

August 4, 2004

Mr. Don Strough Strough Family Trust of 1983 PO Box 489 Orinda, California 94563

Subject:

LETTER OF TRANSMITTAL

Second Quarter 2004 Groundwater Monitoring Report

Former Val Strough Chevrolet Fuel Leak Case No. RO0000134 327 34th Street

327 34th Street
Oakland, California

Dear Mr. Strough:

ETIC Engineering, Inc. is pleased to submit the enclosed copy of the Second Quarter 2004 Groundwater Monitoring Report for the above-referenced site. We have distributed additional copies of the report as noted below.

ETIC appreciates the opportunity to provide the Strough Family Trust of 1983 with environmental consulting services. If you have any questions or comments, please contact me at (510) 208-1600, extension 11.

Sincerely,

ETIC Engineering, Inc.

Katherine A. Brandt

Project Manager

Enclosure:

Second Quarter 2004 Groundwater Monitoring Report

erive Brandt

Cc:

Don Hwang, Alameda County Health Services Agency, 1131 Harbor Bay Parkway, Suite 250,

Alameda, California 94502-6577

Jonathan Redding, Wendel Rosen Black and Dean, 1111 Broadway, 24th Floor, Oakland, California

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Project File

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SECOND QUARTER 2004

FORMER VAL STROUGH CHEVROLET AND THE STREET

Prepared For:

Mr. Don Strough Strough Family Trust of 1983 PO Box 489 Orinda, California 94563

Prepared By:

ETIC Engineering, Inc. 1333 Broadway, Suite 1015 Oakland, California 94612

August 4, 2004



Second Quarter 2004 Groundwater Monitoring Report

Former Val Strough Chevrolet 327 34th Street Oakland, California

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Katherine Brandt Project Manager

Khaled Rahman, R.G., C.Hg.

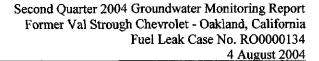
Senior Geologist

KHALED B. RAHMAN
NG. 0261
CERTIFIED
HYDROGEOLOGIST
Exp. 7/3//03



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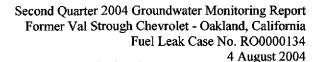
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SITE CONTACTS

Site Name: Former Val Strough Chevrolet

Site Address: 327 34th Street

Oakland, California

Consultant: ETIC Engineering, Inc.

1333 Broadway, Suite 1015 Oakland, California 94612

(510) 208-1600

ETIC Project Manager: Katherine A. Brandt

Regulatory Oversight: Don Hwang

Alameda County Health Care Services Agency

1131 Harbor Bay Parkway, Suite 250 Alameda, California 94502-6577

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1.0 INTRODUCTION

At the request of the Strough Family Trust of 1983, ETIC Engineering, Inc. has prepared this Second Quarter 2004 Groundwater Monitoring Report for the former Val Strough Chevrolet site located in Oakland, California. This report documents the procedures and findings of the 24 June 2004 groundwater monitoring event. Groundwater monitoring results, well construction details, and groundwater monitoring plan are provided in the attached figures and tables. Groundwater monitoring protocols, field data, and analytical results are provided in the attached appendices.

1.1 GENERAL SITE INFORMATION

Site name: Former Val Strough Chevrolet

Site address: 327 34th Street, Oakland, California

Current property owner: Strough Family Trust of 1983

Current site use: Automotive Dealership and Service Center

Current phase of project: Groundwater monitoring, interim remedial action

Tanks at site: Two former tanks (1 gasoline, 1 waste-oil) removed in

1993

Number of wells: 7 (all onsite)

1.2 GROUNDWATER MONITORING SUMMARY

Gauging and sampling date: 24 June 2004

Wells gauged and sampled: MW1, MW3-MW7

Wells gauged only: MW2

Groundwater flow direction: South-southwest

Groundwater gradient: 0.02

Separate-phase hydrocarbons: Observed in well MW2

Laboratory: Severn Trent Laboratories, Inc (STL) San Francisco of

Pleasanton, California

Analyses performed: Total Petroleum Hydrocarbons as gasoline (TPH-g),

benzene, toluene, ethylbenzene, and total xylenes (BTEX), and methyl t-butyl ether (MTBE) by EPA Method 8260B. Total Extractable Petroleum Hydrocarbon (TEPH) with

Silica Gel Clean-up by modified EPA Method 8015.



2.0 SITE BACKGROUND

2.1 Site Description

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

The site is located at an elevation of approximately 61 feet above mean sea level (Environmental Data Resources, Inc. [EDR], 2003), and topography slopes slightly toward the south. The site is located approximately 2 miles east of the San Francisco Bay. The nearest surface water body is Lake Merritt, which is located approximately 1 mile south of the site (see Figure 1).

Site Features: The site consists of a multi-story building with adjacent parking lot (see Figure 2). The former underground storage tanks (USTs) and fuel dispenser were located near the northwestern portion of the site. Seven monitoring wells and several soil borings are located at the site. Well construction details for the site wells are presented in Table 1.

Underground Utilities: A box culvert for a former tributary of Glen Echo Creek that drains to Lake Merritt is located beneath the parking lot near Broadway (see Figure 2). The box culvert consists of a reinforced concrete box measuring 5 feet by 6 feet. The depth of the top of the culvert is approximately 17 feet below ground surface (bgs). During the winter of 1983, a section of the culvert caved-in and was replaced with a 5-foot-diameter pipe. A storm drain flows to the east along the northern border of 34th Street, approximately 40 feet north of the site, and is diverted into the box culvert.

A sanitary sewer lateral from the site connects to a sanitary sewer line running beneath 34th Street approximately 40 feet north of the site. This sanitary sewer line connects to a main line which runs beneath Broadway.

The natural gas service is located on the east side of the property. The water service appears to enter the site from the north.

Water Supply Well Search: The EDR Report (2003) indicated that there are no federal US 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.



2.2 Summary of Previous Investigation and Monitoring Activities

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

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

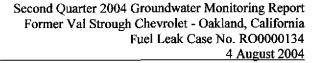
Groundwater is typically measured at 17 to 23 feet bgs in the site wells. As shown in the modified rose diagram on Figure 2, the historic monitoring data indicate a prevailing groundwater flow direction toward the southwest, with an average hydraulic gradient of approximately 0.03 to 0.02 foot/foot. It should be noted that groundwater does not appear to be significantly influenced by underground utilities, including the box culvert.

Primary Sources: Two USTs (one gasoline and one used oil) were located beneath the sidewalk along 34th Street on the north side of the property. A fuel dispenser was located inside the building (see Figure 2). These primary sources of hydrocarbons were removed from the site in 1993.

Constituents of Potential Concern: Based on the material stored in the USTs and the results of previous subsurface investigations at the site, the constituents of potential concern (COPCs) at the site include TPH-g, BTEX and MTBE. TPH-d and TPH-mo are not routinely reported in groundwater samples and are considered secondary COPCs for the site.

Residual Source Area: Separate phase hydrocarbons (SPHs) have been intermittently observed in wells MW2 and MW3, and elevated concentrations of TPH-g, BTEX, and MTBE are limited to the vadose and capillary fringe soils adjacent to the former UST fuel dispenser, near well MW2 and MW-3. These findings indicate that most of the residual hydrocarbon mass is localized near the former USTs and fuel dispenser, herein referred to as the source area.

Hydrocarbon Distribution in Groundwater: The hydrocarbon mass in groundwater within the source area is defined by wells MW2, MW3 and MW4. The SPH is observed only in monitoring wells MW2 and MW3. Nearby monitoring wells MW1 (approximately 50 feet east of MW2 and 50 feet northeast of MW3) and MW4 (approximately 50 feet southeast of MW3) have not reported measurable SPH (see Table 2). Due to the presence of SPH over the past two years, groundwater has not been sampled in source area wells MW2 and MW3 during recent quarterly monitoring activities. The highest concentrations of dissolved constituents are typically reported in well MW4, where relatively low and stable/decreasing levels define the extent of the source area.





The extent of dissolved hydrocarbons in groundwater is largely defined by downgradient and crossgradient monitoring wells MW5, MW6 and MW7, which show stable concentrations of TPH-g, BTEX, and MTBE over the last two years (see Table 2). These data suggest that hydrocarbons in groundwater are largely limited to the property boundaries, and that the plume is stable and has limited potential for offsite migration.

Dual Phase Extraction Pilot Test: In March 2004, ETIC performed a high vacuum dual-phase extraction (DPE) pilot test at the site. As summarized in the June 2004 Dual Phase Extraction Pilot Test and Interim Remedial Action Plan (DPE Report and IRAP), vacuum was applied to source area wells MW2 and MW3 while water and vacuum levels were monitored 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 flowrates and hydrocarbon concentrations in the vaporstream during the short-term pilot test, removal rates of approximately 90 pounds of hydrocarbons per day were estimated. These findings suggest that DPE can successfully remove hydrocarbons from the site subsurface and induce vacuum influence across the source area.

Interim Remedial Action: Based on the DPE pilot test results, temporary DPE was proposed as a interim remedial action for the site in the DPE Report and IRAP. As mentioned during several telephone discussions and most recently documented in a 27 July 2004 ETIC correspondence, temporary system installation must be coordinated with planned site redevelopment activities to remain cost effective. Expedited Alameda County Health Care Services Agency (ACHCSA) approval of the scope of work described in the DPE Report and IRAP is greatly appreciated.



3.0 PROTOCOLS FOR QUARTERLY GROUNDWATER MONITORING

The following sections of this report present information relevant to the methods employed during the collection of groundwater samples from site wells. The scope of work for the quarterly groundwater monitoring event at the site included:

- Checking for SPH in the wells.
- Gauging depth to groundwater in the wells.
- Purging wells to be sampled.
- Collecting and analyzing groundwater samples from wells with no SPH.
- Calculating the groundwater gradient and flow direction.
- Preparing this report summarizing the results of the monitoring event.

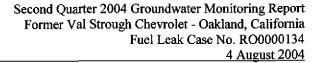
3.1 GROUNDWATER GAUGING

The 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 permanent reference point at the top of the well casing. Wells with a sheen or measurable SPH were not purged or sampled.

The groundwater elevation map (see 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.

3.2 WELL PURGING

Approximately of 3 well casing volumes of water were purged from each well to provide representative groundwater samples for analysis. Field parameters including pH, temperature, and electrical conductance were measured during purging to ensure that these parameters had stabilized before groundwater was sampled. Groundwater in each well was purged using a WaTerra inertial pump. After purging and prior to sampling, the water level was checked to ensure that the well had recharged to at least 80 percent of its pre-purge water level.





3.3 GROUNDWATER SAMPLING

After purging, groundwater in each well was sampled using dedicated tubing and a WaTerra inertial pump. The samples were submitted to STL San Francisco of Pleasanton, California, a state-certified laboratory. Groundwater analytical results and chain-of-custody documentation are presented in Appendix C.



4.0 RESULTS

4.1 SEPARATE-PHASE HYDROCARBON MONITORING

Wells were monitored for the presence of SPH using a disposable bailer and/or interface probe. SPH was measured at a thickness of 0.31 feet in well MW2. SPH was not observed in the other site wells.

4.2 GROUNDWATER ELEVATION AND GRADIENT

Groundwater elevations in the site wells during this monitoring event ranged from 41.63 feet above mean sea level (msl) at well MW6 to 44.21 feet msl at well MW1 (see Figure 2). Groundwater flow is generally to the south-southwest with a hydraulic gradient of approximately 0.02 foot/foot. At the request of the ACHCSA, a rose diagram is also presented on Figure 2.

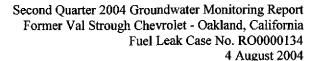
4.3 GROUNDWATER ANALYTICAL RESULTS

Groundwater samples were collected from wells MW1, MW3, MW4, MW5, MW6 and MW7. Well MW2 was not sampled on 24 June 2004 due to the presence of SPH. Samples were analyzed by STL San Francisco for TPH-g, BTEX, MTBE, and TEPH with silica gel clean-up. Analytical results for this and prior monitoring events are presented in Table 2. Analytical results for this monitoring event are presented on Figure 3. Copies of the chain-of-custody and laboratory analytical reports for the groundwater samples are presented in Appendix C.

