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

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

Dear Ms. Jakub:

This enclosed report has been prepared by LRM Consulting, Inc. on behalf of the Strough Family Trust. I declare, under penalty of perjury, that the information and/or recommendations contained in the attached document or report is true and correct to the best of my knowledge.

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

Sincerely,

Linda L. Strough, Trustee

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

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

INTERIM REMEDIAL ACTION ACTIVITIES

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

Prepared by
LRM Consulting, Inc.
602 S. Amphlett Blvd
San Mateo, CA 94402

October 2010

October 6, 2010

MEMORANDUM

To: Ms. Barbara Jakub
Alameda County Health Care Services Agency (ACHCSA)
1131 Harbor Bay Parkway
Alameda, California 94502-6577

From: Jing Heisler and Mehrdad Javaherian
LRM Consulting, Inc.

Re: **Interim Remedial Action Activities**
Former Val Strough Chevrolet
327 34th Street, Oakland, California
Site ID #3035, RO #0000134

On behalf of the Strough Family Trust, LRM Consulting, Inc. (LRM) has prepared this Memorandum which summarizes implementation of the Interim Remedial Action Plan (IRAP) for the above-referenced site, previously approved by the ACHCSA (LRM, 2010). The interim remediation action (IRA) activities summarized herein include application of in-situ chemical oxidation (ISCO) using RegenOx to the residual source area bounded by existing monitoring wells MW-2, O-1, MW-9A/9B, and MW-3 at the site (see Figure 1). Also included herein are pre- and post-injection groundwater quality sampling results, conclusions related to the effectiveness of IRA activities, and recommendations for further action at the site.

Pre-Injection Activities

Prior to initiation of RegenOx injections, a drilling permit (W2010-0617) was obtained from the Alameda County Public Works Agency and a health and safety plan (HSP) was prepared for the site. In addition, USA Alert was notified and a private utility contractor was used to clear for utilities in the residual source area.

IRA Activities

The IRA activities include three rounds of RegenOx injections within a depth interval of 15 to 40 feet below ground surface (bgs), per the approved IRAP. The first round of injection was conducted in three successive days spanning August 15th through 17th, 2010. The second event was conducted over one day (August 29, 2010), while the third event was conducted on September 12th and 13th, 2010.

As shown on Figure 1, the IRA injections were performed via advancement of 20 direct-push borings across the three injection events. The number of borings and related locations were defined based on utility clearance limitations within the residual source area targeted for IRAP activities. The following procedures were followed in advancing the direct-push injections, as performed under LRM's supervision by Vironex, a CA-certified driller:

- The surface concrete was cored and the top five feet of soil were hand-augered to further clear potential utilities.
- A direct push unit was set up at each location and 1.5-inch O.D./0.625-inch I.D drive rods were advanced to the desired depth of 15 to 40 feet bgs.
- After the drive rods were pushed to the desired depth, the rod assembly was withdrawn three to six inches. Then the expendable tip was dropped from the drive rods.
- The appropriate quantity of RegenOx™ Oxidizer for five vertical feet of injection was measured and poured into a mixing tank. The volume of water per injection location was calculated from the following formula:

$$\frac{\text{RegenOx Oxidizer lbs/foot}}{(8.34\ \text{lbs/gal water})(\%\ \text{RegenOx\_Oxidizer solids})}\left[1-(\%\ \text{RegenOx\_Oxidizer solids})\right]$$

- The pre-measured quantity of RegenOx™ Oxidizer and RegenOx Activator were mixed into the pre-measured volume of water to make the desired target % oxidant in solution. The volumes of water and oxidant mixed and injected at each direct-push location are summarized in field forms in Appendix B.

- The sub-assembly from the mixing tanks were connected to the drive rod. After confirming that all of the connections are secure, the RegenOx™ was pumped through the delivery system to displace the water/fluid in the rods.

- The drive rods were slowly withdrawn and the pre-determined volume of RegenOx™ was pumped into the aquifer across the desired treatment interval of 15 to 40 feet bgs. Following completion of RegenOx injections, each boring was grouted and later inspected by the Alameda County Department of Public Works.

- The existing wells and the ground surface were observed for any indications of aquifer refusal. This included observations for a spike in pressure as indicated or RegenOx™ "surfacing" around the injection rods or previously installed injection points. The injection rates were altered to allow the aquifer to be able to accept the RegenOx and to minimize pressure and surfacing across the three injection events.

- As indicated on the graphic below, over 9,500 gallons of RegenOx was injected into the ground via 20 boring locations. The amount of RegenOx which surfaced around existing wells and cracks in the paved ground surface was limited to less than 75 gallons. The surfaced RegenOx was captured instantaneously and disposed of offsite by Asbury Environmental.

Injection Summary

		Date	Injection Points Completed	Volume Injected (Gallons)	Daily Injection Points Completed
Event 1	Sunday	8/15/2010	2	1,360	IP-01,02
	Monday	8/16/2010	3	1,875	IP-03,04,05
	Tuesday	8/17/2010	3	1,875	IP-06,07,08
Event 2	Sunday	8/29/2010	4	2,068	IP-09,10,11,12
Event 3	Sunday	9/12/2010	4	1,300	IP-13,14,15,16
	Monday	9/13/2010	4.0	1,170	IP-17,18,19,20
		TOTAL	20	TOTAL 9,648	

Groundwater Quality Sampling Results

Table 1 summarizes groundwater quality sampling results for three rounds of sampling, with field notes and laboratory results from the sampling included as Appendix B[1]. The first sampling event represented the baseline (pre-injection) conditions and corresponded to the site's 2nd Quarter 2010 routine monitoring event. The second round of sampling was conducted nine days following the first injection event, also corresponding to the site's 3rd Quarter 2010 routine monitoring event. The third round of sampling was conducted one week after the third injection event.

As shown on Table 1, the sampling conducted after the third injection event yielded hydrocarbon concentrations largely below (ie., from 53% to 90% below) those in baseline or first injection event sampling rounds; this includes source area wells MW2, O1, MW9A, and MW9B. The sole exception to this was at well MW3, where separate phase hydrocarbons (SPHs) were encountered following both the first and third injection events. The SPHs were bailed out following the third injection event, allowing for sampling of groundwater in this well; however, elevated concentrations persist. Also worth noting is that at MW9B, the first injection event caused an increase in hydrocarbon concentrations (TPH-g from 2,900 ug/L to 14,000 ug/L), most likely due to induced dissolution from soils by RegenOx, but then declined down to 6,200 ug/L following the third injection event.

[1] Field notes and laboratory analytical reports for the baseline and post-first injection event sampling are included in the 2nd Quarter 2010 Groundwater Monitoring Report and the 3rd Quarter 2010 Groundwater Monitoring Report for the site, respectively; these reports were previously submitted to ACHCSA and upload onto the ACHCSA's ftp site and Geotracker.

It should also be noted that dissolved oxygen (DO) concentrations significantly increased following RegenOx injections (see Table 1); these included DO levels as high as 18 mg/L in MW2, 11.3 mg/L in MW3, 20.9 mg/L in MW9A, 40 mg/L in MW9B, and 39 mg/L in well O1. These results further confirm the effectiveness of the RegenOx injections and the transition of the site toward conditions which promote aerobic biodegradation beyond the ISCO injection period.

Proposed Additional Remedial Activities

Based on the above observations, LRM recommends completing another round of post-injection sampling corresponding to one month following the third injection event. In addition, LRM recommends expansion of the IRAP activities to include:

1) RegenOx injections in three borings in the immediate vicinity of MW9A/9B in order to continue the observed reductive trend in TPH-g concentrations (i.e, from 150,000 ppb to 70,000 ppb), with the goal of reducing such levels to less than 10,000 ppb (see Figure 1). It should be noted that injections within the vertical profile of 15 to 40 feet bgs at this location will also aid further reduction of TPH-g concentrations at MW-9B, aiding the continued decline toward and below the levels previously observed in the baseline sampling rounds.

2) Removal of SPHs from well MW-3 and RegenOx injections in three borings in the immediate vicinity of MW3 (see Figure 1). These would include RegenOx injections upgradient of MW3 to maintain residual SPHs from extending farther downgradient and treating the hydrocarbon mass present via injections at MW3 and the nearby MW9A/9B location. To minimize contaminant migration, the injection will start from the downgradient point and then move toward upgradient.

LRM further recommends performing two additional rounds of post-injection groundwater sampling following the additional round of injection proposed under items 1 and 2 above. All procedures for RegenOx injections and groundwater sampling would follow those previously presented to and approved by the ACHCSA.

CLOSING

We appreciate your assistance with this project. If you have any questions or require further information, please contact Mehrdad Javaherian (mjavaherian@lrm-consulting.com) of LRM Consulting, Inc. at 415-706-8935.

Jing Heisler, PG, CHG

Mehrdad Javaherian, Ph.D(c), MPH

ATTACHMENTS

Table 1 – Pre- and Post-Injection Groundwater Quality Data

Figure 1 –ISCO Application Area

Appendix A - RegenOx Application Procedures
Appendix B - Field Forms for RegenOx Injections
Appendix C - Field Forms and Laboratory Analytical Report

cc: Gregory Brandt, Esq., Wendel, Rosen, Black & Dean, 1111 Broadway, 24th Floor, Oakland, California 94607

Strough Family Trust of 1983, 2 Sea View Avenue, Piedmont, California 94611

REFERENCES

LRM Consulting, Inc. (2010). Addendum Two to the Interim Remedial Action Plan. Former Val Strough Chevrolet Site, Oakland, CA.

Miller, S., Rosenwinkel, P., Dey, J. (2007). In-Situ Remediation of MTBE and Petroleum Product Spills Utilizing Ozone Injection, The International Conference on Soils, Sediments, and Water, University of Massachusetts, Amherst.

