM 43.48	0.00																			
MW7	03/29/06		b 12.65		0.00	< 0.50	< 0.50	< 0.50	< 0.50	<50	<50	<100	< 0.50			0.72		5.81						
MW7	06/19/06		b 14.49		0.00																			
MW7	09/29/06		b 16.67		0.00																			
MW7	12/12/06		b 15.21		0.00																			
MW7	03/01/07	59.47	b 14.68	44.79	0.00	< 0.50	< 0.50	< 0.50	< 0.50	< 50	< 50	<100	< 0.50			0.92		6.84						
MW7	06/12/07	59.47	b 16.2	43.27	0.00																			
MW7	09/25/07		b 16.72		0.00	< 0.50	< 0.50	< 0.50	< 0.50	< 50	< 50	<100	< 0.50			6.11		6.78						
MW7	12/20/07		b 15.02		0.00																			
MW7	03/26/08		b 15.95		0.00	< 0.50	< 0.50	< 0.50	< 0.50	<50	< 50	<100	< 0.50			3.3	23	6.46						
MW7	06/03/08		b 14.24		0.00																			
MW7 MW7	09/25/08 12/29/08		b 17.07 b 15.64		0.00	<0.50 <0.50	<0.50 <0.50	<0.50 <0.50	<0.50 <0.50	<50 <50	<50 <50	<100 <100	<0.50 <0.50	<5.0 <5.0		1.5	-186 -50	6.3 6.9						
IVI W /	12/29/08	39.47	b 15.64	43.83	0.00	<0.50	<0.50	<0.50	<0.50	<50	<50	<100	<0.50	< 5.0		6.4	-50	0.9						

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

0.00

< 0.50

0.64

< 0.50

NS b 15.71

		Casing	Depth to	GW	SPH				Cone	centration (μg/L)								Concentra	tion (mg/L	.)			
Well		Elevation	Water	Elevation	Thickness			Ethyl-	Total						CO_2	DO	ORP (mv)	pН						
Number	Date	(feet)	(feet)	(feet)	(feet)	Benzene	Toluene	benzene	Xylenes	TPH-g	TPH-d	TPH-mo	MTBE	TBA	(lab)	(field)	(field)	(field)	Fe(II)	Mn	SO_4	N-NH ₃	N-NO ₃	$o-PO_4$

<100

< 5.0

SPH Separate-phase hydrocarbons.

CO₂ Carbon dioxide.

12/29/08

DO Dissolved oxygen.

DO DISSOIVED OXY

Fe(II) Ferrous iron.

MW8

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

μg/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.

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.

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

-						Concentra	tions (µg/L)			
Boring		Depth			Ethyl-	Total				
ID	Date	(feet)	Benzene	Toluene	benzene	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.
Bold values reflect maximum detected concentrations <

660

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

XX7 . 11	Groundwater	Groundwa	ter Sampling and Analysis	Frequency
Well Number	Gauging Frequency	BTEX and TPH-g	МТВЕ	ТЕРН
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

Q = Quarterly.

S = Semiannual.

A = Annual.

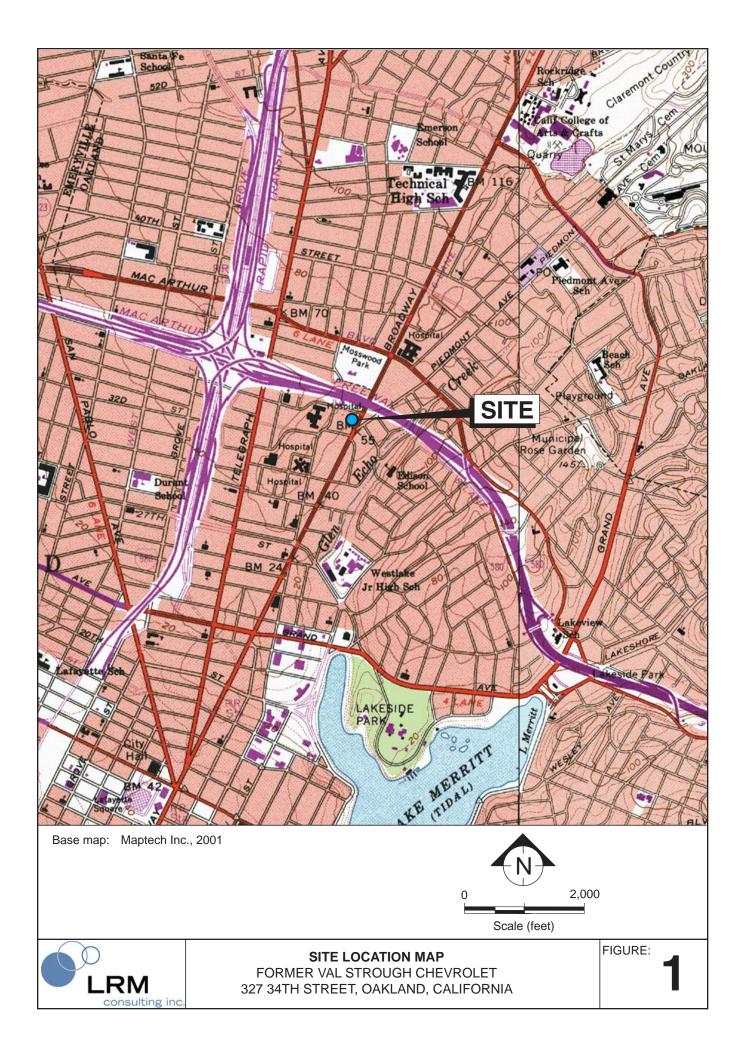
BTEX = Benzene, toluene, ethylbenzene, total xylenes.

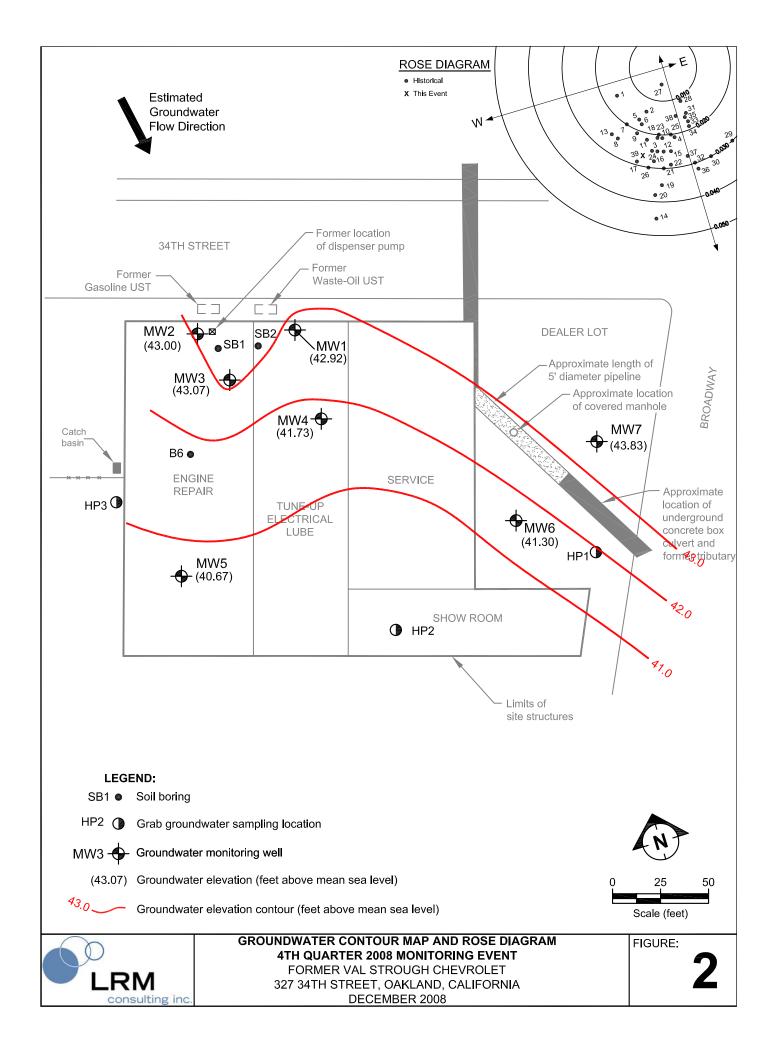
MTBE = Methyl tertiary butyl ether.