4.4 FINDINGS

The following observations are made comparing the results of the June 2004 monitoring event with the results of the previous monitoring events. Note that the DPE pilot test took place between the two most recent monitoring events (March 2004 and June 2004).

- SPH was reported in well MW2, which is consistent with recent monitoring events.
 However, well MW3, which had reported hydrocarbon sheen during recent monitoring
 events, did not report SPH presence. This finding may be a direct result of hydrocarbon mass
 removal during the DPE pilot test.
- TPH-g was below laboratory reporting limits in the monitoring wells sampled, except wells MW3, MW4 and MW6 which reported concentrations at 39,000 μg/L, 920 μg/L, and 130 μg/L, respectively. As mentioned above, well MW3 has reported hydrocarbon sheen during recent monitoring events. The absence of SPH and reported TPH-g concentration in well MW3 represent a decline in hydrocarbon concentration at this well location, most likely in response to the DPE pilot test. TPH-g concentrations in wells MW4 and MW6 are generally consistent with previous monitoring events.





- BTEX concentrations were below the laboratory reporting limits in the monitoring wells sampled; expect for wells MW3 and MW4. As mentioned above, the absence of SPH and reported BTEX concentrations in well MW3 represent a decline in hydrocarbon concentration at this well location, perhaps in response to the DPE pilot test. BTEX concentrations in well MW4 are generally consistent with previous monitoring events.
- MTBE concentrations were below laboratory reporting limits in wells MW1 and MW7, and ranged from 0.79 μg/L in well MW5 to 1,100 μg/L in wells MW3 and MW4. These findings are generally consistent with previous monitoring events.
- TPH-d concentrations were below laboratory reporting limits in the monitoring wells sampled, except for wells MW3, MW5 and MW7, which reported TPH-d at 1,700 μ g/L, 130 μ g/L, and 300 μ g/L, respectively. TPH-d has not been typically reported in wells MW5 and MW7; these findings will be evaluated during a subsequent monitoring event.
- TPH-mo concentrations were below laboratory reporting limits in each of the monitoring wells sampled.



5.0 PLANNED SITE ACTIVITIES

5.1 INTERIM REMEDIAL ACTION

Short-term high vacuum DPE has been proposed as an interim remedial action for the site. Permitting and design of the system are in progress. As mentioned in a 27 July 2004 ETIC letter and the DPE Report and IRAP; however, temporary DPE system installation must be coordinated with site redevelopment activities to minimize impacts to business operations and maintain cost-effectiveness. To proceed with installation of the temporary DPE system in concert with site redevelopment and ensure reimbursement from the California UST Cleanup Fund, ETIC requests your expedited approval of the DPE Report and IRAP. If this opportunity is missed, we will likely pursue site closure through natural attenuation, rather than active source area cleanup.

5.2 GROUNDWATER MONITORING

As proposed in the 17 September 2003 Supplemental Site Investigation Workplan (Workplan), the monitoring frequency of the site wells will be re-evaluated after four monitoring events. This report presents the results of the fourth consecutive monitoring event since the Workplan was submitted. The following presents our proposed modifications to the well monitoring frequency.

Based on the observed hydrocarbon concentrations and associated trends over time in key site wells, changes to the sampling frequency of select wells are recommended. As shown below and on Figure 4, the sampling frequency in source area wells will remain quarterly while the sampling frequency in downgradient and cross-gradient wells will be reduced to semi-annually or annually.

Well	Current	Planned Sampling	Gauging	Rationale for Modification
No.	Sampling Frequency	Frequency		
MW-1	Quarterly	1 st and 3 rd Quarters	Quarterly	COPCs are below laboratory detection limits
MW-2	Quarterly	Quarterly	Quarterly	Proposed extraction well for the DPE system
MW-3	Quarterly	Quarterly	Quarterly	Proposed extraction well for the DPE system
MW-4	Quarterly	Quarterly	Quarterly	Typically defines extent of elevated TPH-g benzene, and MTBE.
MW-5	Quarterly	1 st Quarter	Quarterly	COPCs are below laboratory detection limits
MW-6	Quarterly	1 st and 3 rd Quarters	Quarterly	MTBE concentrations are stable to decreasing.
MW-7	Quarterly	1 st Quarter	Quarterly	COPCs are below laboratory detection limits

The next groundwater monitoring event is scheduled for September 2004. Groundwater will be monitored in accordance with the groundwater monitoring schedule presented above and on Table 3. This monitoring schedule will be re-evaluated following the completion of the interim remedial actions or after four quarters on this new schedule.

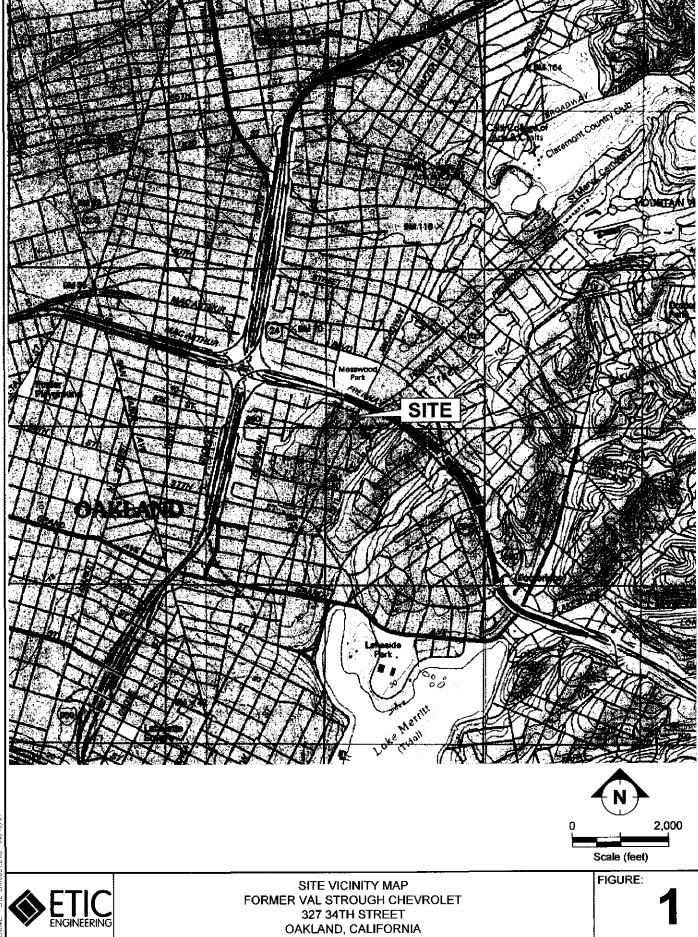


6.0 REFERENCES

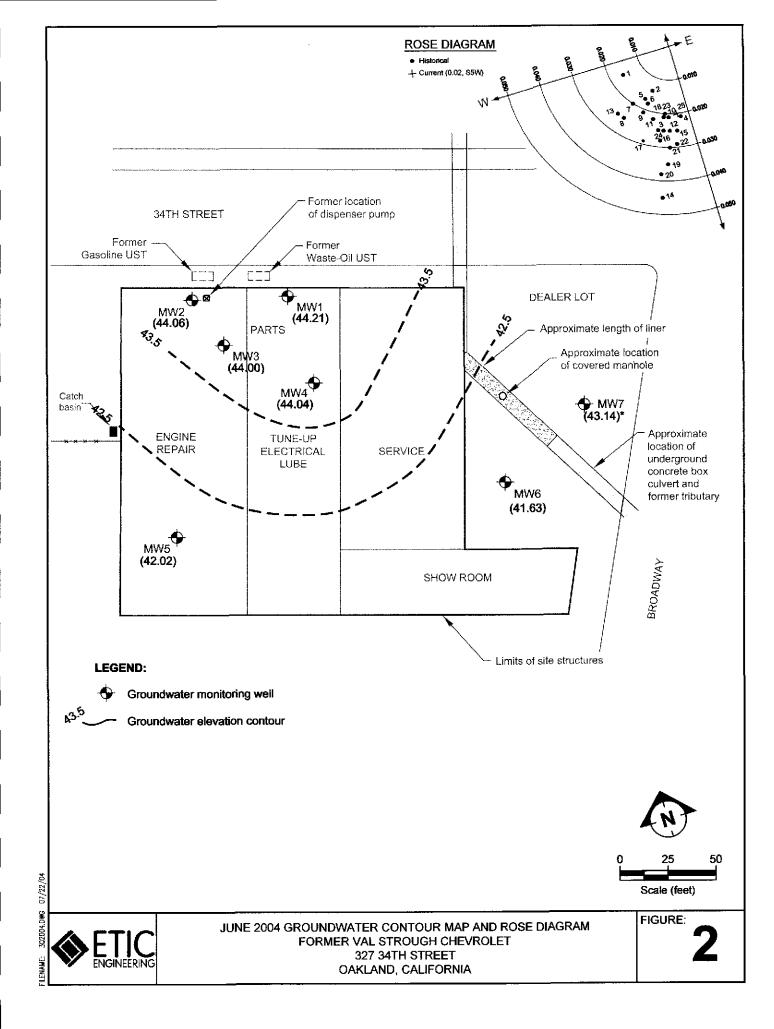
- Environmental Data Resources. 2003. EDR Radius Map with GeoCheck, Strough Family Trust, 327 34th Street, Oakland, California. September 10.
- ETIC Engineering, Inc. 2003. Supplemental Site Investigation Workplan, Fuel Case No. RO0000134, Val Strough Chevrolet, 327 34th Street, Oakland, California. September 17.
- ETIC Engineering, Inc. 2004. Supplemental Site Investigation Report and Dual-Phase Extraction Pilot Test Workplan, Strough Family Trust of 1983, 327 34th Street, Oakland, California. February.
- ETIC Engineering, Inc. 2004. First Quarter 2004 Groundwater Monitoring Report, Strough Family Trust of 1983, 327 34th Street, Oakland, California. -Oakland, California. May.
- ETIC Engineering, Inc. 2004. Dual Phase Extraction Pilot Test Report and Interim Remedial Action Plan, Strough Family Trust of 1983, Former Val Strough Chevrolet, 327 34th Street, Oakland, California. June.