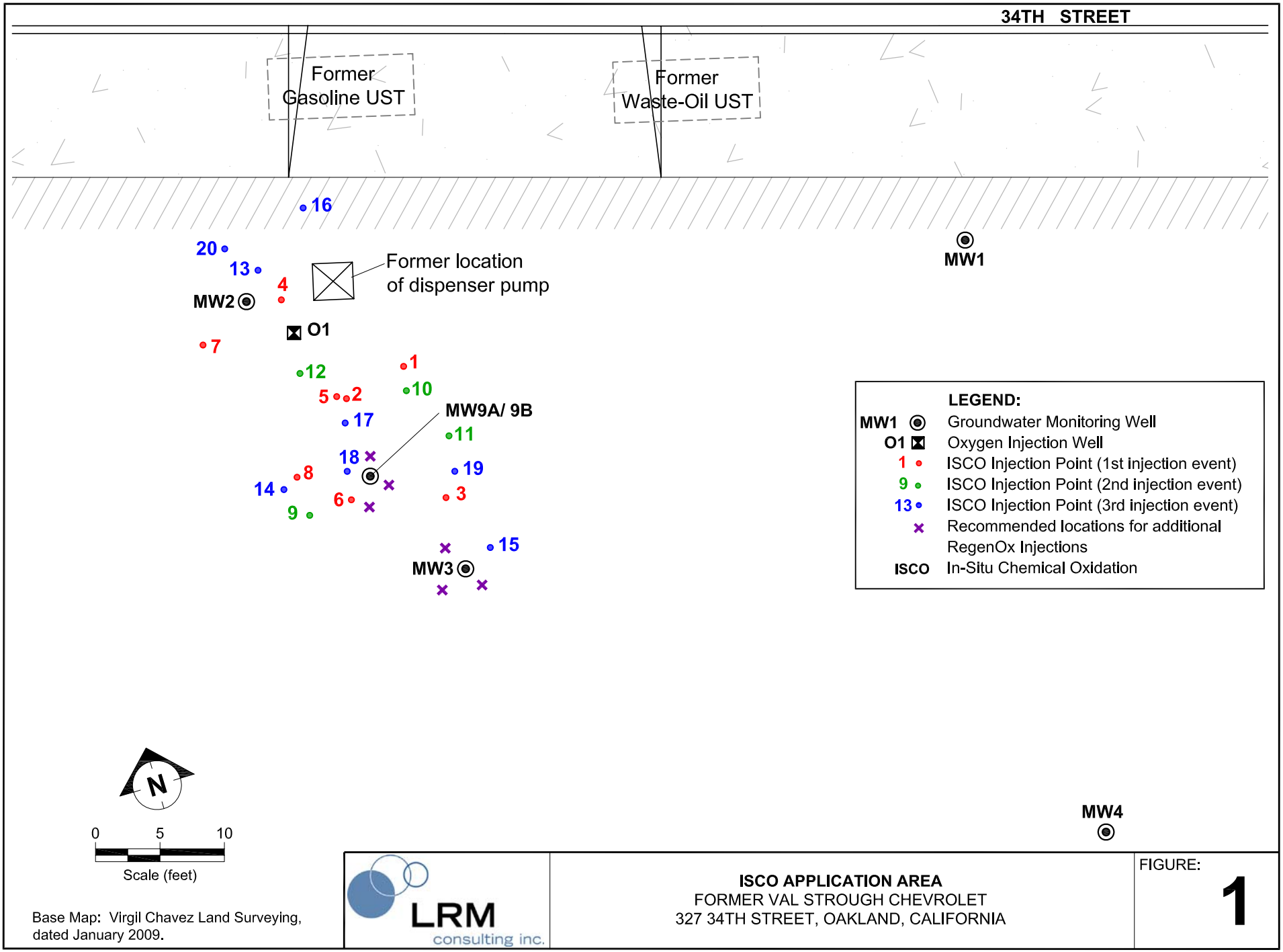
TABLE

Table 1. Pre- and Post-Injection Groundwater Quality Data
Former Val Strough Chevrolet Site, Oakland, CA

Well Number	Date	Casing Elevation (feet)	Depth to Water (feet)	GW Elevation (feet)	SPH Thickness (feet)	Concentration (µg/L)					DO (mg/L)	Comment
						Benzene	Toluene	Ethyl-benzene	Total Xylenes	TPH-g		
MW2	05/28/10	65.71	22.41	43.30	0.00	260	1,100	650	4,700	23,000	2	Well exhibited a 62% reduction in TPH concentration after RegenOx injection
MW2	08/26/10	65.71	23.00	42.71	0.00	160	980	490	4,200	22,000	16	
MW2	09/20/10	65.71	23.48	42.23	0.00	**52**	**360**	**210**	**1,600**	**8,800**	**18**	
MW3	05/28/10	65.70	22.84	42.86	0.00	1,200	4,600	920	4,800	31,000	2	SPHs encountered following initial injection event. Location warrants SPH removal and recommended for additional injections.
MW3	08/26/10	65.70	23.42	42.28	sheen	Not Sampled due to Free Product						
MW3	09/20/10	65.70	23.25	42.45	SPH Sheen-Removed	**2,700**	**13,000**	**2,900**	**18,000**	**110,000**	**11.3**	
MW9A	05/28/10	65.90	22.62	43.28	0.02	Not Sampled due to Free Product						concentration after RegenOx injection. Additional injections is recommended.
MW9A	08/26/10	65.90	23.21	42.69	0.00	2,600	19,000	3,000	22,000	150,000	10.3	
MW9A	09/21/10	65.90	23.32	42.58	0.00	**1,400**	**9,600**	**1,600**	**12,000**	**70,000**	**20.9**	
MW9B	05/28/10	65.85	22.50	43.35	0.00	31	75	150	270	2,900	2	Well exhibited a 56% reduction in TPH concentration after 2nd round of RegenOx injection. The increase in concentration after the first round of injection implies dissolution of hydrocarbons from soils to groundwater in the vicinity of the well. Additional injection at this location is recommended.
MW9B	08/26/10	65.85	23.31	42.54	0.00	13	160	310	2,000	14,000	40	
MW9B	09/20/10	65.85	23.60	42.25	0.00	**6.7**	**110**	**140**	**830**	**6,200**	**26.9**	
O1	05/28/10	65.91	22.49	43.42	0.00	610	2,000	1,000	4,200	21,000	1.4	Well exhibited a 90% reduction in TPH concentration after RegenOx injection
O1	08/26/10	65.91	23.25	42.66	0.00	29	160	59	680	5,000	39	
O1	09/20/10	65.91	23.65	42.26	0.00	**24**	**140**	**28**	**330**	**2,000**	**24.7**	

Notes:
Data collected on 5/28/10 represents baseline sampling event and corresponds to 2nd Quarter 2010 groundwater monitoring event
Data collected on 8/26/10 represents sampling event following first round of RegenOx injection that was conducted from August 15 to 17, 2010.
Data collected on 9/20/10 represents sampling event following the third round of RegenOx injection that was conducted from September 12 to 13, 2010.

FIGURE



Base Map: Virgil Chavez Land Surveying, dated January 2009.

LRM consulting inc.

ISCO APPLICATION AREA
FORMER VAL STROUGH CHEVROLET
327 34TH STREET, OAKLAND, CALIFORNIA

FIGURE: **1**

Appendix A

RegenOx Application Procedures

REGENESIS

RegenOx™

CHEMICAL OXIDATION REDEFINED

RegenOx™ *In Situ* Chemical Oxidation Application Instructions

Using Direct-Push Injection (Step-by-Step Procedures)

RegenOx™ is the new generation of chemical oxidation. RegenOx™ is a proprietary (patent-applied-for) *in situ* chemical oxidation process using a solid oxidant complex (sodium percarbonate/catalytic formulation) and an activator complex (a composition of ferrous salt embedded in a micro-scale catalyst gel). RegenOx™ with its catalytic system has very high activity, capable of treating a very broad range of soil and groundwater contaminants including both petroleum hydrocarbons and chlorinated solvents.

Instructions

1) Prior to the installation of RegenOx™, any surface or overhead impediments should be identified as well as the location of all underground structures. Underground structures include but are not limited to utility lines; tanks; distribution piping; sewers; drains; and landscape irrigation systems. The planned installation locations should be adjusted to account for all impediments and obstacles. These considerations should be part of the SSHP or HASP.

2) Pre-mark the installation locations, noting any points that may have different vertical application requirements or total depth.

3) Set up the direct push unit over each point and follow the manufacturer standard operating procedures (SOP) for the direct push equipment. Care should be taken to assure that probe holes remain in the vertical.

4) For most applications, Regenesis suggests using 1.5-inch O.D./0.625-inch I.D drive rods. However, some applications may require the use of 2.125-inch O.D./1.5-inch I.D. or larger drive rods.

5) Advance drive rods through the surface pavement, as necessary, following SOP.

6) Push the drive rod assembly with an expendable tip to the desired maximum depth. Regenesis suggests pre-counting the number of drive rods needed to reach depth prior to starting injection activities.

7) After the drive rods have been pushed to the desired depth, the rod assembly should be withdrawn three to six inches. Then the expendable tip can be dropped from the drive rods, following SOP. If an injection tool was used instead of an expendable tip, the application of material can take place without any preliminary withdrawal of the rods.

8) In some cases, introduction of a large column of air prior to RegenOx™ application may be problematic because the air can block water flow to the treatment area. This is particularly the case in deep injections (>50 ft) with large diameter rods (>1.5-inch O.D.). To prevent the injection of air into the aquifer during RegenOx™ application, as well as to prevent problems associated with heaving sands, fill the drive rods with water, or the RegenOx™ mixture prior dropping the expendable tip or exposing the injection tool.

9) The RegenOx™ percent of the oxidizer in solution should range between 3% to 5%. Although solutions up to 8% may be used, this will likely increase the difficulty of injection due to reactivity. Solutions with greater than 8% oxidizer in solution will result in excess reaction and flocculation prior to injection and are not typically recommended

   Measure the appropriate quantity of RegenOx™ Oxidizer for one to four vertical foot of injection into a 55 gallon drum or mixing tank. The volume of water per injection location can be calculated from the following formula:

$$\frac{\text{RegenOx Oxidizer lbs/foot}}{(8.34\ \text{lbs/gal water})(\%\ \text{R}egenOx\_Oxidizer\ \text{solids})}\left[1-(\%\ \text{R}egenOx\_Oxidizer\ \text{solids})\right]$$

   Tighter formations (clays and silts), and even some fine sand formations will likely require higher oxidant percentages since less volume can be injected per location. The following are guides to various RegenOx™ mixing ratios based on the above equation.