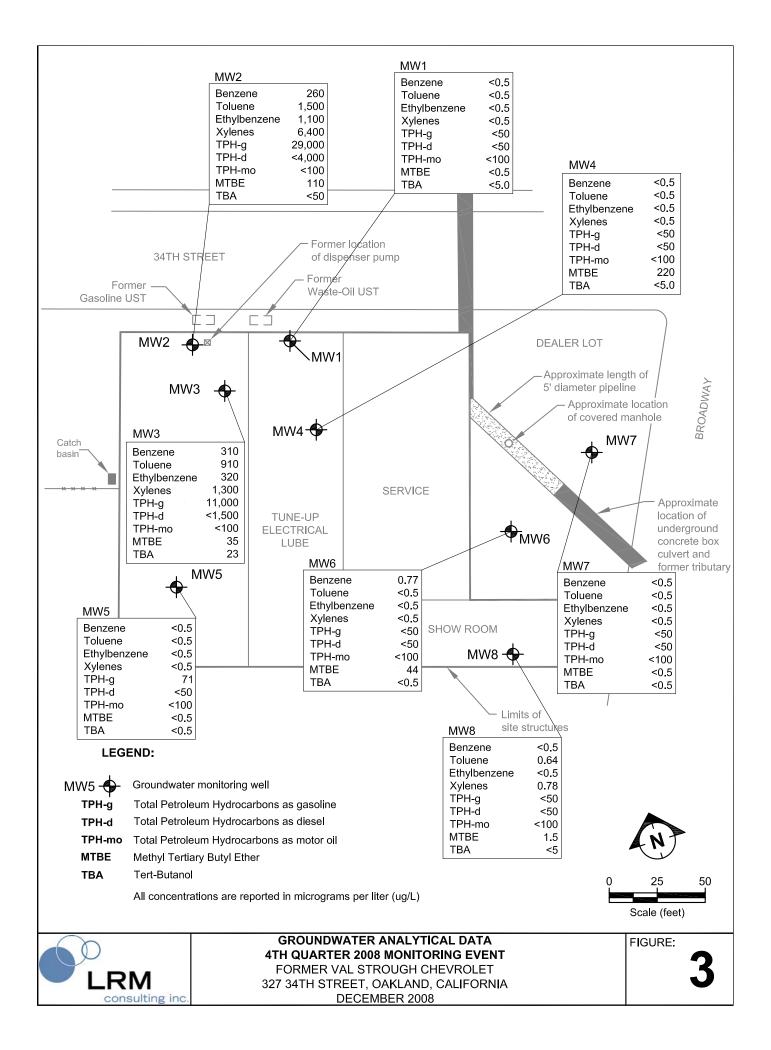
TPH-g = Total Petroleum Hydrocarbons as gasoline.

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

FIGURES







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.confluencs-env.com

Chain of Custody

Project Name:

Former Strough Chevy - Oakland

Job Number:

M1-081229

TAT: STANDARD

S DAY 2 DAY 24 HOUR OTHER:

ab: K	Iff					Site Address:	327	34th	St, C	akla	nd						Confluence	PM:	Jason	Brow	m_			
ddress	s: 2795 2nd St, Suite 300,	Davis CA 95			California Global II	_	_	T06	_							Phone / Fa	-	_			173-861	7		
ontact	: Angelique Showman					Include EDF w/ F	_				No						Confluence							
hone/	Fax: 530-297-4800 x.127					Consultant / PM: 1					aheri	an					Report to:				aheria			
						Phone / Fax;	(41:	5) 70	06-89					- 4			Invoice to:		erhda	d Jav	aheria	n		
		-		M	atrix				P	reser	vativ	re				Requ	ested Anal	ysis						
	Sample ID	Time	Date	Soil/Solid	Water/Liquid Air	Laboratory No.	No. of Containers	Unpreserved	H ₂ SO ₄	HNO	HCI	NeOH	TEPH Diesel & Motor Oil* (8015)	PH-G, BTEX (8260B)	MTBE (\$260)	TBA (8260)		Ten Ini Tin	Sip °C.	型200	PLE TO	keee norm.1 ato <u>//</u>	potenti (68)	ents -2 / No
	un-1	930	nhar		Y		5				7		x	X	×	¥								
	14n-2	1/30	1		X		5				×		X	X	×	×		1						
	1445-3	955	1		X		5				م		X	×	入	X		10						
	xuv-4	945			x		5				7		X	X	X	X								
	KILVS	1040			Y		5				×		K	×	بد	×								
	purt.	11000			χ		5				4		X	e	X.	×								
	KM 7	1115		П	1		5				Y		×	X	K	K								
	1212-8	1140		П	×		5				×		×	×	×	X								
	4CTB	-	.L		K		2			0	×		X	¥	×	×								
																							1 12/8/2	
	er's Name: R Myrs					Reline	quish	ed By	/An	iliati	un			ate		me		Accep	ted By	/ Affil	iation		Date	Tim
ampl	er's Company: Confluence	Environme	ntal		-	Benton	-	>	2				1,2	30 16	17.	50				-	_	_		
hipm	ent Date:						_	D		_	_		-		_	~					7			
hipm	ent Mcthod:						_	*			-						5/10	1/		Act 6	Ana	Which	12308	123



Confluence Environmental, Inc

Equipment Calibration Log

Equipment make/model	Equipment ID/ serial number	Date	Time	Calibration Standards	Equipment Reading	Equipment Calibrated (Temp (°C) °F)	Tech init.	Comments
YSI SSC	#/	12/29/08	910	4,7,10 cons	4.0, 7.0	Yes.	10	Bu	
)				20101S	1413	yes	1	BAI	
				D.a.	100%	yes		Bu	
	4	1	1	0AP 251	251	yes	7	Эш	
			2.						
								2	

Site: Fix Mer Strongh Chang Dolland

		1	# of dru	ms					7 =	
Date		Įnj	partial	empty	total	Contents (s-soil w-water	labeled (y or n)	label legible (y or n)	tech initial	Notes:
1/25	Arrival				0					
9/25	Departure		l		1	W	y	4	BH	
417	Arrival	4	1		5	1/5	y	y	Bu	u/
40	Departure	4		1	4	5	Y	у	BY	*
	Arrival									· · ·
	Departure		92			7.				
	Arrival									1 3/4
	Departure									1
:36	Arrival									
	Departure									
	Arrival						6 0			
	Departure			Ÿ						
	Arrival									
- 1	Departure									
	Arrival									
	Departure									
	Arrival									
	Departure	123								