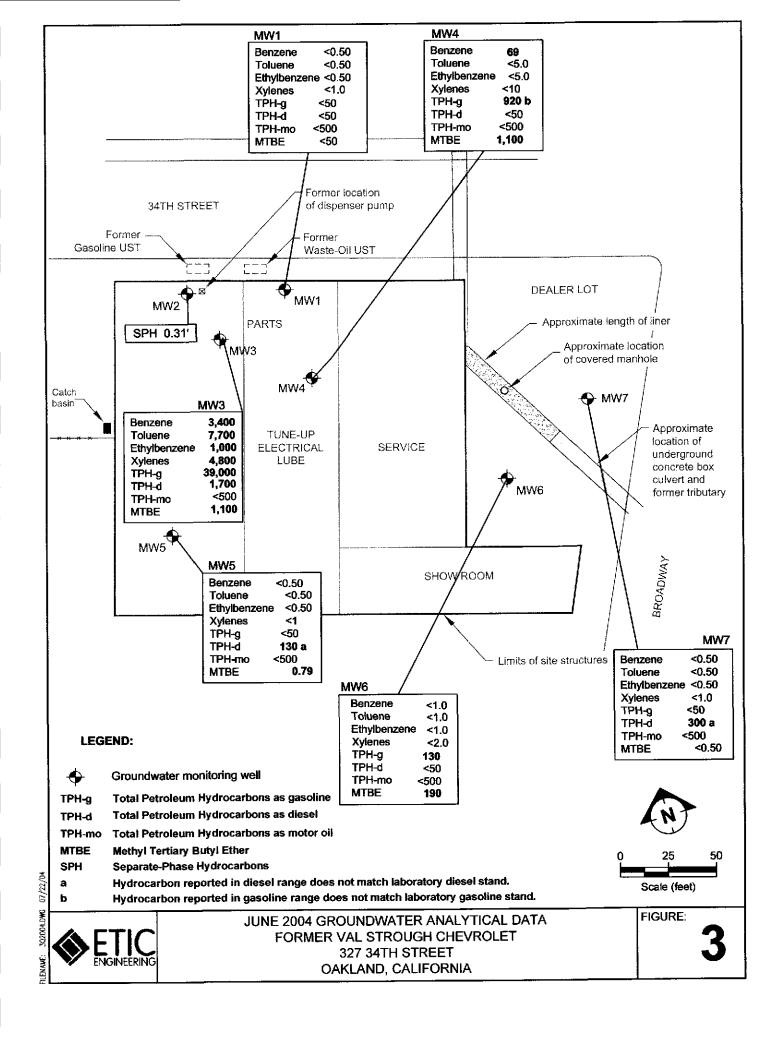


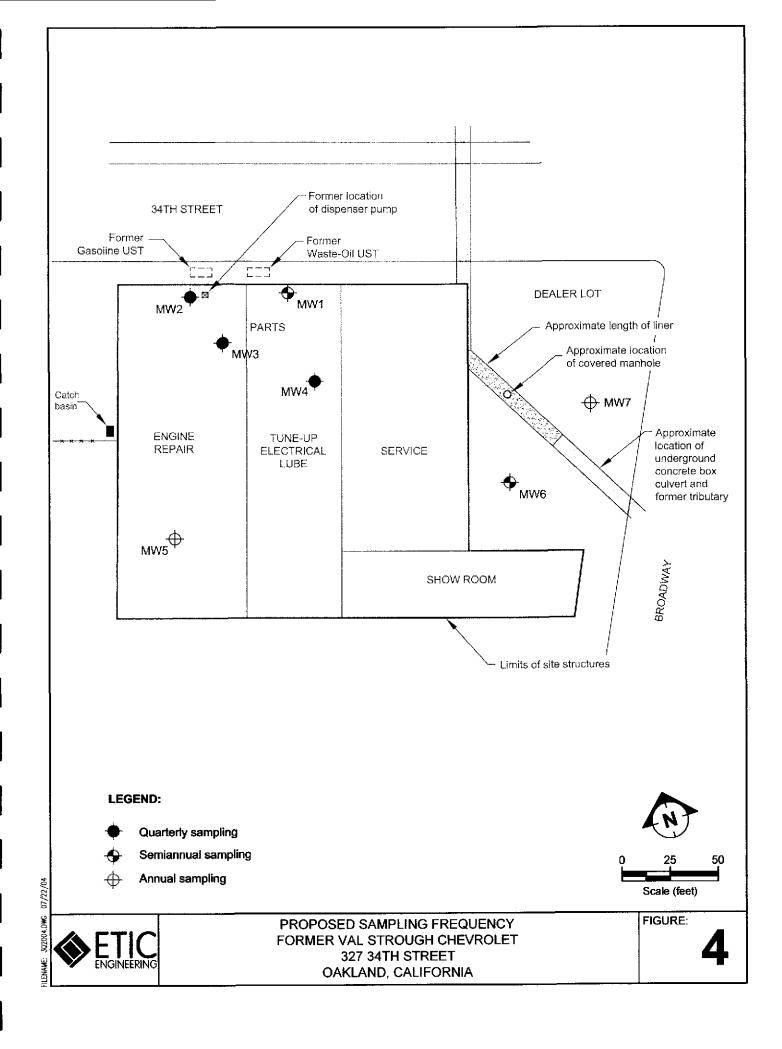
Figures



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Tables

TABLE 1 WELL CONSTRUCTION DETAILS
STROUGH FAMILY TRUST, 327 34th STREET, OAKLAND, CALIFORINA

Well ID	Well Installation Date	Top-of-Casing Elevation ^a (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	Correct Devil
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	16-33	Gravel Pack Gravel Pack
MW4	06/26/98	63.35	PVC	31	2	15-31	0.020	13-31.5	
MW5	06/26/98	65.59	PVC	31	2	15-31			Lonestar #3 Sand
MW6	07/17/00	59.60	PVC		2	- ·	0.020	13-31.5	Lonestar #3 Sand
				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

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

PVC Polyvinyl chloride.

a

ft bgs Feet below ground surface.

TABLE 2 CUMULATIVE GROUNDWATER ANALYTICAL DATA STROUGH FAMILY TRUST, 327 34th STREET OAKLAND, CALIFORINA

		Casing		epth to	GW	SPH				Concentr	ation (µg/L)				<u> </u>			c	oncentratio	n (mg/L)			
Well	_	Elevation		Water	Elevation	Thickness			Ethyl-	Total					CO2	DO	pН			(
Number	Date	(feet)	((feet)	(feet)	(feet)	Benzene	Toluene	benzene	Xylenes	TPH-g	TPH-d	TPH-mo	MTBE	(lab)	(field)	(field)	Fe(II)	Mn	SO ₄	N-NH ₃	N-NO ₃	o-PO ₄
MWI	07/27/93	100.00		70.70	70.01																		
MWI	10/02/97	100.00 a			79.21	0.00	< 0.50	< 0.50	< 0.50	<0.50	<50	<50											
		100.00 a			78.78	0.00	<0.50	<0.50	< 0.50	<0.50	<50			<2.0									
	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
	07/29/98	100.00 a			81.26	0.00				•-													
	08/26/98	100.00 a			80.72	0.00																	
MWI	10/01/98	100.00 a			80.07	0.00	<1.0	<1.0	<1.0	<1.0	<50			<2.0	192	3.6	6.49						
MWI	10/30/98	100.00 a			79.78	0.00																	
MW1	11/30/98	100.00 a			80.01	0.00				••													
MW1	12/28/98	100.00 a	a 1	19.81	80.19	0.00																	
MW1	01/25/99	100.00 a	a l	19.62	80.38	0.00	<1.0	<1.0	<1.0	<1.0	<50			<2.0	389	3.4	6.72						
MWI	02/26/99	100.00 a	a l	17.18	82.82	0.00																	
MWI	03/24/99	100.00 a	a l	l 7.28	82.72	0.00												**					
MWI	05/12/99	100.00 a	a l	17.91	82.09	0.00					_		•-										
MWI	12/15/99	100.00 a	a 2	21.01	78.99	0.00	< 0.50	< 0.50	< 0.50	< 0.50	<50			< 0.50		3.31	6.52			-			
MWI	03/20/00	100.00 a	<u>a</u> 1	16.25	83.75	0.00							••				0.02						
ΜWΙ	07/20/00	100.00 a	a 1	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					
MWI	10/11/00	100.00 a	1 2	20.80	79.20	0.00								3,4		7,37	0.00		<0.01	54	<0.10	3,4	<0.2
MWI	04/10-11/01	100.00 a	a 1	18.81	81.19	0.00	< 0.50	<0.50	< 0.50	<0.50	<50	<50	<300	1.2	117			 	0.045				
MWI	07/10/01	100.00 a	1 2	20.51	79.49	0.00			••	-0.50			~300			NR	NR	<0.10	0.045	57	<0.10	6.6	0.15
	11/20/01			21.36	43.33	0.00	<0.50	1.3	< 0.50	0.81	<50	<50			c					-	•		
	02/19/02			18.95	45.74	0.00	-0.50	*-		U.01 			<300	<2.0		0.65	6.47	0.32	1.8	63	<0.10		<0.20
	05/21/02	64.69 b			44.87	0.00	<0.50	<0.50	<0.50	<0.50													
	06/27/03			19.93	44.76	0.00		~0.50	V30	~0.30	<50	<50	<300	<2.0	120	0.96	6.25	<0.10	0.5	58	<0.10	5.5	<0.20
	09/29/03			21.24	43.45	0.00	<0.50	<0.50															
	12/12/03			21.27	43.42	0.00	<0.50	<0.50	<0.50 <0.50	<1.0	<50	<50	<500	<0.50									
	03/15/04			18.18	46.51	0.00				1.1	<50	58	<500	<0.50			·				•-		
	06/24/04			20.48			<0.50	<0.50	< 0.50	<1.0	<50	<50	<500	<0.50		0.14							
144 44 1	00/24/04	04.07	, ,	.U.40	44.21	0.00	<0.50	< 0.50	< 0.50	<1.0	<50	<50	<500	<0.50		0.15	·					-•	
MW2	07/27/93	101.27 a	. 2	22.10	79.17	0.00	10,000	27,000	2,900	20,000	120,000												
MW2	10/02/97	101.27 a	. 2	22.91	78.36	0.43	*	*	*	+	*		•-	*									
MW2	06/30/98	101.27 a			81.58	0.45	7,300	18,000	2,500	15,600					**			**					
MW2	07/29/98	101.27 a			81.16	0.29					72,000	**		5,500	185	2.2	5.98						
	08/26/98	101.27 a			80.73	0.08					**		***							••			
	10/01/98	101.27 a			79.75	0.42			2.600														
	10/30/98	101.27 a					6,400	17,000	2,600	17,000	84,000		••	2,000	•-	2.7	6.47						
	11/30/98				79.73	0.10						••											
	12/28/98	101.27 a			80.06	0.04	**		**			••		••									
	01/25/99	101.27 a			80.17	0.02																	
		101.27 a			80.47	0.01	9,000	26,000	3,800	27,500	130,000			5,800	386	0.3	6.69						
	02/26/99	101.27 a			83.27	sheen							•-									-	
	03/24/99	101.27 a			83.00	trace		••	-														**
	05/12/99	101.27 a			82.19	trace				44							;						
	12/15-16/99	101.27 a			78.85	0.025	*	*	*	*		*	*	•		•	*						
	03/20/00	101.27 a			84.18	0.026																	
MW2	07/20/00	101.27 a	2	20.86	80.41	0.017	*	*	*	*	*	*	*	•	*	0.88	6.37	*	*	*	•		*