   - to make a roughly 3% oxidant solution for every 10 lbs of oxidant and 10 lbs of activator (20 lbs total RegenOx™), use 38 gallons of water.
   - to make a roughly 4% oxidant solution for every 10 lbs of oxidant and 10 lbs of activator (20 lbs total RegenOx™), use 28 gallons of water.
   - to make a roughly 5% oxidant solution for every 10 lbs of oxidant and 10 lbs of activator (20 lbs total RegenOx™), use 22 gallons of water.

10) Pour the pre-measured quantity of RegenOx™ Oxidizer into the pre-measured volume of water to make the desired target % oxidant in solution. NOTE: always pour the Oxidizer into water, do not pour water into the Oxidizer. Mix the water and oxidant with a power drill and paint stirrer or other mechanical mixing device to ensure that the Oxidizer has dissolved in the water.

11) Pour the applicable quantity of the pre-mixed RegenOx™ Activator into the oxidant:water solution. Mix the Oxidant and Activator using a power drill paint stirrer or other mechanical mixing device for at least 5 minutes until a homogenous mixture is formed. After mixing the RegenOx™ mixture should be injected into the subsurface as soon as possible.

12) Do not mix more RegenOx™ material than will be used over roughly 1 to 4 feet of injection so as to minimize potential above ground reaction/flocculation prior to injection.

    Transfer the contents of the mixing tank to the pump using gravity feed or appropriate transfer pump. (See Section 9.2: Pump Selection) For some types of pumps, it may be desirable to perform a volume check prior to injecting RegenOx™

13) Connect the delivery hose to the pump outlet and the delivery sub-assembly. Circulate RegenOx™ though the hose and the delivery sub-assembly to displace air in the hose. NOTE: an appropriately sized pressure gauge should be placed between the pump outlet and the delivery sub-assembly in order to monitor application pump pressure and detect changes in aquifer backpressures during application.

14) Connect the sub-assembly to the drive rod. After confirming that all of the connections are secure, pump the RegenOx™ through the delivery system to displace the water/fluid in the rods.

15) Slowly withdraw the drive rods. Commonly RegenOx™ injection progress at 1-foot intervals. However, continuous injection while slowly withdrawing single lengths of drive rod (3 or 4 feet) is an acceptable option. The pre-determined volume of RegenOx™ should be pumped into the aquifer across the desired treatment interval.

16) Remove one section of the drive rod. The drive rod may contain some residual RegenOx™. Place the RegenOx™-filled rod in a clean, empty bucket and allow the RegenOx to drain. Eventually, the RegenOx™ should be returned to the RegenOx™ pump hopper for reuse.

17) Monitor for any indications of aquifer refusal. This is typically indicated by a spike in pressure as indicated or (in the case of shallow applications) RegenOx™ "surfacing" around the injection rods or previously installed injection points. At times backpressure caused by reaction off-gassing will impede the pumps delivery volume. This can be corrected by bleeding the pressure off using a pressure relief/bypass valve (placed inline between the pump discharge and the delivery sub-assembly) and then resume pumping. If aquifer acceptance appears to be low, as indicated by high back pressure, allow sufficient time for the aquifer to equilibrate prior to removing the drive rod.

18) Repeat steps 13 through 23 until treatment of the entire contaminated vertical zone has been achieved. It is recommended that the procedure extend to the top of the capillary fringe/smear zone, or to the top of the targeted treatment interval.

19) Install an appropriate seal, such as bentonite, above the RegenOx™ material through the entire vadose zone. Prior to emplacing the borehole seal, we recommend placing clean sand in the hole to the top of the RegenOx™ treatment zone (especially important in holes that stay open). Bentonite chips or granular bentonite should be placed immediately above the treatment zone, followed by a cement/bentonite grout to roughly 0.5 feet below ground surface. Quick-set concrete should then be used as a surface seal.

20) Remove and clean the drive rods as necessary.

21) Finish the borehole at the surface as appropriate (concrete or asphalt cap, as needed). We recommend a quick set concrete to provide a good surface seal with minimal set up time.

22) A proper borehole and surface seal assures that the RegenOx™ remains properly placed and prevents contaminant migration from the subsurface. Each borehole should be sealed immediately following RegenOx™ application to minimize RegenOx™ surfacing during the injection process. If RegenOx™ continues to "surface" up the direct push borehole, an appropriately sized (oversized) disposable drive tip or wood plug/stake can be used to plug the hole until the aquifer pressures equilibrates and the RegenOx™ stops surfacing. If wells are used for RegenOx™ injection the RegenOx™ injection wells and all nearby groundwater monitoring wells should be tightly capped to reduce potential for surfacing through nearby wells.

23) Periodically compare the pre- and post-injection volumes of RegenOx™ in the holding tank or pump hopper using the pre-marked volume levels. Volume level may not be present on all tanks or pump hoppers. In this case, volume level markings can be temporarily added using known amounts of water and a carpenter's grease pencil (Kiel crayon).

24) Move to the next probe point, repeating steps 8 through 29. We recommend that the next RegenOx™ injection point be as far a distance as possible within the treatment zone from the previous RegenOx™ injection point. This will further minimize RegenOx™ surfacing and short circuiting up an adjacent borehole. When possible, due to the high volumes of liquid being injected, working from the outside of the injection area towards the center will limit expansion of the plume.

REGENESIS

Pump Selection

Regenesis has evaluated a number of pumps and many are capable of delivering RegenOx™ to the subsurface at a sufficient pressure and volumetric rate. However, even though a number of the evaluated pumps may be capable of delivering the RegenOx™ to the subsurface based on adequate pressures and delivery rates, each pump has its own set of practical issues that may make it more or less difficult to manage in a field setting.

In general, Regenesis strongly recommends using a pump with a pressure rating of 200 pounds per square inch (psi) in sandy soil settings, and 800 psi in silt, clay or weathered bedrock settings. Any pump under consideration should have a minimum delivery rate of 5 gallons per minute (gpm). A lower gpm rated pump may be used; however, they are not recommended due to the amount of time required to inject the volume of liquids typically associated with a RegenOx™ injection (i.e. 1,000 lbs of RegenOx™ [500 lbs Oxidant/500 lbs Activator] require roughly 1,100 gallons of water to make a 5% Oxidant solution).

Quite often diaphragm pumps are used for the delivery of chemical oxidants. Generally, these pumps operate pressures from 50-150 psi. Some of these pumps do not have the pressure head necessary to overcome the back pressure encountered in silt and clay lenses. In these cases the chemical oxidant thus ends up being delivered to the surrounding sands (the path of least resistance) and is not delivered to soil with residual adsorbed contamination. The use of a positive displacement pump such as a piston pump or a progressing cavity pump is may be superior because these pumps have the pressure necessary to overcome the resistance of low permeability soils. NOTE: be aware that application at pressures that are too high may over-consolidate the soil and minimize the direct contact of the oxidant. The key is to inject at a rate and pressure that maximizes the radius of influence without causing preferential flow. This can be achieved by injecting at the minimum pressure necessary to overcome the particular pressures associated with your site soil conditions.

Whether direct injection or wells are used, it is best to start by injecting RegenOx™ outside the contaminated area and spiral laterally inwards toward the source. Similarly, RegenOx™ should be applied starting vertically at the bottom elevation of contamination, through the layer of contamination, and a couple of feet above the layer of contamination. The reagents can be pushed out from the well bore with some water.

Pump Cleaning

For best results, flush all moving parts and hoses with clean water at the end of the day; flush the injection system with a mixture of water and biodegradable cleaner such as Simple Green.

For more information or technical assistance please call Regenesis at 949-366-8000

Appendix B

Field Notes for RegenOx Injections

INJECTION SUMMARY

		Date	Injection Points Completed	Volume Injected
Event 1	Sunday	8/15/2010	2	1,360
	Monday	8/16/2010	3	1,875
	Tuesday	8/17/2010	3	1,875
Event 2	Sunday	8/29/2010	4	2,068
Event 3	Sunday	9/12/2010	4	1,300
	Monday	9/13/2010	4	1,170
		TOTAL	20	TOTAL 9,648

Daily Injection Points Completed / Started

IP-01,02
IP-03,04,05
IP-06,07,08

IP-09,10,11,12

Daily Injection Points Completed / Started

IP-13,14,15,16
IP-17,18,19,20

Vironex Crewchief: Nick Ivanoff

INJECTION FIELD LOG

Project Name: LRM Consulting, Regenox, Oakland, Ca. 8.15.2010

Original Injection Scope of work: Inject Regenox as directed by LRM Consulting into upper and lower zones. From 15' bgs. To 25' (upper zone). 25' bgs. To 40" bgs.(lower zone).Upper zone receives 250 gal. of water to 75 lbs. (Part A), 52.5 lbs. (Part B). Lower zone receives 375 gal. water and 52.5 lbs. (Part A), 37.5 lbs. (Part B).

Boring ID No.	Date	Start Time	End Time	Pump Type / Inj. Method	Injection Interval	Starting PSI	Average PSI	Average Flow Rate (GPM)	Mixture Injected (GAL)	Injection Notes
IP-01	8/15/2010	9:49 AM	10:41 M	Top Down	15-20	25	34	2.9	180	Lowered flowrate due to surfacing out of adjacent wells.
		10:44 AM	11:31 AM	Top Down	20-25	25	33	5.3	180	Using 5' injection tool.
		11:58 AM	12:19 PM	Top Down	25-30	25	34	6.4	125	
		12:24 PM	1:16 PM	Top Down	30-35	150	40	6.8	125	Formation really tight. Difficult to establish good flow rate.
		1:20 PM	1:42 PM	Top Down	35-40	100	50	6.6	125	
								Total Volume Injected	735	

Vironex Crewchief: Nick Ivanoff

INJECTION FIELD LOG

Project Name: LRM Consulting, Regenox, Oakland, Ca. 8.15.2010

Original Injection Scope of work:	Inject Regenox as directed by LRM Consulting into upper and lower zones. From 15' bgs. To 25' (upper zone). 25' bgs. To 40" bgs.(lower zone).Upper zone receives 250 gal. Lower zone receives 375 gal.