NON-HAZARDOUS WASTE MANIFEST

WASTE MANIFEST	Generator's US EPA ID N			Manifest Document No.		2. Page 1
3. Generator's Name and Mailing Address	ermer Story	a Chery				
52	27 344 31.					
4. Generator's Phone ()	akland CA					
5. Transporter 1 Company Name	5.	US EPA ID Number		A. State Transpo	dada ID	
Confluence Env	1			B. Transporter 1	20000000	, , ,
7. Transporter 2 Company Name	8.	US EPA ID Number		C. State Transpo		60-76
	1			D. Transporter 2		
9. Designated Facility Name and Site Address	10.	US EPA ID Number		E. State Facility's	1000	
1105 Airpet Not.						
				F. Facility's Phon		
TI WASTE DESCRIPTION					374-353	
11. WASTE DESCRIPTION				ontainers	13. Total	UI WE
			No.	Туре	Total Quantity	WŁ
a.					527	
NOW HAZ 7	Dunge		1	Poly		(2)
b.	WINCH WIT	-(EC	- 1	1011	37	Cr
7						
						1
c.						-
				1 1		
d.						
G. Additional Descriptions for Materials Listed Ab	ovo /			H. Handling Code	s for Wastes Listed At	bove
G. Additional Descriptions for Materials Listed Ab	ove ers/seczos	5		H. Handling Code	s for Wastes Listed At	bove
G. Additional Descriptions for Materials Listed Ab CLEAK NO CD	ove oRS/SGLZDS	5		H. Handling Code	s for Wastes Listed At	bove
G. Additional Descriptions for Materials Listed Ab. CLEAK NO OD	ove ers/seczos	S		H. Handling Code	s for Wastes Listed At	bove
G. Additional Descriptions for Materials Listed Ab CLEAK NO OD	ove ers/seczos	5		H. Handling Code	≾ for Wastes Listed At	bove
CLEAR NO OD	ers/seczos	S		H. Handling Code	≾ for Wastes Listed At	bove
CLEAK NO OD	ers/seczos	S		H. Handling Code	≾ for Wastes Listed At	bove
CLEAK NO OD	ers/seczos	5		H. Handling Code	s for Wastes Listed At	bove
CLEAK NO OD	ers/seczos	5		H. Handling Code	≾ for Wastes Listed At	bove
CLEAK NO OD	ers/seczos	S		H. Handling Code	≾ for Wastes Listed At	bove
CLEAK NO OD	ers/seczos	5		H. Handling Code	s for Wastes Listed At	bove
CLEAK NO OD	nformation		cribed and are in		s for Wastes Listed At	bove
CLEAK NO OD	nformation		cribed and are in ste regulations.		s for Wastes Listed At	bove
15. Special Handling Instructions and Additional Ins	nformation		cribed and are in		s for Wastes Listed At	Date
15. Special Handling Instructions and Additional Ins	nformation		cribed and are in			
CLEAR NO OD	nformation sertily that the contents of this ships sescribed on this manifest are no	oment are fully and accurately desi ot subject to federal hazardous wa	cribed and are in			Date
CLEAK NO OD 15. Special Handling Instructions and Additional In 16. GENERATOR'S CERTIFICATION: I hereby of in proper condition for transport. The materials Printed/Typed Name 17. Transporter 1 Acknowledgement of Receipt of	nformation sertily that the contents of this ships sescribed on this manifest are no	oment are fully and accurately desi ot subject to federal hazardous wa	cribed and are in sate regulations.			Date
CLEAR NO OD 15. Special Handling Instructions and Additional In 16. GENERATOR'S CERTIFICATION: I hereby of in proper condition for transport. The materials Printed/Typed Name 17. Transporter 1 Acknowledgement of Receipt of Printed/Typed Name	nformation sertily that the contents of this ships sescribed on this manifest are no	oment are fully and accurately desi ot subject to federal hazardous wa	cribed and are in			Date fonth Day Date fonth Day
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15. Special Handling Instructions and Additional Instructions and Instructions	nformation serilly that the contents of this ships described on this manifest are not the series of the ships described on this manifest are not the series of the series	oment are fully and accurately designature Signature	cribed and are in			Date fonth Day Date fonth Day 2 /7 Date
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CLEAR NO OD 15. Special Handling Instructions and Additional In 16. GENERATOR'S CERTIFICATION: I hereby of in proper condition for transport. The materials Printed/Typed Name 17. Transporter 1 Acknowledgement of Receipt of Printed/Typed Name BYANDOW HYERS 18. Transporter 2 Acknowledgement of Receipt of Printed/Typed Name	nformation serilly that the contents of this ships described on this manifest are not the series of the ships described on this manifest are not the series of the series	oment are fully and accurately designature Signature	cribed and are in usite regulations.			Date fonth Day Date fonth Day 2 /7 Date

Well Maintenance Inspection Form

Client: 4	24				Site:	Ferm	r 51	long	16		Ch	cv	V		Date: 12/29/08
Job #: 14/-	081	2.2	9		Site:		Techn	icia	n:		BI	4			Page of
					Ent	ry India	ates De	eficie	ency	0					
Inspection Point	Well Inspected - No Corrective Action Required	Cap non-functional	Lock non- functional	Lock missing	Bolts missing (# missing / # total tabs)	#/	j _o		pai	Rim / Lid broken	Trlp Hazard	Below Grade	Other (explain in notes)	Well Not Inspected (explain in notes)	Notes (Note any repairs made while on site)
MWI	X														NL
MWZ	X					/	/								Vault
nnv-3	X														verul
11102 1110-3 1110-4						/		X							
115	X					/,	/								
MWG MWT MWE					/	4	/					X			
MUT					/	/	/					X			
Mer-E	X				/	/	/								NL
					/,	/	/,								
					/	/	/		Ü,						
						/	/								
	<i>C</i>				/	_	/								
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Notes:								_					_	-	

Water Level Measurements

Date: 12/29/08 Client: LRM Job Number: 11-08/229

Well I.D.	Time	Dia		Thickness of NAPL	Depth to water (DTW)	Total Depth (measured)	Total Depth (historical)	Ref Point (TOC/ TOB)		
401	848	2			21.77		30.59	TOC		
UN-2	855	2			22,95		31.74			
Uw-3	852	2			22.92		31.58			_
44-4	84G	2			21.42		27.54			
eru-5	842	2			24,92		26.40			
4a-6		2			18.30		24.55			
4107	837	2			15.64		34.54			
KW 8		1			15.71	74.45		+		
	<i>5</i>									
		-	-			1				
										-
									1	
						- 4		/H		

107-11 2	D. 14.	1		40/00/0000		Citar	Forme	r Ctrous	h Chou	Oakland
100000	D: Hw			12/29/2008		Site:				, Oakland
		_		6" Other:		DTW: 2/				
Purge	equip:	ES - diar	n: Blac	der Perl	_		Air Disp	lacemen'	t Ext.	System
disp bai		on bailer	other:		Tubing:		New	Dedica	ited N	IA
				me Micro/L					30	
	depth/									1.47 Radlus ² X 0.1
(TD - E	TW X Mu	iltiplier =	1 Volume		80% Rec	overy (TD -	DIW	(0.20 +	DIW)	
	1 Volume	e = /,4	<u> </u>	= 4.2	(Total Pi	urge)			80%=_	23.53
Time	Temp		Cond (ms (us)	Turbidity (NTU)	Purge Rate (gal or ml/ min)	Volume	DO (mg/l)	ORP	DTW	Notes
e l	18.3	6.1	1474	71000		-	3.4	119	-	
923	18.6	6.2	1441	71000	~	1.4	1	72	-	
925	18.7	10.2	1420	71000	-	2.8	1.9	38	-	
927	18.7	6.2	1405	71000	-	4.2	1.8	3/	1	
	,					, ,		JA-E		
	II dewater		(NO)	d. Tubing	Total vol	ume remov		4,5 Other:	(gal /	L)
	e method: e date: 12		Sample t		230	ing Ext. P		at sampl	le: —	_
Sample		lut		Lab:	Kiff			Numbe	r of bott	les: 5
Analys	is:	TPH-G, B	TEX, MTBE	, TBA, TEPH-D	The second	- A.C.	0.2			
Equipn	nent blank	ID	@		Field blar	nk ID	@			
Duplica	ate ID:				Pre-purg	e DO:		Post pu	irge DO	
Fe2+:					Pre-purg	e ORP:		Post pu	ırge OR	P:
	depth:		Volume	of NAPL:			Volu	me rem	oved:	ml