TABLE 2 CUMULATIVE GROUNDWATER ANALYTICAL DATA STROUGH FAMILY TRUST, 327 34th STREET OAKLAND, CALIFORINA

		Casing	Depth to	GW	SPH			_	Concentra	ation (µg/L)				1			C	oncentratio	an (ma/L)			
Well		Elevation	Water	Elevation	Thickness			Ethyl-	Total		-		_	CO ₂	DO	pH		nicentratio	in (mg/r)		 -	
Number	Date	(feet)	(feet)	(feet)	(feet)	Benzene	Toluene	benzene	Xylenes	TPH-g	TPH-d	TPH-mo	MTBE	(lab)	(field)	(field)	Fe(II)	Mn	SO ₄	N-NH ₃	N-NO ₃	o-PO4
													-	()	()	()	~ ~()		204	11-11113	11-1103	0-1-04
MW2	10/11/00	101.27	a 22.10	79.17	0.00					••												
MW2	04/10-11/01	101.27	a 19.98	81.29	0.00	8,000	22,000	2,600	23,500	150,000	1,500	<600	3,600		a.							
MW2	07/10/01	101.27	a 21.85	79.42	0.00	5,900	15,000	2,300	12,100	83,000	5,700			168	NR	NR	3.1	2.5	16	0.14	0.19	< 0.20
MW2	11/20/01		b 22.75	43.20	0.00			2,200	12,100	45,000	3,700	<1,500	2,800									
MW2	02/19/02		b 20.12	45.83	0.00									120	NR	6.15	1,8	2	16	<0.10		<0.20
MW2	05/21/02		b 21.10	44.85	0.00	8,600	25,000	3,500	26,000	150,000		-2.000							-		-	
MW2	06/27/03		21.48	44,47	0.35		20,000	3,500	20,000	130,000	31,000	<3,000	4,800	160	0.88	5.99	3.9	1.7	13	<0.10	0.54	<0.20
MW2	09/29/03		5 23.04	42.91	0.48	*	*	*	*													
MW2°	12/12/03		22.75	43.31	0.16	*		*			-				*	*	*	*	*	*	*	*
MW2°	03/15/04		19.24	46.72	0.01	*					-			*	*	*	*	*	*	*	*	•
MW2 ^e	06/24/04		22.10	44.06	0.31					-		•		*	•	*	*	*	*	*	*	*
		031/5	22.10	74.00	0.01		•	•	•	•	•	*	•	*	*	•	*	*	*	*	*	*
MW3	07/27/93	101.29	a 22.28	79.01	0.02	0.100	74.000	£ 200	22.000	220.000												
MW3	10/02/97	101.29		78.58	0.02	9,100 4,200	24,000	5,300	33,000	330,000												
MW3	06/30/98	101.29		81.82	0.03		11,000	1,800	10,600	36,000		•-	3,500									
MW3	07/29/98	101.29 8				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	08/26/98	101.29 a		81.28	0.00					•-												
MW3	10/01/98	101.29 a		80.67	0.00																	
MW3	10/30/98			79.96	0.00	3,900	8,500	1,200	6,000	38,000			2,300	240	2	6.65						
MW3	11/30/98	101.29		79.67	0.00																	
		101.29 a		79.98	0.00				•-							•						
MW3	12/28/98	101.29 a		80.14	0.06												*-					
MW3	01/25/99	101.29 a		80.50	0.00	4,000	10000	1200	6700	5,100			2900	238	1	7.01						
MW3	02/26/99	101.29 a		83.27	0.00																	
MW3	03/24/99	101.29 a		82.92	0.00								••									
MW3	05/12/99	101.29 a		82.07	0,0083								**									
MW3	12/15-16/99	101.29 a		78.86	0.00	•	*	*	•	•	*	*	*		*	. *						
MW3	03/20/00	101.29 a		84.15	0.00																*-	
MW3	07/20/00	101.29 a		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	ı	6	8.2	< 0.10	0.13	<0.20
MW3	07/10/01		21.97	79.32	0.00							••		**								
MW3	11/20/01		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		21.32	44.67	sheen								**			·						
MW3	09/29/03		22.79	43.20	sheen	*	*	*	*	*	*	*	*	*	*	. *	*	*	*	*	*	*
MW3°	12/12/03	65.9 9 b	22.73	43.27	10,0	*	*	*	*	+	*	*	*	*	*	*	*	*	*	*	*	*
MW3°	03/15/04	65.99 b	19.32	46.67	sheen	*	*	*	*	•	*	•	*	•	*		*		*	*	*	
MW3°	06/24/04	65.99 E	21.99	44.00	0.00	3,400	7,700	1,000	4,800	39,000	1,700	<500	1,100		0.07					•	,	•
												- • -	-,		0.07							
MW4	06/30/98	98.65 a	16.93	81.72	0.00	2,200	930	850	2,100	10,000			1,800	222	2.6	6.18	0.14	4.3	14	0.6	ΛР	
MW4	07/29/98	98.65 a	17.48	81,17	0.00								-,		2.0	0.16		T.J	14	0.8	0.8	1.5
MW4	08/26/98	98.65 a	18.65	80.00	0.00										- -							-
MW4	10/01/98	98.65 a	18.74	79.91	0.00	570	46	130	36	1,100			1,300	320	3.4	~0.001			•-			
							-			.,			1,500	320	3.4	<0.001	••	**				

TABLE 2 CUMULATIVE GROUNDWATER ANALYTICAL DATA STROUGH FAMILY TRUST, 327 34th STREET OAKLAND, CALIFORINA

11.7 14		Casing		pth to	GW	SPH					tion (µg/L)	<u>. </u>			<u> </u>			c	oncentratio	n (mg/L)			
Weli		Elevation		Vater	Elevation	Thickness			Ethyl-	Total					CO2	DO	pН						
Number	Date	(feet)		feet)	(feet)	(feet)	Benzene	Toluene	benzene	Xylenes	TPH-g	TPH-d	TPH-mo	MTBE	(lab)	(field)	(field)	Fe(11)	Mπ	SO ₄	N-NH ₃	N-NO ₃	o-PO ₄
MW4	10/30/98	98.65	a I	9.02	79.63	0.00																	•
MW4	11/30/98		a 1		79.91	0.00															-+		
MW4	12/28/98		a 1		80.05	0.00	=10															•	
MW4	01/25-26/99	98.65	a 1	8.32	80.33	0.00	230	<8.3	<8.3	<8.3	290			1,300	475	 	, - -						
MW4	02/26/99	98.65	a j	5.81	82.84	0.00								1,500	4/3	6.7	,						
MW4	03/24/99	98.65	a l	6.01	82.64	0.00																	**
MW4	05/12/99	98.65	a l	7.71	80.94	0.00						_											+-
MW4	12/15-16/99	98.65	a l'	9.83	78.82	0.00	5.8	< 0.50	< 0.50	< 0.50	<50			1,400		1.75	7.02						
MW4	03/20/00	98.65	a 1	14.9	83.75	0.00			**		-					1.75	. 7.02					**	
MW4	07/20/00	98.65	a l	8.38	80.27	0.00	91	4.6	19	12.9	210	<50	<300	1,500	126	3.88	6.67	9.5	5.3	 11	 <0.10	0.04	-0.20
MW4	10/11/00	98.65	a 1	9.61	79.04	0.00				••							0.07	y.J	3.3		~0.10	0.04	<0.20
MW4	04/10-11/01	98.65	a l'	7.55	81.10	0.00	110	<5.0	<5.0	<5.0	350	<50	<300	1,100	107	NR	NR	0.8	6.3	10	<0.10	<0.05	-0.20
MW4	07/10/01	98.65	a 1º	9.34	79.31	0.00													0.5		~0.10	<0.05	<0.20
MW4	11/20/01	63.35 I	b 2	0.16	43.19	0.00	<2.5	4	<2.5	3.7	96	<50	<300	2,500	130	0.83	6.51	1.6	10	11	<0.10		<0.20
MW4	02/19/02	63.35	b 1	7.34	46.01	0.00															V.10		\0.20
MW4	05/21/02	63.35 l	b 1	8.57	44.78	0.00	340	5.7	70	<1.0	940	83	<300	1,600	150	1.65	6.32	3.1	8.4	9	<0.10	0.06	<0.20
MW4	06/27/03	63.35 l	b 1	8.72	44.63	0.00															-0.10	0.00	~0.20
MW4	09/29/03	63.35 l	b 2	0.11	43.24	0.00	<5.0	<5.0	<5.0	<10	1,100	<50 ^d	<500	1,700			***	**					
MW4	12/12/03	63.35	b 20	0.06	43.29	0.00	<13	<13	<13	<25	<1,300	<50	<500	1,000									
MW4	03/15/04	63.35 E	b le	6.89	46,46	0.00	1.5	< 0.50	<0.50	<1.0	54 ^d	<50	<500	41		0.16							
MW4	06/24/04	63.35 I	b 19	9.31	44.04	0.00	69	<5.0	<5.0	<10	920 ^d	<50	<500	1,100		0.15							
MW5	06/30/98	100.9	a 20	0.60	80.30	0.00	< 0.50	<0.50	< 0.50	<0.50	<50			43	220								
MW5	07/29/98		a 2		79.38	0.00		~0.50	\0.50		\ 30		-	23	220	4.3	6.1						
MW5	08/26/98		a 2		78.69	0.00								**		-							
MW5	10/01/98		a 22		77.95	0.00	<1.0	<1.0	<1.0	<1.0	 <50			-0.0									
MW5	10/30/98		a 2:		77.67	0.00		~1.0	-1.0	-1.0	\30			<2.0	256	4.8	6.71						
MW5	11/30/98		a 2		77.78	0.00		_			-			**									
MW5	12/28/98		a 2		77.72	0.00			 											••			
MW5	01/25-26/99		а 2:		78.29	0.00	<1.0	<1.0	<i.0< td=""><td><1.0</td><td><50</td><td></td><td></td><td></td><td>205</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></i.0<>	<1.0	<50				205								
MW5	02/26/99		a 15		81.12	0.00		~1.0	~1.0		\ 30			<2.0	305	9.7	7.04						
MW5	03/24/99		a 20		80.65	0.00			-								·						
MW5	05/12/99		a 2		79.84	0.00															_		
MW5	12/15-16/99		a 2		76.71	0.00	< 0.50	<0.50	<0.50	<0.50	<50			<0.50		 171	7.10						
MW5	03/20/00		a 19		81.75	0.00				~0.50	~50			<0.30		2.72	7.19		-			**	
MW5	07/20/00	100.9	a 2	1.84	79.06	0.00	<0.50	0.98	<0.50	<0.50	<50	<50	<300	1.9	134	5.58	 6 75		0.017	40	O 1 O	2.0	
MW5	10/11/00	100.9 a	a 2	23.4	77.50	0.00						-50		1.9	134	3.38	6.35	0.11	0.017	49	<0.10	3.9	<0.20
MW5	04/10-11/01	100.9	a 2	22.3	78.60	0.00	<0.50	2.6	<0.50	0.6	<50	<50	<300	1.5	183	66	NR	<0.10	0.042	 4=	~0.10		
MW5	07/10/01	100.9 a	a 2:	3.64	77.26	0.00								1.5			NK	<0.10	0.042	45	<0.10	2.9	0.11
MW5	11/20/01	65.59 ł	b 24	4.65	40.94	0.00	0.83	12	1.2	11	140	860	2,500	10	c	66	6.01	0.2	2.5	43	 		
MW5	02/19/02	65.59 t	5 23	2.37	43.22	0.00							2,200				0.01	0.2	2.5	42	<0.10		<0.20
MW5	05/21/02	65.59 t	2	3.10	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		
MW5	06/27/03	65,59 E	b 2:	3.07	42.52	0.00		•		•-				~2.0			0.5		V.ZZ	44	<0.10	3	<0.20
MW5	09/29/03	65.59 E	b 24	4.38	41.21	0.00	< 0.50	0.52	7.l	35	100	<50 ^d	<500	1.4									
												-50	-500	1.7						_			**

TABLE 2 CUMULATIVE GROUNDWATER ANALYTICAL DATA STROUGH FAMILY TRUST, 327 34th STREET OAKLAND, CALIFORINA

Well		Casing	Depth to		SPH					tion (µg/L)			_	<u> </u>			c	oncentratio	on (mg/L)			
		Elevation	Water	Elevation	Thickness			Ethyl-	Total					CO ₁	DO	pН						
Number	Date	(feet)	(feet)	(feet)	(feet)	Benzene	Toluene	benzene	Xylenes	TPH-g	TPH-d	TPH-mo	MTBE	(Iab)	(field)	(field)	Fe(II)	Mn	SO ₄	N-NH _J	N-NO ₃	o-PO ₄
MW5	12/12/03	65.59	23.90	41.69	0.00	<0.50	<0.50	< 0.50	<1	<50	<50	<500	1.5			***						
MW5	03/15/04	65.59 t	20.82	44.77	0.00	<0.50	< 0.50	< 0.50	<1.0	<50	<50	<500	<0.50		6.4							
MW5	06/24/04	65.59 I	23.57	42.02	0.00	<0.50	<0.50	<0.50	<1.0	<50	130 ^f	<500	0.79		5.56							
AW6	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	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
MW6	07/10/01	96.60 a	18.43	78.17	0.00		**						**									-0.20
MW6	11/20/01	59.60 l	18.67	40.93	0.00	< 0.50	< 0.50	< 0.50	< 0.50	<50	<50	<300	450	001	2.03	6.44	29	5.2	1.1	3.4		<0.20
MW6	02/19/02	59.60 t	17.40	42.20	0.00					**												
MW6	05/21/02	59.60 t	17.68	41.92	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	59.60 l	17.73	41.87	0.00		••					••										
MW6	09/29/03	59.60 1	18.48	41.12	0.00	<1.0	<1.0	<1.0	<2.0	230 ^d	<50	<500	340		_				_			
MW6	12/12/03	59.60 1	17.89	41.71	0.00	<2.5	<2.5	<2.5	<5.0	<250	51	<500	190									
MW6	03/15/04	59.60	16.46	43.14	0.00	<1.0	<1.0	<1.0	<2.0	200	<50	<500	220		0.11							
MW6	06/24/04	59.60 I	17.97	41.63	0.00	<1.0	<1.0	<1.0	<2.0	130	<50	<500	190	**	0.05							
MW7	07/20/00	96.75	15.93	80.82	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	96.75	16.90	79.85	0.00																	
MW7	04/10-11/01	96.75	15.80	80.95	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	96.75	16.71	80.04	0.00																	
MW7	11/20/01	59.47	16.17	43.30	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	02/19/02	59.47	14.92	44.55	0.00			**			-											
MW7	05/21/02	59.47	15.18	44.29	0.00	< 0.50	< 0.50	< 0.50	<0.50	<50	<50	<300	< 0.50	68	1.03	7.57	0.1 I	0.35	51	< 0.10	2.8	0.11
MW7	06/27/03	59.47	16.28	43.19	0.00		••															
MW7	09/29/03	59.47	16.88	42.59	0.00	< 0.50	< 0.50	< 0.50	<1.0	<50	<50	<500	0.62		_							
MW7	12/12/03	59.47	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	16.33	43.14	0.00	< 0.50	< 0.50	< 0.50	<1.0	<50	300 ^f	<500	< 0.50	_	0.20				_			**

TABLE 2 CUMULATIVE GROUNDWATER ANALYTICAL DATA STROUGH FAMILY TRUST, 327 34th STREET OAKLAND, CALIFORINA

		Casing	Depth to	GW	SPH				Concentra	tion (µg/L)							Co	ncentratio	on (mg/L)			
Well		Elevation	Water	Elevation	Thickness			Ethyl-	Total			•		CO,	DO	pН						
Number	Date	(feet)	(feet)	(feet)	(feet)	Benzene	Toluene	benzene	Xylenes	TPH-g	TPH-d	TPH-mo	MTBE	(lab)	(field)	(field)	Fe(II)	Mn	SO_4	N-NH ₃	N-NO.	o-PO4

SPH Separate-phase hydrocarbons.