Boring ID No.	Date	Start Time	End Time	Pump Type / Inj. Method	Injection Interval	Starting PSI	Average PSI	Average Flow Rate (GPM)	Mixture Injected (GAL)	Injection Notes
IP-02	8/15/2010	2:38 PM	2:59 PM	Top Down	15-20	97	67	6.7	125	Connection to tooling broke off down hole. Had to pull out fix issue and then go back down hole.
		3:09 PM	3:29 PM	Top Down	20-25	95	60	5.1	125	
		4:07 PM	4:42 PM	Top Down	25-30	65	50	6.7	125	Tooling broke off again. Pulled tool out, fixed issue and went back down hole.
		4:45 PM	5:20 PM	Top Down	30-35	60	45	7.4	125	5:01 PM Track overheated. 5:16 PM resumed injection.
		5:21 PM	5:48 PM	Top Down	35-40	57	44	8.9	125	
								Total Volume Injected	625	

Vironex Crewchief: Mike Grace

INJECTION FIELD LOG

Project Name: LRM Consulting, Regenox, Oakland, Ca. 8.15.2010

Original Injection Scope of work:	Inject Regenox as directed by LRM Consulting into upper and lower zones. From 15' bgs. To 25' (upper zone). 25' bgs. To 40" bgs.(lower zone).Upper zone receives 250 gal. Lower zone receives 375 gal.

Boring ID No.	Date	Start Time	End Time	Pump Type / Inj. Method	Injection Interval	Starting PSI	Average PSI	Average Flow Rate (GPM)	Mixture Injected (GAL)	Injection Notes
IP-03	8/16/2010	7:12 PM	8:50 PM	Top Down	15-20	10	10	8.2	125	moyno pump's gear failed. Switched to Dia. Pump
		9:10 PM	9:25 PM	Top Down	20-25	10	10	7.6	125	
		10:14 PM	10:43 PM	Top Down	25-30	10	10	4.2	125	
		10:50 PM	11:16 PM	Top Down	30-35	10	10	5.4	125	
		11:22 PM	11:45 PM	Top Down	35-40	10	10	5.8	125	
							Total Volume Injected		625	

Vironex Crewchief: Mike Grace

INJECTION FIELD LOG

Project Name: LRM Consulting, Regenox, Oakland, Ca. 8.15.2010

Original Injection Scope of work:	Inject Regenox as directed by LRM Consulting into upper and lower zones. From 15' bgs. To 25' (upper zone). 25' bgs. To 40" bgs.(lower zone).Upper zone receives 250 gal. Lower zone receives 375 gal.

Boring ID No.	Date	Start Time	End Time	Pump Type / Inj. Method	Injection Interval	Starting PSI	Average PSI	Average Flow Rate (GPM)	Mixture Injected (GAL)	Injection Notes
IP-04	8/16/2010	8:01 PM	9:10 PM	Top Down	15-20	10	10	8.2	125	Air diaphram pump.
		9:18 PM	9:59 PM	Top Down	20-25	10	10	4.3	125	Product coming up through the top of the rod
		10:18 PM	10:38 PM	Top Down	25-30	10	10	4.2	125	
		10:43 PM	11:22 PM	Top Down	30-35	10	10	2.5	125	
		11:28 PM	12:40 AM	Top Down	35-40	10	10	9.0	125	zone was not pumping. Pulled up 5' to regain flow, then pushed back to depth
							Total Volume Injected		625	

Vironex Crewchief: Mike Grace

INJECTION FIELD LOG

Project Name: LRM Consulting, Regenox, Oakland, Ca. 8.15.2010

Original Injection Scope of work:	Inject Regenox as directed by LRM Consulting into upper and lower zones. From 15' bgs. To 25' (upper zone). 25' bgs. To 40" bgs.(lower zone).Upper zone receives 250 gal. Lower zone receives 375 gal.

Boring ID No.	Date	Start Time	End Time	Pump Type / Inj. Method	Injection Interval	Starting PSI	Average PSI	Average Flow Rate (GPM)	Mixture Injected (GAL)	Injection Notes
IP-05	8/17/2010	12:43 AM	1:12 AM	Top Down	15-20	10	10	7.7	125	Air diaphram pump.
		1:13 AM	1:29 AM	Top Down	20-25	10	10	7.6	125	
		1:37 AM	1:57 AM	Top Down	25-30	10	10	7.8	125	
		2:00 AM	2:11 AM	Top Down	30-35	10	10	8.4	125	
		2:13 AM	2:25 AM	Top Down	35-40	10	10	7.8	125	
								Total Volume Injected	625	

Vironex Crewchief: Nick Ivanoff

INJECTION FIELD LOG

Project Name: LRM Consulting, Regenox, Oakland, Ca. 8.15.2010

Original Injection Scope of work: Inject Regenox as directed by LRM Consulting into upper and lower zones. From 15' bgs. To 25' (upper zone). 25' bgs. To 40" bgs.(lower zone).Upper zone receives 250 gal. Lower zone receives 375 gal.

Boring ID No.	Date	Start Time	End Time	Pump Type / Inj. Method	Injection Interval	Starting PSI	Average PSI	Average Flow Rate (GPM)	Mixture Injected (GAL)	Injection Notes
IP-06	8/17/2010	6:33 PM	6:46 PM	Top Down	15-20	10	10	6.9	125	Air diaphram pump.
		6:50 PM	7:05 PM	Top Down	20-25	10	10	8.0	125	
		7:07 PM	7:43 PM	Top Down	25-30	40	10	5.2	125	
		7:45 PM	8:00 PM	Top Down	30-35	10	10	7.3	125	
		8:05 PM	8:23 PM	Top Down	35-40	10	10	8.8	125	
								Total Volume Injected	625	

Vironex Crewchief: Mike Grace

INJECTION FIELD LOG

Project Name: LRM Consulting, Regenox, Oakland, Ca. 8.15.2010

Original Injection Scope of work:	Inject Regenox as directed by LRM Consulting into upper and lower zones. From 15' bgs. To 25' (upper zone). 25' bgs. To 40" bgs.(lower zone).Upper zone receives 250 gal. Lower zone receives 375 gal.

Boring ID No.	Date	Start Time	End Time	Pump Type / Inj. Method	Injection Interval	Starting PSI	Average PSI	Average Flow Rate (GPM)	Mixture Injected (GAL)	Injection Notes
IP-07	8/17/2010	8:49 PM	9:05 PM	Top Down	15-20	10	10	8.2	125	Air diaphram pump.
		9:08 PM	9:19 PM	Top Down	20-25	10	10	8.6	125	
		9:23 PM	9:35 PM	Top Down	25-30	10	10	7.2	125	
		9:40 PM	9:53 PM	Top Down	30-35	10	10	9.1	125	
		9:56 PM	10:25 PM	Top Down	35-40	10	10	2.4	125	Product starting to come up through the rods, lowering gpm
								Total Volume Injected	625	

Vironex Crewchief: Nick Ivanoff

INJECTION FIELD LOG

Project Name: LRM Consulting, Regenox, Oakland, Ca. 8.15.2010

Original Injection Scope of work: Inject Regenox as directed by LRM Consulting into upper and lower zones. From 15' bgs. To 25' (upper zone). 25' bgs. To 40" bgs.(lower zone).Upper zone receives 250 gal. Lower zone receives 375 gal.

Boring ID No.	Date	Start Time	End Time	Pump Type / Inj. Method	Injection Interval	Starting PSI	Average PSI	Average Flow Rate (GPM)	Mixture Injected (GAL)	Injection Notes
IP-08	8/17/2010	11:05 PM	11:33 PM	Top Down	15-20	10	10	4.5	125	Air diaphram pump.
		11:37 PM	11:48 PM	Top Down	20-25	10	10	7.4	125	
		11:50 PM	12:12 AM	Top Down	25-30	10	10	0.5	62.5	Can't pump into the formation. Moving to next interval.
		12:15 AM	12:50 AM	Top Down	30-35	10	10	0.5	62.5	
		1:00 AM	1:54 AM	Top Down	35-40	10	10	1.8	250	
								Total Volume Injected	625	

Vironex Crewchief: Jeff Baker/Mike Haske

INJECTION FIELD LOG

Project Name: LRM Consulting, Regenox, Oakland, Ca. 8.29.2010

Original Injection Scope of work:	Inject Regenox as directed by LRM Consulting into upper and lower zones. From 15' bgs. To 25' (upper zone). 25' bgs. To 40" bgs.(lower zone).Upper zone receives 250 gal. Lower zone receives 375 gal.

Boring ID No.	Date	Start Time	End Time	Pump Type / Inj. Method	Injection Interval	Starting PSI	Average PSI	Average Flow Rate (GPM)	Mixture Injected (GAL)	Injection Notes
IP-09	8/29/2010	9:14 AM	9:37 AM	Top Down	15-20	30	20	5.9	125	Air diaphram pump.
		9:37 AM	10:15 AM	Top Down	20-25	20	20	3.7	125	
		10:35 AM	11:07 AM	Top Down	25-30	150	150	4.4	125	use moyno to gain flow
		11:15 AM	11:44 AM	Top Down	30-35	40	40	3.5	125	switch back to air diaphram, high pressure noted in adjacent well, slow flow to ~3.5 gpm.
		11:50 AM	12:20 PM	Top Down	35-40	40	40	5.0	125	
							Total Volume Injected		625	

Vironex Crewchief: Jeff Baker/Mike Haske

INJECTION FIELD LOG

Project Name: LRM Consulting, Regenox, Oakland, Ca. 8.29.2010

Original Injection Scope of work:	Inject Regenox as directed by LRM Consulting into upper and lower zones. From 15' bgs. To 25' (upper zone). 25' bgs. To 40" bgs.(lower zone).Upper zone receives 250 gal. Lower zone receives 375 gal.