Job#:	M1-0812	229	Sample	r:	B Myers		Clien	t:	LRM	
Well I	D: 146	1-2	Date:	12/29/2008		Site:	Forme	r Stroug	h Chevy	, Oakland
Well d	liam: 1/4	1" 1" 6) 3" 4"	6" Other:		DTW: 2	2.95	Total	Depth:	31.74
Purge	equip:	ES - diar	n: Blac	lder Per						
disp bail	er tefl	on bailer	other:		Tubing:	OD:	New	Dedica		
Purge	metho	d: 3-5		me (Micro/I						
		intake								1.47 Radius ² X 0.163
(TD - D			1 Volume			overy (TD -	DTW)	(0.20 +	DTW)	
	1 Volum	e = <u>/.</u>	<u>/</u> x 3	= 4.2	_ (Total P	urge)			80%=_2	24.71
Time	Temp	pН	Cond (m\$/(iS)	Turbidity (NTV)	Purge	Volume Removed	DO (mg/l)	ORP	DTW	Notes
tral	17.7	4.2	7100	43	Training to		1.2	-59)	
1175	18.3		856	57		1.4	1.4	-74	_	
1127	18.3	6.4	876	57	-	7.8	1.4	-80)	
1129	18.1	6.4	803	55	-	4.2	1.3	-73	-	
					1 - 1					
Did wel	dewater	? YES	NO	,	Total vo	ume remov	ed: 4	1.5	(gal /	L)
Sample	method	Qisp Ba	ailer De	d. Tubing	New Tubi	ng Ext. F	ort C	Other:		
Sample	date: 1	2/29/08	Sample 1	ime:	1130		DTW	at sampl	e: "	
Sample	ID: 1	wi		Lab:	Kiff			Numbe	r of bott	es: 5
Analysi	s:	TPH-G, E	STEX, MTBE	, TBA, TEPH-D	, TEPH-MO					
Equipm	ent blan	k ID	@		Field blan	nk ID	@			
Duplica	Ouplicate ID:					e DO:		Sec. 10	irge DO:	
Fe2+:					Pre-purg	Pre-purge ORP: Post purge ORP:				

Job#:	M1-0812	229	Sample	ır:	B Myers		Clien	t:	LRM		
Well I	D:U/w	-3	Date:	12/29/2008	3	Site:	Forme	r Stroug	h Chevy	, Oakland	d
Well o	diam: 1/4	1" 1" 2	3" 4"	6" Other:		DTW: 23	2.92	Total	Depth:	31.88	5
				der Per							
	ler tefl		other:			OD:		Dedica	ted N	A	
				me (Micro/						- FR TS 7.5	\$1.600 K
-	depth/			Multiplie						L.47 Radius	s* X 0.163
(10-6			1 Volume			overy (TD -	ושום				
	1 Volum	e = <u>/.4</u>	x 3	=_4,2	_ (Total P	urge)			80%=_	14.71	
Time	Temp	рН	Cond (ms (15)	Turbidity (NTU)	Purge Rate (gal or mL/ min)		DO (mg/l)	ORP	DTW	Notes	i.
491	17.7	6.5	961	33	-	_	1.6	-112			
	17.9		9606	71000	_	1.4	1.4	-91			
952	18.1	6.5	938	71000		2.8	lile	-7/			
952/	18.2	4.5	938	71008	_	4.2	1.7	108			
									di .		
Did we	I dewater	? YES	(NO)		Total vo	lume remov	ed: 4	1.5	(gal /	L)	
Sample	e methods	Disp Ba	ile De	d. Tubing	New Tubi	ng Ext. P	ort C	Other:			
Sample	e date: 12	2/29/08	Sample	ime: 5	35		DTW:	at sampl	e: —		
Sample ID: 1400-3 Lab:					Kiff	+'		Numbe	r of bottl	es: 5	0
Analysi	is:	TPH-G, B	TEX, MTBE	TBA, TEPH-	, ТЕРН-МО						
Equipn	nent blank	cID	@		Field bla	nk ID	@				
Duplica	ate ID:				Pre-purg	e DO:		Post pu	rge DO:		
Fe2 ⁺ :					Pre-purg	e ORP:		Post pu	irge ORI	o:	
NAPL	depth:		Volume	of NAPL:			Volu	me rem	oved:	m	

Job#	: M1-0812	29	Sample	ri	B Myers		Clien	t:	LRM	
Well	ID: No-	4	Date:	12/29/2008		Site:	Forme	r Stroug	h Chevy	, Oakland
Well	diam: 1/4 le equip:	" 1" (2		6" Other:	Waterra Tubing:				t Ext.	
-				me (Micro/I			-	_		
Pum	p depth/	intake	:	Multiplier	'S: 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 Mu	ltiplier =	1 Volume		80% Rec	overy (TD -	DTW >	(0.20 +	DTW)	
	1 Volume	e =/	x 3	= 3	_ (Total Pi	urge)			80%=_2	22.80
Time	Temp	рН	Cond (mS/ss))	Turbidity (NTU)	Purge Rate (gal or mL/ min)	Volume Removed (gal / L)	DO (mg/l)	ORP	DTW	Notes
Hal	18.Ce	6.4	934	7/000	-	_	29	-7	_	
935	18.7	6.4	900	7/000		1	1.4	-19)	
937		(0.4	928	71000		2	1.1	-28		
940	18.8	6.3	937	71000		3	1.1	-360	-	
								-		
Ť.										
Did w	ell dewater	? YES	(NO)		Total vol	ume remov	ed:	3	(gal /	L)
Samp	ole method:	Disp Ba	ailer De	d. Tubing	New Tubi	ng Ext. P	ort C	Other:		
Samp	ole date: 12	2/29/08	Sample	time:	945		DTW	at samp	le: —	
Sam	ole ID: 14	w-4		Lab:	Kiff			Numbe	er of bott	les: 5
Analy	sis:	TPH-G, E	BTEX, MTBE	, TBA, TEPH-D	, TEPH-MO					
Equip	ment blank	(ID	@		Field blan	nk ID	@	1		
Dupli	cate ID:				Pre-purg	e DO:		Post p	urge DO	
Fe2 ⁺	:				Pre-purg	e ORP:		Post p	urge OR	P:
NAPI	L depth:		Volume	of NAPL:			Volu	ıme rem	oved:	ml