CO₂ Carbon dioxide.

DO Dissolved oxygen.

Fe(II) Ferrous iron.

Mn Manganese.

SO₄ Sulfate.

N-NH, Ammonia.

N-NO₃ Nitrate.

u-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.

NR Not reported.

μg/L Micrograms per liter.

mg/L Milligrams per liter.

* SPH present; not sampled.

Not analyzed or not sampled.

Less than the laboratory reporting limits.

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

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.

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.

TABLE 3 GROUNDWATER MONITORING SCHEDULE STROUGH FAMILY TRUST, 327 34th STREET, OAKLAND, CALIFORNIA

XX7-11	Groundwater	Groundwater	Sampling and Analysis	Frequency
Well Number	Gauging Frequency	BTEX and TPH-g	MTBE	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.

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





Client: STE	USH FAMILY T	Rust'	Station No.: SF-T
Project No.: TM	८ १ -ए । . ।		Task No.: 1
Sample Team: W	P-		Budgeted time:
Date: 6.74.	-4		Time Billed:
No. of Drums on Si	te: 💆 Water	Soil	<u> </u>
	DIR DW CAMP		
ers) d an	nge wells w	INI THEN A	MWT WITH WUM & IP ELECKIN
STW, MTH, DER.	MWZ & MWZ NITH	IP). Pur	LES & SAMPLE WELLS MINI THEEL
AWT WITH WA	recen acces	4 cours	s all wells, belives warere
Summary:			
OPENSO & C	-4466D WELLS	MWI,MW	4 THEY MUT WITH WLM CHECKING
			ECKING DTP, DTW + DTB, MWE-
Pulled A SA	MELED WELLS M	DIEPOSINGLE WII, MWZ 1	S. NO HIT ON EP FOR MWS. S PREDUCT FAILURE. WHICH WATERET. NO SCURED ALL WELLS. DELIVERED
	omic, pueces		
	· · · · · · · · · · · · · · · · · · ·		
OUSTIE	CFFSITE		wymp
5:00 AM	10115 mm		W42 1. Frances. CO. 24.04
H: 30 am	15 115 PM		
		7	



_ MONITORING WELL DATA FORM _

Client:	STROUGH F	AMILY TRUST	-		Date: 6.7	24.04	
Project Numbe	r:TMSFT1.1				Station Numb	er SFT	
Site Location:	327 34TH ST OAKLAND , (Samplers: 🕠	VP	
Bed Mark Bill be as	DEPTIES WATER TOCKE		himeic (a) rilliak mi	E REPROBLIGATE	MONITORING WEILE WATEGRIY	MISSOURIEGIMIS	Programme
MW1	Z=48					30.55	2*
MW2*	22.10	21.79	.31	<i>-</i> -		32.15	2"
MW3*	21.99					32.45	2"
MW4	19.31					26.85	2"
MW5	Z3.57					26.35	2"
MW6	17.97					27.15	2"
MW7	16.33					34.75	2"
· · · · · · · · · · · · · · · · · · ·							
* POSSIBLE L	PH - USE IP A	AND CONFIRM	WITH BAILE	R	_,		
							



Engineering, Inc.		- GROUNDW	ATER PURGE	AND SAMPLE		
Project Name:	STROUGH FAM			Well No: MW) Date	:6.24.04
Project No:	TMSFT.6			Personnel: (W)		
GAUGING DAT						
Water Level Me	asuring Method:	WLMO / IP				
Walter Crick	Trial Deal 13		- Water Column	Casing Diameter		(15. i pa Guidea 1 Maurie (dal)
oyounnesses To a robination			Processing the second			
	3a55 (Zc.49	10.07	1 2 4 6 0.04 0.16 0.64 1.4	- 1.G1 🛭	94.83
PURGING DATA	A					
Purge Method:	WATERRA)BA	ILER / SUB		PURGE RATE	.50	GPM
41005 (P205-24-2	12:31	12:35	12:39		<u> </u>	
i Veneda žverejecije Veneda izvorejecije	7_	4	6			<u> </u>
	18.38	18.41	18.43			
oning services a	6.37	6.37	6.36			
(See/equaling)	1256	1214	1389			
42 (mines - 44) is 3 (DP) (DP) : 12 3/3	.15	, చర్	٠١٥			
POPE SERVICE	-11.6	-1Z.5	-12.8			
	EILTY BRILL	SILM Ben	SILVY			<u> </u>
(0.60) (0.00)	7	7	7			
	7	7	7			
Alkalinity:						
Comments/Observ	vations:		<u> </u>			
O A MODI INICI DA 7			<u> </u>			
SAMPLING DAT Time Sampled:	12:45		Approximate Depti	h to Water During San	npling: マヱ	(feet)
Comments:						
Samilia dinaer	se Numbelcole. Godfalder ik	Conduct Type	Persident	v Volume Filedi (2) (millor年)知	Tiribialty/Gale	Avairese Mainise
MWI	3	VOA	HCL	40 ml		HVOCs by 82608
MWI	2	AMBER	HCL	1L		TPH-D,TEHO
Total Purge Volu	me: 🕓	(gallons)		Disposal:	System	
Weather Condition						
-	Box and Casing					∑ / N
	tions Requiring C					3) / N
	ntered During Pur	ging and Samplin	g: Novice			X / N
Comments:	JGH FAMILY TRUST (2)\[Pure	e form xls Sheet1			SECURED	/ IN



Project Name:	STROUGH FAN		ATER PURGE	: AND SAMPLE Well No: ► MW	3 Date	6.24.04					
Project No:	TMSFT.6			Personnel: (AP)	-						
Water Level Measuring Method: WLM / IP											
	At Long to Control of the Control of	Depth to Water			Gasing Volum						
Weldings -		10457/(GB)(V/4/ 1057/(GB)		beasing Diameter to the second	Specification of	Volume (gal)					
COALONIATION	32,45 (21.99	10.46	1 2 4 6 0.04 0.16 0.64 1.4	7 1.6 + 1	5.02					
PURGING DATA											
Purge Method:	WATERRA / BA	ILER/SUB	PURGE RATE	.50	GPM						
ni abole secol	13:44	13:48	13:57								
avzarina e mia (ce)	Z	4	6								
	18.34	18.34	18.35								
ivo i promoti e de dice. Violità i di promoti e de dice.	<i>ن.</i> 55	جا 5.ص	6.57								
	921	920	921								
	, O7	.04	. 64								
	-143.7	-170.5	-177.9								
	SILTH GREM	SIUTI LIKE	swa say								
ing sample and a DEOGRAPES	Ψ	9	4								
i de waldiere (Yay) die	7	7	N								
Alkalinity:											
Comments/Obser	vations:					·					
SAMPLING DAT											
Time Sampled:	14:00		Approximate Dept	h to Water During San	npling: 24	(feet)					
Comments:											
Salmole Miniber	es Numbero (6) Secontaines (6)	e Marie Tyre	Perservative	youngellede A # mLord Se	apriciality (e, ala)						
MW3	3	VOA	HCL	40 ml		HVOCs by 8260B					
MW3	2	AMBER	HCL	1L		TPH-D,TEHO					
		(galions)		Disposal:		<u> </u>					
Total Purge Volu		System									
Weather Condition				<u>Y</u> / N Y / N							
	Box and Casing		D/ N								
	tions Requiring Contered During Pure		\$\frac{1}{N}								
Comments:	reted Duting Full		∑ / N								
G:USERS\DFitzgerale\STROL	GH FAMILY TRUST (2)(pur)	ge form.xis]Sheetl									



Engineering, lnc.	GROUNDWATER PURGE AND SAMPLE										
Project Name:	STROUGH FAMILY TRUST			Well No: MW	4 Date: 6:24:04						
Project No:	TMSFT.6			Personnel:							
GAUGING DATA Water Level Measuring Method: WLM / IP											
WE DE OFFICE OF THE STATE OF TH	Trotal ejérilősé műljásábal		Water Golumna Loan ear News	as Multiplier for A Gasing Diameter	Casine, Volume	A Joial Burge W Volume (gal)					
	Z6.85 (19.31	7.54	1 2 4 6 0.04 0.16 0.64 1.4	71.23	3.60					
PURGING DATA											
Purge Method: (WATERRA BAI	LER / SUB	PURGE RATE	.50	GPM						
加度制元(40亿)	12:04	12:06	12:08	· · · · · · · · · · · · · · · · · · ·							
		2	'3								
	18.81	18.80	18.79								
	6.54	ه کا	6.56								
	803	७०७	87.U	_							
e boarmyly same	.15	. ح	.07								
	-43.6	-40.4	-37.5								
	-sicon Issen	Sich 15em	SILTY BEN								
0.00 (1/6)	7	7	7								
	7	7	7								
Alkalinity:											
Comments/Obsen	vations:										
SAMPLING DAT					-]					
Time Sampled:	12:15		Approximate Depti	n to Water During Sar	npling: Z.5	(feet)					
Comments:		re e			A Englished the Septiment of A						
Spictime	e Number of self- Containers	Container Tyce	Persenting	 Volume Filled R 17) Local Filled 	Turficiny/Color	Analysis Method cath page at a se					
MW4	3	VOA	HCL	40 ml		HVOCs by 8260B					
MW4	2	AMBER	HCL	1 <u>L</u>		TPH-D,TEHO					
	<u>_</u>			Disposal:	<u> </u>						
Total Purge Volu		System	de Trans								
Weather Condition			<u> </u>								
	Box and Casing		<u> </u>								
	tions Requiring Co		<u> </u>								
	ntered During Pur	WELL BOX (Ý) / N Ý) / N								
Comments: SECURED (Y) / N GNUSERSDAIZERFAIGSTROUGH FAMILY TRUST (2)\(\text{Opurge form x1s}\) Sheet1											