Boring ID No.	Date	Start Time	End Time	Pump Type / Inj. Method	Injection Interval	Starting PSI	Average PSI	Average Flow Rate (GPM)	Mixture Injected (GAL)	Injection Notes
IP-10	8/29/2010	9:30 AM	10:00 AM	Top Down	15-20	30	20	3.9	125	Air diaphram pump.
		10:00 AM	10:30 AM	Top Down	20-25	20	20	4.0	125	
		10:30 AM	11:09 AM	Top Down	25-30	160	150	4.3	125	switch to Moyno to gain flow.
		11:22 AM	11:54 AM	Top Down	30-35	30	20	5.0	125	switch back to air diaphram.
		11:54 AM	12:20 PM	Top Down	35-40	20	20	4.5	125	lost injection tool down hole (5 foot top-down and 2 1/8" drive head)
								Total Volume Injected	625	

Vironex Crewchief: Jeff Baker/Mike Haske

INJECTION FIELD LOG

Project Name: LRM Consulting, Regenox, Oakland, Ca. 8.29.2010

Original Injection Scope of work:	Inject Regenox as directed by LRM Consulting into upper and lower zones. From 15' bgs. To 25' (upper zone). 25' bgs. To 40" bgs.(lower zone).Upper zone receives 250 gal. Lower zone receives 375 gal.

Boring ID No.	Date	Start Time	End Time	Pump Type / Inj. Method	Injection Interval	Starting PSI	Average PSI	Average Flow Rate (GPM)	Mixture Injected (GAL)	Injection Notes
IP-11	8/29/2010	2:08 PM	2:46 PM	Top Down	15-20	35	30	4.1	125	Air diaphram pump.
		2:46 PM	3:22 PM	Top Down	20-25	20	20	3.5	125	
		3:22 PM	3:45 PM	Top Down	25-30	20	20	4.0	70	surfacing noted ~ 50 feet away throuth drain system which connects all service bays. Recommended we pust tooling deeper and continue slowly to use remaining mixed product.
		3:55 PM	4:20 PM	Top Down	30-35	20	20		91	Product surfaced from IP-11. Injections stopped.
				Top Down	35-40					Product continues to surface from IP-11. Boring called.
								Total Volume Injected	411	

Vironex Crewchief: Jeff Baker/Mike Haske

INJECTION FIELD LOG

Project Name: LRM Consulting, Regenox, Oakland, Ca. 8.29.2010

Original Injection Scope of work:	Inject Regenox as directed by LRM Consulting into upper and lower zones. From 15' bgs. To 25' (upper zone). 25' bgs. To 40" bgs.(lower zone).Upper zone receives 250 gal. Lower zone receives 375 gal.

Boring ID No.	Date	Start Time	End Time	Pump Type / Inj. Method	Injection Interval	Starting PSI	Average PSI	Average Flow Rate (GPM)	Mixture Injected (GAL)	Injection Notes
IP-12	8/29/2010	2:18 PM	3:07 PM	Top Down	15-20	40	35	3.4	125	Air diaphram pump.
		3:07 PM	3:30 PM	Top Down	20-25	20	20	4.6	125	
		3:30 PM	3:45 PM	Top Down	25-30	20	20		32	surfacing noted ~ 50 feet away throuth drain system which connects all service bays. Recommended we pust tooling deeper and continue slowly to use remaining mixed product.
		4:00 PM	5:05 PM	Top Down	30-35	20	20		125	Product surfaced from IP-11. Continue @ ~2 gpm to get remaining mixed product into the ground.
				Top Down	35-40					
							Total Volume Injected		407	

Vironex Crewchief: Mike Grace

INJECTION FIELD LOG

Project Name: LRM Consulting, Regenox, Oakland, C 9 12 10

Original Injection Scope of work: Inject Regenox as directed by LRM Consulting into upper and lower zones. From 15' bgs. To 25' (upper zone). 25' bgs. To 40" bgs.(lower zone).Upper zone receives 130 gal. of water to 75 lbs. (Part A), 52.5 (Part B). Lower zone receives 195 gal. water

Boring ID No.	Date	Start Time	End Time	Pump Type / Inj. Method	Injection Interval	Starting PSI	Average PSI	Average Flow Rate (GPM)	Mixture Injected (GAL)	Injection Notes
IP-13	9/12/2010	9:33 AM	9:59 AM	bottom up	40-35	60	60	6.8	65	
		10:02 AM	10:12 AM	bottom up	35-30	60	50	6.5	65	
		10:15 AM	10:28 AM	bottom up	30-25	100	100	6.9	65	Water coming from the groundwater well next to the boring
		10:51 AM	11:13 AM	bottom up	25-20	65	65	3.9	65	
		11:15 AM	11:30 AM	bottom up	20-15	60	60	4.1	65	
								Total Volume Injected	325	

Vironex Crewchief: Mike Grace

INJECTION FIELD LOG

Project Name: LRM Consulting, Regenox, Oakland, C 9 12 10

Original Injection Scope of work: Inject Regenox as directed by LRM Consulting into upper and lower zones. From 15' bgs. To 25' (upper zone). 25' bgs. To 40" bgs.(lower zone).Upper zone receives 130 gal. of water to 75 lbs. (Part A), 52.5 (Part B). Lower zone receives 195 gal. water

Boring ID No.	Date	Start Time	End Time	Pump Type / Inj. Method	Injection Interval	Starting PSI	Average PSI	Average Flow Rate (GPM)	Mixture Injected (GAL)	Injection Notes
IP-14	9/12/2010	12:13 PM	12:26 PM	bottom up	40-35	75	70	4.6	65	
		12:32 PM	12:40 PM	bottom up	35-30	55	55	5.4	65	
		12:42 PM	12:53 PM	bottom up	30-25	50	85	9.7	65	Increasing gpm as per the client… Not to go over 100 psi
		12:56 PM	1:00 PM	bottom up	25-20	85	85	17.6	65	
		1:02 PM	1:10 PM	bottom up	20-15	60	60	9.5	65	
							Total Volume Injected		325	

Vironex Crewchief: Mike Grace

INJECTION FIELD LOG

Project Name: LRM Consulting, Regenox, Oakland, C 9 12 10

Original Injection Scope of work: Inject Regenox as directed by LRM Consulting into upper and lower zones. From 15' bgs. To 25' (upper zone). 25' bgs. To 40" bgs.(lower zone).Upper zone receives 130 gal. of water to 75 lbs. (Part A), 52.5 (Part B). Lower zone receives 195 gal. water

Boring ID No.	Date	Start Time	End Time	Pump Type / Inj. Method	Injection Interval	Starting PSI	Average PSI	Average Flow Rate (GPM)	Mixture Injected (GAL)	Injection Notes
IP-15	9/12/2010	2:15 PM	2:30 PM	bottom up	40-35	150	120	5.1	65	
		2:32 PM	2:44 PM	bottom up	35-30	100	100	12.1	65	
		2:45 PM	2:51 PM	bottom up	30-25	100	100	13.1	65	
		2:52 PM	3:00 PM	bottom up	25-20	100	100	12.1	65	
		3:02 PM	3:11 PM	bottom up	20-15	100	100	10.1	65	
							Total Volume Injected		325	

Vironex Crewchief:	Mike Grace
Project Name:	LRM Consulting, Regenox, Oakland, C 9 12 10

INJECTION FIELD LOG

VIRONEX

Original Injection Scope of work:	Inject Regenox as directed by LRM Consulting into upper and lower zones. From 15' bgs. To 25' (upper zone). 25' bgs. To 40" bgs.(lower zone).Upper zone receives 130 gal. of water to 75 lbs. (Part A), 52.5 (Part B). Lower zone receives 195 gal. water

Boring ID No.	Date	Start Time	End Time	Pump Type / Inj. Method	Injection Interval	Starting PSI	Average PSI	Average Flow Rate (GPM)	Mixture Injected (GAL)	Injection Notes
IP-16	9/12/2010	3:57 PM	4:03 PM	bottom up	40-35	120	100	18.5	65	
		4:04 PM	4:25 PM	bottom up	35-30	50	50	4.0	65	surfacing from cracks around the boring. Lowering gpm
		4:27 PM	4:43 PM	bottom up	30-25	50	50	2.1	65	
		4:45 PM	5:20 PM	bottom up	25-20	45	45	2.5	5	Surfacing increased. As per the client, pushed to the final depth.
		5:22 PM	5:35 PM	bottom up	20-15	45	45	5.6	125	
							Total Volume Injected		325	

Vironex Crewchief: Mike Grace

INJECTION FIELD LOG

Project Name: LRM Consulting, Regenox, Oakland, C 9 12 10

Original Injection Scope of work: Inject Regenox as directed by LRM Consulting into upper and lower zones. From 15' bgs. To 25' (upper zone). 25' bgs. To 40" bgs.(lower zone).Upper zone receives 130 gal. of water to 75 lbs. (Part A), 52.5 (Part B). Lower zone receives 195 gal. water

Boring ID No.	Date	Start Time	End Time	Pump Type / Inj. Method	Injection Interval	Starting PSI	Average PSI	Average Flow Rate (GPM)	Mixture Injected (GAL)	Injection Notes
IP-17	9/13/2010	6:50 PM	6:54 PM	top down	15-20	120	75	11.0	65	
		6:58 PM	7:03 PM	top down	20-25	90	75	13.0	65	
		7:10 PM	7:37 PM	top down	25-30	50	150	3.8	65	Surfacing from cracks all around the site.
		7:45 PM	8:03 PM	top down	30-35	70	100	5.8	65	
		8:10 PM	8:22 PM	top down	35-40	100	100	8.5	65	
							Total Volume Injected		325	

Vironex Crewchief:	Mike Grace
Project Name:	LRM Consulting, Regenox, Oakland, C 9 12 10