Job#:	M1-0812	29	Sample	r:	B Myers		Clien	t:	LRM	
Nell I	D: Mu	-5	Date:	12/29/2008		Site:	Forme	r Stroug	h Chevy	, Oakland
4.171				6" Other:		DTW: 24	192	Total I	Depth:	26.40
				ider Peti			575-200		Ext,	
-	er teflo		other:		Tubing:		New	Dedica		
				me (Micro/L			Other	:		
		intake		Multiplier	'S: 1"= 0.04	2"= 0.16 3"-	0.37 4"=	0.65 5"=1	-	47 Radius ² X 0.163
TD - D	TW X Mu	ıltiplier =	1 Volume		80% Rec	overy (TD -	DTW	(0.20 +	DTW)	
	1 Volum	e= 0.	2 × 3	= 0.6	(Total P	urge)	1		80%= 2	25,72
	1 1 7 1 1 1 1				Purge	Volume				
	Temp	-11	Cond (mS/((S))	Turbidity	Rate (gal or mL/ min)		DO (mg/l)	ORP	DTW	Notes
Time	(C)°F)	pH	(ma /(µa)	(mo)	Of Int.	(90.7 -1			Ditt	Hotes
e 1	17.2	4.0	690	71000			3.3	-6.4	_	
1036	17.3	(0.1	665	7,000	-	0.2	4.8	151		
						0.4		104	_	
1051	11.6	6.0	680				1	7.		V
1138	17.7	10.6	686	71000	- 1	0.60	4.0	167	-	
										-,
	Y									
					-					
-		7 P								
			20							
Did we	l dewater	r? YES	(NO))	Total vo	lume remov	/ed:	0.6	(gal /	L)
		- du	_	ed. Tubing	New Tub			Other:		
C. MITAN		: (Disp Ba				ing LALI		2011		
Sample	date: 12	2/29/08	Sample t	ime:	1040		DTW	at samp	le: –	
Sample	ample ID: Hw-5 La				Kiff			Numbe	r of bott	les: 5
Analysi	s:	TPH-G, B	TEX, MTBE	, TBA, TEPH-D	, TEPH-MO					
Equipn	nent blank	k ID	@		Field bla	nk ID	@			
Duplica					Pre-purg	je DO:		Post pu	urge DO	
Fe2+:					Pre-purg	e ORP:		Post p	urge OR	P:
the series	donthe		la company	of NADI ·			Volu	ıme rem	oved:	ml



Job#:	M1-0812	29	Sample	r:	B Myers		Client	t:	LRM	
Well I	D: Mu	6	Date:	12/29/2008		Site:	Forme	r Stroug	h Chevy	, Oakland
Well d	liam: 1/4	" 1"(2"	3" 4"	6" Other:		DTW: /2	5.30	Total I	Depth:	26.55
	equip:			lder Peri	Waterra	Positive	Air Disp	lacement	Ext.	System
disp bail		on bailer	other:		Tubing		New	Dedica	ted N	A
				me (Micro/I			Other		Older San S	
•	depth/									1.47 Radius ² X 0.163
(TD - D	TW X Mu	ltiplier =	1 Volume		80% Rec	overy (TD -	DIW			727 A 187 A
	1 Volume	e = _ /	3_x3	= 3.9	(Total P	urge)			80%=_,	19.95
Time	Temp	pН	Cond (ms/(s))	Turbidity (ΝΤΟ)	Purge Rate (gal or mL/ min)	Volume Removed	DO (mg/l)	ORP	DTW	Notes
hel	17.1		614	71040	_	-	1.2	-60	-	
1053	18.6	6.6	පිට/	11000	~	1.3	0.9	-112	1	
1055	18.7	6.5	619	71000		2.6	0.8	-1460	_	
1058	18.8	10.5	845	21000		3.9	0.8	-151		
		B:		9						
			Lp.							
	7 - 10 - 10			,	Tatalian	lume remov	tod:	4	(gal /	D-
	dewater method:			d. Tubing	New Tub	The State of	. 121	Other:	(gui)	-,
	e date: 12	dy me and a	Sample		1100			at samp	le: —	_
Sample		w.c		Lab:	Kiff				.16 (1)	les: ,5
Analysi	is:	TPH-G, B	TEX, MTBE	, ТВА, ТЕРН-С	, TEPH-MO					
Equipm	nent blank	(ID	@		Field bla	nk ID	@			
Duplica	ate ID:				Pre-purge DO: Post purge DO:					:
Fe2+:					Pre-purge ORP: Post purge ORP:				P:	

Job#:	M1-0812	29	Sample	r:	B Myers	-	Clien	t:	LRM	
Well I	D: 1410	-7	Date:	12/29/2008		Site:	Forme	r Stroug	h Chevy	, Oakland
				6" Other:	Waterra			Total		34.5Co System
disp bail		on bailer	other:		Tubing:		New	Dedica	ted N	Α
				me (Micro/L					02 ("	1,47 Radius ² X 0.16
	depth/					overy (TD -	4 7 7 7 7 7 1			1,47 Kaulus X 0.10
(10-0			1 Volume X 3	= 7	(Total P		DIWI		80%=_	1842
Time	Temp	рН	Cond (ms/@)	Turbidity (NTU)	Purge	Volume Removed (gal / L)	DO (mg/l)	ORP	DTW	Notes
ial	17.60	6.9	825	71000	_	-	6.4	-50	_	
1106	19.5	6.8	842	> 1000	-	3	0.7	-56	_	
1110	19.7	10.7	835	71000	_	4	3.4	-38	-	
1114	100		Exce	71000	_	9	3.2	-24	-	
	d							6		
				11						
	0									
_	-				1					
Did well	l dewater	o VEC	(NO)		Total vo	lume remov	red:	9	(gal /	E)
	method:			d. Tubing,	New Tubi			Other:	13	
	date: 12		Sample		115		Mul.	at samp	le: -	_
Sample		4w-7		Lab:	Kiff			Numbe	er of bott	les: 5
Analysi				, TBA, TEPH-D	thank to be					
Equipm	nent blank	k ID	@		Field bla	nk ID	@			
Duplica					Pre-purg	e DO:		Post p	urge DO	:
Fe2+:					Pre-purg	e ORP:		Post p	urge OR	P:
	depth:		Volume	of NAPL:			Volu	ıme rem	oved:	ml

Job#:	M1-0812	229	Sample	r:	B Myers		Client	t:	LRM	
Well I	D: 140	-8	Date:	12/29/2008	1	Site:	Forme	r Stroug	h Chevy	, Oakland
Well o	liam: 1/4	4" (1") 2'	3" 4"	6" Other:		DTW: /5	7/	Total !	Depth:	26.65
41.00	CONTRACTOR CONTRACTOR	ES - dian	100.00	der Peri	Waterra			lacement		F-1006 (F-100)
disp bai		on bailer	other:	4 1 10 1	Tubing		New	Dedica	ted N	IA
				me (Micro/I					0.00	•
		/ intake								1.47 Radius ² X 0.163
(TD - D	TW X Mu	ultiplier =	1 Volume		80% Rec	overy (TD -	DIWA			A
	1 Volum	e= <u>0.</u>	4 X 3	= 1.2					80%=	17.80
Time	Temp	рН	Cond (mS/(S)	Turbidity (NTU)	Purge Rate (gal or mL/ min)		DO (mg/l)	ORP	DTW	Notes
intest	18.7	6.4	541	230	-		1.5	-3	-	
		6.6		211	_	0.4	1.0	-23	-	
		lo.Co		198		0.8	1.0	-30	-	
		co.lo		209	_	1.2	0.9	-34	_	
212										
						-				
-				0						
				0						
Did we	ll dewater	r? YES	(NO)		Total vo	lume remov	red:	1.2	(gal /	L)
Sample	e method:	: Disp Ba	iler (De	d. Tubing	New Tubi	ing Ext. P	ort C	Other:		
Sample	e date: 12	2/29/08	Sample t	ime:	1140		DTW a	at sampl	e: -	
Sample	e ID:	MW-E	9	Lab:	Kiff			Numbe	r of bott	les: ,5
Analysi		TPH-G, B	TEX, MTBE	, TBA, TEPH-D	, TEPH-MO					
Equipn	nent blank	k ID	@		Field bla	nk ID	@	1		
Duplica	ate ID:				Pre-purg	je DO:		Post pu	urge DO:	
Fe2*:					Pre-purg	je ORP:	,	Post pu	urge OR	P:
Course are	PROVIDES.		Constitution of	of NADL:			Make	me rem	ovod:	ml