Engineering, Inc.	~ ~~~	- GROUNDW	ATER PURGE	AND SAMPLE					
Project Name:	STROUGH FAM			Well No: WW	Date	e: 6.24.04			
Project No:	TMSFT.6			Personnel: Wf					
GAUGING DAT									
Water Level Me	asuring Method	WLM // IP	ova, memanananan kanan dan kenangan dan kenangan dan kenangan dan kenangan dan kenangan dan kenangan dan kenan		oodde March i warenia waaraa ahaaraa ah ahaa ah				
WELLPURGE WELLPURGE WOLUMENING	Fotal Depth	Dáigh ló Water (féal)	Water Column (reet)	Multiplier for Casing Diameter	\$185 AND THE PROPERTY OF THE P	young (gl)			
CATCULATION FINANCIAL PROPERTY OF THE AMERICAN PROPERTY OF THE AMERICAN	76.35	23.57	2.76	1 2 4 6 0.04 0.16 0.64 1.4	न् , क्य (1.33			
PURGING DATA		<u> </u>							
Purge Method:	WATERRA / BA	ILER / SUB	<u> </u>	PURGE RATE	, ZS	GPM			
Time to the second	13:09	13:11							
Volume Pulitie (g2))	・マン・	1.0	1.5						
	18,25	18.24							
	له.۱۹	6,03							
	451	451							
	5,5 6	4.61							
	50.9	45.1	/						
t ispacilica dinica an Cardidry Colorada Residenti	SILIT ISRU	41174 EEN							
ORSIONIE	7	2							
	7	9	/						
Alkalinity:					, <u>, , , , , , , , , , , , , , , , , , </u>				
Comments/Observ	vations:	\ N		HARAGO A					
CAMPI INC DAT	-A		/exc	FACTON A	S WALL COLL				
SAMPLING DAT Time Sampled:	13:20		Approximate Depth	n to Water During San	npling: 24	(feet)			
Comments:									
Sary Blande	Number of Containers	Container Type	Terservatives	N. Volume Filled ml of Fi	augienyaciól	Analysis Method			
くとい	3	VOA	HCL	40 ml		HVOCs by 8260B			
MWS	2	AMBER	HCL	1L		TPH-D,TEHO			
Total Purge Volu	me: 1,0	(gallons)		Disposal:	System				
	Weather Conditions: BOLTS								
Condition of Well						<u>X</u> / N			
Well Head Condi						D/N			
Problems Encour	ntered During Pur	ging and Sampling	g: Devare	(ep	WELL BOX	X / N			
Comments:	GH FAMILY TRUST ON DRIVE	re form XIS Sheet			SECURED (<u>Y / N</u>			



Engineering, Inc. GROUNDWATER PURGE AND SAMPLE Well No: WW Date: 6.724-04									
Project Name:	STROUGH FAM			Well No: ₩W	C Date	<u>. د کا بو</u>	4.04		
Project No:	TMSFT.6			Personnel: www					
GAUGING DAT	A		•	<u>-</u>					
Water Level Me	asuring Method: \	NLM IP							
	i katalingologo	Depth to Waler	-Water Column	Multiplier for \$	e Gasing Volum	Τ'n	Puige		
acyvalung orkeler (cyva): DMES com	in the Transfer	Telephone (See)	(4 (4)	(CasingDamele)	で発((gal))は数 (pal)(gal)(gal)	(1 (2/0)) (1 (2)	(inia) (inia)) e		
SAME TRAFFOR				1 2 4 6	2.66		د دی		
	34.60	17.97	5)16.65 ((0.04 0.16 0.64 1.4	1				
PURGING DAT	Δ								
	WATERRA/BAI	ILER / SUB		PURGE RATE	.75	GPM			
	14:51	14:55	14:59						
Voluma Pingerman		ب	9						
		18.26	18.25			1			
	18.28					+			
in succession of	6.73	6.74	U.74			- 			
	7-85	798	802						
	, 62	. 03	.03						
	-194.3	-203.0	-7075						
	ELUM BAND	GEN SEN	SILMI						
1 (1 (1 (1 (1 (1 (1 (1 (1 (1 (1 (1 (1 (1	7	7	2						
	N	7	7			 			
Alkalinity: Comments/Obser	vations:					-			
Octimiento, e e e e									
SAMPLING DA			· · · · · · · · · · · · · · · · · · ·						
Time Sampled:	15:05		Approximate Dept	h to Water During Sai	mpling: Z \	(feet)			
Comments:			no antigore de la compositiona	(A. Velline Elleds		5 6 0 G			
SampeNames	sufumberois. Continuers	reament was	in Paranyanya Salahan		Projectiv (Sele	Analys	ite Welling See See		
MWG	3	VOA	HCL	40 ml		HVOC	s by 8260B		
MWG	2	AMBER	HCL	1L		TPH-	D,TEHO		
						<u> </u>			
Total Purge Volu	ıme: 🤼	(gallons)		Disposal:	System				
Weather Conditi					BOLTS	$\frac{2}{2}$	N		
Condition of Wel	ll Box and Casing	at Time of Sampl	ing: PK		CAP & LOCK	<u> </u>	N		
	litions Requiring C				GROUT (<u> </u>	N		
	intered During Pur	ging and Samplin	g: 2025		WELL BOX SECURED	公 /	N		
Comments:	UGH FAMILY TRUST (2)\[pur	ge form xls}Sheet1			SECONED	<u> </u>	14		



Engineering, Inc.		- GROUNDW	ATER PURGE	AND SAMPLE	: ———		
Project Name:	STROUGH FAN			Well No: MV	Dat	e: ७ Z	404
Project No:	TMSFT.6		·····	Personnel: 🚧			
GAUGING DAT Water Level Me	A asuring Method:(ŴĹM IP					
WEIL BURGE		Deptin to Water		Multiplier for Casing Diamete			nus (est); elegancies
ATOULARION	34.75 (1633 (18.42	1 2 4 0	5 Z,94	90	.64
PURGING DAT. Purge Method: (A WATERRAT BA	ILER / SUB		PURGE RATE	. 50	GРM	
	9:35	9:41	9:47				
a Valuga Engeloži) 1948 alpha septemb	3	6	9				
	1952	19.49	19,50				
Control of the Contro	6,79	6.76	6,76				
	6 53	834	637				
	. 20	.23	. 29			<u> </u>	
e ja ja vieta ja kasaja til Er oj Petsijosti etalikataja Erionografija ja kasaja kasaj	-55.9	-45.1	-29.2			<u> </u>	
	STORY SERVI	SICH SEN	SILEY SEEN			<u> </u>	
Collection	7	7	7			<u> </u>	
	7	7	7				
Alkalinity:					<u> </u>		
Comments/Observ	/ations:					_	
SAMPLING DAT	-Δ		· ·		<u> </u>		
Time Sampled:	* 155°		Approximate Depti	h to Water During Sa	mpling: Z	(feet)	
Comments:						te Pagesarway (Arrigan)	
Samue Number	esidumierojes Gomaniers	Container Type		volume filled a	Timilaby/Solor	A Party	is Memor
MWT	3	VOA	HCL	40 ml		HVOC	s by 8260E
MWT	2	AMBER	HCL	1L		TPH-I	D,TEHO
						 	
7 (17)	me: ^C 1	/ 11		Diamanah	Suntana.	<u> </u>	
Total Purge Volum		(gailons)		Disposal:	System	SD /	
Weather Condition	Box and Casing	at Time of Samoli	ing: (SY_			$\frac{20}{30}$ \ \lambda \tau \tau \tau \tau \tau \tau \tau \tau \tau \tau \tau \tau \tau \tau \tau \tau \tau \tau \tau \tau \tau \tau \tau \tau \tau \tau \tau \tau \tau \tau \tau \tau \tau \tau \tau \tau \tau \tau \tau \tau \tau \tau \tau \tau \tau \tau \qua	<u>N</u>
	tions Requiring Co				··	₹\/_\	N N
	ntered During Pur			····		<u>y</u> /	N
Comments:	<u>-</u> -		<i></i>			7/	N
C.MPEKPANUS BELSKAPIKOO	OWENERS INCOME.	e initityislaneeri					



ETIC Oakland

July 07, 2004

1333 Broadway, Suite 1015 Oakland, CA 94612

Attn.:

Kathy Brandt

Project#: TMSFT.9

Project:

Strough Family Trust

RECEIVED

JUL 1 5 2004

ETIC ENGINEERING

Kathy

Attached is our report for your samples received on 06/28/2004 15:40 This report has been reviewed and approved for release. Reproduction of this report is permitted only in its entirety.

Please note that any unused portion of the samples will be discarded after 08/12/2004 unless you have requested otherwise.

We appreciate the opportunity to be of service to you. If you have any questions, please call me at (925) 484-1919.

You can also contact me via email. My email address is: vvancil@stl-inc.com

Sincerely,

Vincent Vancil Project Manager



Fuel Oxygenates by 8260B

ETIC Oakland

Attn.: Kathy Brandt

1333 Broadway, Suite 1015

Oakland, CA 94612

Phone: (510) 208-1600 Fax: (510) 208-1604

Project: TMSFT.9

Strough Family Trust

Received: 06/28/2004 15:40

Samples Reported

Sample Name	Date Sampled	Matrix	Lab#
MW1	06/24/2004 12:45	Water	1
MW3	06/24/2004 14:00	Water	2
MW4	06/24/2004 12:15	Water	3
MW5	06/24/2004 13:20	Water	4
MVV6	06/24/2004 15:05	Water	5
MVV7	06/24/2004 09:55	Water	6



Fuel Oxygenates by 8260B

ETIC Oakland

Attn.: Kathy Brandt

1333 Broadway, Suite 1015

Oakland, CA 94612

Phone: (510) 208-1600 Fax: (510) 208-1604

Project: TMSFT.9

Strough Family Trust

Received: 06/28/2004 15:40

Prep(s):

5030B

Test(s):

8260B

Lab ID: 2004-06-0883 - 1

Sampled:

Sample ID: MW1

06/24/2004 12:45

San Marie Marie San Carlot San Ale

Extracted:

7/6/2004 11:56

Matrix:

Water

QC Batch#: 2004/07/06-01.64

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	ND	50	ug/L	1.00	07/06/2004 11:56	
Methyl tert-butyl ether (MTBE)	ND	0.50	ug/L		07/06/2004 11:56	
Benzene	ND	0.50	ug/L		07/06/2004 11:56	
Toluene	ND	0.50	ug/L		07/06/2004 11:56	
Ethylbenzene	ND	0.50	ug/L		07/06/2004 11:56	
Total xylenes	ND	1.0	ug/L			
Surrogate(s)						
1,2-Dichloroethane-d4	108.6	72-128	%	1.00	07/06/2004 11:56	
Toluene-d8	109.4	80-113	%		07/06/2004 11:56	



Fuel Oxygenates by 8260B

ETIC Oakland

Attn.: Kathy Brandt

1333 Broadway, Suite 1015

Oakland, CA 94612

Phone: (510) 208-1600 Fax: (510) 208-1604

Project: TMSFT.9

Strough Family Trust

Received: 06/28/2004 15:40

Prep(s):

5030B

Test(s):

8260B

Sample ID: MW3

Lab ID:

2004-06-0883 - 2

Sampled: 06/24/2004 14:00

Extracted:/

7/7/2004 13:42

Matrix:

Water

QC Batch#: 2004/07/07-01.66

Analysis Flag: o (See Legend and Note Section)

			_			
Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	39000	10000	ug/L	200.00	07/07/2004 13:42	
Methyl tert-butyl ether (MTBE)	1100	100	ug/L		07/07/2004 13:42	
Benzene	3400	100	ug/L		07/07/2004 13:42	
Toluene	7700	100	ug/L		07/07/2004 13:42	
Ethylbenzene	1000	100	ug/L		07/07/2004 13:42	
Total xylenes	4800	200	ug/L		07/07/2004 13:42	
Surrogate(s)						
1,2-Dichloroethane-d4	112.6	72-128	%	200.00	07/07/2004 13:42	
Toluene-d8	93.5	80-113	%		07/07/2004 13:42	



Fuel Oxygenates by 8260B

ETIC Oakland

Attn.: Kathy Brandt

1333 Broadway, Suite 1015

Oakland, CA 94612

Phone: (510) 208-1600 Fax: (510) 208-1604

Project: TMSFT.9

Strough Family Trust

Received: 06/28/2004 15:40

Prep(s):

5030B

Test(s):

8260B

Sample ID: MW4

Lab ID:

2004-06-0883 - 3

Sampled: 06/24/2004 12:15

Extracted: 7/7/2004 13:11

Matrix:

Water

QC Batch#: 2004/07/07-01.64

Analysis Flag: o (See Legend and Note Section)

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	920	500	ug/L	10.00	07/07/2004 13:11	g
Methyl tert-butyl ether (MTBE)	1100	5.0	ug/L	10.00	07/07/2004 13:11	•
Benzene	69	5.0	ug/L	10.00	I I	
Toluene	ND	5.0	ug/L	10.00		
Ethylbenzene	ND	5.0	ug/L	10.00	07/07/2004 13:11	
Total xylenes	ND	10	ug/L		07/07/2004 13:11	
Surrogate(s)						
1,2-Dichloroethane-d4	114.4	72-128	%	10.00	07/07/2004 13:11	
Toluene-d8	112.7	80-113	%	10.00	07/07/2004 13:11	



Fuel Oxygenates by 8260B

ETIC Oakland

Attn.: Kathy Brandt

1333 Broadway, Suite 1015

Oakland, CA 94612

Phone: (510) 208-1600 Fax: (510) 208-1604

Project: TMSFT.9

Strough Family Trust

Received: 06/28/2004 15:40

Prep(s): 5030B

Test(s):

8260B

Sample ID: MW5

Lab ID:

2004-06-0883 - 4

Sampled: 06/24/2004 13:20

Extracted:

7/6/2004 13:26

Matrix:

Water

QC Batch#: 2004/07/06-01.64

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	ND	50	ug/L	1.00	07/06/2004 13:26	
Methyl tert-butyl ether (MTBE)	0.79	0.50	ug/L	1.00	07/06/2004 13:26	
Benzene	ND	0.50	ug/L	1.00	07/06/2004 13:26	
Toluene	ND	0.50	ug/L	1.00	07/06/2004 13:26	
Ethylbenzene	ND	0.50	ug/L	1.00	07/06/2004 13:26	
Total xylenes	ND	1.0	ug/L	1.00	07/06/2004 13:26	
Surrogate(s)						
1,2-Dichloroethane-d4	109.0	72-128	%	1.00	07/06/2004 13:26	
Toluene-d8	107.7	80-113	%	1.00	07/06/2004 13:26	



Fuel Oxygenates by 8260B

ETIC Oakland

Attn.: Kathy Brandt

1333 Broadway, Suite 1015

Oakland, CA 94612

Phone: (510) 208-1600 Fax: (510) 208-1604

Project: TMSFT.9

Strough Family Trust

Received: 06/28/2004 15:40

Prep(s):

5030B:

Test(s):

8260B

Sample ID: MW6

Lab ID:

2004-06-0883 - 5

Sampled: 06/24/2004 15:05

Extracted:

7/6/2004 13:49

Matrix:

Water

QC Batch#: 2004/07/06-01:64

Analysis Flag: o (See Legend and Note Section)

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	130	100	ug/L	2.00	07/06/2004 13:49	g
Methyl tert-butyl ether (MTBE)	190	1.0	ug/L	2.00	07/06/2004 13:49	
Benzene	ND	1.0	ug/L	2.00	07/06/2004 13:49	
Toluene	ND	1.0	ug/L	2.00	07/06/2004 13:49	
Ethylbenzene	ND	1.0	ug/L	2.00	07/06/2004 13:49	
Total xylenes	ND	2.0	ug/L	2.00	07/06/2004 13:49	
Surrogate(s)						
1,2-Dichloroethane-d4	111.6	72-128	%	2.00	07/06/2004 13:49	
Toluene-d8	108.7	80-113	%	2.00	07/06/2004 13:49	



Fuel Oxygenates by 8260B

ETIC Oakland

Attn.: Kathy Brandt

1333 Broadway, Suite 1015

Oakland, CA 94612

Phone: (510) 208-1600 Fax: (510) 208-1604

Project: TMSFT.9

Strough Family Trust

Received: 06/28/2004 15:40

Prep(s): 5030B

Sample ID: MW7

Test(s):

8260B

Lab ID:

2004-06-0883 - 6

Sampled: 06/24/2004 09:55 Extracted:

7/6/2004 14:11

Matrix:

Water

QC Batch#: 2004/07/06-01.64

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	ND	50	ug/L	1.00	07/06/2004 14:11	
Methyl tert-butyl ether (MTBE)	ND	0.50	ug/L	1.00	07/06/2004 14:11	
Benzene	ND	0.50	ug/L		07/06/2004 14:11	
Toluene	ND	0.50	ug/L	1.00	07/06/2004 14:11	
Ethylbenzene	ND	0.50	lug/L		07/06/2004 14:11	
Total xylenes	ND	1.0	ug/L		07/06/2004 14:11	
Surrogate(s)						
1,2-Dichloroethane-d4	113.5	72-128	%	1.00	07/06/2004 14:11	
Toluene-d8	107.9	80-113	%		07/06/2004 14:11	



Fuel Oxygenates by 8260B

ETIC Oakland

Attn.: Kathy Brandt

1333 Broadway, Suite 1015

Oakland, CA 94612

Phone: (510) 208-1600 Fax: (510) 208-1604

Project: TMSFT.9

Strough Family Trust

Received: 06/28/2004 15:40

Batch QC Report

Prep(s): 5030B Method Blank

MB: 2004/07/06-01.64-002

Water

Test(s): 8260B QC Batch # 2004/07/06-01.64

Date Extracted: 07/06/2004 08:02

					1.20 - 1.30
Compound	Conc.	RL	Unit	Analyzed	Flag
Gasoline	ND	50	ug/L	07/06/2004 08:02	
Methyl tert-butyl ether (MTBE)	ND	0.5	ug/L	07/06/2004 08:02	
Benzene	ND	0.5	ug/L	07/06/2004 08:02	
Toluene	ND	0.5	ug/L	07/06/2004 08:02	
Ethylbenzene	ND	0.5	ug/L	07/06/2004 08:02	
Total xylenes	ND	1.0	ug/L	07/06/2004 08:02	
Surrogates(s)			-		
1,2-Dichloroethane-d4	105.6	72-128	%	07/06/2004 08:02	
Toluene-d8	105.6	80-113	%	07/06/2004 08:02	



Fuel Oxygenates by 8260B

ETIC Oakland

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1333 Broadway, Suite 1015

Oakland, CA 94612

Phone: (510) 208-1600 Fax: (510) 208-1604

Project: TMSFT.9

Strough Family Trust

Received: 06/28/2004 15:40

Batch QC Report

Prep(s): 5030B

Water

Test(s): 8260B QC Batch # 2004/07/07-01.64

MB: 2004/07/07-01.64-009

Date Extracted: 07/07/2004 08:09

Compound	Conc.	RL	Unit	Analyzed	Flag
Gasoline	ND	50	ug/L	07/07/2004 08:09	
Methyl tert-butyl ether (MTBE)	ND	0.5	ug/L	07/07/2004 08:09	
Benzene	ND	0.5	ug/L	07/07/2004 08:09	
Toluene	ND	0.5	ug/L	07/07/2004 08:09	
Ethylbenzene	ND	0.5	ug/L.	07/07/2004 08:09	
Total xylenes	ND	1.0	ug/L	07/07/2004 08:09	
Surrogates(s)					
1,2-Dichloroethane-d4	104.6	72-128	1 %	07/07/2004 08:09	
Toluene-d8	107.0	80-113	%	07/07/2004 08:09	



Fuel Oxygenates by 8260B

ETIC Oakland

Attn.: Kathy Brandt

1333 Broadway, Suite 1015

Oakland, CA 94612

Phone: (510) 208-1600 Fax: (510) 208-1604

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Project: TMSFT.9

Strough Family Trust

Received: 06/28/2004 15:40

Batch QC Report

Prep(s): 5030B Method Blank

MB: 2004/07/07-01.66-023

Water

Test(s): 8260B

od Blank V

QC Batch # 2004/07/07-01.66

Date Extracted: 07/07/2004 08:23

Compound	Conc.	RL	Unit	Analyzed	Flag
Gasoline	ND	50	ug/L	07/07/2004 08:23	
Methyl tert-butyl ether (MTBE)	ND	0.5	ug/L	07/07/2004 08:23	
Benzene	ND	0.5	ug/L	07/07/2004 08:23	
Toluene	ND	0.5	ug/L	07/07/2004 08:23	
Ethylbenzene	ND	0.5	ug/L	07/07/2004 08:23	
Total xylenes	ND	1.0	ug/L	07/07/2004 08:23	
Surrogates(s)	ľ				
1,2-Dichloroethane-d4	92.6	72-128	%	07/07/2004 08:23	
Toluene-d8	100.0	80-113	%	07/07/2004 08:23	



Fuel Oxygenates by 8260B

ETIC Oakland

Attn.: Kathy Brandt

1333 Broadway, Suite 1015

Oakland, CA 94612

Phone: (510) 208-1600 Fax: (510) 208-1604

Project: TMSFT.9

Strough Family Trust

Received: 06/28/2004 15:40

			ort

Prep(s): 5030B

Test(s): 8260B

Laboratory Control Spike

Water

QC Batch # 2004/07/06-01.64

LCS

2004/07/06-01.64-017

Extracted: 07/06/2004

Analyzed: 07/06/2004 07:17

LCSD 2004/07/06-01.64-039

Extracted: 07/06/2004 Analyzed: 07/06/2004 07:39

Compound	Conc.	ug/L	Exp.Conc,	Reco	very %	RPD	Ctrl.Lin	nits %	Fla	ags
	LCS	LCSD		LCS	LCSD	%	Rec.	RPD	LCS	LCSD
Methyl tert-butyl ether (MTBE) Benzene Toluene	21.2 24.4 25.9	22.3 25.0 25.9	25.0 25.0 25.0	84.8 97.6 103.6	89.2 100.0 103.6	5.1 2.4 0.0	65-165 69-129 70-130	20 20 20		
Surrogates(s) 1,2-Dichloroethane-d4 Toluene-d8	500 547	506 553	500 500	100.0 109.4	101.2 110.6		72-128 80-113		i	



Fuel Oxygenates by 8260B

ETIC Oakland

Attn.: Kathy Brandt

1333 Broadway, Suite 1015

Oakland, CA 94612

Phone: (510) 208-1600 Fax: (510) 208-1604

Project: TMSFT.9

Strough Family Trust

Received: 06/28/2004 15:40

Batch QC Report

Prep(s): 5030B

Test(s); 8260B

Laboratory Control Spike

Water

QC Batch # 2004/07/07-01.64

LCS

2004/07/07-01.64-024

Extracted: 07/07/2004

Analyzed: 07/07/2004 07:24

LCSD.

2004/07/07-01.64-047

Extracted: 07/07/2004

Analyzed: 07/07/2004 07:47

Compound	Conc.	ug/L	Exp.Conc.	Reco	very %	RPD	Ctrl.Lin	nits %	Fla	ags
	LCS	LCSD		LCS	LCSD	%	Rec.	RPD	LCS	LCSD
Methyl tert-butyl ether (MTBE) Benzene Toluene	24.6 27.5 28.8	25.5 27.9 28.4	25.0 25.0 25.0	98.4 110.0 115.2	102.0 111.6 113.6	3.6 1.4 1.4	65-165 69-129 70-130	20 20 20		
Surrogates(s) 1,2-Dichloroethane-d4 Toluene-d8	504 537	501 542	500 500	100.8 107.4	100.2 108.4		72-128 80-113			



Fuel Oxygenates by 8260B

ETIC Oakland

Attn.: Kathy Brandt

1333 Broadway, Suite 1015

Oakland, CA 94612

Phone: (510) 208-1600 Fax: (510) 208-1604

Project: TMSFT.9

Strough Family Trust

Received: 06/28/2004 15:40

Batch QC Report

Prep(s): 5030B

LCS

LCSD.