INJECTION FIELD LOG

Original Injection Scope of work:	Inject Regenox as directed by LRM Consulting into upper and lower zones. From 15' bgs. To 25' (upper zone). 25' bgs. To 40" bgs.(lower zone).Upper zone receives 130 gal. of water to 75 lbs. (Part A), 52.5 (Part B). Lower zone receives 195 gal. water

Boring ID No.	Date	Start Time	End Time	Pump Type / Inj. Method	Injection Interval	Starting PSI	Average PSI	Average Flow Rate (GPM)	Mixture Injected (GAL)	Injection Notes
IP-18	9/13/2010	8:45 PM	8:56 PM	top down	15-20	60	75	6.4	65	Surfacing from cracks around the boring
		9:01 PM	9:12 PM	top down	20-25	75	100	12.1	65	Surfacing from cracks around the boring
		9:16 PM	9:27 PM	top down	25-30	100	100	10.0	65	
		9:31 PM	9:40 PM	top down	30-35	125	100	8.8	65	
		9:44 PM	9:51 PM	top down	35-40	120	100	9.5	65	
							Total Volume Injected		325	

Vironex Crewchief: Mike Grace

INJECTION FIELD LOG

Project Name: LRM Consulting, Regenox, Oakland, C 9 12 10

Original Injection Scope of work: Inject Regenox as directed by LRM Consulting into upper and lower zones. From 15' bgs. To 25' (upper zone). 25' bgs. To 40" bgs.(lower zone).Upper zone receives 130 gal. of water to 75 lbs. (Part A), 52.5 (Part B). Lower zone receives 195 gal. water

Boring ID No.	Date	Start Time	End Time	Pump Type / Inj. Method	Injection Interval	Starting PSI	Average PSI	Average Flow Rate (GPM)	Mixture Injected (GAL)	Injection Notes
IP-19	9/13/2010	10:51 PM	10:59 PM	top down	20-25	150	100	9.7	65	New Formula: 260 gal. of water to 75 lbs of part A and 52.5 lbs of part B from 20' bgs to 40' bgs
		11:04 PM	11:09 PM	top down	25-30	50	50	11.3	65	
		11:14 PM	11:22 PM	top down	30-35	150	100	12.4	65	
		11:27 PM	11:34 PM	top down	35-40	150	100	16.4	65	
								Total Volume Injected	260	

Vironex Crewchief: Mike Grace

INJECTION FIELD LOG

Project Name: LRM Consulting, Regenox, Oakland, C 9 12 10

Original Injection Scope of work: Inject Regenox as directed by LRM Consulting into upper and lower zones. From 15' bgs. To 25' (upper zone). 25' bgs. To 40" bgs.(lower zone).Upper zone receives 130 gal. of water to 75 lbs. (Part A), 52.5 (Part B). Lower zone receives 195 gal. water

Boring ID No.	Date	Start Time	End Time	Pump Type / Inj. Method	Injection Interval	Starting PSI	Average PSI	Average Flow Rate (GPM)	Mixture Injected (GAL)	Injection Notes
IP-20	9/14/2010	12:15 AM	12:20 AM	top down	20-25	120	60	9.1	65	New Formula: 260 gal. of water to 75 lbs of part A and 52.5 lbs of part B from 20' bgs to 40' bgs
		12:30 AM	12:38 AM	top down	25-30	110	90	10.3	65	Surfacing from cracks
		12:41 AM	12:48 AM	top down	30-35	100	100	11.5	65	
		12:52 AM	12:59 AM	top down	35-40	100	90	14.3	65	
								Total Volume Injected	260	

Appendix c

Field Notes and Laboratory Analytical Report

Purging And Sampling Data Sheet

Job Number:	**Sampler:** SP	**Client:** Val Strough
Well ID: MW-9A	**Date:** 9/20/10	**Site:** Former Chevy Oakland
Well Diameter: 2	**DTW:** 23.32	**Total Depth** 25.20
Purge Equipment Disp Bailer	**Tubing** (OD)	**New Dedicated**
Purge Method	(3-5 Casing Vol) Micro/low Flow Extraction Well Other:	
Multipliers	1"= 0.04, 2"=0.16, 3"=0.37, 4"=0.65, 5"=1.02, 6"=1.47 Gallons per liner foot	

Total Depth - DTW X Mulitplier = 1 casing vol.	80% Recovery = Total Depth -DTW X .20 + DTW

1 volume = 1.88 **X** .16 **=** .3 **Gallons** **80% =** 23.97'

Time	ph	Temp	Cond ms	Turb	DO	ORP	Gallons	Notes
11:40	10.17	23.2	4000		20.10		Init. Tot.	
11:45	11.52	23.0	4000+		14.01		1/4	well went Dry
14:20								24.2
15:12								23.9

Well Dewater (Yes) / No	**Total Volume Removed:** .5 **Gallons**	
Sample Method: (Disp Bailer) New Tubing Sample port Other:		
Sample Date: 9/21/10	**Sample Time:** 1201	**DTW at Sample:**
Sample ID: MW9A	**Lab:** KIFF	**Number of Containers:** 4
Analysis: TPH- Gas, BTEX, MTBE		

Notes:

Purging And Sampling Data Sheet

Job Number:	**Sampler:** SP	**Client:** Vic Strength
Well ID: MW2	**Date:** 9/20/10	**Site:** Former Vic Strength, Chevy
Well Diameter: 2	**DTW:** 23.48	**Total Depth** 30.59
Purge Equipment Disp Bailer	**Tubing** (OD)	**New Dedicated**
Purge Method	3-5 Casing Vol Micro/low Flow Extraction Well Other:	
Multipliers	1"= 0.04, 2"=0.16, 3"=0.37, 4"=0.65, 5"=1.02, 6"=1.47 Gallons per liner foot	

Total Depth - DTW X Mulitplier = 1 casing vol.	80% Recovery = Total Depth -DTW X .20 + DTW

1 volume = 7.11 **X** ___ **=** 1.14 **Gallons** **80% =** 24.9 '

Time	ph	Temp °C	Cond µ	Turb	DO	ORP	Gallons	Notes
11:50	9.95	22.5	T4000		4.40		Initial	
11:53	10.02	22.1	T4000		14.55		1.25	
11:58	10.07	22.0	T4000		18.0		2.50	
12:05	10.06	22.0	T4000		17.95		3.75	
12								

Well Dewater	**Yes (No)**	**Total Volume Removed:** 4.0 gal	**Gallons**
Sample Method:	**(Disp Bailer)** **New Tubing** **Sample port** **Other:**		
Sample Date: 9/20/10	**Sample Time:** 1205	**DTW at Sample:**	
Sample ID: MW2	**Lab:** KIFF	**Number of Containers:** 5	
Analysis: TPH- Gas, BTEX, MTBE			

Notes:

Purging And Sampling Data Sheet

Job Number:	**Sampler:** SP	**Client:** Val Strough
Well ID: MW-3	**Date:** 9/20/10	**Site:** Former Chevy Oakland
Well Diameter: 2	**DTW:** 23.25	**Total Depth** 31.88
Purge Equipment Disp. Bailer	**Tubing** (OD)	**New Dedicated**
Purge Method	3-5 Casing Vol Micro/low Flow Extraction Well Other:	
Multipliers	1"= 0.04, 2"=0.16, 3"=0.37, 4"=0.65, 5"=1.02, 6"=1.47 Gallons per liner foot	

Total Depth - DTW X Mulitplier = 1 casing vol.	80% Recovery = Total Depth -DTW X .20 + DTW

1 volume = 8.63 X .16 = 1.38 **Gallons** **80% =** 24.97'

Time	ph	Temp	Cond	Turb	DO ppm	ORP	Gallons	Notes
1258	8.22	21.7	2338	✓	8.96			Initial
1301	8.90	21.8	2013	✓	11.3		1.5	
1308	8.75	21.7	2234		10.60		3.0	
1311	8.27	21.2	2134		10.20		4.5	
1315	8.26	21.3	2115		8.84		5.0	
1445								

Well Dewater Yes (No) **Total Volume Removed:** 4.75 **Gallons**

Sample Method: (Disp Bailer) New Tubing Sample port Other: _____

Sample Date: 9/20/10	**Sample Time:** 1316	**DTW at Sample:**
Sample ID: MW3	**Lab:** KIFF	**Number of Containers:** 5
Analysis: TPH- Gas, BTEX, MTBE		

Notes: DTP 24.32

1445 DTW 24.34

Purging And Sampling Data Sheet

Job Number:	**Sampler:** SP	**Client:** Van Streeth
Well ID: MW-1	**Date:** 9/20/10	**Site:** Former Chevy OAKLAND
Well Diameter: 2	**DTW:** 23.65	**Total Depth** 35.17
Purge Equipment Disp Bailer	**Tubing** (OD)	**New Dedicated**
Purge Method	3- 5 Casing Vol Micro/low Flow Extraction Well Other:	
Multipliers	1"= 0.04, 2"=0.16, 3"=0.37, 4"=0.65, 5"=1.02, 6"=1.47 Gallons per liner foot	

Total Depth - DTW X Mulitplier = 1 casing vol.	80% Recovery = Total Depth -DTW X .20 + DTW

1 volume = 11.52 X ___ = 1.89 **Gallons** **80% =** 25.95

Time	ph	Temp	Cond	Turb	DO ppm	ORP	Gallons	Notes
1223	10.48	22.0	4000	✓	24.70			~~Initial~~
1230	10.73	22.1	4000†	✓	24.45		2.0	
1242							3.0	well went Dry ~~3.0~~
1245								DTW 34.90
1425	10.45	21.4	†4000		16.40			25.87

Well Dewater Yes / No	**Total Volume Removed:** 3.25	**Gallons**
Sample Method: ~~Disp Bailer~~ **New Tubing** **Sample port** **Other:**		
Sample Date: 9/20/10	**Sample Time:** 1428	**DTW at Sample:** 25.87
Sample ID: ~~MW~~ 01	**Lab:** ~~S~~ KIFF	**Number of Containers:** 5
Analysis: TPH- Gas, BTEX, MTBE		

Notes:

Water Level Measurements

Job Number:	Date: 9/20/10	Client: Stroughs

Site: Former Val Stroughs Clay OAKLAND

Well ID.	Time	Diam	Depth to Product	Product Thickness	Depth To Water (DTW)	Total Depth (Measured)	Total Depth (Historical)	Notes
MW-2	10:41	2	N/A	N/A	23.48	32.0	30.59	
MW-3	10:46	2			~~23.48~~	25	31.88	
O-1	10:43	2			~~23.65~~	35.25	35.17	
9-A	10:49	2			23.32	24.25	25.20	
9-B	10:51	2			23.6	35.75'	34.58	

Purging And Sampling Data Sheet

Job Number:	**Sampler:** SF	**Client:** Val Strough
Well ID: MW-9B	**Date:** 9/20/10	**Site:** Former Chevy OAKLAND
Well Diameter: 2	**DTW:** 23.60	**Total Depth** 34.58
Purge Equipment Disp Bailer	**Tubing** (OD)	**New Dedicated**
Purge Method	3/5 Casing Vol Micro/low Flow Extraction Well Other:	
Multipliers	1"= 0.04, 2"=0.16, 3"=0.37, 4"=0.65, 5"=1.02, 6"=1.47 Gallons per liner foot	

Total Depth - DTW X Mulitplier = 1 casing vol.	80% Recovery = Total Depth -DTW X .20 + DTW

1 volume = 10.98 X .16 = 1.76 **Gallons** **80% =** 25.8 '

Time	ph	Temp	Cond	Turb	DO ppm	ORP	Gallons	Notes
1337	10.17	21.5	+4000		24.88			Initial
1343	10.25	21.3	+4000		26.00		1.75	
1354	10.10	21.8	+4000		18.01		3.50	
1405	10.01	21.6	+4000		20.63		4.25	well went Dry DTW
1407			+4002					DTW = 33.75
1445	10.05	22.1	+4000		16.5			

Well Dewater	Yes / No	**Total Volume Removed:** 4.25	**Gallons**
Sample Method:	Disp Bailer, New Tubing Sample port Other:		
Sample Date: 9/20/10	**Sample Time:** 1757	**DTW at Sample:** 25.80	
Sample ID: MW9B	**Lab:** KIFF	**Number of Containers:** 5	
Analysis: TPH- Gas, BTEX, MTBE			

Notes:

KIFF Analytical LLC

2795 2nd Street, Suite 300
Davis, CA 95618
Lab: 530.297.4800
Fax: 530.297.4802

SRG # / Lab No. _____ Page 1 of 1

Chain-of-Custody Record and Analysis Request

Project Contact (Hardcopy or PDF To):

California EDF Report? ☐ Yes ☐ No

Company / Address:

Sampling Company Log Code:

Phone Number:

Global ID:

Fax Number:

EDF Deliverable To (Email Address):

Project #: | P.O. #:

Bill to:

Project Name:

Sampler Print Name:

Sampler Signature:

Project Address:

Sample Designation	Sampling: Date	Sampling: Time	Container: 40 ml VOA	Container: Sleeve	Container: Poly	Container: Glass	Container: Tedlar	Container:	Preservative: HCl	Preservative: HNO_3	Preservative: None	Preservative:	Preservative:	Matrix: Water	Matrix: Soil	Matrix: Air
MW-7A			X						X					X		
MW-2																
MW-3																
01																
MW-9B			V						V					V		

Analysis Request — CIRCLE METHOD

MTBE @ 0.5 ppb (EPA 8260B)	BTEX (EPA 8260B)	TPH Gas (EPA 8260B)	5 Oxygenates (MTBE, DIPE, ETBE, TAME, TBA) (EPA 8260B)	7 Oxygenates (5 oxy + EtOH, MeOH) (EPA 8260B)	Lead Scav. (1,2 DCA & 1,2 EDB) (EPA 8260B)	Volatile Halocarbons (EPA 8260B)	Volatile Organics Full List (EPA 8260B)	Volatile Organics (EPA 524.2 Drinking Water)	TPH as Diesel (EPA 8015M)	TPH as Motor Oil (EPA 8015M)	CAM 17 Metals (EPA 200.7 / 6010)	5 Waste Oil Metals (Cd,Cr,Ni,Pb,Zn) (EPA 200.7 / 6010)	Mercury (EPA 245.1 / 7470 / 7471)	Total Lead (EPA 200.7 / 6010)	W.E.T. Lead (STLC)					
X	X	X																		
V	V	V																		

TAT: ☐ 12 hr ☐ 24 hr ☐ 48hr ☐ 72hr ☑ 1 wk

For Lab Use Only

Relinquished by:	Date	Time	Received by:
Relinquished by:	Date	Time	Received by:
Relinquished by:	Date	Time	Received by:
	09/24/10	1121	Kiff Analytical LLC

Remarks:

Distribution: White - Lab; Pink - Originator
Rev: 060409

KIFF Analytical LLC

Report Number : 74636
Date : 09/27/2010

Laboratory Results

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

Subject : 5 Water Samples
Project Name : FORMER VAL STROUGH CHEVY
Project Number :

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. Testing procedures comply with the 2003 NELAC standard. All soil samples are reported on a total weight (wet weight) basis unless noted otherwise in the case narrative. Laboratory results relate only to the samples tested. This report may be freely reproduced in full, but may only be reproduced in part with the express permission of Kiff Analytical, LLC. Kiff Analytical, LLC is certified by the State of California under the National Environmental Laboratory Accreditation Program (NELAP), lab # 08263CA. If you have any questions regarding procedures or results, please call me at 530-297-4800.

Sincerely,

Joel Kiff

KIFF Analytical LLC

Report Number : 74636
Date : 09/27/2010

Subject : 5 Water Samples
Project Name : FORMER VAL STROUGH CHEVY
Project Number :

Case Narrative

Samples were centrifuged prior to analysis by EPA Method 8260B.

KIFF Analytical LLC

Report Number : 74636
Date : 09/27/2010

Project Name : **FORMER VAL STROUGH CHEVY**
Project Number :

Sample : **MW-9A** Matrix : Water Lab Number : 74636-01
Sample Date :09/21/2010

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date/Time Analyzed
Benzene	**1400**	20	ug/L	EPA 8260B	09/22/10 17:47
Toluene	**9600**	20	ug/L	EPA 8260B	09/22/10 17:47
Ethylbenzene	**1600**	20	ug/L	EPA 8260B	09/22/10 17:47
Total Xylenes	**12000**	20	ug/L	EPA 8260B	09/22/10 17:47
Methyl-t-butyl ether (MTBE)	< 20	20	ug/L	EPA 8260B	09/22/10 17:47
TPH as Gasoline	**70000**	2000	ug/L	EPA 8260B	09/22/10 17:47
1,2-Dichloroethane-d4 (Surr)	98.7		% Recovery	EPA 8260B	09/22/10 17:47
Toluene - d8 (Surr)	98.0		% Recovery	EPA 8260B	09/22/10 17:47

Sample : **MW2** Matrix : Water Lab Number : 74636-02
Sample Date :09/20/2010

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date/Time Analyzed
Benzene	**52**	2.5	ug/L	EPA 8260B	09/22/10 16:38
Toluene	**360**	2.5	ug/L	EPA 8260B	09/22/10 16:38
Ethylbenzene	**210**	2.5	ug/L	EPA 8260B	09/22/10 16:38
Total Xylenes	**1600**	2.5	ug/L	EPA 8260B	09/22/10 16:38
Methyl-t-butyl ether (MTBE)	**140**	2.5	ug/L	EPA 8260B	09/22/10 16:38
TPH as Gasoline	**8800**	250	ug/L	EPA 8260B	09/22/10 16:38
1,2-Dichloroethane-d4 (Surr)	100		% Recovery	EPA 8260B	09/22/10 16:38
Toluene - d8 (Surr)	98.4		% Recovery	EPA 8260B	09/22/10 16:38

KIFF Analytical LLC

Report Number : 74636
Date : 09/27/2010

Project Name : **FORMER VAL STROUGH CHEVY**
Project Number :

Sample : **MW3** Matrix : Water Lab Number : 74636-03
Sample Date :09/20/2010

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date/Time Analyzed
Benzene	**2700**	25	ug/L	EPA 8260B	09/22/10 18:25
Toluene	**13000**	25	ug/L	EPA 8260B	09/22/10 18:25
Ethylbenzene	**2900**	25	ug/L	EPA 8260B	09/22/10 18:25
Total Xylenes	**18000**	25	ug/L	EPA 8260B	09/22/10 18:25
Methyl-t-butyl ether (MTBE)	**300**	25	ug/L	EPA 8260B	09/22/10 18:25
TPH as Gasoline	**110000**	2500	ug/L	EPA 8260B	09/22/10 18:25
1,2-Dichloroethane-d4 (Surr)	99.4		% Recovery	EPA 8260B	09/22/10 18:25
Toluene - d8 (Surr)	98.2		% Recovery	EPA 8260B	09/22/10 18:25

Sample : **O1** Matrix : Water Lab Number : 74636-04
Sample Date :09/20/2010

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date/Time Analyzed
Benzene	**24**	0.50	ug/L	EPA 8260B	09/22/10 17:12
Toluene	**140**	0.50	ug/L	EPA 8260B	09/22/10 17:12
Ethylbenzene	**28**	0.50	ug/L	EPA 8260B	09/22/10 17:12
Total Xylenes	**330**	0.50	ug/L	EPA 8260B	09/22/10 17:12
Methyl-t-butyl ether (MTBE)	**43**	0.50	ug/L	EPA 8260B	09/22/10 17:12
TPH as Gasoline	**2000**	50	ug/L	EPA 8260B	09/22/10 17:12
1,2-Dichloroethane-d4 (Surr)	99.8		% Recovery	EPA 8260B	09/22/10 17:12
Toluene - d8 (Surr)	99.1		% Recovery	EPA 8260B	09/22/10 17:12

KIFF Analytical LLC

Report Number : 74636
Date : 09/27/2010

Project Name : **FORMER VAL STROUGH CHEVY**
Project Number :