APPENDIX C

LABORATORY ANALYTICAL REPORTS AND CHAIN-OF-CUSTODY DOCUMENTATION



Date: 01/06/2009

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

Subject: 9 Water Samples

Project Name: Former Strough Chevy - Oakland

Project Number: M1-081229

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,



Date: 01/06/2009

Project Name: Former Strough Chevy - Oakland

Project Number: M1-081229

Sample: MW-1 Matrix: Water Lab Number: 66675-01

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	< 0.50	0.50	ug/L	EPA 8260B	12/31/2008
Toluene	< 0.50	0.50	ug/L	EPA 8260B	12/31/2008
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	12/31/2008
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	12/31/2008
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	12/31/2008
Tert-Butanol	< 5.0	5.0	ug/L	EPA 8260B	12/31/2008
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	12/31/2008
1,2-Dichloroethane-d4 (Surr)	95.2		% Recovery	EPA 8260B	12/31/2008
Toluene - d8 (Surr)	101		% Recovery	EPA 8260B	12/31/2008
TPH as Diesel (w/ Silica Gel)	< 50	50	ug/L	M EPA 8015	12/31/2008
TPH as Motor Oil (w/ Silica Gel)	< 100	100	ug/L	M EPA 8015	12/31/2008
Octacosane (Silica Gel Surr)	81.3		% Recovery	M EPA 8015	12/31/2008



Date: 01/06/2009

Project Name: Former Strough Chevy - Oakland

Project Number: M1-081229

Sample: MW-2 Matrix: Water Lab Number: 66675-02

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	260	9.0	ug/L	EPA 8260B	12/31/2008
Toluene	1500	9.0	ug/L	EPA 8260B	12/31/2008
Ethylbenzene	1100	9.0	ug/L	EPA 8260B	12/31/2008
Total Xylenes	6400	9.0	ug/L	EPA 8260B	12/31/2008
Methyl-t-butyl ether (MTBE)	110	9.0	ug/L	EPA 8260B	12/31/2008
Tert-Butanol	< 50	50	ug/L	EPA 8260B	12/31/2008
TPH as Gasoline	29000	900	ug/L	EPA 8260B	12/31/2008
1,2-Dichloroethane-d4 (Surr)	94.0		% Recovery	EPA 8260B	12/31/2008
Toluene - d8 (Surr)	97.6		% Recovery	EPA 8260B	12/31/2008
TPH as Diesel (w/ Silica Gel) (Note: MRL increased due to interference fi	< 4000	4000	ug/L	M EPA 8015	12/31/2008
TPH as Motor Oil (w/ Silica Gel)	< 100	100	ug/L	M EPA 8015	12/31/2008
Octacosane (Silica Gel Surr)	88.7		% Recovery	M EPA 8015	12/31/2008



Date: 01/06/2009

Project Name : Former Strough Chevy - Oakland

Project Number: M1-081229

Sample: MW-3 Matrix: Water Lab Number: 66675-03

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed	
Benzene	310	2.5	ug/L	EPA 8260B	01/02/2009	
Toluene	910	2.5	ug/L	EPA 8260B	01/02/2009	
Ethylbenzene	320	2.5	ug/L	EPA 8260B	01/02/2009	
Total Xylenes	1300	2.5	ug/L	EPA 8260B	01/02/2009	
Methyl-t-butyl ether (MTBE)	35	2.5	ug/L	EPA 8260B	01/02/2009	
Tert-Butanol	23	15	ug/L	EPA 8260B	01/02/2009	
TPH as Gasoline	11000	250	ug/L	EPA 8260B	01/02/2009	
1,2-Dichloroethane-d4 (Surr)	90.6		% Recovery	EPA 8260B	01/02/2009	
Toluene - d8 (Surr)	98.9		% Recovery	EPA 8260B	01/02/2009	
TPH as Diesel (w/ Silica Gel) (Note: MRL increased due to interference fr	< 1500	1500	ug/L	M EPA 8015	12/31/2008	
TPH as Motor Oil (w/ Silica Gel)	< 100	100	ug/L	M EPA 8015	12/31/2008	
Octacosane (Silica Gel Surr)	110		% Recovery	M EPA 8015	12/31/2008	



Date: 01/06/2009

Project Name: Former Strough Chevy - Oakland

Project Number: M1-081229

Sample: MW-4 Matrix: Water Lab Number: 66675-04

Sample Date .12/29/2000		Method					
Parameter	Measured Value	Reporting Limit	Units	Analysis Method	Date Analyzed		
Benzene	< 0.50	0.50	ug/L	EPA 8260B	12/31/2008		
Toluene	< 0.50	0.50	ug/L	EPA 8260B	12/31/2008		
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	12/31/2008		
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	12/31/2008		
Methyl-t-butyl ether (MTBE)	220	0.50	ug/L	EPA 8260B	12/31/2008		
Tert-Butanol	< 5.0	5.0	ug/L	EPA 8260B	12/31/2008		
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	12/31/2008		
1,2-Dichloroethane-d4 (Surr)	95.7		% Recovery	EPA 8260B	12/31/2008		
Toluene - d8 (Surr)	102		% Recovery	EPA 8260B	12/31/2008		
TPH as Diesel (w/ Silica Gel)	< 50	50	ug/L	M EPA 8015	12/31/2008		
TPH as Motor Oil (w/ Silica Gel)	< 100	100	ug/L	M EPA 8015	12/31/2008		
Octacosane (Silica Gel Surr)	114		% Recovery	M EPA 8015	12/31/2008		



Date: 01/06/2009

Project Name : Former Strough Chevy - Oakland

Project Number: M1-081229

Sample: MW-5 Matrix: Water Lab Number: 66675-05

Parameter Parameter	Measured Value	Method Reporting Limit Units		Analysis Method	Date Analyzed	
Benzene	< 0.50	0.50	ug/L	EPA 8260B	12/31/2008	
Toluene	< 0.50	0.50	ug/L	EPA 8260B	12/31/2008	
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	12/31/2008	
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	12/31/2008	
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	12/31/2008	
Tert-Butanol	< 5.0	5.0	ug/L	EPA 8260B	12/31/2008	
TPH as Gasoline (Note: Primarily compounds not found in type	71 Dical Gasoline)	50	ug/L	EPA 8260B	12/31/2008	
1,2-Dichloroethane-d4 (Surr)	97.5		% Recovery	EPA 8260B	12/31/2008	
Toluene - d8 (Surr)	101		% Recovery	EPA 8260B	12/31/2008	
TPH as Diesel (w/ Silica Gel)	< 50	50	ug/L	M EPA 8015	12/31/2008	
TPH as Motor Oil (w/ Silica Gel)	< 100	100	ug/L	M EPA 8015	12/31/2008	
Octacosane (Silica Gel Surr)	112		% Recovery	M EPA 8015	12/31/2008	



Date: 01/06/2009

Project Name : Former Strough Chevy - Oakland

Project Number: M1-081229

Sample: MW-6 Matrix: Water Lab Number: 66675-06

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	0.77	0.50	ug/L	EPA 8260B	12/31/2008
Toluene	< 0.50	0.50	ug/L	EPA 8260B	12/31/2008
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	12/31/2008
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	12/31/2008
Methyl-t-butyl ether (MTBE)	44	0.50	ug/L	EPA 8260B	12/31/2008
Tert-Butanol	< 5.0	5.0	ug/L	EPA 8260B	12/31/2008
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	12/31/2008
1,2-Dichloroethane-d4 (Surr)	94.8		% Recovery	EPA 8260B	12/31/2008
Toluene - d8 (Surr)	102		% Recovery	EPA 8260B	12/31/2008
TPH as Diesel (w/ Silica Gel)	< 50	50	ug/L	M EPA 8015	12/31/2008
TPH as Motor Oil (w/ Silica Gel)	< 100	100	ug/L	M EPA 8015	12/31/2008
Octacosane (Silica Gel Surr)	85.3		% Recovery	M EPA 8015	12/31/2008



Date: 01/06/2009

Project Name: Former Strough Chevy - Oakland

Project Number: M1-081229

Sample: MW-7 Matrix: Water Lab Number: 66675-07

Sample Date .12/29/2000		Method					
Parameter	Measured Value	Reporting Limit	Units	Analysis Method	Date Analyzed		
Benzene	< 0.50	0.50	ug/L	EPA 8260B	12/30/2008		
Toluene	< 0.50	0.50	ug/L	EPA 8260B	12/30/2008		
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	12/30/2008		
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	12/30/2008		
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	12/30/2008		
Tert-Butanol	< 5.0	5.0	ug/L	EPA 8260B	12/30/2008		
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	12/30/2008		
1,2-Dichloroethane-d4 (Surr)	92.2		% Recovery	EPA 8260B	12/30/2008		
Toluene - d8 (Surr)	105		% Recovery	EPA 8260B	12/30/2008		
TPH as Diesel (w/ Silica Gel)	< 50	50	ug/L	M EPA 8015	12/31/2008		
TPH as Motor Oil (w/ Silica Gel)	< 100	100	ug/L	M EPA 8015	12/31/2008		
Octacosane (Silica Gel Surr)	80.2		% Recovery	M EPA 8015	12/31/2008		



Date: 01/06/2009

Project Name: Former Strough Chevy - Oakland

Project Number: M1-081229

Sample: MW-8 Matrix: Water Lab Number: 66675-08

Parameter Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	< 0.50	0.50	ug/L	EPA 8260B	12/31/2008
Toluene	0.64	0.50	ug/L	EPA 8260B	12/31/2008
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	12/31/2008
Total Xylenes	0.78	0.50	ug/L	EPA 8260B	12/31/2008
Methyl-t-butyl ether (MTBE)	1.5	0.50	ug/L	EPA 8260B	12/31/2008
Tert-Butanol	< 5.0	5.0	ug/L	EPA 8260B	12/31/2008
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	12/31/2008
1,2-Dichloroethane-d4 (Surr)	93.8		% Recovery	EPA 8260B	12/31/2008
Toluene - d8 (Surr)	95.4		% Recovery	EPA 8260B	12/31/2008
TPH as Diesel (w/ Silica Gel)	< 50	50	ug/L	M EPA 8015	12/31/2008
TPH as Motor Oil (w/ Silica Gel)	< 100	100	ug/L	M EPA 8015	12/31/2008
Octacosane (Silica Gel Surr)	84.9		% Recovery	M EPA 8015	12/31/2008



Date: 01/06/2009

Project Name: Former Strough Chevy - Oakland

Project Number: M1-081229

Sample: QCTB Matrix: Water Lab Number: 66675-09

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	< 0.50	0.50	ug/L	EPA 8260B	12/31/2008
Toluene	< 0.50	0.50	ug/L	EPA 8260B	12/31/2008
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	12/31/2008
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	12/31/2008
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	12/31/2008
Tert-Butanol	< 5.0	5.0	ug/L	EPA 8260B	12/31/2008
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	12/31/2008
1,2-Dichloroethane-d4 (Surr) Toluene - d8 (Surr)	92.4 106		% Recovery % Recovery	EPA 8260B EPA 8260B	12/31/2008 12/31/2008
roluctic do (ouir)	100		70 1 10 00 VC1 y	LI / (0200D	12/01/2000

Date: 01/06/2009

QC Report : Method Blank Data

Project Name : Former Strough Chevy - Oakland

Project Number: M1-081229

<u>Parameter</u>	Measured Value	Method Reporting Limit) Units	Analysis Method	Date Analyzed
TPH as Diesel (w/ Silica Gel)	< 50	50	ug/L	M EPA 8015	12/31/2008
TPH as Motor Oil (w/ Silica Gel)	< 100	100	ug/L	M EPA 8015	12/31/2008
Octacosane (Silica Gel Surr)	81.0		%	M EPA 8015	12/31/2008
Benzene	< 0.50	0.50	ug/L	EPA 8260B	01/02/2009
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	01/02/2009
Toluene	< 0.50	0.50	ug/L	EPA 8260B	01/02/2009
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	01/02/2009
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	01/02/2009
Tert-Butanol	< 5.0	5.0	ug/L	EPA 8260B	01/02/2009
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	01/02/2009
1,2-Dichloroethane-d4 (Surr)	98.0		%	EPA 8260B	01/02/2009
Toluene - d8 (Surr)	100		%	EPA 8260B	01/02/2009
Benzene	< 0.50	0.50	ug/L	EPA 8260B	12/30/2008
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	12/30/2008
Toluene	< 0.50	0.50	ug/L	EPA 8260B	12/30/2008
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	12/30/2008
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	12/30/2008
Tert-Butanol	< 5.0	5.0	ug/L	EPA 8260B	12/30/2008
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	12/30/2008
1,2-Dichloroethane-d4 (Surr)	94.1		%	EPA 8260B	12/30/2008
Toluene - d8 (Surr)	99.3		%	EPA 8260B	12/30/2008

	Measured	Method Reportin	•	Analysis	Date
<u>Parameter</u>	Value	Limit	Units	Method	Analyzed
Benzene	< 0.50	0.50	ug/L	EPA 8260B	12/31/2008
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	12/31/2008
Toluene	< 0.50	0.50	ug/L	EPA 8260B	12/31/2008
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	12/31/2008
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	12/31/2008
Tert-Butanol	< 5.0	5.0	ug/L	EPA 8260B	12/31/2008
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	12/31/2008
1,2-Dichloroethane-d4 (Surr)	94.8		%	EPA 8260B	12/31/2008
Toluene - d8 (Surr)	99.4		%	EPA 8260B	12/31/2008
Benzene	< 0.50	0.50	ug/L	EPA 8260B	12/30/2008
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	12/30/2008
Toluene	< 0.50	0.50	ug/L	EPA 8260B	12/30/2008
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	12/30/2008
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	12/30/2008
Tert-Butanol	< 5.0	5.0	ug/L	EPA 8260B	12/30/2008
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	12/30/2008
1,2-Dichloroethane-d4 (Surr)	95.9		%	EPA 8260B	12/30/2008
Toluene - d8 (Surr)	102		%	EPA 8260B	12/30/2008
Benzene	< 0.50	0.50	ug/L	EPA 8260B	12/30/2008
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	12/30/2008
Toluene	< 0.50	0.50	ug/L	EPA 8260B	12/30/2008
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	12/30/2008
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	12/30/2008
Tert-Butanol	< 5.0	5.0	ug/L	EPA 8260B	12/30/2008
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	12/30/2008
1,2-Dichloroethane-d4 (Surr)	94.7		%	EPA 8260B	12/30/2008
Toluene - d8 (Surr)	107		%	EPA 8260B	12/30/2008

Date: 01/06/2009

Project Name : Former Strough Chevy - Oakland

QC Report : Matrix Spike/ Matrix Spike Duplicate

Project Number: M1-081229

Parameter	Spiked Sample	Sample Value	Spike Level	Spike Dup. Level	Spiked Sample Value	Duplicate Spiked Sample Value	e Units	Analysis Method	Date Analyzed	Spiked Sample Percent Recov.	Duplicat Spiked Sample Percent Recov.	Relative	Spiked Sample Percent Recov. Limit	Relative Percent Diff. Limit
TPH-D (Si Gel)	BLANK	<50	1000	1000	868	933	ug/L	M EPA 8015	12/31/08	86.8	93.3	7.27	70-130	25
Benzene	66689-05	<0.50	39.3	39.3	36.9	36.9	ug/L	EPA 8260B	1/2/09	93.7	93.8	0.105	70-130	25
Methyl-t-butyl ether	66689-05	67	39.6	39.6	106	105	ug/L	EPA 8260B	1/2/09	97.6	95.0	2.65	70-130	25
Tert-Butanol	66689-05	<5.0	200	200	202	204	ug/L	EPA 8260B	1/2/09	101	102	1.12	70-130	25
Toluene	66689-05	<0.50	40.1	40.1	38.3	38.4	ug/L	EPA 8260B	1/2/09	95.5	95.7	0.254	70-130	25
Benzene	66652-04	13	39.3	39.3	46.1	44.2	ug/L	EPA 8260B	12/30/08	84.6	79.8	5.88	70-130	25
Methyl-t-butyl ether	66652-04	2.4	39.6	39.6	42.0	42.4	ug/L	EPA 8260B	12/30/08	100	101	1.20	70-130	25
Tert-Butanol	66652-04	13	200	200	197	194	ug/L	EPA 8260B	12/30/08	91.7	89.9	1.93	70-130	25
Toluene	66652-04	0.74	40.1	40.1	37.0	35.3	ug/L	EPA 8260B	12/30/08	90.5	86.2	4.83	70-130	25
Benzene	66678-07	<0.50	39.3	39.3	35.1	34.4	ug/L	EPA 8260B	12/31/08	89.1	87.5	1.82	70-130	25
Methyl-t-butyl ether	66678-07	<0.50	39.6	39.6	40.8	39.6	ug/L	EPA 8260B	12/31/08	103	100	3.01	70-130	25
Tert-Butanol	66678-07	<5.0	200	200	190	187	ug/L	EPA 8260B	12/31/08	95.0	93.5	1.64	70-130	25
Toluene	66678-07	<0.50	40.1	40.1	37.4	36.6	ug/L	EPA 8260B	12/31/08	93.3	91.2	2.22	70-130	25
Benzene	66652-06	<0.50	39.3	39.3	36.0	35.0	ug/L	EPA 8260B	12/30/08	91.4	88.8	2.85	70-130	25
Methyl-t-butyl ether	66652-06	<0.50	39.6	39.6	35.5	35.2	ug/L	EPA 8260B	12/30/08	89.7	88.9	0.936	70-130	25
Tert-Butanol	66652-06	<5.0	200	200	204	209	ug/L	EPA 8260B	12/30/08	102	105	2.37	70-130	25
Toluene	66652-06	<0.50	40.1	40.1	41.0	39.8	ug/L	EPA 8260B	12/30/08	102	99.3	2.93	70-130	25

Date: 01/06/2009

Project Name : Former Strough Chevy - Oakland

QC Report : Matrix Spike/ Matrix Spike Duplicate

Project Number: M1-081229

Parameter	Spiked Sample	Sample Value	Spike Level	Spike Dup. Level	Spiked Sample Value	Duplicate Spiked Sample Value	e Units	Analysis Method	Date Analyzed	Percent	Duplicat Spiked Sample Percent Recov.	Relative	Spiked Sample Percent Recov. Limit	Relative Percent Diff. Limit
Benzene	66652-03	<0.50	39.3	39.3	36.4	36.3	ug/L	EPA 8260B	12/30/08	92.5	92.2	0.280	70-130	25
Methyl-t-butyl ether	r 66652-03	<0.50	39.6	39.6	40.2	40.8	ug/L	EPA 8260B	12/30/08	102	103	1.30	70-130	25
Tert-Butanol	66652-03	<5.0	200	200	208	208	ug/L	EPA 8260B	12/30/08	104	104	0.121	70-130	25
Toluene	66652-03	<0.50	40.1	40.1	43.4	43.0	ug/L	EPA 8260B	12/30/08	108	107	1.03	70-130	25

Date: 01/06/2009

Project Name : Former Strough Chevy - Oakland

QC Report : Laboratory Control Sample (LCS)

Project Number : **M1-081229**

Parameter	Spike Level	Units	Analysis Method	Date Analyzed	LCS Percent Recov.	LCS Percent Recov. Limit
Benzene	39.3	ug/L	EPA 8260B	1/2/09	92.5	70-130
Methyl-t-butyl ether	39.6	ug/L	EPA 8260B	1/2/09	93.8	70-130
Tert-Butanol	200	ug/L	EPA 8260B	1/2/09	99.5	70-130
Toluene	40.1	ug/L	EPA 8260B	1/2/09	94.7	70-130
Benzene	40.2	ug/L	EPA 8260B	12/30/08	88.8	70-130
Methyl-t-butyl ether	39.8	ug/L ug/L	EPA 8260B	12/30/08	99.0	70-130
Tert-Butanol	201	ug/L	EPA 8260B	12/30/08	92.6	70-130
Toluene	40.2	ug/L	EPA 8260B	12/30/08	92.1	70-130
. 5.455	. 3.2	~3, -		50, 66	5	
Benzene	40.0	ug/L	EPA 8260B	12/31/08	87.7	70-130
Methyl-t-butyl ether	39.6	ug/L	EPA 8260B	12/31/08	92.7	70-130
Tert-Butanol	200	ug/L	EPA 8260B	12/31/08	91.8	70-130
Toluene	40.0	ug/L	EPA 8260B	12/31/08	91.1	70-130
Benzene	39.9	ug/L	EPA 8260B	12/30/08	91.0	70-130
Methyl-t-butyl ether	39.9 39.5	_	EPA 8260B	12/30/08	86.1	70-130 70-130
Tert-Butanol	200	ug/L	EPA 8260B	12/30/08	102	70-130 70-130
		ug/L			102	
Toluene	39.9	ug/L	EPA 8260B	12/30/08	101	70-130
Benzene	39.2	ug/L	EPA 8260B	12/30/08	93.0	70-130

Date: 01/06/2009

Project Name : Former Strough Chevy - Oakland

QC Report : Laboratory Control Sample (LCS)

Project Number : **M1-081229**

Parameter	Spike Level	Units	Analysis Method	Date Analyzed	LCS Percent Recov.	LCS Percent Recov. Limit	
Methyl-t-butyl ether	39.4	ug/L	EPA 8260B	12/30/08	100	70-130	
Tert-Butanol	199	ug/L	EPA 8260B	12/30/08	102	70-130	
Toluene	40.0	ug/L	EPA 8260B	12/30/08	109	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

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Project Name: Former Stroug

Former Strough Chevy - Oakland

Job Number: M1-081229

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