Test(s); 8260B

Laboratory Control Spike

2004/07/07-01.66-035

2004/07/07-01.66-059

Extracted: 07/07/2004

7-

QC Batch # 2004/07/07-01.66

Extracted: 07/07/2004

Water

Analyzed: 07/07/2004 07:35 Analyzed: 07/07/2004 07:59

Compound	Conc. ug/L		Exp.Conc.	Reco	Recovery %		RPD Ctrl.Limits		% Flags	
	LCS	LCSD		LCS	LCSD	%	Rec.	RPD	LCS	LCSD
Methyl tert-butyl ether (MTBE) Benzene Toluene	27.1 27.3 28.1	26.9 28.2 25.9	25.0 25.0 25.0	108.4 109.2 112.4	107.6 112.8 103.6	0.7 3.2 8.1	65-165 69-129 70-130	20 20 20		
Surrogates(s) 1,2-Dichloroethane-d4 Toluene-d8	429 497	435 471	500 500	85.8 99.4	87.0 94.2		72-128 80-113			



Fuel Oxygenates by 8260B

ETIC Oakland

Attn.: Kathy Brandt

1333 Broadway, Suite 1015

Oakland, CA 94612

Phone: (510) 208-1600 Fax: (510) 208-1604

Project: TMSFT.9

Strough Family Trust

Received: 06/28/2004 15:40

Legend and Notes

Analysis Flag

0

Reporting limits were raised due to high level of analyte present in the sample.

Result Flag

g

Hydrocarbon reported in the gasoline range does not match our gasoline standard.



TEPH w/ Silica Gel Clean-up

ETIC Oakland

Attn.: Kathy Brandt

1333 Broadway, Suite 1015

Oakland, CA 94612

Phone: (510) 208-1600 Fax: (510) 208-1604

Project: TMSFT.9

Strough Family Trust

Received: 06/28/2004 15:40

Samples Reported

Sample Name	Date Sampled	Matrix	Lab#
MW1	06/24/2004 12:45	Water	1
MW3	06/24/2004 14:00	Water	2
MW4	06/24/2004 12:15	Water	3
MW5	06/24/2004 13:20	Water	4
MW6	06/24/2004 15:05	Water	5
MW7	06/24/2004 09:55	Water	6



TEPH w/ Silica Gel Clean-up

ETIC Oakland

Attn.: Kathy Brandt

1333 Broadway, Suite 1015

Oakland, CA 94612

Phone: (510) 208-1600 Fax: (510) 208-1604

Project: TMSFT.9

Strough Family Trust

Received: 06/28/2004 15:40

Prep(s):

3510/8015M

Test(s):

8015M

Sample ID: MW1

Lab ID:

2004-06-0883 - 1

Sampled: 06/24/2004 12:45

Extracted:

6/29/2004 05:32

Matrix;

Water

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Diesel	ND	50	ug/L	1.00	06/29/2004 14:50	
Motor Oil	ND	500	ug/L	1.00	06/29/2004 14:50	
Surrogate(s) o-Terphenyl	87.7	50-120	%	1.00	06/29/2004 14:50	



TEPH w/ Silica Gel Clean-up

ETIC Oakland

Attn.: Kathy Brandt

1333 Broadway, Suite 1015

Oakland, CA 94612

Phone: (510) 208-1600 Fax: (510) 208-1604

Project: TMSFT.9

Strough Family Trust

Received: 06/28/2004 15:40

Prep(s): 3510/8015M

Test(s):

8015M

Sample ID: MW3

Lab ID:

2004-06-0883 - 2

Sampled: 06/24/2004 14:00

Extracted:

6/29/2004 05:32

Matrix: Water

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Diesel	1700	50	ug/L	1.00	06/29/2004 16:40	
Motor Oil	ND	500	ug/L	1.00	06/29/2004 16:40	
Surrogate(s)		ĺ				
o-Terphenyl	84.1	50-120	%	1.00	06/29/2004 16:40	



TEPH w/ Silica Gel Clean-up

ETIC Oakland

Attn.: Kathy Brandt

1333 Broadway, Suite 1015

Oakland, CA 94612

Phone: (510) 208-1600 Fax: (510) 208-1604

Project: TMSFT.9

Strough Family Trust

Received: 06/28/2004 15:40

Prep(s):

3510/8015M

Test(s):

8015M

Sample ID: MW4

Lab ID:

Extracted:

2004-06-0883 - 3. 6/29/2004 05:32

Matrix:

Sampled: 06/24/2004 12:15 Water

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Diesel	ND	50	ug/L	1.00	06/29/2004 17:07	
Motor Oil	ND	500	ug/L	1.00	06/29/2004 17:07	
Surrogate(s)						
o-Terphenyl	85.4	50-120	%	1.00	06/29/2004 17:07	



TEPH w/ Silica Gel Clean-up

ETIC Oakland

Attn.: Kathy Brandt

1333 Broadway, Suite 1015

Oakland, CA 94612

Phone: (510) 208-1600 Fax: (510) 208-1604

Project: TMSFT.9

Strough Family Trust

Received: 06/28/2004 15:40

Prep(s): 3510/8015M

Test(s):

8015M

Sample ID: MW5

Lab ID:

2004-06-0883 - 4

Sampled: 06/24/2004 13:20

Extracted:

6/29/2004 05:32

Matrix:

Water

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Diesel	130	50	ug/L	1.00	06/29/2004 17:34	edr
Motor Oil	ND	500	ug/L	1.00	06/29/2004 17:34	
Surrogate(s)						
o-Terphenyl	97.3	50-120	%	1.00	06/29/2004 17:34	



TEPH w/ Silica Gel Clean-up

ETIC Oakland

Attn.: Kathy Brandt

1333 Broadway, Suite 1015

Oakland, CA 94612

Phone: (510) 208-1600 Fax: (510) 208-1604

Project: TMSFT.9

Strough Family Trust

Received: 06/28/2004 15:40

Prep(s):

3510/8015M

Test(s):

8015M

Sample ID: MW6

Lab ID:

2004-06-0883 - 5

Sampled: 06/24/2004 15:05

Extracted:

6/29/2004 05:32

Matrix:

Water

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Diesel	ND	50	ug/L	1.00	06/29/2004 18:02	
Motor Oil	ND	500	ug/L	1.00	06/29/2004 18:02	
Surrogate(s)		İ				
o-Terphenyl	85.6	50-120	%	1.00	06/29/2004 18:02	



TEPH w/ Silica Gel Clean-up

ETIC Oakland

Attn.: Kathy Brandt

1333 Broadway, Suite 1015

Oakland, CA 94612

Phone: (510) 208-1600 Fax: (510) 208-1604

Project: TMSFT.9

Strough Family Trust

Received: 06/28/2004 15:40

Prep(s): 3510/8015M

Test(s):

8015M

Sample ID: MW7

Lab ID:

2004-06-0883 - 6

Sampled: 06/24/2004 09:55

Extracted:

6/29/2004 05:32

Matrix:

Water

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Diesel	300	50	ug/L	1.00	06/29/2004 16:40	edr
Motor Oil	ND	500	ug/L	1.00	06/29/2004 16:40	
Surrogate(s)				4 00		
o-Terphenyl	88.8	50-120	%	1.00	06/29/2004 16:40	



TEPH w/ Silica Gel Clean-up

ETIC Oakland

Attn.: Kathy Brandt

1333 Broadway, Suite 1015

Oakland, CA 94612

Phone: (510) 208-1600 Fax: (510) 208-1604

Project: TMSFT.9

Strough Family Trust

Received: 06/28/2004 15:40

Batch QC Report

Prep(s): 3510/8015M Method Blank

MB: 2004/06/29-02.10-001

Water

Test(s): 8015M QC Batch # 2004/06/29-02.10

Date Extracted: 06/29/2004 05:32

Compound	Conc.	RL.	Unit	Analyzed	Flag
Diesel	ND	50	ug/L	06/29/2004 14:50	
Motor Oil	ND	500	ug/L	06/29/2004 14:50	
Surrogates(s)					
o-Terphenyl	86.5	60-130	%	06/29/2004 14:50	



TEPH w/ Silica Gel Clean-up

ETIC Oakland

Attn.: Kathy Brandt

1333 Broadway, Suite 1015

Oakland, CA 94612

Phone: (510) 208-1600 Fax: (510) 208-1604

18.4

17.7

Project: TMSFT.9

Surrogates(s) o-Terphenyl

Strough Family Trust

Received: 06/28/2004 15:40

60-130

0

, Lines	g Quan -	ائين داري داري رڪيونج پيريونو		atch QC R							
Prep(s): 3	510/8015M									Test(s):	8015M
Laborator	y Control Spik	e		Wate	Γ		Q	C Batci	ı # 20	04/06/29	9-02.10
	2004/06/29-02. 2004/06/29-02.		and the second second	Extracted: (Extracted: (فالمهاف والأواما			Analyze Analyze			CO. T. S. S. S. S.
Compound		Conc.	ug/L	Exp.Conc.	Reco	very %	RPD	Ctrl.Lin	nits %	Fla	ags
		LCS	LCSD		LCS	LCSD	%	Rec.	RPD	LCS	LCSD
Diesel		869	822	1000	86.9	82.2	5.6	60-130	25		

20.0

91.8

88.5



TEPH w/ Silica Gel Clean-up

ETIC Oakland

Attn.: Kathy Brandt

1333 Broadway, Suite 1015

Oakland, CA 94612

Phone: (510) 208-1600 Fax: (510) 208-1604

Project: TMSFT.9

Strough Family Trust

Received: 06/28/2004 15:40

Legend and Notes

Result Flag

edr

Hydrocarbon reported is in the early Diesel range, and does not match our Diesel standard

SEVERN TRENT SERVICES

STL

1220 Quarry Lane ● Pleasanton CA 94566-4756 Phone: (925) 484-1919 • Fax: (925) 484-1096

Email: info@chromalab.com

Rev 05/01

Date 6/24/04 Page _ of 1 Chain of Custody 2004-06-0883 From Analysis Request KATHY BRANDT Proj.Mgr TPH-d and TEPH-o by 8015 with silica gel clean-up ETIC Company Address 1333 BROADWAY, STE. 1015 OAKLAND CA. 94612 Number of Containers Sampler (Signature) AUT DN Publica TPH (EPA X-Gas w/ Phone (510)208-1600 \ Fax/Email(5)0)208-1604 Pres Sample ID Time erv. 6/24 12:45 W HCL X X MW₁ X HÇL **WW2** X-HCL MW3 X X X 14:00 HCL X MW4 X X 17:15 5 HCL W MW₅ X X X 13:23 W HCL X MW₆ X X 15:05 HCL MW7 W X X X 9:55 Sample Receipt 1) Relinquished by: Project Info. 2) Relinquished by: 3) Relinquished by: 14247 Project Name: # of Containers: STROUGH FAMILY TRUST Signature (Time 6/24/4 Project# TMSFT.9 Head Space: Stephen Lao WHAN PROLLER 6/28/04 Printed Name Printed Name PO#: Temp: ETIC ETIC Credit Card#: Conforms to record: Company Company Other 1) Received by: 2) Received by: 3) Received by: Std 5 72h 48h 24h Day Report: ☐ Routine ☐ Level 2 ☐ Level 3 ☐ Level 4 EDF Signature Time Special Instructions / Comments: Printed Name Date GLOBAL ID# Company Company Company



STL San Francisco

Sample Receipt Checklist

Submission #:2004- <u>06</u> - <u>0883</u>	
Checklist completed by: (initials)	
Courier name: ZSTL San Francisco 🗅 Client	
Custody seals intact on shipping container/samples	Not YesNoPresent
Chain of custody present?	YesNo
Chain of custody signed when relinquished and received?	YesNo
Chain of custody agrees with sample labels?	YesNo
Samples in proper container/bottle?	YesNo
Sample containers intact?	YesNo
Sufficient sample volume for indicated test?	YesNo
All samples received within holding time?	Yes No
Container/Temp Blank temperature in compliance (4° C ± 2)?	Temp: <u>6</u> °C Yes / No
	Ice Present YesNo
Water - VOA vials have zero headspace?	No VOA vials submitted YesNo
Water - pH acceptable upon receipt? ☐ Yes ☐ No ☐ pH adjusted— Preservative used: ☐ HNO₃ ☐ HCl ☐ H₂SO₄ ☐ NaOH ☐	ZnOAc –Lot #(s)
For any item check-listed "No", provided detail of discrepancy in comme	nt section below:
A .	TR "EDF"
TEPH-O LOGGED FOR TEPH - MOTO	
* TEPH-U KUGGES FOR EFFI	
Project Management [Routing for instruction of indicate	ed discrepancy(ies)]
Project Manager: (initials) Date://04	
Client contacted: Yes No	·
Summary of discussion:	
Corrective Action (per PM/Client):	
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