Sample : **MW-9B** Matrix : Water Lab Number : 74636-05
Sample Date :09/20/2010

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date/Time Analyzed
Benzene	**6.7**	2.0	ug/L	EPA 8260B	09/22/10 14:16
Toluene	**110**	2.0	ug/L	EPA 8260B	09/22/10 14:16
Ethylbenzene	**140**	2.0	ug/L	EPA 8260B	09/22/10 14:16
Total Xylenes	**830**	2.0	ug/L	EPA 8260B	09/22/10 14:16
Methyl-t-butyl ether (MTBE)	**20**	2.0	ug/L	EPA 8260B	09/22/10 14:16
TPH as Gasoline	**6200**	200	ug/L	EPA 8260B	09/22/10 14:16
1,2-Dichloroethane-d4 (Surr)	102		% Recovery	EPA 8260B	09/22/10 14:16
Toluene - d8 (Surr)	97.9		% Recovery	EPA 8260B	09/22/10 14:16

Report Number : 74636

QC Report : Method Blank Data

Date : 09/27/2010

Project Name : **FORMER VAL STROUGH CHEVY**

Project Number :

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	< 0.50	0.50	ug/L	EPA 8260B	09/22/2010
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	09/22/2010
Toluene	< 0.50	0.50	ug/L	EPA 8260B	09/22/2010
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	09/22/2010
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	09/22/2010
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	09/22/2010
1,2-Dichloroethane-d4 (Surr)	103		%	EPA 8260B	09/22/2010
Toluene - d8 (Surr)	99.2		%	EPA 8260B	09/22/2010

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed

KIFF ANALYTICAL, LLC

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

Report Number : 74636

QC Report : Matrix Spike/ Matrix Spike Duplicate

Date : 09/27/2010

Project Name : **FORMER VAL STROUGH CHEVY**

Project Number :

Parameter	Spiked Sample	Sample Value	Spike Level	Spike Dup. Level	Spiked Sample Value	Duplicate Spiked Sample Value	Units	Analysis Method	Date Analyzed	Spiked Sample Percent Recov.	Duplicate Spiked Sample Percent Recov.	Relative Percent Diff.	Spiked Sample Percent Recov. Limit	Relative Percent Diff. Limit
Benzene														
	74620-09	<0.50	39.8	39.9	39.7	39.7	ug/L	EPA 8260B	9/22/10	99.9	99.4	0.490	80-120	25
Ethylbenzene														
	74620-09	<0.50	39.8	39.9	42.2	42.0	ug/L	EPA 8260B	9/22/10	106	105	0.844	80-120	25
Methyl-t-butyl ether														
	74620-09	42	39.8	39.9	81.1	79.5	ug/L	EPA 8260B	9/22/10	97.2	92.9	4.55	69.7-121	25
O-Xylene														
	74620-09	<0.50	39.8	39.9	41.3	41.0	ug/L	EPA 8260B	9/22/10	104	103	1.16	79.7-120	25
P + M Xylene														
	74620-09	0.53	39.8	39.9	40.8	40.5	ug/L	EPA 8260B	9/22/10	101	100	1.22	76.8-120	25
Toluene														
	74620-09	<0.50	39.8	39.9	40.4	39.9	ug/L	EPA 8260B	9/22/10	102	99.9	1.59	80-120	25

KIFF ANALYTICAL, LLC

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

Report Number : 74636

QC Report : Laboratory Control Sample (LCS)

Date : 09/27/2010

Project Name : **FORMER VAL STROUGH CHEVY**

Project Number :

Parameter	Spike Level	Units	Analysis Method	Date Analyzed	LCS Percent Recov.	LCS Percent Recov. Limit
Benzene	40.0	ug/L	EPA 8260B	9/22/10	98.7	80-120
Ethylbenzene	40.0	ug/L	EPA 8260B	9/22/10	106	80-120
Methyl-t-butyl ether	40.0	ug/L	EPA 8260B	9/22/10	93.9	69.7-121
O-Xylene	40.0	ug/L	EPA 8260B	9/22/10	102	79.7-120
P + M Xylene	40.0	ug/L	EPA 8260B	9/22/10	100	76.8-120
Toluene	40.0	ug/L	EPA 8260B	9/22/10	100	80-120

KIFF ANALYTICAL, LLC

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

KIFF Analytical LLC

2795 2nd Street, Suite 300
Davis, CA 95618
Lab: 530.297.4800
Fax: 530.297.4802

SRG # / Lab No. 74636

Page 1 of 1

Chain-of-Custody Record and Analysis Request

Project Contact (Hardcopy or PDF To): MEGHAN JAVATHEARAN

California EDF Report? ☑ Yes ☐ No

Company / Address: LRM

Sampling Company Log Code:

Phone Number: 415 ~~925~~ 706-8935

Global ID: T0600101644

Fax Number:

EDF Deliverable To (Email Address):

Project #: P.O. #:

Bill to:

Project Name: Former Val Stroup Chevy

Sampler Print Name: Scott Polston

Sampler Signature:

Project Address: 3273 4th Street Oakland CA

Sample Designation	Sampling: Date	Sampling: Time	Container: 40 ml VOA	Container: Sleeve	Container: Poly	Container: Glass	Container: Tedlar	Preservative: HCl	Preservative: HNO_3	Preservative: None	Matrix: Water	Matrix: Soil	Matrix: Air	MTBE @ 0.5 ppb (EPA 8260B)	BTEX (EPA 8260B)	TPH Gas (EPA 8260B)	5 Oxygenates (MTBE, DIPE, ETBE, TAME, TBA) (EPA 8260B)	7 Oxygenates (5 oxy + EtOH, MeOH) (EPA 8260B)	Lead Scav. (1,2 DCA & 1,2 EDB) (EPA 8260B)	Volatile Halocarbons (EPA 8260B)	Volatile Organics Full List (EPA 8260B)	Volatile Organics (EPA 524.2 Drinking Water)	TPH as Diesel (EPA 8015M)	TPH as Motor Oil (EPA 8015M)	CAM 17 Metals (EPA 200.7 / 6010)	5 Waste Oil Metals (Cd,Cr,Ni,Pb,Zn) (EPA 200.7 / 6010)	Mercury (EPA 245.1 / 7470 / 7471)	Total Lead (EPA 200.7 / 6010)	W.E.T. Lead (STLC)	Confirm Sample Prior to Analysis				TAT: 1 wk	For Lab Use Only
MW-9A	9/21/10	1201	X					X			X			X	X	X																		01
MW2	9/20/10	1205																																02
MW3		1316																																03
01		1428																																04
MW-9B		1457	V								V			V	V	V																		05

Relinquished by:	Date	Time	Received by:
	9/21/10	1221	
Relinquished by:	Date	Time	Received by:
Relinquished by:	Date	Time	Received by Laboratory:
	092110	1221	Kiff Analytical LLC

Remarks:

Distribution: White - Lab; Pink - Originator
Rev: 060409

KIFF Analytical LLC

SAMPLE RECEIPT CHECKLIST

RECEIVER: TJB (Initials)

SRG#: 74636 Date: 092110

Project ID: Former Val Strough Chevy

Method of Receipt: [X] Courier [ ] Over-the-counter [ ] Shipper

COC Inspection

Is COC present?	[X] Yes	[ ] No	
Custody seals on shipping container?	[ ] Intact	[ ] Broken	[ ] Not present [X] N/A
Is COC Signed by Relinquisher? [X] Yes [ ] No Dated?	[X] Yes	[ ] No	
Is sampler name legibly indicated on COC?	[X] Yes	[ ] No	
Is analysis or hold requested for all samples	[X] Yes	[ ] No	
Is the turnaround time indicated on COC?	[X] Yes	[ ] No	
Is COC free of whiteout and uninitialed cross-outs?	[X] Yes	[ ] No, Whiteout	[ ] No, Cross-outs

Sample Inspection

Coolant Present: [X] Yes [ ] No (includes water)

Temperature °C 3.0 Therm. ID# IR-5 Initial TJB Date/Time 092110 / 1453 [ ] N/A

Are there custody seals on sample containers?	[ ] Intact	[ ] Broken	[X] Not present
Do containers match COC? [X] Yes [ ] No	[ ] No, COC lists absent sample(s)	[ ] No, Extra sample(s) present	
Are there samples matrices other than soil, water, air or carbon?	[ ] Yes	[X] No	
Are any sample containers broken, leaking or damaged?	[ ] Yes	[X] No	
Are preservatives indicated? [X] Yes, on sample containers	[X] Yes, on COC	[ ] Not indicated	[ ] N/A
Are preservatives correct for analyses requested?	[X] Yes	[ ] No	[ ] N/A
Are samples within holding time for analyses requested?	[X] Yes	[ ] No	
Are the correct sample containers used for the analyses requested?	[X] Yes	[ ] No	
Is there sufficient sample to perform testing?	[X] Yes	[ ] No	
Does any sample contain product, have strong odor or are otherwise suspected to be hot?	[ ] Yes	[X] No	

Receipt Details

Matrix WA	Container type VOA	# of containers received 25 TJB 24
Matrix	Container type	# of containers received
Matrix	Container type	# of containers received

Date and Time Sample Put into Temp Storage Date: 092110 Time: 1502

Quicklog

Are the Sample ID's indicated:	[ ] On COC	[ ] On sample container(s)	[X] On Both	[ ] Not indicated
If Sample ID's are listed on both COC and containers, do they all match?	[X] Yes	[ ] No		[ ] N/A
Is the Project ID indicated:	[ ] On COC	[ ] On sample container(s)	[X] On Both	[ ] Not indicated
If project ID is listed on both COC and containers, do they all match?	[X] Yes	[ ] No		[ ] N/A
Are the sample collection dates indicated:	[ ] On COC	[ ] On sample container(s)	[X] On Both	[ ] Not indicated
If collection dates are listed on both COC and containers, do they all match?	[X] Yes	[ ] No		[ ] N/A
Are the sample collection times indicated:	[ ] On COC	[ ] On sample container(s)	[X] On Both	[ ] Not indicated
If collection times are listed on both COC and containers, do they all match?	[X] Yes	[ ] No		[ ] N/A

COMMENTS: