



RO 134

May 6, 2005

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

RE: Strough Family Trust-327 34<sup>th</sup> Street, Oakland, California  
Site ID# 3035

Dear Mr. Strough,

ETIC Engineering, Inc. is pleased to submit the enclosed copy of the *First Quarter 2005 Groundwater Monitoring and Interim Remedial Action 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.**

A handwritten signature in cursive script that reads "Katherine Brandt".

Katherine Brandt  
Project Manager

Cc: Mr. Gregory Brandt, Esq., Wendel Rosen Black & Dean, 1111 Broadway, 24<sup>th</sup> Floor, Oakland, California 94607  
Mr. Jonathan Redding, Esq., Wendel Rosen Black & Dean, 1111 Broadway, 24<sup>th</sup> Floor, Oakland, California 94607  
Mr. Don Hwang, Hazardous Materials Specialist, Alameda County Health Care Services Agency, 1131 Harbor Bay Parkway, Alameda, California 94502-6577

R0134



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**FIRST QUARTER 2005  
GROUNDWATER MONITORING  
AND INTERIM REMEDIAL ACTION REPORT**

**FORMER VAL STROUGH CHEVROLET  
327 34<sup>th</sup> STREET  
OAKLAND, CALIFORNIA**

---

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

May 6, 2005



**First Quarter 2005  
Groundwater Monitoring and  
Interim Remedial Action Report**

**Former Val Strough Chevrolet  
327 34<sup>th</sup> Street  
Oakland, California**

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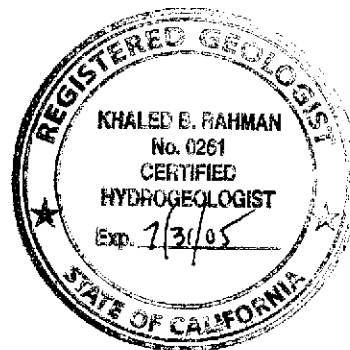
ETIC Engineering, Inc.  
1333 Broadway, Suite 1015  
Oakland, California 94612

A handwritten signature in black ink that reads "Katherine Brandt".

Katherine Brandt  
Project Manager

A handwritten signature in black ink that reads "Khaled Rahman".

Khaled Rahman, P.G., C.Hg.  
Senior Geologist





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## **SITE CONTACTS**

Site Name: Former Val Strough Chevrolet

Site Address: 327 34<sup>th</sup> Street  
Oakland, California

Consultant: ETIC Engineering, Inc.  
1333 Broadway, Suite 1015  
Oakland, California 94612  
(510) 208-1600

ETIC Project Manager: Katherine A. Brandt

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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 *First Quarter 2005 Groundwater Monitoring and Interim Remedial Action Report* for the former Val Strough Chevrolet site located in Oakland, California. This report documents the procedures and findings of the 14 March 2005 groundwater monitoring event. This report includes the performance of the temporary High Vacuum Dual Phase Extraction (DPE) system at the site. 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

<b>Site name:</b>	Former Val Strough Chevrolet
<b>Site address:</b>	327 34 <sup>th</sup> Street, Oakland, California
<b>Current property owner:</b>	Strough Family Trust of 1983
<b>Current site use:</b>	Automotive Dealership and Service Center
<b>Current phase of project:</b>	Groundwater monitoring, temporary DPE system operation
<b>Tanks at site:</b>	Two former tanks (1 gasoline, 1 waste-oil) removed in 1993
<b>Number of wells:</b>	7 (all onsite), DPE from wells MW2 and MW3

## 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 34<sup>th</sup> Street (see Figure 1). The site is inactive but renovation is underway. 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.

Other utilities at the site, namely sanitary sewer, electrical, and natural gas, are generally less than two feet bgs. A storm drain flows to the east along the northern border of 34<sup>th</sup> 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 34<sup>th</sup> Street approximately 40 feet north of the site. A second sanitary sewer line runs beneath the southern portion of the site building. These sanitary sewer lines connect 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 INVESTIGATIONS 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 0.02 to 0.03 foot/foot. It should be noted that groundwater does not appear to be significantly influenced by underground utilities, including the box culvert (see Figure 2).

**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 Total Petroleum Hydrocarbons (TPH) as gasoline (TPH-g), benzene, toluene, ethylbenzene, and total xylenes (BTEX), and methyl t-butyl ether (MTBE). TPH as diesel (TPH-d) and TPH as motor oil (TPH-mo) are not routinely 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 these wells. 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. SPH has been historically observed only in monitoring wells MW2 and MW3 (see Table 2). Due to the SPH presence, groundwater has not been regularly sampled in source area wells MW2 and MW3 during most of the recent monitoring events. 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). The relatively low and stable/decreasing levels reported in well MW4 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 three years (see Table 2). Fuel oxygenates (Tertiary Amyl Methyl Ether, Ethyl Tertiary Butyl Ether, Di-Isopropyl Ether, and Tertiary Butyl Alcohol and Ethanol) and the lead scavengers (Ethylene Dibromide and Ethylene Dichloride) were near or below reporting limits in previously analyzed grab groundwater samples for the site (see Table 3). These data suggest that hydrocarbons in groundwater are largely limited to within 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 observed 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 from wells MW2 and MW3 can successfully remove hydrocarbons from the site subsurface and induce vacuum influence across the source area.

**Interim Remedial Action:** The DPE Report and IRAP described the planned reduction of residual petroleum hydrocarbon mass in the source area through temporary DPE system installation and operation. In brief, the remediation scheme consists of a liquid-ring pump which applies high vacuum to source area wells MW2 and MW3 to extract soil-vapor and groundwater simultaneously. A knockout vessel is used to separate the soil-vapor and water streams and the extracted vapor is treated using a thermal oxidizer (with propane as a supplemental fuel) and extracted water is treated using aqueous-phase granular activated carbon. The DPE system is currently operating and initial field readings indicate successful mass removal from the source area wells.

**20 August 2004 ACHCSA Correspondence:** In a 20 August 2004 correspondence, the ACHCSA provided general concurrence with the scope of work presented in the DPE Report and IRAP and requested performance of additional activities, including preparation of a work plan for source characterization and shallow soil remediation. In our 26 October 2004 *Technical Memorandum*, ETIC presented a review of site data and concluded that the source area was adequately characterized and that the planned DPE interim remedial action would address the shallow soil remediation requested by the ACHCSA.

**4 February 2005 ACHSCA Correspondence:** In a 4 February 2005 correspondence, the ACHCSA provided concurrence with initiation of DPE interim remedial activities and requested an Addendum to the Interim Remedial Action Plan for verification monitoring of DPE interim remediation. The following summarizes ETIC's response to this request.



During operation, hydrocarbon concentrations in vapor and water are anticipated to decline, resulting in reduction in mass removal rates. As mass removal rates near asymptotic levels, DPE operations will cease temporarily (2 to 4 weeks) to allow the subsurface to re-equilibrate. Following re-equilibration, the site data will be evaluated and if warranted the system will be restarted and operated until mass removal rates again near asymptotic levels. This process may be repeated one or more times. As described in our 24 June 2004 DPE Report and IRAP, the effectiveness of interim remedial action activities will be evaluated through multiple lines of evidence. The following provides a brief summary:

- Extracted water entering and exiting the carbon vessels will be analyzed on a biweekly basis to comply with EBMUD permit conditions and to evaluate carbon breakthrough. These data will also be used with groundwater extraction rates to evaluate mass removal rates in the aqueous phase.
- Extracted vapors entering and exiting the thermal oxidizer will be monitored using a PID on a weekly basis to comply with BAAQMD permit conditions and determine the effectiveness of the treatment system. These data, along with monthly laboratory analyses of vapor samples, will be used with vapor extraction rates to evaluate mass removal rates in the vapor phase.
- Groundwater monitoring at the site, including extraction wells MW2 and MW3, will continue on a quarterly basis. Additional groundwater samples from these extraction wells will be collected intermittently to evaluate the effectiveness of the DPE system. The absence of SPH and declining hydrocarbon concentrations in these wells will also be used to evaluate the system effectiveness.

### 3.0 PROTOCOLS FOR GROUNDWATER MONITORING

The following sections of this report present information relevant to the methods employed during the collection of groundwater samples from site wells. 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 scheduled wells with no observed 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.

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 three well casing volumes of water were purged from each well (except MW2 and MW3 due to system operations) using a WaTerra inertial pump. Field parameters including pH, temperature, and electrical conductance were measured during purging. 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. Field protocols are presented in Appendix A.

#### 3.3 GROUNDWATER SAMPLING

After purging, groundwater in each well was sampled using dedicated tubing and a WaTerra inertial pump or a disposable bailer (MW2 and MW3). The samples were submitted to STL San Francisco of Pleasanton, California (STL), a state-certified laboratory. Groundwater analytical results and chain-of-custody documentation are presented in Appendix C.



## **4.0 MONITORING 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 not observed in site monitoring wells.

### **4.2 GROUNDWATER ELEVATION AND GRADIENT**

Groundwater elevations in the site wells during this monitoring event ranged from 42.78 feet above mean sea level (msl) at well MW6 to 44.06 feet msl at well MW1 (see Figure 2). Based on the depth of the stingers, the groundwater elevation were approximately 40.95 feet msl and 41.99 feet msl in extraction wells MW2 and MW3, respectively. Groundwater elevations show the localized influence of DPE system operation (see Figure 2). At the request of the ACHCSA, a rose diagram depicting historic groundwater gradient and direction is also presented on Figure 2.

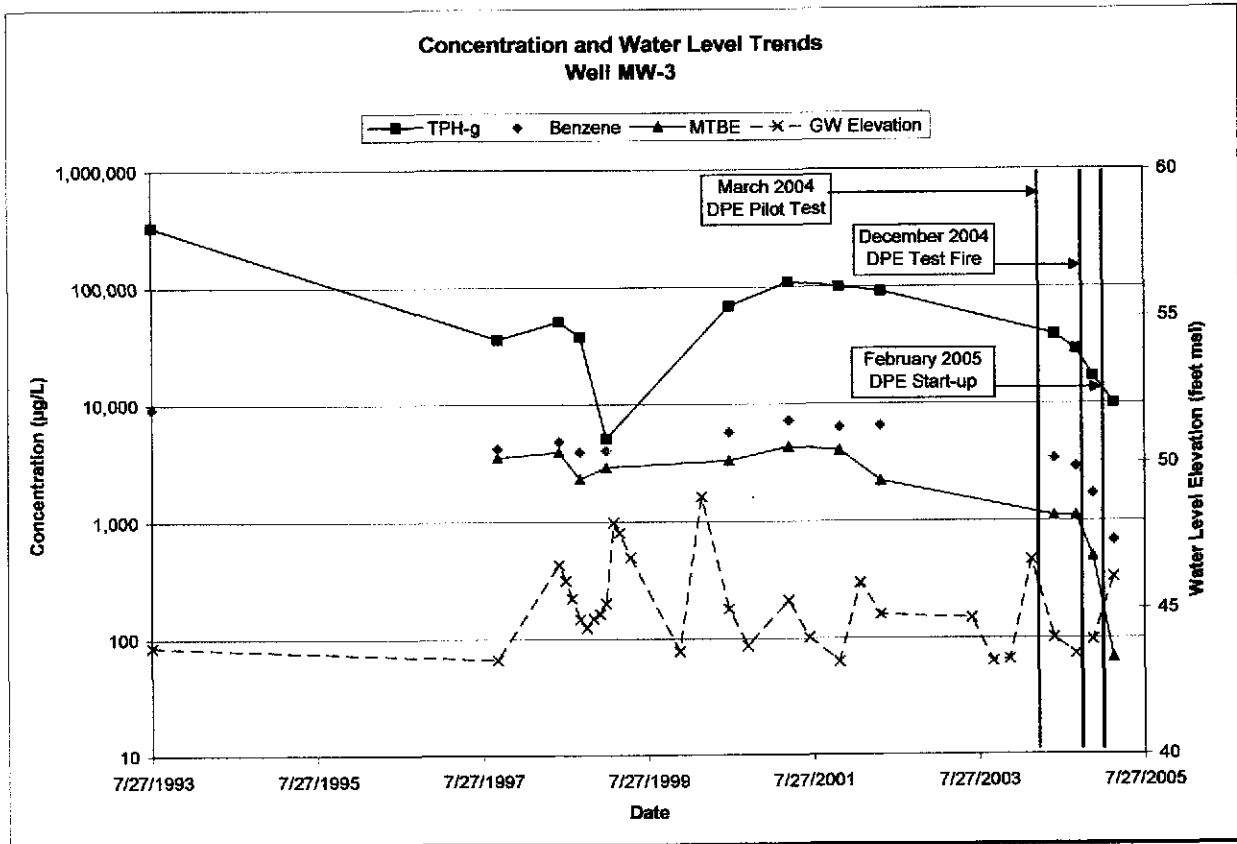
### **4.3 GROUNDWATER ANALYTICAL RESULTS**

Groundwater samples were collected from wells MW2, MW3 and MW4. Samples were analyzed by STL for TPH-g, BTEX, and MTBE by EPA Method 8260B. TPH-d and TPH-mo with Silica Gel Clean-up were analyzed by modified EPA Method 8015. 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 March 2005 monitoring event with the results of the previous monitoring events. Note that the DPE system was operational from 23 February 2005.

- SPH was not detected in site monitoring wells during the March 2005 monitoring event. Recent monitoring events (December 2004) have reported SPH in wells MW2 (1/4-inch thickness) and MW3 (sheen).
- With the exception of MW1 and MW7, TPH-g was detected in the wells sampled at concentrations ranging from 82  $\mu\text{g/L}$  (MW5) to 43,000  $\mu\text{g/L}$  (MW2). As mentioned above, well MW3 has reported SPH sheen during monitoring events prior to the DPE pilot test in March 2004. As shown on the graph below, the absence of SPH and reported TPH-g concentration in well MW3 represent a decline in hydrocarbon concentrations in this well, most likely in response to the DPE activities. TPH-g concentration in well MW4 (930  $\mu\text{g/L}$ ) are generally consistent with previous monitoring events.



- BTEX concentrations were below the laboratory reporting limits in monitoring well MW7. BTEX concentrations ranged from 780  $\mu\text{g/L}$  to 6,400  $\mu\text{g/L}$  in well MW2 and from 380  $\mu\text{g/L}$  to 1,700  $\mu\text{g/L}$  in well MW3.



- MTBE concentrations ranged from 67  $\mu\text{g/L}$  in well MW3 to 930  $\mu\text{g/L}$  in wells MW4. These findings are generally consistent with previous monitoring events.
- TPH-d concentrations were below laboratory reporting limits in the monitoring wells MW4, MW5, MW6, and MW7. Wells MW1, MW2, and MW3 reported concentrations of 73  $\mu\text{g/L}$ , 43,000  $\mu\text{g/L}$ , and 10,000  $\mu\text{g/L}$ , respectively. These detections were noted to have the concentrations that reflect individual or discrete peaks not matching a typical fuel pattern.
- TPH-mo concentrations were below laboratory reporting limits in each of the monitoring wells sampled.

Based on these findings, elevated concentrations of TPH-g, TPH-d, BTEX and MTBE are largely limited to the source area (MW2 and MW3) and the hydrocarbon plume is stable to declining and largely limited to within the property boundaries. Temporary DPE activities will remove hydrocarbon mass from the source area, further stabilizing the plume and limiting the potential for offsite migration.

## 5.0 INTERIM REMEDIAL ACTION SUMMARY

### 5.1 DPE SYSTEM INSTALLATION AND OPERATIONAL STATUS

**Permits:** Appropriate Bay Area Air Quality Management District (BAAQMD) and East Bay Municipal Utility District (EBMUD) discharge permits have been acquired. The City of Oakland Building and Fire Departments have inspected and approved the temporary remediation system construction.

**System Construction:** Wells MW2 and MW3 are connected to the DPE unit via underground piping. The DPE unit consists of a liquid-ring pump, knock-out vessel, and thermal oxidizer. Propane is used as a supplemental fuel for the thermal oxidizer. Temporary system installation was completed in December 2004.

**Operational Status:** The DPE unit was initially "test fired" in December 2004 once construction was complete. Based on data collected during initial operation, the DPE unit required modification to the motor for more efficient operation. The motor was customized in February 2005 and the system began operation on February 23, 2005.

### 5.2 DPE SYSTEM PERFORMANCE

- Between 23 February and 31 March 2005, the system operated 70 percent of the time (i.e. approximately 26.1 days over 36 day interval). Temporary shutdowns occurred due to electrical power outages, propane deliveries, and as part of operation and maintenance activities, among other factors.
- 172,040 gallons of groundwater were extracted during the operation of the DPE system with an average flow rate of 3.4 gallons per minute (gpm). These flow rates ranged from 0.23 gpm (3/14/05) to 5.9 gpm (2/28/05) and include flow rates of zero when the system was not operating.
- The average vapor flow rate was 152 cubic feet per minute (CFM) at the system. These flow rates varied from 133 CFM (3/21/05) to 200 CFM (3/25/05).
- Influent concentrations of TPH-g in groundwater decreased from 70,000 µg/L (3/23/05) to 7,900 µg/L (3/28/05) during the operation of the DPE system (see Table 4).
- Influent concentrations of TPH-g in vapor decreased from 5,400 parts per million by volume (ppmv) (2/28/05) to 3,300 ppmv (3/28/05) during the operation of the DPE system (see Table 5).
- Approximately 10 pounds of TPH-g and one pound of benzene are estimated to have been removed in the aqueous phase during the operation of the DPE system (see Table 6).





- Approximately 6,804 pounds of TPH-g and 77 pounds of benzene are estimated to have been removed in the vapor phase during the operation of the DPE system (see Table 7). These mass removal calculations are based on influent vapor samples collected soon after the system was restarted following temporary shutdown events. Because influent concentrations typically decline during system operation (i.e. higher concentrations soon after startup or restart), these estimates likely represent the maximum mass removed.
- Based on the estimated mass removed in the aqueous-phase and the vapor-phase during the 26.1 days of DPE system operation, the average TPH-g removal rate is calculated to be 260 pounds per day.

The groundwater monitoring data has shown that the temporary DPE system has been effective at removing hydrocarbons from the subsurface during the operation period.

### 5.3 SYSTEM PERFORMANCE EVALUATION

Based on the data presented in this report, the temporary system is successfully removing hydrocarbon mass from the source area at approximately three times the removal rate observed during the DPE pilot test. SPH has not been observed in MW2 during the last two groundwater sampling events. Measurable SPH has not been observed in well MW3 since March 2004. Concentrations of TPH-g, benzene and MTBE in MW3 (as shown in the hydrograph on page 8) and MW2 have declined since the initial pilot test (March 2004) and the temporary system startup.



## **6.0 PLANNED SITE ACTIVITIES**

### **6.1 INTERIM REMEDIAL ACTION**

Based on a performance evaluation of the temporary DPE system, it appears that the residual source area within the zone of DPE influence. Therefore, ETIC recommends the following:

- Continue operating the DPE system until influent concentrations demonstrate near asymptotic levels. Sample the system concentrations for water on a biweekly basis and vapor on a monthly basis to determine the effectiveness of the DPE system;
- Once influent concentrations near asymptotic levels, shut down the system and evaluate rebound concentrations in the extraction wells; and
- When mass removal rates diminish and/or hydrocarbon concentration rebound is limited, submit a request for site closure.

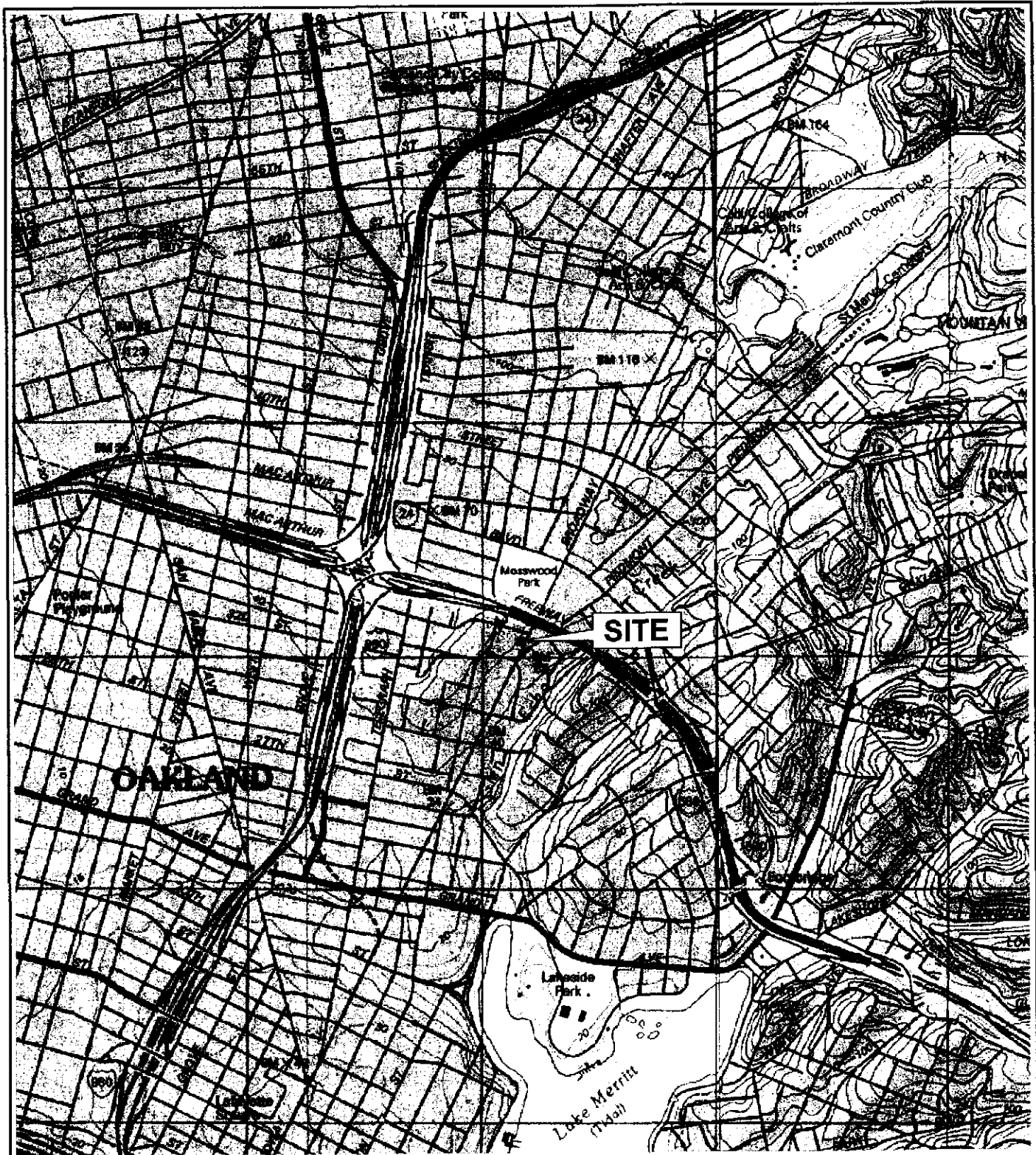
### **6.2 MONITORING ACTIVITIES**

The next quarterly monitoring event is currently scheduled for mid-June 2005. Groundwater will be monitored in accordance with the groundwater monitoring schedule presented in Table 8.

## 7.0 REFERENCES

- Alameda County Health Cares Services Agency. 2004. Fuel Leak Case No. RO0000134, Val Strough Chevrolet, 327-34<sup>th</sup> St., Oakland, California. August 20.
- Alameda County Health Cares Services Agency. 2005. Fuel Leak Case No. RO0000134, Val Strough Chevrolet, 327-34<sup>th</sup> St., Oakland, California. February 4.
- Environmental Data Resources. 2003. EDR Radius Map with GeoCheck, Strough Family Trust, 327 34<sup>th</sup> Street, Oakland, California. September 10.
- ETIC Engineering, Inc. 2003. Supplemental Site Investigation Workplan, Fuel Case No. RO0000134, Val Strough Chevrolet, 327 34<sup>th</sup> Street, Oakland, California. September 17.
- ETIC Engineering, Inc. 2003. Third Quarter 2003 Groundwater Monitoring Report, Strough Family Trust of 1983, 327 34<sup>th</sup> Street, Oakland, California. October.
- ETIC Engineering, Inc. 2004. Supplemental Site Investigation Report and Dual-Phase Extraction Pilot Test Workplan, Strough Family Trust of 1983, 327 34<sup>th</sup> Street, Oakland, California. February.
- ETIC Engineering, Inc. 2004. First Quarter 2004 Groundwater Monitoring Report, Strough Family Trust of 1983, 327 34<sup>th</sup> Street, 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 34<sup>th</sup> Street, Oakland, California. June.
- ETIC Engineering, Inc. 2004. Second Quarter 2004 Groundwater Monitoring Report, Strough Family Trust of 1983, 327 34<sup>th</sup> Street, Oakland, California. August.
- ETIC Engineering, Inc. 2004. Response to Technical Comments, Strough Family Trust of 1983, 327 34<sup>th</sup> Street, Oakland, California. October.
- ETIC Engineering, Inc. 2004. Third Quarter 2004 Groundwater Monitoring Report, Strough Family Trust of 1983, 327 34<sup>th</sup> Street, Oakland, California. October.
- ETIC Engineering, Inc. 2005. Fourth Quarter 2004 Groundwater Monitoring Report, Strough Family Trust of 1983, 327 34<sup>th</sup> Street, Oakland, California. March.

**Figures**



Scale (feet)

FILENAME: 0M\_DEC2004.DWG 1/6/2005



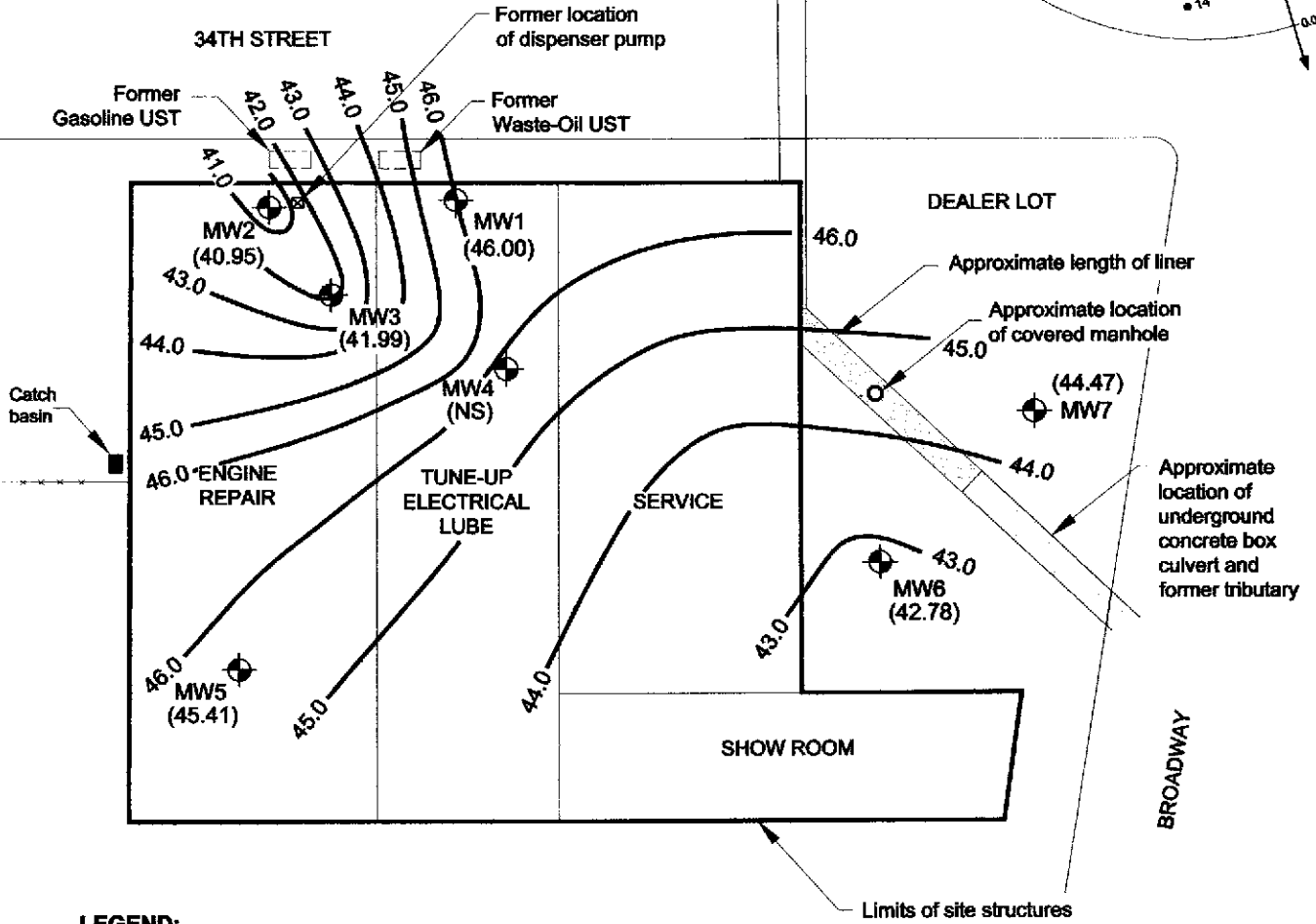
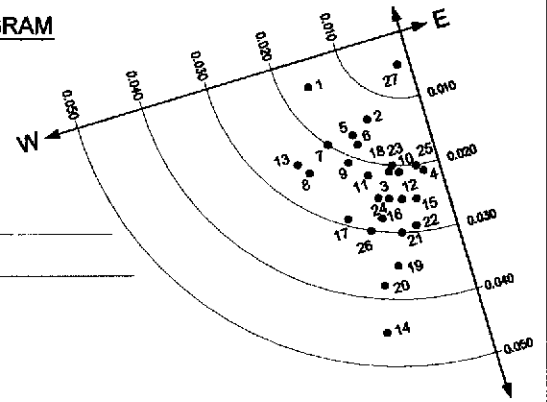
SITE LOCATION MAP  
 VAL STROUGH CHEVROLET  
 327 34TH STREET  
 OAKLAND, CALIFORNIA

FIGURE:

1

**ROSE DIAGRAM**

• Historical



**LEGEND:**



Groundwater monitoring well

43.0

Groundwater elevation contour

NS Not surveyed



Scale (feet)

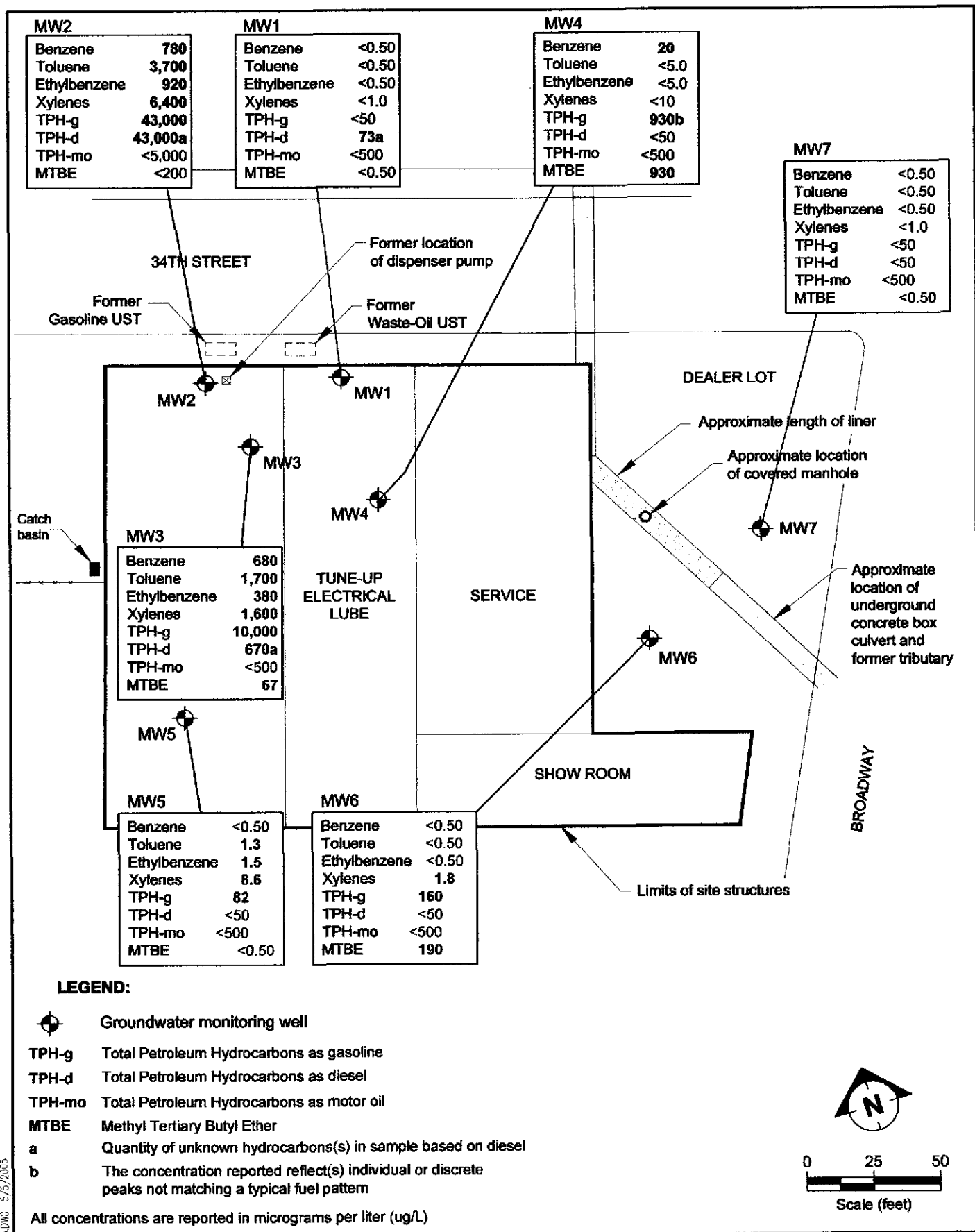
FILENAME: CW\_MAR2005.DWG 5/19/2005



MARCH 2005 GROUNDWATER CONTOUR MAP AND ROSE DIAGRAM  
 FORMER VAL STROUGH CHEVROLET  
 327 34TH STREET  
 OAKLAND, CALIFORNIA

FIGURE:

**2**



MW2	
Benzene	780
Toluene	3,700
Ethylbenzene	920
Xylenes	6,400
TPH-g	43,000
TPH-d	43,000a
TPH-mo	<5,000
MTBE	<200

MW1	
Benzene	<0.50
Toluene	<0.50
Ethylbenzene	<0.50
Xylenes	<1.0
TPH-g	<50
TPH-d	73a
TPH-mo	<500
MTBE	<0.50

MW4	
Benzene	20
Toluene	<5.0
Ethylbenzene	<5.0
Xylenes	<10
TPH-g	930b
TPH-d	<50
TPH-mo	<500
MTBE	930

MW7	
Benzene	<0.50
Toluene	<0.50
Ethylbenzene	<0.50
Xylenes	<1.0
TPH-g	<50
TPH-d	<50
TPH-mo	<500
MTBE	<0.50

MW3	
Benzene	680
Toluene	1,700
Ethylbenzene	380
Xylenes	1,600
TPH-g	10,000
TPH-d	670a
TPH-mo	<500
MTBE	67

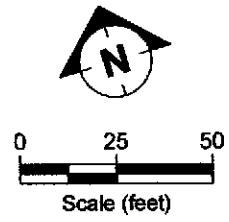
MW5	
Benzene	<0.50
Toluene	1.3
Ethylbenzene	1.5
Xylenes	8.6
TPH-g	82
TPH-d	<50
TPH-mo	<500
MTBE	<0.50

MW6	
Benzene	<0.50
Toluene	<0.50
Ethylbenzene	<0.50
Xylenes	1.8
TPH-g	160
TPH-d	<50
TPH-mo	<500
MTBE	190

**LEGEND:**

- Groundwater monitoring well
- 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
- a Quantity of unknown hydrocarbon(s) in sample based on diesel
- b The concentration reported reflect(s) individual or discrete peaks not matching a typical fuel pattern

All concentrations are reported in micrograms per liter (ug/L)



FILENAME: C:\\_MAR2005.DWG 5/5/2005



MARCH 2005 GROUNDWATER ANALYTICAL DATA  
 FORMER VAL STROUGH CHEVROLET  
 327 34TH STREET  
 OAKLAND, CALIFORNIA

FIGURE:  
3

## **Tables**



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

Well ID	Well Installation Date	Top-of-Casing Elevation <sup>a</sup> (feet)	Casing Material	Total Depth of Borehole (ft bgs)	Casing Diameter (inches)	Screened Interval (ft bgs)	Slot Size (inches)	Filter Pack Interval (ft bgs)	Filter Pack Material
MW1	07/19/93	64.69	PVC	32	2	17-32	0.020	15-32	Gravel Pack
MW2	07/20/93	65.95	PVC	33	2	18-33	0.020	16-33	Gravel Pack
MW3	07/20/93	65.99	PVC	34	2	18-34	0.020	16-34	Gravel Pack
MW4	06/26/98	63.35	PVC	31	2	15-31	0.020	13-31.5	Lonestar #3 Sand
MW5	06/26/98	65.59	PVC	31	2	15-31	0.020	13-31.5	Lonestar #3 Sand
MW6	07/17/00	59.60	PVC	31.5	2	10-30	0.020	8-30	Lonestar #3 Sand
MW7	07/17/00	59.47	PVC	36.5	2	15-35	0.020	13-35	Lonestar #3 Sand

a 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.  
 ft bgs Feet below ground surface.

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

Well Number	Date	Casing Elevation (feet)	Depth to Water (feet)	GW Elevation (feet)	SPH Thickness (feet)	Concentration (µg/L)								Concentration (mg/L)									
						Benzene	Toluene	Ethyl-benzene	Total Xylenes	TPH-g	TPH-d	TPH-mo	MTBE	CO <sub>2</sub> (lab)	DO (field)	pH (field)	Fe(II)	Mn	SO <sub>4</sub>	N-NH <sub>3</sub>	N-NO <sub>3</sub>	o-PO <sub>4</sub>	
MW1	07/27/93	100.00	a 20.79	79.21	0.00	<0.50	<0.50	<0.50	<0.50	<50	<50	--	--	--	--	--	--	--	--	--	--	--	
MW1	10/02/97	100.00	a 21.22	78.78	0.00	<0.50	<0.50	<0.50	<0.50	<50	--	--	<2.0	--	--	--	--	--	--	--	--	--	
MW1	06/30/98	100.00	a 18.21	81.79	0.00	<0.50	<0.50	2.1	0.6	84	--	--	2.1	204	5	6.16	0.15	0.046	55	<0.10	<0.10	2	
MW1	07/29/98	100.00	a 18.74	81.26	0.00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW1	08/26/98	100.00	a 19.28	80.72	0.00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW1	10/01/98	100.00	a 19.93	80.07	0.00	<1.0	<1.0	<1.0	<1.0	<50	--	--	<2.0	192	3.6	6.49	--	--	--	--	--	--	
MW1	10/30/98	100.00	a 20.22	79.78	0.00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW1	11/30/98	100.00	a 19.99	80.01	0.00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW1	12/28/98	100.00	a 19.81	80.19	0.00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW1	01/25/99	100.00	a 19.62	80.38	0.00	<1.0	<1.0	<1.0	<1.0	<50	--	--	<2.0	389	3.4	6.72	--	--	--	--	--	--	
MW1	02/26/99	100.00	a 17.18	82.82	0.00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW1	03/24/99	100.00	a 17.28	82.72	0.00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW1	05/12/99	100.00	a 17.91	82.09	0.00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW1	12/15/99	100.00	a 21.01	78.99	0.00	<0.50	<0.50	<0.50	<0.50	<50	--	--	<0.50	--	3.31	6.52	--	--	--	--	--	--	
MW1	03/20/00	100.00	a 16.25	83.75	0.00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW1	07/20/00	100.00	a 19.63	80.37	0.00	<0.50	<0.50	<0.50	<0.50	<50	<50	<300	3.4	120	7.37	6.66	0.13	<0.01	54	<0.10	3.4	<0.2	
MW1	10/11/00	100.00	a 20.80	79.20	0.00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW1	04/10-11/01	100.00	a 18.81	81.19	0.00	<0.50	<0.50	<0.50	<0.50	<50	<50	<300	1.2	117	NR	NR	<0.10	0.045	57	<0.10	6.6	0.15	
MW1	07/10/01	100.00	a 20.51	79.49	0.00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW1	11/20/01	64.69	b 21.36	43.33	0.00	<0.50	1.3	<0.50	0.81	<50	<50	<300	<2.0	-- <sup>c</sup>	0.65	6.47	0.32	1.8	63	<0.10	--	<0.20	
MW1	02/19/02	64.69	b 18.95	45.74	0.00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW1	05/21/02	64.69	b 19.82	44.87	0.00	<0.50	<0.50	<0.50	<0.50	<50	<50	<300	<2.0	120	0.96	6.25	<0.10	0.5	58	<0.10	5.5	<0.20	
MW1	06/27/03	64.69	b 19.93	44.76	0.00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW1	09/29/03	64.69	b 21.24	43.45	0.00	<0.50	<0.50	<0.50	<1.0	<50	<50	<500	<0.50	--	--	--	--	--	--	--	--	--	
MW1	12/12/03	64.69	b 21.27	43.42	0.00	<0.50	<0.50	<0.50	1.1	<50	58	<500	<0.50	--	--	--	--	--	--	--	--	--	
MW1	03/15/04	64.69	b 18.18	46.51	0.00	<0.50	<0.50	<0.50	<1.0	<50	<50	<500	<0.50	--	0.14	--	--	--	--	--	--	--	
MW1	06/24/04	64.69	b 20.48	44.21	0.00	<0.50	<0.50	<0.50	<1.0	<50	<50	<500	<0.50	--	0.15	--	--	--	--	--	--	--	
MW1	09/29/04	64.69	b 21.37	43.32	0.00	<0.50	0.51	<0.50	<1.0	<50	<50	<500	<0.50	--	1.01	6.42	--	--	--	--	--	--	
MW1	12/13/04	64.69	b 20.63	44.06	0.00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
<b>MW1</b>	<b>03/14/05</b>	<b>64.69</b>	<b>b 18.69</b>	<b>46.00</b>	<b>0.00</b>	<b>&lt;0.50</b>	<b>&lt;0.50</b>	<b>&lt;0.50</b>	<b>&lt;1.0</b>	<b>&lt;50</b>	<b>73</b>	<b>h</b>	<b>&lt;500</b>	<b>&lt;0.50</b>	<b>--</b>	<b>1.96</b>	<b>6.04</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	
MW2	07/27/93	101.27	a 22.10	79.17	0.00	10,000	27,000	2,900	20,000	120,000	--	--	--	--	--	--	--	--	--	--	--	--	
MW2	10/02/97	101.27	a 22.91	78.36	0.43	*	*	*	*	*	--	--	*	--	--	--	--	--	--	--	--	--	
MW2	06/30/98	101.27	a 19.69	81.58	0.45	7,300	18,000	2,500	15,600	72,000	--	--	5,500	185	2.2	5.98	--	--	--	--	--	--	
MW2	07/29/98	101.27	a 20.11	81.16	0.29	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW2	08/26/98	101.27	a 20.54	80.73	0.08	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW2	10/01/98	101.27	a 21.52	79.75	0.42	6,400	17,000	2,600	17,000	84,000	--	--	2,000	--	2.7	6.47	--	--	--	--	--	--	
MW2	10/30/98	101.27	a 21.54	79.73	0.10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW2	11/30/98	101.27	a 21.21	80.06	0.04	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW2	12/28/98	101.27	a 21.10	80.17	0.02	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW2	01/25/99	101.27	a 20.80	80.47	0.01	9,000	26,000	3,800	27,500	130,000	--	--	5,800	386	0.3	6.69	--	--	--	--	--	--	
MW2	02/26/99	101.27	a 18.00	83.27	sheen	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW2	03/24/99	101.27	a 18.27	83.00	trace	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW2	05/12/99	101.27	a 19.08	82.19	trace	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW2	12/15-16/99	101.27	a 22.42	78.85	0.025	*	*	*	*	*	*	*	*	--	*	*	--	--	--	--	--	--	--

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

Well Number	Date	Casing Elevation (feet)	Depth to Water (feet)	GW Elevation (feet)	SPH Thickness (feet)	Concentration (µg/L)								Concentration (mg/L)								
						Benzene	Toluene	Ethyl-benzene	Xylenes	TPH-g	TPH-d	TPH-mo	MTBE	CO <sub>2</sub> (lab)	DO (field)	pH (field)	Fe(II)	Mn	SO <sub>4</sub>	N-NH <sub>3</sub>	N-NO <sub>3</sub>	o-PO <sub>4</sub>
MW2	03/20/00	101.27	a 17.09	84.18	0.026	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW2	07/20/00	101.27	a 20.86	80.41	0.017	*	*	*	*	*	*	*	*	*	0.88	6.37	*	*	*	*	*	*
MW2	10/11/00	101.27	a 22.10	79.17	0.00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW2	04/10-11/01	101.27	a 19.98	81.29	0.00	8,000	22,000	2,600	23,500	150,000	1,500	<600	3,600	168	NR	NR	3.1	2.5	16	0.14	0.19	<0.20
MW2	07/10/01	101.27	a 21.85	79.42	0.00	5,900	15,000	2,300	12,100	83,000	5,700	<1,500	2,800	--	--	--	--	--	--	--	--	--
MW2	11/20/01	65.95	b 22.75	43.20	0.00	--	--	--	--	--	--	--	--	120	NR	6.15	1.8	2	16	<0.10	--	<0.20
MW2	02/19/02	65.95	b 20.12	45.83	0.00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW2	05/21/02	65.95	b 21.10	44.85	0.00	8,600	25,000	3,500	26,000	150,000	31,000	<3,000	4,800	160	0.88	5.99	3.9	1.7	13	<0.10	0.54	<0.20
MW2	06/27/03	65.95	b 21.48	44.47	0.35	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW2	09/29/03	65.95	b 23.04	42.91	0.48	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
MW2 <sup>c</sup>	12/12/03	65.95	b 22.75	43.31	0.16	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
MW2 <sup>c</sup>	03/15/04	65.95	b 19.24	46.72	0.01	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
MW2 <sup>c</sup>	06/24/04	65.95	b 22.10	44.06	0.31	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
MW2 <sup>c</sup>	09/29/04	65.95	b 22.81	43.14	sheen	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
MW2 <sup>c</sup>	12/13/04	65.95	b 22.06	43.95	0.08	3,700	12,000	1,900	10,000	47,000	2,600	<500	1,200	--	0.27	6.63	*	*	*	*	*	*
MW2 <sup>j</sup>	03/14/05	65.95	b 25.00	40.95	0.00	780	3,700	920	6,400	43,000	43,000	<5,000	<200	--	--	--	--	--	--	--	--	--
MW3	07/27/93	101.29	a 22.28	79.01	0.02	9,100	24,000	5,300	33,000	330,000	--	--	--	--	--	--	--	--	--	--	--	--
MW3	10/02/97	101.29	a 22.71	78.58	0.03	4,200	11,000	1,800	10,600	36,000	--	--	3,500	--	--	--	--	--	--	--	--	--
MW3	06/30/98	101.29	a 19.47	81.82	0.00	4,800	11,000	1,200	7,100	51,000	--	--	3,900	300	2	6.03	1.4	9.8	13	1.4	<0.10	2.4
MW3	07/29/98	101.29	a 20.01	81.28	0.00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW3	08/26/98	101.29	a 20.62	80.67	0.00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW3	10/01/98	101.29	a 21.33	79.96	0.00	3,900	8,500	1,200	6,000	38,000	--	--	2,300	240	2	6.65	--	--	--	--	--	--
MW3	10/30/98	101.29	a 21.62	79.67	0.00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW3	11/30/98	101.29	a 21.31	79.98	0.00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW3	12/28/98	101.29	a 21.15	80.14	0.06	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW3	01/25/99	101.29	a 20.79	80.50	0.00	4,000	10,000	1200	6700	5,100	--	--	2900	238	1	7.01	--	--	--	--	--	--
MW3	02/26/99	101.29	a 18.02	83.27	0.00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW3	03/24/99	101.29	a 18.37	82.92	0.00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW3	05/12/99	101.29	a 19.22	82.07	0.0083	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW3	12/15-16/99	101.29	a 22.43	78.86	0.00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
MW3	03/20/00	101.29	a 17.14	84.15	0.00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW3	07/20/00	101.29	a 20.98	80.31	0.00	5,700	14,000	1,600	9,300	69,000	2,900	<300	3,300	128	2.05	6.73	3.9	6.6	20	<0.10	0.55	<0.20
MW3	10/11/00	101.29	a 22.24	79.05	0.00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW3	04/10-11/01	101.29	a 20.70	80.59	0.00	7,200	<0.001	2,300	12,900	110,000	4,700	<1,500	4,300	137	NR	NR	1	6	8.2	<0.10	0.13	<0.20
MW3	07/10/01	101.29	a 21.97	79.32	0.00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW3	11/20/01	65.99	b 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	65.99	b 20.11	45.88	0.00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW3	05/21/02	65.99	b 21.20	44.79	0.00	6,500	17,000	2,200	12,700	91,000	14,000	<3,000	2,200	130	1.01	6.62	4.2	9.6	25	<0.10	0.77	<0.20
MW3	06/27/03	65.99	b 21.32	44.67	sheen	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW3	09/29/03	65.99	b 22.79	43.20	sheen	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
MW3 <sup>c</sup>	12/12/03	65.99	b 22.73	43.27	0.01	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
MW3 <sup>c</sup>	03/15/04	65.99	b 19.32	46.67	sheen	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
MW3	06/24/04	65.99	b 21.99	44.00	0.00	3,400	7,700	1,000	4,800	39,000	1,700	<500	1,100	--	0.07	--	--	--	--	--	--	--
MW3	09/29/04	65.99	b 22.54	43.45	0.00	2,900	6,700	980	4,300	29,000	2,200	<500	1,100	--	0.80	6.42	--	--	--	--	--	--

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

Well Number	Date	Casing Elevation (feet)	Depth to Water (feet)	GW Elevation (feet)	SPH Thickness (feet)	Concentration (µg/L)									Concentration (mg/L)							
						Benzene	Toluene	Ethyl-benzene	Total Xylenes	TPH-g	TPH-d	TPH-mo	MTBE	CO <sub>2</sub> (lab)	DO (field)	pH (field)	Fe(II)	Mn	SO <sub>4</sub>	N-NH <sub>3</sub>	N-NO <sub>3</sub>	α-PO <sub>4</sub>
MW3	12/13/04	65.99	b 22.06	43.93	0.00	1,700	2,900	790	3,400	17,000	1,300	<500	490	--	0.16	6.7	--	--	--	--	--	--
<b>MW3<sup>j</sup></b>	<b>03/14/05</b>	<b>65.99</b>	<b>b 24.00</b>	<b>41.99</b>	<b>0.00</b>	<b>680</b>	<b>1,700</b>	<b>380</b>	<b>1,600</b>	<b>10,000</b>	<b>670</b>	<b>&lt;500</b>	<b>67</b>	--	--	--	--	--	--	--	--	
MW4	06/30/98	98.65	a 16.93	81.72	0.00	2,200	930	850	2,100	10,000	--	--	1,800	222	2.6	6.18	0.14	4.3	14	0.8	0.8	1.5
MW4	07/29/98	98.65	a 17.48	81.17	0.00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW4	08/26/98	98.65	a 18.65	80.00	0.00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW4	10/01/98	98.65	a 18.74	79.91	0.00	570	46	130	36	1,100	--	--	1,300	320	3.4	<0.001	--	--	--	--	--	--
MW4	10/30/98	98.65	a 19.02	79.63	0.00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW4	11/30/98	98.65	a 18.74	79.91	0.00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW4	12/28/98	98.65	a 18.60	80.05	0.00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW4	01/25-26/99	98.65	a 18.32	80.33	0.00	230	<8.3	<8.3	<8.3	290	--	--	1,300	475	6.7	7	--	--	--	--	--	--
MW4	02/26/99	98.65	a 15.81	82.84	0.00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW4	03/24/99	98.65	a 16.01	82.64	0.00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW4	05/12/99	98.65	a 17.71	80.94	0.00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW4	12/15-16/99	98.65	a 19.83	78.82	0.00	5.8	<0.50	<0.50	<0.50	<50	--	--	1,400	--	1.75	7.02	--	--	--	--	--	--
MW4	03/20/00	98.65	a 14.9	83.75	0.00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW4	07/20/00	98.65	a 18.38	80.27	0.00	91	4.6	19	12.9	210	<50	<300	1,500	126	3.88	6.67	9.5	5.3	11	<0.10	0.04	<0.20
MW4	10/11/00	98.65	a 19.61	79.04	0.00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW4	04/10-11/01	98.65	a 17.55	81.10	0.00	110	<5.0	<5.0	<5.0	350	<50	<300	1,100	107	NR	NR	0.8	6.3	10	<0.10	<0.05	<0.20
MW4	07/10/01	98.65	a 19.34	79.31	0.00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW4	11/20/01	63.35	b 20.16	43.19	0.00	<2.5	4	<2.5	3.7	96	<50	<300	2,500	130	0.83	6.51	1.6	10	11	<0.10	--	<0.20
MW4	02/19/02	63.35	b 17.34	46.01	0.00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW4	05/21/02	63.35	b 18.57	44.78	0.00	340	5.7	70	<1.0	940	83	<300	1,600	150	1.65	6.32	3.1	8.4	9	<0.10	0.06	<0.20
MW4	06/27/03	63.35	b 18.72	44.63	0.00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW4	09/29/03	63.35	b 20.11	43.24	0.00	<5.0	<5.0	<5.0	<10	1,100	<50	<500	1,700	--	--	--	--	--	--	--	--	--
MW4	12/12/03	63.35	b 20.06	43.29	0.00	<13	<13	<13	<25	<1,300	<50	<500	1,000	--	--	--	--	--	--	--	--	--
MW4	03/15/04	63.35	b 16.89	46.46	0.00	1.5	<0.50	<0.50	<1.0	54	d <50	<500	41	--	0.16	--	--	--	--	--	--	--
MW4	06/24/04	63.35	b 19.31	44.04	0.00	69	<5.0	<5.0	<10	920	d <50	<500	1,100	--	0.15	--	--	--	--	--	--	--
MW4	09/29/04	63.35	b 20.20	43.15	0.00	<5.0	<5.0	<5.0	<10	940	g <50	<500	1,200	--	0.13	6.63	--	--	--	--	--	--
MW4	12/13/04	**	b 20.44	0.00	0.00	<5.0	<5.0	<5.0	<10	740	<50	<500	860	--	0.58	6.84	--	--	--	--	--	--
<b>MW4</b>	<b>03/14/05</b>	<b>**</b>	<b>b 18.30</b>	<b>0.00</b>	<b>0.00</b>	<b>20</b>	<b>&lt;5.0</b>	<b>&lt;5.0</b>	<b>&lt;10</b>	<b>930</b>	<b>i &lt;50</b>	<b>&lt;500</b>	<b>930</b>	--	<b>0.28</b>	<b>6.34</b>	--	--	--	--	--	--
MW5	06/30/98	100.9	a 20.60	80.30	0.00	<0.50	<0.50	<0.50	<0.50	<50	--	--	23	220	4.3	6.1	--	--	--	--	--	--
MW5	07/29/98	100.9	a 21.52	79.38	0.00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW5	08/26/98	100.9	a 22.21	78.69	0.00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW5	10/01/98	100.9	a 22.95	77.95	0.00	<1.0	<1.0	<1.0	<1.0	<50	--	--	<2.0	256	4.8	6.71	--	--	--	--	--	--
MW5	10/30/98	100.9	a 23.23	77.67	0.00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW5	11/30/98	100.9	a 23.12	77.78	0.00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW5	12/28/98	100.9	a 23.18	77.72	0.00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW5	01/25-26/99	100.9	a 22.61	78.29	0.00	<1.0	<1.0	<1.0	<1.0	<50	--	--	<2.0	305	9.7	7.04	--	--	--	--	--	--
MW5	02/26/99	100.9	a 19.78	81.12	0.00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW5	03/24/99	100.9	a 20.25	80.65	0.00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW5	05/12/99	100.9	a 21.06	79.84	0.00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW5	12/15-16/99	100.9	a 24.19	76.71	0.00	<0.50	<0.50	<0.50	<0.50	<50	--	--	<0.50	--	2.72	7.19	--	--	--	--	--	--
MW5	03/20/00	100.9	a 19.15	81.75	0.00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

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

Well Number	Date	Casing Elevation (feet)	Depth to Water (feet)	GW Elevation (feet)	SPH Thickness (feet)	Concentration (µg/L)								Concentration (mg/L)								
						Benzene	Toluene	Ethyl-benzene	Total Xylenes	TPH-g	TPH-d	TPH-mo	MTBE	CO <sub>2</sub> (lab)	DO (field)	pH (field)	Fe(II)	Mn	SO <sub>4</sub>	N-NH <sub>3</sub>	N-NO <sub>3</sub>	o-PO <sub>4</sub>
MW5	07/20/00	100.9	a 21.84	79.06	0.00	<0.50	0.98	<0.50	<0.50	<50	<50	<300	1.9	134	5.58	6.35	0.11	0.017	49	<0.10	3.9	<0.20
MW5	10/11/00	100.9	a 23.4	77.50	0.00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW5	04/10-11/01	100.9	a 22.3	78.60	0.00	<0.50	2.6	<0.50	0.6	<50	<50	<300	1.5	183	66	NR	<0.10	0.042	45	<0.10	2.9	0.11
MW5	07/10/01	100.9	a 23.64	77.26	0.00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW5	11/20/01	65.59	b 24.65	40.94	0.00	0.83	12	1.2	11	140	860	2,500	10	-- <sup>f</sup>	66	6.01	0.2	2.5	42	<0.10	--	<0.20
MW5	02/19/02	65.59	b 22.37	43.22	0.00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW5	05/21/02	65.59	b 23.10	42.49	0.00	<0.50	<0.50	<0.50	<0.50	<50	2,200	<300	<2.0	140	66	6.3	<0.1	0.22	44	<0.10	3	<0.20
MW5	06/27/03	65.59	b 23.07	42.52	0.00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW5	09/29/03	65.59	b 24.38	41.21	0.00	<0.50	0.52	7.1	35	100	<50	d <500	1.4	--	--	--	--	--	--	--	--	--
MW5	12/12/03	65.59	b 23.90	41.69	0.00	<0.50	<0.50	<0.50	<1	<50	<50	<500	1.5	--	--	--	--	--	--	--	--	--
MW5	03/15/04	65.59	b 20.82	44.77	0.00	<0.50	<0.50	<0.50	<1.0	<50	<50	<500	<0.50	--	6.4	--	--	--	--	--	--	--
MW5	06/24/04	65.59	b 23.57	42.02	0.00	<0.50	<0.50	<0.50	<1.0	<50	130	f <500	0.79	--	5.56	--	--	--	--	--	--	--
MW5	09/29/04	65.59	b 24.44	41.15	0.00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW5	12/13/04	65.59	b 23.87	41.72	0.00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
<b>MW5</b>	<b>03/14/05</b>	<b>65.59</b>	<b>b 20.18</b>	<b>45.41</b>	<b>0.00</b>	<b>&lt;0.50</b>	<b>1.3</b>	<b>1.5</b>	<b>8.6</b>	<b>82</b>	<b>&lt;50</b>	<b>&lt;500</b>	<b>&lt;0.50</b>	--	<b>3.91</b>	<b>5.57</b>	--	--	--	--	--	--
MW6	07/20/00	96.60	a 18.30	78.30	0.00	<0.50	<0.50	<0.50	<0.50	<50	<50	<300	160	122	2.72	6.66	120	1.9	53	6	0.05	<0.20
MW6	10/11/00	96.60	a 18.69	77.91	0.00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW6	04/10-11/01	96.60	a 17.85	78.75	0.00	<0.50	<0.50	<0.50	<0.50	<50	<50	<300	180	142	NR	NR	22	2.2	0.69	5.2	<0.05	<0.20
MW6	07/10/01	96.60	a 18.43	78.17	0.00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW6	11/20/01	59.60	b 18.67	40.93	0.00	<0.50	<0.50	<0.50	<0.50	<50	<50	<300	450	100	2.03	6.44	29	5.2	1.1	3.4	--	<0.20
MW6	02/19/02	59.60	b 17.40	42.20	0.00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW6	05/21/02	59.60	b 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	b 17.73	41.87	0.00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW6	09/29/03	59.60	b 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	b 17.89	41.71	0.00	<2.5	<2.5	<2.5	<5.0	<250	51	<500	190	--	--	--	--	--	--	--	--	--
MW6	03/15/04	59.60	b 16.46	43.14	0.00	<1.0	<1.0	<1.0	<2.0	200	<50	<500	220	--	0.11	--	--	--	--	--	--	--
MW6	06/24/04	59.60	b 17.97	41.63	0.00	<1.0	<1.0	<1.0	<2.0	130	<50	<500	190	--	0.05	--	--	--	--	--	--	--
MW6	09/29/04	59.60	b 18.55	41.05	0.00	<0.50	0.61	<0.50	1.2	210	g <50	<500	190	--	0.37	6.60	--	--	--	--	--	--
MW6	12/13/04	59.60	b 17.88	41.72	0.00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
<b>MW6</b>	<b>03/14/05</b>	<b>59.60</b>	<b>b 16.82</b>	<b>42.78</b>	<b>0.00</b>	<b>&lt;0.50</b>	<b>&lt;0.50</b>	<b>&lt;0.50</b>	<b>1.8</b>	<b>160</b>	<b>&lt;50</b>	<b>&lt;500</b>	<b>190</b>	--	<b>0.08</b>	<b>5.65</b>	--	--	--	--	--	--
MW7	07/20/00	96.75	a 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	a 16.90	79.85	0.00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW7	04/10-11/01	96.75	a 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	a 16.71	80.04	0.00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW7	11/20/01	59.47	b 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	b 14.92	44.55	0.00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW7	05/21/02	59.47	b 15.18	44.29	0.00	<0.50	<0.50	<0.50	<0.50	<50	<50	<300	<0.50	68	1.03	7.57	0.11	0.35	51	<0.10	2.8	0.11
MW7	06/27/03	59.47	b 16.28	43.19	0.00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW7	09/29/03	59.47	b 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	b 14.95	44.52	0.00	<0.50	<0.50	<0.50	<1.0	<50	<50	<500	<0.50	--	--	--	--	--	--	--	--	--
MW7	03/15/04	59.47	b 14.77	44.70	0.00	<0.50	<0.50	<0.50	<1.0	<50	<50	<500	<0.50	--	0.54	--	--	--	--	--	--	--
MW7	06/24/04	59.47	b 16.33	43.14	0.00	<0.50	<0.50	<0.50	<1.0	<50	300	f <500	<0.50	--	0.20	--	--	--	--	--	--	--
MW7	09/29/04	59.47	b 16.88	42.59	0.00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

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

Well Number	Date	Casing Elevation (feet)	Depth to Water (feet)	GW Elevation (feet)	SPH Thickness (feet)	Concentration (µg/L)								Concentration (mg/L)									
						Benzene	Toluene	Ethyl-benzene	Total Xylenes	TPH-g	TPH-d	TPH-mo	MTBE	CO <sub>2</sub> (lab)	DO (field)	pH (field)	Fe(II)	Mn	SO <sub>4</sub>	N-NH <sub>3</sub>	N-NO <sub>3</sub>	o-PO <sub>4</sub>	
MW7	12/13/04	59.47	b 15.26	44.21	0.00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW7	03/14/05	59.47	b 15.00	44.47	0.00	<0.50	<0.50	<0.50	<1.0	<50	<50	<500	<0.50	--	0.47	6.15	--	--	--	--	--	--	--

SPH Separate-phase hydrocarbons.

CO<sub>2</sub> Carbon dioxide.

DO Dissolved oxygen.

Fe(II) Ferrous iron.

Mn Manganese.

SO<sub>4</sub> Sulfate.

N-NH<sub>3</sub> Ammonia.

N-NO<sub>3</sub> Nitrate.

o-PO<sub>4</sub> 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.

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

-- Not analyzed or not sampled.

< Less than the laboratory reporting limits.

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

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

c Analysis not conducted due to broken sample containers.

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

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

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

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

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

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

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

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

Boring ID	Date	Depth (feet)	Concentrations (µg/L)													
			Benzene	Toluene	Ethyl-benzene	Total Xylenes	TPH-g	TPH-d	TPH-mo	TBA	MTBE	DIPE	ETBE	TAME	1,2-DCA	EDB
HP1	12/18/2003	26-30	<5.0	<5.0	<5.0	11	410	180	<500	<50	480	<10	<5.0	<5.0	<5.0	<5.0
HP3	12/18/2003	32-36	<0.50	<0.50	<0.50	<1.0	<50	75	<500	<5.0	0.55	<1.0	<0.50	<0.50	1.3	<0.50

TPH-g Total Petroleum Hydrocarbons as gasoline.  
 TPH-d Total Petroleum Hydrocarbons as diesel.  
 TPH-mo Total Petroleum Hydrocarbons as motor oil.  
 TBA t-butyl alcohol.  
 MTBE Methyl tertiary butyl ether.  
 DIPE di-isopropyl ether.  
 ETBE ethyl t-butyl ether.  
 TAME t-amyl methyl ether.  
 1,2-DCA 1,2-dichloroethane.  
 EDB ethylene dibromide.  
 < less than the laboratory reporting limits.

TABLE 4 DPE SYSTEM - GROUNDWATER ANALYTICAL RESULTS  
FORMER VAL STROUGH CHEVROLET, 327 34th STREET OAKLAND, CALIFORNIA

Sample Location	Sample Date	Concentrations (µg/L)					
		TPH-g	TPH-d	Benzene	Toluene	Ethylbenzene	Total Xylenes
Influent	12/20/04	2,100	NA	440	110	77	340
	02/28/05	NA	1,700	550	2,500	410	4,300
	03/23/05	70,000	4,000	360	2,300	740	6,300
	03/28/05	7,900	1,100	240	1,100	150	1,900
Midfluent	12/20/04	<50	<50	<0.50	<0.50	<0.50	<1
	02/28/05	NA	<50	<0.50	<0.50	<0.50	<1
	03/23/05	<50	<50	<0.50	<0.50	<0.50	<1
	03/28/05	<50	<50	<0.50	<0.50	<0.50	<0.50
Effluent	12/20/04	NA	NA	<0.50	<0.50	<0.50	<1
	02/28/05	NA	<50	<0.50	<0.50	<0.50	<1
	03/23/05	<50	<50	<0.50	<0.50	<0.50	<1
	03/28/05	<50	<50	<0.50	<0.50	<0.50	<0.50

µg/L - micrograms per liter.

TPH-g - Total Petroleum Hydrocarbons as gasoline.

TPH-d - Total Petroleum Hydrocarbons as diesel.

MTBE - Methyl tert-butyl ether.

NA - Not Analyzed.



TABLE 5 DPE SYSTEM - VAPOR ANALYTICAL RESULTS  
FORMER VAL STROUGH CHEVROLET, 327 34th STREET OAKLAND, CALIFORNIA

Sample Location	Date	Concentration (ppmv*) by EPA Method 8260B					POC Abatement Efficiency Based on Lab results
		TPHg	Benzene	Toluene	Ethylbenzene	Total Xylenes	
Influent							
	12/20/04	26,101	375	NA	NA	NA	--
	02/28/05	5,400	77	260	45	270	--
	03/23/05	6,100	92	340	54	340	--
	03/28/05	3,300	40	170	25	140	--
Effluent							
	12/20/04	<14	<0.15	NA	NA	NA	>99.9%
	02/28/05	<14	<0.15	<0.13	<0.11	<0.23	>99.7%
	03/23/05	<14	<0.15	<0.13	<0.11	<0.23	>99.8%
	03/28/05	<14	<0.15	<0.13	<0.11	<0.23	>99.6%

TPHg - Total petroleum hydrocarbons as gasoline

ppmv - Parts Per Million by Volume

POC - Precursor Organic Compound

NA - Not Analyzed.

-- - Not Applicable.

\* - December 20, 2004 concentrations converted from  $\mu\text{g/L}$  to ppmv using conversion factors: TPH-g -  $1\mu\text{g/L} = 0.2837085$  ppmv; Benzene -  $1\mu\text{g/L} = 0.3130207$  ppmv; Toluene -  $1\mu\text{g/L} = 0.2653859$  ppmv; Ethylbenzene -  $1\mu\text{g/L} = 0.2303127$  ppmv; and total xylenes -  $1\mu\text{g/L} = 0.2293621$  ppmv.

TABLE 6 DPE SYSTEM OPERATION AND PERFORMANCE DATA - GROUNDWATER  
FORMER VAL STROUGH CHEVROLET, 327 34th STREET OAKLAND, CALIFORNIA

Date	Days Operational	Percent Operational	Cumulative Total (gallons)	Average	Influent Conc.	Influent Conc.	Est. Pounds	Est. Pounds
				Operational Flow rate (gpm)	(µg/L) TPH-g	(µg/L) Benzene	Removed* Total TPH	Removed* Benzene
12/20/04	0.0	0%	0	0.00	2,100	440	0.00	0.00
02/23/05	0.0	0%	19,148	0.00	NA	NA	0.34	0.07
02/25/05	2.0	99%	25,840	2.33	NA	NA	0.12	0.02
02/28/05	3.0	100%	51,770	5.94	NA	550	0.45	0.12
03/04/05	1.5	38%	63,010	5.10	NA	NA	0.20	0.05
03/07/05	1.4	48%	73,950	5.25	NA	NA	0.19	0.05
03/11/05	4.0	98%	92,050	3.18	NA	NA	0.32	0.08
03/14/05	3.1	100%	93,080	0.23	NA	NA	0.02	0.00
03/21/05	5.1	73%	128,800	4.89	NA	NA	0.63	0.16
03/21/05	0.0	0%	128,810	0.00	NA	NA	0.00	0.00
03/23/05	0.6	30%	133,270	5.27	70,000	360	2.60	0.01
03/25/05	0.6	26%	137,720	5.37	NA	NA	2.60	0.01
03/28/05	2.6	94%	156,980	5.16	7,900	240	1.27	0.04
03/30/05	2.2	98%	172,040	4.79	NA	NA	0.99	0.03
<b>Total</b>	<b>26.1</b>		<b>172,040</b>	<b>3.4</b>			<b>9.7</b>	<b>0.66</b>

\* Est. Mass TPH Removed (pounds) = Average influent conc. (µg/L) \* period flow total (gallons) \* 1 lb/454 g \* 1g/1,000,000 mg \* 3.785 L/gallon  
µg/L - Micrograms per liter.

TPH - Total Petroleum Hydrocarbons (measured as Total Petroleum Hydrocarbons as both gasoline and diesel as analyzed by EPA Method 8015 modified).

gpm - Gallons per minute.

NM - Not Measured.

NA - Not Analyzed.

TABLE 7 DPE SYSTEM OPERATION AND PERFORMANCE DATA - VAPOR  
FORMER VAL STROUGH CHEVROLET, 327 34th STREET OAKLAND, CALIFOR

Date	Days Operational	Percent Operational	Average Flow rate (CFM)	Influent Lab Concentration TPH-g (ppmv)	Influent Lab Concentration Benzene (ppmv)	Estimated Pounds TPH-g Removed	Estimated Pounds Benzene Removed
02/23/05	0.0	0%	145	NA	NA	NA	NA
02/25/05	2.0	99%	147	NA	NA	598.3	10.64
02/28/05	3.0	100%	142	5,400	77	878.4	5.29
03/04/05	1.5	38%	140	NA	NA	436.6	4.75
03/07/05	1.4	48%	133	NA	NA	392.2	12.97
03/11/05	4.0	98%	133	NA	NA	1,071.5	10.46
03/14/05	3.1	100%	135	NA	NA	863.8	16.65
03/21/05	5.1	73%	133	NA	NA	1,375.3	0.00
03/21/05	0.0	0%	135	NA	NA	0.0	1.96
03/23/05	0.6	30%	135	6,100	92	182.7	1.53
03/25/05	0.6	26%	138	NA	NA	183.0	6.90
03/28/05	2.6	94%	138	3,300	40	446.1	3.52
03/30/05	2.2	98%	138	NA	NA	375.8	2.74
<b>Total</b>	<b>26.1</b>		<b>138</b>			<b>6,804</b>	<b>77.4</b>

<sup>a</sup> Est. pounds/day removed TPH-g = Average Combined well conc.(ppm<sub>v</sub>) \* 4.2(μg/L/ppm<sub>v</sub>) \* Average combined well flowrate (CFM) \* 1440 min/day \* 1 g/1,000,000 μg \* 0.002205 lbs/g \* 28.32 L/ft<sup>3</sup>

<sup>b</sup> Est. pounds/day removed Benzene = Average Combined well conc.(ppm<sub>v</sub>) \* 3.25(μg/L/ppm<sub>v</sub>) \* Average combined well flowrate (CFM) \* 1440 min/day \* 1 g/1,000,000 μg \* 0.002205 lbs/g \* 28.32 L/ft<sup>3</sup>

Cumulative Total - Total as measured since system start-up.

TPH-g - Total Petroleum Hydrocarbons as gasoline.

CFM - Cubic feet per minute.

ppmv - Parts Per Million by Volume.

NM - Not Measured

NA - Not Analyzed

TABLE 8 GROUNDWATER MONITORING SCHEDULE  
 FORMER VAL STROUGH CHEVROLET, 327 34th STREET OAKLAND, CALIFORNIA

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

Q = Quarterly.  
 S = Semiannual.  
 A = Annual.

BTEX = Benzene, toluene, ethylbenzene, total xylenes.

MTBE = Methyl tertiary butyl ether.

TPH-g = Total Petroleum Hydrocarbons as gasoline.

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

**Appendix A**

**Protocols for Groundwater Monitoring**

## **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**



# MONITORING WELL DATA FORM

Client: **STROUGH FAMILY TRUST**

Date: **3/14/05**

Project Number: **TMSFT 6.11**

Station Number: **SFT**

Site Location: **327 34TH ST.  
OAKLAND, CA.**

Samplers: **C. Mitchell**

MONITORING WELL NUMBER	DEPTH TO WATER (TOC)	DEPTH TO PRODUCT (TOC)	APPARENT PRODUCT THICKNESS	AMOUNT OF PRODUCT REMOVED	MONITORING WELL INTEGRITY	DEPTH TO BOTTOM (TOC)	GENERAL FIELD COMMENTS
------------------------	----------------------	------------------------	----------------------------	---------------------------	---------------------------	-----------------------	------------------------

MW1	18.69					30.52	2"
MW2 <i>IP</i>	21.03					31.85	2"
MW3 <i>IP</i>	19.92					32.14	2"
MW4	18.30					27.50	2"
MW5	20.14					26.38	2"
MW6	16.82					26.90	2"
MW7	15.00					37.55	2"

G:\USERS\Fitzgerald\STROUGH FAMILY TRUST (2)\SFTMonitoring\ Note: Depth to bottom measured during first quarter unless noted.





Engineering, Inc.

### GROUNDWATER PURGE AND SAMPLE

Project Name: STROUGH FAMILY TRUST Well No: MM1 Date: 3/14/05  
 Project No: TMSFT 2, 11 Personnel: C. Mitchell

#### GAUGING DATA

Water Level Measuring Method: WLM / IP

WELL PURGE VOLUME CALCULATION	Total Depth (feet)	Depth to Water (feet)	Water Column (feet)	Multiplier for Casing Diameter				Casing Volume (gal)	Total Purge Volume (gal)
		30.52	18.69	11.83	1	2	4	6	1.89
				0.04	0.16	0.64	1.44		

#### PURGING DATA

Purge Method: WATERRA / BAILER / SUB PURGE RATE GPM

Time	12:38	12:41	12:44			
Volume Purge (gal)	2	4	6			
Temperature (°C)	18.35°C	18.32°C	18.32°C			
Flow Rate (gpm)	6.02	6.02	6.04			
Sp. Cond. (µmhos/cm)	967 µmhos/cm	958 µmhos/cm	909 µmhos/cm			
DO (mg/L)	9.4% (1.73 mg/L)	17.7% (1.68 mg/L)	21.0% (1.96 mg/L)			
pH	+111.4	+99.6	+93.9			
Specific Gravity	5.74 / 6.24	5.14 / 6.24	5.14 / 6.24			
DO (mg/L)	N	N	N			
Dissolved (mg/L)	N	N	N			

Alkalinity:

Comments/Observations:

#### SAMPLING DATA

Time Sampled: 12:50 Approximate Depth to Water During Sampling: 19 (feet)

Comments:

Sample Number	Number of Containers	Container type	Perservative	Volume Filled (ml or L)	Turbidity/Color	Analysis Method
<u>MM1</u>	3	VOA	HCL	40 ml		HVOCs by 8260B
<u>MM1</u>	2	AMBER	HCL	1L		TPH-D, TEHO

Total Purge Volume: 6 (gallons) Disposal: \_\_\_\_\_ System \_\_\_\_\_  
 Weather Conditions: 04 BOLTS Y / N  
 Condition of Well Box and Casing at Time of Sampling: No Bait CAP & LOCK Y / N  
 Well Head Conditions Requiring Correction: GROUT Y / N  
 Problems Encountered During Purging and Sampling: None WELL BOX Y / N  
 Comments: SECURED Y / N



Engineering, Inc.

**GROUNDWATER PURGE AND SAMPLE**

Project Name: STROUGH FAMILY TRUST Well No: MW2 Date: 3/14/05  
 Project No: TMSFT 2.11 Personnel: C. Mitchell

**GAUGING DATA**

Water Level Measuring Method: WLM IP

WELL PURGE VOLUME CALCULATION	Total Depth (feet)	Depth to Water (feet)	Water Column (feet)	Multiplier for Casing Diameter				Casing Volume (gal)	Total Purge Volume (gal)
				1	2	4	6		
	<u>—</u>	<u>—</u>	<u>—</u>	<u>X</u>				<u>—</u>	
				0.04	0.16	0.64	1.44		

**PURGING DATA**

Purge Method: WATERRA/ BAILER / SUB PURGE RATE GPM

Time	System up				
Volume Purged (gal)	Sampled at Well with				
Temperature (C)	Bailer				
pH					
Sp. Cond. (µmhos)					
DO (mg/L)					
SRP					
Specific Conductivity					
DO (mg/L)					
Temperature (°C)					

Alkalinity:

Comments/Observations:

**SAMPLING DATA**

Time Sampled: 14:55 Approximate Depth to Water During Sampling: — (feet)

Comments:

Sample Number	Number of Containers	Container Type	Preservative	Volume Filled (ml or l)	Turnidity/Color	Analysis Method
MW2	3	VOA	HCL	40 ml		HVOCs by 8260B
MW2	2	AMBER	HCL	1L		TPH-D, TEHO

Total Purge Volume: — (gallons) Disposal: System

Weather Conditions: OK BOLTS (Y) / N

Condition of Well Box and Casing at Time of Sampling: OK CAP & LOCK (X) / N

Well Head Conditions Requiring Correction: None GROUT (X) / N

Problems Encountered During Purging and Sampling: None WELL BOX (X) / N

Comments: SECURED (Y) / N

**GROUNDWATER PURGE AND SAMPLE**

Project Name: **STROUGH FAMILY TRUST** Well No: **MW3** Date: **3/14/05**  
 Project No: **TMSFT 81.11** Personnel: **C. Mitchell**

**GAUGING DATA**

Water Level Measuring Method: **WLM / IP**

WELL PURGE VOLUME CALCULATION	Total Depth (feet)	Depth to Water (feet)	Water Column (feet)	Multiplier for Casing Diameter				Casing Volume (gall)	Total Purge Volume (gal)
				1	2	4	6		
				0.04	0.16	0.64	1.44		
	⊖	⊖	⊖	⊗				⊖	

**PURGING DATA**

Purge Method: **WATERRA / BAILER / SUB** PURGE RATE: \_\_\_\_\_ GPM

	<b>system up - sampled at well with bailer</b>		
Volume Purge (gall)			
Temperature (C)			
pH			
Sp. Cond. (µmhos)			
DO (mg/L)			
ORP			
Iron (µg/L)			
Dewatered (Y/N)			

Alkalinity: \_\_\_\_\_

Comments/Observations: \_\_\_\_\_

**SAMPLING DATA**

Time Sampled: **1405** Approximate Depth to Water During Sampling: \_\_\_\_\_ (feet)

Comments: \_\_\_\_\_

Sample Number	Number of Containers	Container Type	Perservative	Volume Filled (ml or L)	Turbidity/Color	Analysis Method
<b>MW3</b>	<b>3</b>	<b>VOA</b>	<b>HCL</b>	<b>40 ml</b>		<b>HVOCs by 8260B</b>
<b>MW3</b>	<b>2</b>	<b>AMBER</b>	<b>HCL</b>	<b>1L</b>		<b>TPH-D,TEHO</b>

Total Purge Volume: \_\_\_\_\_ (gallons) Disposal: \_\_\_\_\_ System: \_\_\_\_\_

Weather Conditions: **OV** BOLTS **Y / (N)**

Condition of Well Box and Casing at Time of Sampling: **No Bolts** CAP & LOCK **(X) / N**

Well Head Conditions Requiring Correction: \_\_\_\_\_ GROUT **(X) / N**

Problems Encountered During Purging and Sampling: **None** WELL BOX **(X) / N**

Comments: \_\_\_\_\_ SECURED **(Y) / N**



Engineering, Inc.

### GROUNDWATER PURGE AND SAMPLE

Project Name: STROUGH FAMILY TRUST

Well No: *MW4*

Date: *3/14/05*

Project No: TMSFT.B1.11

Personnel: *C. M. Felie*

#### GAUGING DATA

Water Level Measuring Method: WLM IP

WELL PURGE VOLUME CALCULATION	Total Depth (feet)	Depth to Water (feet)	Water Column (feet)	Multiplier for Casing Diameter				Casing Volume (gal)	Total Purge Volume (gal)
				1	2	4	6		
	27.50	16.30	9.20	0.04	0.16	0.64	1.44	1.47	4.42

#### PURGING DATA

Purge Method: WATERRA BAILER / SUB

PURGE RATE

GPM

Time	12:09	12:10	12:11			
Volume Purged (gal)	1	2	3			
Temperature (°C)	18.65°C	18.65°C	18.65°C			
TPH	6.57	6.46	6.34			
Sp. Cond. (µmhos/cm)	603 µmhos/cm	604 µmhos/cm	604 µmhos/cm			
DO (mg/L)	5.2% / 0.48 mg/L	3.9% / 0.36 mg/L	3.0% / 0.28 mg/L			
ORP	-29.3	-21.3	-18.2			
Notes/Geo	Silty / Brown	Silty / Brown	Silty / Brown			
Corr (N)	N	N	N			
Conductivity (µM)	N	N	N			

Alkalinity:

Comments/Observations: *Well open on arrival*

#### SAMPLING DATA

Time Sampled: *12:15*

Approximate Depth to Water During Sampling: *19* (feet)

Comments:

Sample Number	Number of Containers	Container type	Preservative	Volume Filled (ml or L)	Turbidity/Color	Analysis Method
<i>MW4</i>	3	VOA	HCL	40 ml		HVOCs by 8260B
<i>MW4</i>	2	AMBER	HCL	1L		TPH-D, TEHO

Total Purge Volume: *3* (gallons)

Disposal: System

Weather Conditions:

*OK* BOLTS  Y  N

Condition of Well Box and Casing at Time of Sampling:

*No bolts* CAP & LOCK  Y  N

Well Head Conditions Requiring Correction:

GROUT  Y  N

Problems Encountered During Purging and Sampling:

*None* WELL BOX  Y  N

Comments:

SECURED  Y  N

**GROUNDWATER PURGE AND SAMPLE**

Project Name: **STROUGH FAMILY TRUST** Well No: **MWS** Date: **3/14/05**  
 Project No: **TMSFT #1.11** Personnel: **C. McArthur**

**GAUGING DATA**

Water Level Measuring Method: **WLM** / IP

WELL PURGE VOLUME CALCULATION	Total Depth (feet)	Depth to Water (feet)	Water Column (feet)	Multiplier for Casing Diameter				Casing Volume (gal)	Total Purge Volume (gal)
		26.38	20.18	6.20	1	2	4	6	.99
				0.04	0.16	0.64	1.44		

**PURGING DATA**

Purge Method: **WATERRA / BAILER / SUB** PURGE RATE GPM

Time	Volume (gallons)	Temperature (C)	PH	Specific Gravity	DO (mg/L)	ORP	Turbidity (NTU)	Color (PCU)
13:23	1	18.10°C	5.60	37.1 g/cm <sup>3</sup>	42.7% / 40%	+135.7	Clear/White	N
13:24	2	18.10°C	5.58	37.1 g/cm <sup>3</sup>	43.4% / 40%	+135.5	Clear/White	N
13:25	3	18.13°C	5.57	31.5 g/cm <sup>3</sup>	46.6% / 39.1%	+134.5	Clear/White	N

Alkalinity: \_\_\_\_\_  
 Comments/Observations: **Well open on arrival**

**SAMPLING DATA**

Time Sampled: **13:30** Approximate Depth to Water During Sampling: **21** (feet)

Comments: \_\_\_\_\_

Sample Number	Number of Containers	Container type	Preservative	Volume Filled (mL or L)	Turbidity/Color	Analysis Method
<b>MWS</b>	3	VOA	HCL	40 ml		HVOCs by 8260B
<b>MWS</b>	2	AMBER	HCL	1L		TPH-D, TEHO

Total Purge Volume: **3** (gallons) Disposal: \_\_\_\_\_ System: \_\_\_\_\_  
 Weather Conditions: \_\_\_\_\_ BOLTS **Y** / **N**  
 Condition of Well Box and Casing at Time of Sampling: **No Bolts** CAP & LOCK **Y** / **N**  
 Well Head Conditions Requiring Correction: **No. Gal** GROUT **Y** / **N**  
 Problems Encountered During Purging and Sampling: **None** WELL BOX **Y** / **N**  
 Comments: \_\_\_\_\_ SECURED **Y** / **N**



Engineering, Inc.

**GROUNDWATER PURGE AND SAMPLE**

Date: 3/14/05

Project Name: STROUGH FAMILY TRUST

Well No: MW6

Project No: TMSFT # 1.11

Personnel: C. M. L. Hall

**GAUGING DATA**

Water Level Measuring Method: WLM / IP

WELL PURGE VOLUME CALCULATION	Total Depth (feet)	Depth to Water (feet)	Water Column (feet)	Multiplier for Casing Diameter				Casing Volume (gal)	Total Purge Volume (gal)
				1	2	4	6		
	26.90	16.47	10.05	0.04	0.16	0.64	1.44	1.61	4.84

**PURGING DATA**

Purge Method: WATERRA / BAILER / SUB

PURGE RATE

GPM

Time	11:06	11:09	11:12			
Volume (gallons)	2	4	6			
Temperature (°C)	18.54°C	18.54°C	18.60°C			
pH	5.40	5.70	5.65			
Specific Conductance (µmhos/cm)	626 µmhos/cm	615 µmhos/cm	606 µmhos/cm			
DO (mg/L)	1.8% / 1.7%	1.0% / 0.9%	1.1% / 0.8%			
ORP	-85.1	-97.0	-103.6			
Redox Potential (V)	S. Hydroxy	S. Hydroxy	S. Hydroxy			
Color (PCU)	N	N	N			
Turbidity (NTU)	N	N	N			

Alkalinity:

Comments/Observations:

**SAMPLING DATA**

Time Sampled: 11:15

Approximate Depth to Water During Sampling: 17 (feet)

Comments:

Sample Number	Number of Containers	Container Type	Preservative	Volume Filled (mL or L)	Turbidity/Color	Analysis Method
MW6	3	VOA	HCL	40 ml		HVOCs by 8260B
MW6	2	AMBER	HCL	1L		TPH-D, TEHO

Total Purge Volume: 4 (gallons)

Disposal: OU

System

Weather Conditions:

BOLTS (Y) / N

Condition of Well Box and Casing at Time of Sampling: No Lock

CAP & LOCK (Y) / N - Lock

Well Head Conditions Requiring Correction:

GROUT (Y) / N

Problems Encountered During Purging and Sampling: None

WELL BOX (Y) / N

SECURED (Y) / N

Comments:

**GROUNDWATER PURGE AND SAMPLE**

Project Name: **STROUGH FAMILY TRUST** Well No: **MW7** Date: **3/14/05**  
 Project No: **TMSFT 01.11** Personnel: **C. M. St. Cyr II**

**GAUGING DATA**

Water Level Measuring Method: **WLM** / IP

WELL PURGE VOLUME CALCULATION	Total Depth (feet)	Depth to Water (feet)	Water Column (feet)	Multiplier for Casing Diameter				Casing Volume (gal)	Total Purge Volume (gal)
		34.55	15.00	19.55	1	2	4	6	3.13
				0.04	0.16	0.64	1.44		

**PURGING DATA**

Purge Method: **WATERRA / BAILER / SUB**

PURGE RATE

GPM

	10:33	10:35	10:37		
Time	10:33	10:35	10:37		
Volume Purge (gal)	3	6	9		
Temperature (°C)	19.77°C	19.95°C	19.95°C		
Time	6.36	6.27	6.15		
Speed (cm)	734 ft/cm	750 ft/cm	688 ft/cm		
Discharge	7.1% / 61 mg/L	7.8% / 71 mg/L	5.7% / 47 mg/L		
DPF	+75.2	+120.9	+111.3		
Fluid/Color	5: H <sub>2</sub> O / clear	5: H <sub>2</sub> O / clear	5: H <sub>2</sub> O / clear		
Depth (ft)	N	N	N		
Depth (ft)	N	N	N		

Alkalinity:

Comments/Observations:

**SAMPLING DATA**

Time Sampled: **10:45** Approximate Depth to Water During Sampling: **16** (feet)

Comments:

Sample Number	Number of Containers	Container Type	Preservative	Volume Filled (ml or L)	Turbidity/Color	Analysis Method
MW7	3	VOA	HCL	40 ml		HVOCs by 8260B
MW7	2	AMBER	HCL	1L		TPH-D, TEHO

Total Purge Volume: **9** (gallons)

Disposal: System

Weather Conditions: **OK**

BOLTS **(Y)** N

Condition of Well Box and Casing at Time of Sampling: **1 x bolt missing**

CAP & LOCK **(Y)** **(N) No lock**

Well Head Conditions Requiring Correction: **ax ok / No lock**

GROUT **(Y)** N

Problems Encountered During Purging and Sampling: **None**

WELL BOX **(Y)** N

Comments:

SECURED **(Y)** N

**Appendix C**

**Laboratory Analytical Reports**



**O & M**  
**Laboratory Analytical Results**

ETIC Pleasant Hill

December 22, 2004

2285 Morello Avenue  
Pleasant Hill, CA 94523

Attn.: Kathy Brandt

Project#: TMSFT1

Project: Strough

RECEIVED

JAN 03 2005

FILE COPY

ETIC ENGINEERING

Dear Ms. Brandt,

Attached is our report for your samples received on 12/20/2004 18:30

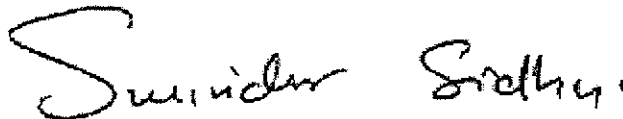
This report has been reviewed and approved for release. Reproduction of this report is permitted only in its entirety.

Please note that any unused portion of the samples will be discarded after 02/03/2005 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: [ssidhu@stl-inc.com](mailto:ssidhu@stl-inc.com)

Sincerely,



Surinder Sidhu  
Project Manager

Severn Trent Laboratories, Inc.

STL San Francisco \* 1220 Quarry Lane, Pleasanton, CA 94566

Tel 925 484 1919 Fax 925 484 1096 \* [www.stl-inc.com](http://www.stl-inc.com) \* CA DHS ELAP# 2496

**Fuel Oxygenates by 8260B**

ETIC Pleasant Hill  
Attn.: Kathy Brandt

2285 Morello Avenue  
Pleasant Hill, CA 94523  
Phone: (925) 602-4710 Fax: (925) 602-4720

Project: TMSFT1  
Strough

Received: 12/20/2004 18:30

**Samples Reported**

Sample Name	Date Sampled	Matrix	Lab #
EFF	12/20/2004 14:00	Water	1

**Fuel Oxygenates by 8260B**

ETIC Pleasant Hill  
Attn.: Kathy Brandt

2285 Morello Avenue  
Pleasant Hill, CA 94523  
Phone: (925) 602-4710 Fax: (925) 602-4720

Project: TMSFT1  
Strough

Received: 12/20/2004 18:30

Prep(s):	5030B	Test(s):	8260B
Sample ID:	EFF	Lab ID:	2004-12-0712 - 1
Sampled:	12/20/2004 14:00	Extracted:	12/20/2004 23:31
Matrix:	Water	QC Batch#:	2004/12/20-02.66

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Benzene	ND	0.50	ug/L	1.00	12/20/2004 23:31	
Toluene	ND	0.50	ug/L	1.00	12/20/2004 23:31	
Ethylbenzene	ND	0.50	ug/L	1.00	12/20/2004 23:31	
Total xylenes	ND	1.0	ug/L	1.00	12/20/2004 23:31	
<b>Surrogate(s)</b>						
1,2-Dichloroethane-d4	91.5	73-130	%	1.00	12/20/2004 23:31	
Toluene-d8	86.5	81-114	%	1.00	12/20/2004 23:31	

Fuel Oxygenates by 8260B

ETIC Pleasant Hill  
Attn.: Kathy Brandt

2285 Morello Avenue  
Pleasant Hill, CA 94523  
Phone: (925) 602-4710 Fax: (925) 602-4720

Project: TMSFT1  
Strough

Received: 12/20/2004 18:30

**Batch QC Report**

Prep(s): 5030B  
Method Blank  
MB: 2004/12/20-02.66-034

Water

Test(s): 8260B  
QC Batch # 2004/12/20-02.66  
Date Extracted: 12/20/2004 18:34

Compound	Conc.	RL	Unit	Analyzed	Flag
Benzene	ND	0.5	ug/L	12/20/2004 18:34	
Toluene	ND	0.5	ug/L	12/20/2004 18:34	
Ethylbenzene	ND	0.5	ug/L	12/20/2004 18:34	
Total xylenes	ND	1.0	ug/L	12/20/2004 18:34	
<b>Surrogates(s)</b>					
1,2-Dichloroethane-d4	87.4	73-130	%	12/20/2004 18:34	
Toluene-d8	85.8	81-114	%	12/20/2004 18:34	

**Fuel Oxygenates by 8260B**

ETIC Pleasant Hill  
Attn.: Kathy Brandt

2285 Morello Avenue  
Pleasant Hill, CA 94523  
Phone: (925) 602-4710 Fax: (925) 602-4720

Project: TMSFT1  
Strough

Received: 12/20/2004 18:30

**Batch QC Report**

Prep(s): 5030B

Test(s): 8260B

Laboratory Control Spike

Water

QC Batch # 2004/12/20-02:66

LCS 2004/12/20-02.66-011

Extracted: 12/20/2004

Analyzed: 12/20/2004 18:11

LCSD

Compound	Conc. ug/L		Exp. Conc.	Recovery %		RPD	Ctrl. Limits %		Flags	
	LCS	LCSD		LCS	LCSD		%	Rec.	RPD	LCS
Benzene	27.6		25.0	110.4			69-129	20		
Toluene	26.7		25.0	106.8			70-130	20		
<i>Surrogates(s)</i>										
1,2-Dichloroethane-d4	430		500	86.0			73-130			
Toluene-d8	428		500	85.6			81-114			

Severn Trent Laboratories, Inc.

STL San Francisco \* 1220 Quarry Lane, Pleasanton, CA 94566

Tel 925 484 1919 Fax 925 484 1096 \* www.stl-inc.com \* CA DHS ELAP# 2496

12/21/2004 12:05

**Fuel Oxygenates by 8260B**

ETIC Pleasant Hill  
Attn.: Kathy Brandt

2285 Morello Avenue  
Pleasant Hill, CA 94523  
Phone: (925) 602-4710 Fax: (925) 602-4720

Project: TMSFT1  
Strough

Received: 12/20/2004 18:30

**Batch QC Report**

Prep(s): 5030B

Test(s): 8260B

**Matrix Spike ( MS / MSD )**

**Water**

**QC Batch # 2004/12/20-02.66**

MS/MSD

Lab ID: 2004-12-0467 - 002

MS: 2004/12/20-02.66-017

Extracted: 12/20/2004

Analyzed: 12/20/2004 21:17

Dilution: 1.00

MSD: 2004/12/20-02.66-039

Extracted: 12/20/2004

Analyzed: 12/20/2004 21:39

Dilution: 1.00

Compound	Conc. ug/L			Spk.Level ug/L	Recovery %			Limits %		Flags	
	MS	MSD	Sample		MS	MSD	RPD	Rec.	RPD	MS	MSD
Benzene	27.7	27.3	ND	25.0	110.8	109.2	1.5	69-129	20		
Toluene	28.4	28.6	ND	25.0	113.6	114.4	0.7	70-130	20		
<i>Surrogate(s)</i>											
1,2-Dichloroethane-d4	426	438		500	85.2	87.6		73-130			
Toluene-d8	450	440		500	90.0	88.0		81-114			

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Tel 925 484 1919 Fax 925 484 1095 \* www.stl-inc.com \* CA DHS ELAP# 2496

12/21/2004 12:05

**Gas/BTEXFuel Oxygenates by 8260B**

ETIC Pleasant Hill  
Attn.: Kathy Brandt

2285 Morello Avenue  
Pleasant Hill, CA 94523  
Phone: (925) 602-4710 Fax: (925) 602-4720

Project: TMSFT1  
Strough

Received: 12/20/2004 18:30

**Samples Reported**

Sample Name	Date Sampled	Matrix	Lab #
INF-AIR	12/20/2004 15:15	Air	4
EFF-AIR	12/20/2004 15:00	Air	5



**Gas/BTEXFuel Oxygenates by 8260B**

ETIC Pleasant Hill  
Attn.: Kathy Brandt

2285 Morello Avenue  
Pleasant Hill, CA 94523  
Phone: (925) 602-4710 Fax: (925) 602-4720

Project: TMSFT1  
Strough

Received: 12/20/2004 18:30

Prep(s): 5030B Test(s): 8260B  
Sample ID: INF-AIR Lab ID: 2004-12-0712 - 4  
Sampled: 12/20/2004 15:15 Extracted: 12/21/2004 12:15  
Matrix: Air QC Batch#: 2004/12/21-1C.65  
Analysis Flag: L2 ( See Legend and Note Section )

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	92000	1000	ug/L	20.00	12/21/2004 12:15	
Benzene	1200	20	ug/L	20.00	12/21/2004 12:15	
<b>Surrogate(s)</b>						
1,2-Dichloroethane-d4	90.6	72-128	%	20.00	12/21/2004 12:15	
Toluene-d8	99.5	80-113	%	20.00	12/21/2004 12:15	

**Gas/BTEX Fuel Oxygenates by 8260B**

ETIC Pleasant Hill  
Attn.: Kathy Brandt

2285 Morello Avenue  
Pleasant Hill, CA 94523  
Phone: (925) 602-4710 Fax: (925) 602-4720

Project: TMSFT1  
Strough

Received: 12/20/2004 18:30

Prep(s): 5030B	Test(s): 8260B
Sample ID: EFF-AIR	Lab ID: 2004-12-0712 - 5
Sampled: 12/20/2004 15:00	Extracted: 12/21/2004 10:33
Matrix: Air	QC Batch#: 2004/12/21-1C.65

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	ND	50	ug/L	1.00	12/21/2004 10:33	
Benzene	ND	1.0	ug/L	1.00	12/21/2004 10:33	
<b>Surrogate(s)</b>						
1,2-Dichloroethane-d4	95.2	72-128	%	1.00	12/21/2004 10:33	
Toluene-d8	102.2	80-113	%	1.00	12/21/2004 10:33	

**Gas/BTEX Fuel Oxygenates by 8260B**

ETIC Pleasant Hill  
Attn.: Kathy Brandt

2285 Morello Avenue  
Pleasant Hill, CA 94523  
Phone: (925) 602-4710 Fax: (925) 602-4720

Project: TMSFT1  
Strough

Received: 12/20/2004 18:30

**Batch QC Report**

Prep(s): 5030B  
Method Blank  
MB: 2004/12/21-1C.65-034

Water

Test(s): 8260B  
QC Batch # 2004/12/21-1C.65  
Date Extracted: 12/21/2004 09:33

Compound	Conc.	RL	Unit	Analyzed	Flag
Gasoline	ND	50	ug/L	12/21/2004 09:33	
Benzene	ND	0.5	ug/L	12/21/2004 09:33	
<b>Surrogates(s)</b>					
1,2-Dichloroethane-d4	101.2	73-130	%	12/21/2004 09:33	
Toluene-d8	103.6	81-114	%	12/21/2004 09:33	

**Gas/BTEX Fuel Oxygenates by 8260B**

ETIC Pleasant Hill  
Attn.: Kathy Brandt

2285 Morello Avenue  
Pleasant Hill, CA 94523  
Phone: (925) 602-4710 Fax: (925) 602-4720

Project: TMSFT1  
Strough

Received: 12/20/2004 18:30

**Batch QC Report**

Prep(s): 5030B

Test(s): 8260B

**Laboratory Control Spike**

**Water**

**QC Batch # 2004/12/21-1C.65**

LCS 2004/12/21-1C.65-007

Extracted: 12/21/2004

Analyzed: 12/21/2004 09:07

LCSD

Compound	Conc. ug/L		Exp. Conc.	Recovery %		RPD	Ctrl. Limits %		Flags	
	LCS	LCSD		LCS	LCSD		%	Rec.	RPD	LCS
Benzene	26.8		25	107.2			69-129	20		
<i>Surrogates(s)</i>										
1,2-Dichloroethane-d4	419		500	83.8			73-130			
Toluene-d8	489		500	97.8			81-114			

Severn Trent Laboratories, Inc.

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Tel 925 484 1919 Fax 925 484 1096 \* www.stl-inc.com \* CA DHS ELAP# 2496

12/21/2004 17:37

**Gas/BTEXFuel Oxygenates by 8260B**

ETIC Pleasant Hill  
Attn.: Kathy Brandt

2285 Morello Avenue  
Pleasant Hill, CA 94523  
Phone: (925) 602-4710 Fax: (925) 602-4720

Project: TMSFT1  
Strough

Received: 12/20/2004 18:30

**Batch QC Report**

Prep(s): 5030B

Test(s): 8260B

**Matrix Spike ( MS / MSD )**

**Water**

**QC Batch # 2004/12/21-1C.65**

MS/MSD

Lab ID: 2004-12-0419 - 002

MS: 2004/12/21-1C.65-021

Extracted: 12/21/2004

Analyzed: 12/21/2004 13:07

Dilution: 1.00

MSD: 2004/12/21-1C.65-033

Extracted: 12/21/2004

Analyzed: 12/21/2004 13:33

Dilution: 1.00

Compound	Conc. ug/L			Spk.Level ug/L	Recovery %			Limits %		Flags	
	MS	MSD	Sample		MS	MSD	RPD	Rec.	RPD	MS	MSD
Benzene	27.9	28.8	ND	25	111.6	115.2	3.2	69-129	20		
<i>Surrogate(s)</i>											
1,2-Dichloroethane-d4	420	421		500	84.0	84.2		73-130			
Toluene-d8	520	492		500	104.0	98.4		81-114			

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Tel 925 484 1919 Fax 925 484 1096 \* www.stl-inc.com \* CA DHS ELAP# 2496

12/21/2004 17:37

Gas/BTEXFuel Oxygenates by 8260B

ETIC Pleasant Hill  
Attn.: Kathy Brandt

2285 Morello Avenue  
Pleasant Hill, CA 94523  
Phone: (925) 602-4710 Fax: (925) 602-4720

Project: TMSFT1  
Strough

Received: 12/20/2004 18:30

---

Legend and Notes

---

Analysis Flag

L2

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

**Fuel Oxygenates by 8260B**

ETIC Pleasant Hill  
Attn.: Kathy Brandt

2285 Morello Avenue  
Pleasant Hill, CA 94523  
Phone: (925) 602-4710 Fax: (925) 602-4720

Project: TMSFT1  
Strough

Received: 12/20/2004 18:30

**Samples Reported**

Sample Name	Date Sampled	Matrix	Lab #
INT	12/20/2004 14:10	Water	2
INF	12/20/2004 14:20	Water	3

**Fuel Oxygenates by 8260B**

ETIC Pleasant Hill  
Attn.: Kathy Brandt

2285 Morello Avenue  
Pleasant Hill, CA 94523  
Phone: (925) 602-4710 Fax: (925) 602-4720

Project: TMSFT1  
Strough

Received: 12/20/2004 18:30

Prep(s):	5030B	Test(s):	8260B
Sample ID:	INT	Lab ID:	2004-12-0712 - 2
Sampled:	12/20/2004 14:10	Extracted:	12/29/2004 01:24
Matrix:	Water	QC Batch#:	2004/12/28-02.64

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	ND	50	ug/L	1.00	12/29/2004 01:24	
Benzene	ND	0.50	ug/L	1.00	12/29/2004 01:24	
Toluene	ND	0.50	ug/L	1.00	12/29/2004 01:24	
Ethylbenzene	ND	0.50	ug/L	1.00	12/29/2004 01:24	
Total xylenes	ND	1.0	ug/L	1.00	12/29/2004 01:24	
<b>Surrogate(s)</b>						
1,2-Dichloroethane-d4	112.5	73-130	%	1.00	12/29/2004 01:24	
Toluene-d8	99.2	81-114	%	1.00	12/29/2004 01:24	

Severn Trent Laboratories, Inc.

STL San Francisco \* 1220 Quarry Lane, Pleasanton, CA 94566

Tel 925 484 1919 Fax 925 484 1096 \* www.stl-inc.com \* CA DHS ELAP# 2496

12/29/2004 11:57



**Fuel Oxygenates by 8260B**

ETIC Pleasant Hill  
Attn.: Kathy Brandt

2285 Morello Avenue  
Pleasant Hill, CA 94523  
Phone: (925) 602-4710 Fax: (925) 602-4720

Project: TMSFT1  
Strough

Received: 12/20/2004 18:30

Prep(s): 5030B	Test(s): 8260B
Sample ID: INF	Lab ID: 2004-12-0712 - 3
Sampled: 12/20/2004 14:20	Extracted: 12/29/2004 10:33
Matrix: Water	QC Batch#: 2004/12/29-0162
Analysis Flag: L2 ( See Legend and Note Section )	

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	2100	250	ug/L	5.00	12/29/2004 10:33	
Benzene	440	2.5	ug/L	5.00	12/29/2004 10:33	
Toluene	110	2.5	ug/L	5.00	12/29/2004 10:33	
Ethylbenzene	77	2.5	ug/L	5.00	12/29/2004 10:33	
Total xylenes	340	5.0	ug/L	5.00	12/29/2004 10:33	
<b>Surrogate(s)</b>						
1,2-Dichloroethane-d4	96.5	73-130	%	5.00	12/29/2004 10:33	
Toluene-d8	92.6	81-114	%	5.00	12/29/2004 10:33	

**Fuel Oxygenates by 8260B**

ETIC Pleasant Hill  
Attn.: Kathy Brandt

2285 Morello Avenue  
Pleasant Hill, CA 94523  
Phone: (925) 602-4710 Fax: (925) 602-4720

Project: TMSFT1  
Strough

Received: 12/20/2004 18:30

Batch QC Report		
Prep(s): 5030B		Test(s): 8260B
Method Blank	Water	QC Batch # 2004/12/28-02:64
MB: 2004/12/28-02:64-002		Date Extracted: 12/28/2004 18:02

Compound	Conc.	RL	Unit	Analyzed	Flag
Gasoline	ND	50	ug/L	12/28/2004 18:02	
Benzene	ND	0.5	ug/L	12/28/2004 18:02	
Toluene	ND	0.5	ug/L	12/28/2004 18:02	
Ethylbenzene	ND	0.5	ug/L	12/28/2004 18:02	
Total xylenes	ND	1.0	ug/L	12/28/2004 18:02	
<b>Surrogates(s)</b>					
1,2-Dichloroethane-d4	105.2	73-130	%	12/28/2004 18:02	
Toluene-d8	102.4	81-114	%	12/28/2004 18:02	

**Fuel Oxygenates by 8260B**

ETIC Pleasant Hill  
Attn.: Kathy Brandt

2285 Morello Avenue  
Pleasant Hill, CA 94523  
Phone: (925) 602-4710 Fax: (925) 602-4720

Project: TMSFT1  
Strough

Received: 12/20/2004 18:30

Batch QC Report			
Prep(s): 5030B			Test(s): 8260B
Method Blank	Water		QC Batch # 2004/12/29-01.62
MB: 2004/12/29-01.62-035			Date Extracted: 12/29/2004 08:35

Compound	Conc.	RL	Unit	Analyzed	Flag
Gasoline	ND	50	ug/L	12/29/2004 08:35	
Benzene	ND	0.5	ug/L	12/29/2004 08:35	
Toluene	ND	0.5	ug/L	12/29/2004 08:35	
Ethylbenzene	ND	0.5	ug/L	12/29/2004 08:35	
Total xylenes	ND	1.0	ug/L	12/29/2004 08:35	
<b>Surrogates(s)</b>					
1,2-Dichloroethane-d4	94.2	73-130	%	12/29/2004 08:35	
Toluene-d8	89.6	81-114	%	12/29/2004 08:35	

**Fuel Oxygenates by 8260B**

ETIC Pleasant Hill  
Attn.: Kathy Brandt

2285 Morello Avenue  
Pleasant Hill, CA 94523  
Phone: (925) 602-4710 Fax: (925) 602-4720

Project: TMSFT1  
Strough

Received: 12/20/2004 18:30

Batch QC Report									
Prep(s): 5030B					Test(s): 8260B				
Laboratory Control Spike			Water			QC Batch # 2004/12/28-02-64			
LCS		2004/12/28-02-64-040		Extracted: 12/28/2004		Analyzed: 12/28/2004 17:40			
LCSD									

Compound	Conc. ug/L		Exp. Conc.	Recovery %		RPD	Ctrl. Limits %		Flags	
	LCS	LCSD		LCS	LCSD		%	Rec.	RPD	LCS
Benzene	24.1		25.0	96.4			69-129	20		
Toluene	24.6		25.0	98.4			70-130	20		
<b>Surrogates(s)</b>										
1,2-Dichloroethane-d4	501		500	100.2			73-130			
Toluene-d8	497		500	99.4			81-114			

**Fuel Oxygenates by 8260B**

ETIC Pleasant Hill  
Attn.: Kathy Brandt

2285 Morello Avenue  
Pleasant Hill, CA 94523  
Phone: (925) 602-4710 Fax: (925) 602-4720

Project: TMSFT1  
Strough

Received: 12/20/2004 18:30

Batch QC Report									
Prep(s): 5030B					Test(s): 8260B				
Laboratory Control Spike			Water			QC Batch # 2004/12/29-01.62			
LCS	2004/12/29-01.62-019		Extracted: 12/29/2004			Analyzed: 12/29/2004 07:19			
LCSD									

Compound	Conc. ug/L		Exp.Conc.	Recovery %		RPD	Ctrl.Limits %		Flags	
	LCS	LCSD		LCS	LCSD		%	Rec.	RPD	LCS
Benzene	22.8		25.0	91.2			69-129	20		
Toluene	22.0		25.0	88.0			70-130	20		
<b>Surrogates(s)</b>										
1,2-Dichloroethane-d4	415		500	83.0			73-130			
Toluene-d8	465		500	93.0			81-114			

**Fuel Oxygenates by 8260B**

ETIC Pleasant Hill  
Attn.: Kathy Brandt

2285 Morello Avenue  
Pleasant Hill, CA 94523  
Phone: (925) 602-4710 Fax: (925) 602-4720

Project: TMSFT1  
Strough

Received: 12/20/2004 18:30

Batch QC Report			
Prep(s):	5030B	Test(s):	8260B
Matrix Spike (-MS / MSD)		Water	QC Batch # 2004/12/28-02:64
MS/MSD		Lab ID	2004-12-0695 - 001
MS:	2004/12/28-02:64-014	Extracted:	12/28/2004
		Analyzed:	12/28/2004 19:14
		Dilution:	1.00
MSD:	2004/12/28-02:64-035	Extracted:	12/28/2004
		Analyzed:	12/28/2004 19:35
		Dilution:	1.00

Compound	Conc. ug/L			Spk.Level	Recovery %			Limits %		Flags	
	MS	MSD	Sample		ug/L	MS	MSD	RPD	Rec.	RPD	MS
Benzene	28.6	25.7	ND	25.0	114.4	102.8	10.7	69-129	20		
Toluene	30.3	26.3	ND	25.0	121.2	105.2	14.1	70-130	20		
<i>Surrogate(s)</i>											
1,2-Dichloroethane-d4	518	512		500	103.6	102.4		73-130			
Toluene-d8	510	486		500	101.9	97.2		81-114			

**Fuel Oxygenates by 8260B**

ETIC Pleasant Hill  
Attn.: Kathy Brandt

2285 Morello Avenue  
Pleasant Hill, CA 94523  
Phone: (925) 602-4710 Fax: (925) 602-4720

Project: TMSFT1  
Strough

Received: 12/20/2004 18:30

Batch QC Report			
Prep(s):	5030B		Test(s): 8260B
<b>Matrix Spike (MS / MSD)</b>		<b>Water</b>	<b>QC Batch # 2004/12/29-01.62</b>
MS/MSD			Lab ID: 2004-12-0770-004
MS:	2004/12/29-01.62-028	Extracted: 12/29/2004	Analyzed: 12/29/2004 09:28
			Dilution: 1:00
MSD:	2004/12/29-01.62-050	Extracted: 12/29/2004	Analyzed: 12/29/2004 09:50
			Dilution: 1:00

Compound	Conc. ug/L		Spk.Level	Recovery %			Limits %		Flags		
	MS	MSD		Sample	ug/L	MS	MSD	RPD	Rec.	RPD	MS
Benzene	23.7	18.6	ND	25.0	94.8	74.4	24.1	69-129	20		R4
Toluene	24.0	18.1	ND	25.0	96.0	72.4	28.0	70-130	20		R4
<b>Surrogate(s)</b>											
1,2-Dichloroethane-d4	436	446		500	87.3	89.2		73-130			
Toluene-d8	451	449		500	90.3	89.8		81-114			

**Fuel Oxygenates by 8260B**

ETIC Pleasant Hill  
Attn.: Kathy Brandt

2285 Morello Avenue  
Pleasant Hill, CA 94523  
Phone: (925) 602-4710 Fax: (925) 602-4720

Project: TMSFT1  
Strough

Received: 12/20/2004 18:30

**Legend and Notes**

**Analysis Flag**

L2

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

**Result Flag**

R4

RPD exceeded method control limit; % recoveries within limits.

Severn Trent Laboratories, Inc.

STL San Francisco \* 1220 Quarry Lane, Pleasanton, CA 94566

Tel 925 484 1919 Fax 925 484 1096 \* www.stl-inc.com \* CA DHS ELAP# 2496



SEVERN  
CORP

STL  
2004-12-0712

STL San Francisco Chain of Custody  
1220 Quarry Lane • Pleasanton CA 94566-4756  
Phone: (925) 484-1919 • Fax: (925) 484-1096  
Email: [slogin@stl-inc.com](mailto:slogin@stl-inc.com)

Reference #: 96831

Date 12/20/04 Page 1 of 1

Report To					Analysis Request														
Attn: <u>Kathy Brandt</u> Company: <u>Etic Engineering</u> Address: <u>2255 marillo AVE, Pleasant Hill, CA 94523</u> Phone: <u>510-208-1600</u> Email: Fax: <u>510-208-1604</u> Sampled By: <u>S. McNew</u> Attn: Phone:					<input type="checkbox"/> TPH EPA • <input type="checkbox"/> 8015M • <input type="checkbox"/> 8088 <input type="checkbox"/> Gas • <input type="checkbox"/> BTEX • <input type="checkbox"/> NTBE <input type="checkbox"/> Purgeable Aromatics <input type="checkbox"/> BTEX EPA • <input type="checkbox"/> 8015 • <input type="checkbox"/> 8088 <input type="checkbox"/> TSPH EPA 8015M • <input type="checkbox"/> Silica Gel <input type="checkbox"/> Diesel • <input type="checkbox"/> Motor Oil • Other <input checked="" type="checkbox"/> Fuel Tests EPA 8088 • <input type="checkbox"/> Gas XSTX <input type="checkbox"/> Free Crystalline • <input type="checkbox"/> DCA • <input type="checkbox"/> EOB • <input type="checkbox"/> Ethanol <input type="checkbox"/> Pyrolyzable Hydrocarbons (HVOCs) EPA 8021 by 80808 <input type="checkbox"/> Volatile Organics GC/MS (VOCs) • <input type="checkbox"/> EPA 8260B • <input type="checkbox"/> 82 <input type="checkbox"/> Semivolatiles GC/MS • <input type="checkbox"/> EPA 8270 • <input type="checkbox"/> 825 <input type="checkbox"/> Oil and Grease • <input type="checkbox"/> Petroleum (EPA 1664) • <input type="checkbox"/> Total <input type="checkbox"/> Pesticides • <input type="checkbox"/> EPA 8081 • <input type="checkbox"/> 808 <input type="checkbox"/> PCBs • <input type="checkbox"/> EPA 8082 • <input type="checkbox"/> 808 <input type="checkbox"/> PAHs by • <input type="checkbox"/> 8270 • <input type="checkbox"/> 8310 <input type="checkbox"/> CML17 Metals (EPA 8010/7470/7471) <input type="checkbox"/> Metals: • <input type="checkbox"/> Lead • <input type="checkbox"/> LUP • <input type="checkbox"/> PCRA • <input type="checkbox"/> Other <input type="checkbox"/> Low Level Metals by EPA 8204/8080 (GP-MS) <input type="checkbox"/> W.E.T (STLC) • <input type="checkbox"/> TCLP <input type="checkbox"/> Hexavalent Chromium ppt (24h hold time for H <sub>2</sub> O) <input type="checkbox"/> Spec. Cond. • <input type="checkbox"/> Alkalinity • <input type="checkbox"/> TDS • <input type="checkbox"/> TSS <input type="checkbox"/> Anions: • <input type="checkbox"/> Cl • <input type="checkbox"/> SO <sub>4</sub> • <input type="checkbox"/> NO <sub>3</sub> • <input type="checkbox"/> F • <input type="checkbox"/> Br • <input type="checkbox"/> NO <sub>2</sub> • <input type="checkbox"/> PO <sub>4</sub> 8015 / 8021 Benzene + Tol's Number of Containers														
Sample ID	Date	Time	Mat. rt	Pres. env.															
EFF	12-20	200	H <sub>2</sub> O	1k															
Int		210	H <sub>2</sub> O	1k															
Inf		220	H <sub>2</sub> O	1k															
Inf-Air	12/20	315	Air	-	} 24 hr lat														
EFF-Air		300	Air	-	} 24 hr lat														

**RUSH**

XX

Project Info.		Sample Receipt		1) Relinquished by:		2) Relinquished by:		3) Relinquished by:	
Project Name: <u>Strough</u>	# of Containers:	# of Containers:	Head Space:	Signature: <u>S. McNew</u>	Time: <u>1850</u>	Signature:	Time:	Signature:	Time:
Project: <u>1msf+1</u>	Temp: <u>5 H<sub>2</sub>O / 15 AIR</u>	Printed Name: <u>S. McNew</u>	Date: <u>12/20/04</u>	Signature: <u>S. McNew</u>	Time: <u>12/20/04</u>	Signature:	Time:	Signature:	Time:
PO#: _____	Conforms to record:	Company: <u>Etic Engineering</u>	Company:	Signature: <u>M. Villanueva</u>	Time: <u>12/20/04</u>	Signature:	Time:	Signature:	Time:
Credit Card#: _____	Other:	Company: <u>STL SF</u>	Company:	Signature:	Time:	Signature:	Time:	Signature:	Time:
T A T	5 Day	72h	48h	24h	Other:	Signature:	Time:	Signature:	Time:
Report: <input type="checkbox"/> Routine <input type="checkbox"/> Level 3 <input type="checkbox"/> Level 4 <input type="checkbox"/> EOD <input type="checkbox"/> State Tax Fund EDF		Special Instructions / Comments: <u>copy: ERIC Zickler ezickler@eticeng.com 510-208-1600 X18</u>		Signature: <u>M. Villanueva</u>		Signature:		Signature:	
		Date: <u>12/20/04</u>		Signature:		Signature:		Signature:	
		Company: <u>STL SF</u>		Signature:		Signature:		Signature:	
		Company:		Signature:		Signature:		Signature:	

\*STL SF reports 8015M from C<sub>1</sub>-C<sub>2</sub> (industry norm). Default for 8015M is C<sub>1</sub>-C<sub>2</sub>

ETIC Oakland

March 08, 2005

1333 Broadway, Suite 1015  
Oakland, CA 94612

Attn.: Eric Zickler

Project#: TMSFT1

Project: Strough Family

**COPY**

Attached is our report for your samples received on 02/28/2005 16:55

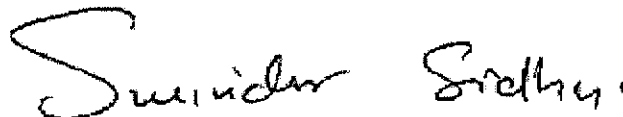
This report has been reviewed and approved for release. Reproduction of this report is permitted only in its entirety.

Please note that any unused portion of the samples will be discarded after 04/14/2005 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: [ssidhu@stl-inc.com](mailto:ssidhu@stl-inc.com)

Sincerely,



Surinder Sidhu  
Project Manager

**Gas/BTEX Fuel Oxygenates by 8260B**

ETIC Oakland

Attn.: Eric Zickler

1333 Broadway, Suite 1015

Oakland, CA 94612

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

Project: TMSFT1

Strough Family

Received: 02/28/2005 16:55

**Samples Reported**

Sample Name	Date Sampled	Matrix	Lab.#
OUTLET	02/28/2005 10:30	Air	4
INLET	02/28/2005 10:50	Air	5

Severn Trent Laboratories, Inc.

STL San Francisco \* 1220 Quarry Lane, Pleasanton, CA 94566

Tel 925 484 1919 Fax 925 484 1096 \* www.stl-inc.com \* CA DHS ELAP# 2496

03/04/2005 16:33

Gas/BTEX Fuel Oxygenates by 8260B

ETIC Oakland  
Attn.: Eric Zickler

1333 Broadway, Suite 1015  
Oakland, CA 94612  
Phone: (510) 208-1600 Fax: (510) 208-1604

Project: TMSFT1  
Strough Family

Received: 02/28/2005 16:55

Prep(s): 5030B Test(s): 8260B  
Sample ID: OUTLET Lab ID: 2005-02-0818 - 4  
Sampled: 02/28/2005 10:30 Extracted: 3/1/2005 12:32  
Matrix: Air QC Batch#: 2005/03/01-1C.62

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Benzene	ND	1.0, 31	ug/L	1.00	03/01/2005 12:32	
Toluene	ND	1.0, 265	ug/L	1.00	03/01/2005 12:32	
Ethylbenzene	ND	1.0, 23	ug/L	1.00	03/01/2005 12:32	
Total xylenes	ND	1.0, 23	ug/L	1.00	03/01/2005 12:32	
<b>Surrogate(s)</b>						
1,2-Dichloroethane-d4	117.6	72-128	%	1.00	03/01/2005 12:32	
Toluene-d8	106.7	80-113	%	1.00	03/01/2005 12:32	

**Gas/BTEX Fuel Oxygenates by 8260B**

ETIC Oakland  
Attn.: Eric Zickler

1333 Broadway, Suite 1015  
Oakland, CA 94612  
Phone: (510) 208-1600 Fax: (510) 208-1604

Project: TMSFT1  
Strough Family

Received: 02/28/2005 16:55

Prep(s): 5030B Test(s): 8260B  
Sample ID: INLET Lab ID: 2005-02-0818 - 5  
Sampled: 02/28/2005 10:50 Extracted: 3/1/2005 12:59  
Matrix: Air QC Batch#: 2005/03/01-1C.62  
Analysis Flag: L2 ( See Legend and Note Section )

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Benzene	78.26 250	10	ug/L	10.00	03/01/2005 12:59	
Toluene	242.73 990	10	ug/L	10.00	03/01/2005 12:59	
Ethylbenzene	46.06 200	10	ug/L	10.00	03/01/2005 12:59	
Total xylenes	276.35 1200	10	ug/L	10.00	03/01/2005 12:59	
<b>Surrogate(s)</b>						
1,2-Dichloroethane-d4	114.5	72-128	%	10.00	03/01/2005 12:59	
Toluene-d8	108.3	80-113	%	10.00	03/01/2005 12:59	

276.35

**Gas/BTEX Fuel Oxygenates by 8260B**

ETIC Oakland  
Attn.: Eric Zickler

1333 Broadway, Suite 1015  
Oakland, CA 94612  
Phone: (510) 208-1600 Fax: (510) 208-1604

Project: TMSFT1  
Strough Family

Received: 02/28/2005 16:55

**Batch QC Report**

Prep(s): 5030B

Method Blank

MB: 2005/03/01-1C.62-001

Water

Test(s): 8260B

QC Batch # 2005/03/01-1C.62

Date Extracted: 03/01/2005 08:01

Compound	Conc.	RL	Unit	Analyzed	Flag
Benzene	ND	0.5	ug/L	03/01/2005 08:01	
Toluene	ND	0.5	ug/L	03/01/2005 08:01	
Ethylbenzene	ND	0.5	ug/L	03/01/2005 08:01	
Total xylenes	ND	1.0	ug/L	03/01/2005 08:01	
<b>Surrogates(s)</b>					
1,2-Dichloroethane-d4	106.2	73-130	%	03/01/2005 08:01	
Toluene-d8	104.8	81-114	%	03/01/2005 08:01	

Severn Trent Laboratories, Inc.

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03/04/2005 16:33

**Gas/BTEX Fuel Oxygenates by 8260B**

ETIC Oakland  
Attn.: Eric Zickler

1333 Broadway, Suite 1015  
Oakland, CA 94612  
Phone: (510) 208-1600 Fax: (510) 208-1604

Project: TMSFT1  
Strough Family

Received: 02/28/2005 16:55

**Batch QC Report**

Prep(s): 5030B

Test(s): 8260B

Laboratory Control Spike

Water

QC Batch # 2005/03/01-1C.62

LCS 2005/03/01-1C.62-035

Extracted: 03/01/2005

Analyzed: 03/01/2005 07:35

LCSD

Compound	Conc. ug/L		Exp. Conc.	Recovery %		RPD %	Ctrl.Limits %		Flags	
	LCS	LCSD		LCS	LCSD		Rec.	RPD	LCS	LCSD
Benzene	24.4		25	97.6			69-129	20		
Toluene	23.6		25	94.4			70-130	20		
<b>Surrogates(s)</b>										
1,2-Dichloroethane-d4	493		500	98.6			73-130			
Toluene-d8	559		500	111.8			81-114			

**Gas/BTEX Fuel Oxygenates by 8260B**

ETIC Oakland  
Attn.: Eric Zickler

1333 Broadway, Suite 1015  
Oakland, CA 94612  
Phone: (510) 208-1600 Fax: (510) 208-1604

Project: TMSFT1  
Strough Family

Received: 02/28/2005 16:55

**Batch QC Report**

Prep(s): 5030B

Test(s): 8260B

Matrix Spike ( MS / MSD )

Water

QC Batch # 2005/03/01-1C.62

MS/MSD

Lab ID: 2005-02-0835 - 004

MS: 2005/03/01-1C.62-040

Extracted: 03/01/2005

Analyzed: 03/01/2005 11:40

Dilution: 1.00

MSD: 2005/03/01-1C.62-006

Extracted: 03/01/2005

Analyzed: 03/01/2005 12:06

Dilution: 1.00

Compound	Conc. ug/L			Spk.Level	Recovery %			Limits %		Flags	
	MS	MSD	Sample		ug/L	MS	MSD	RPD	Rec.	RPD	MS
Benzene	24.6	25.1	ND	25	98.4	100.4	2.0	69-129	20		
Toluene	23.3	24.4	ND	25	93.2	97.6	4.6	70-130	20		
<i>Surrogate(s)</i>											
1,2-Dichloroethane-d4	503	513		500	100.6	102.6		73-130			
Toluene-d8	507	538		500	101.4	107.6		81-114			

Severn Trent Laboratories, Inc.

STL San Francisco \* 1220 Quarry Lane, Pleasanton, CA 94566

Tel 925 484 1919 Fax 925 484 1096 \* www.stl-inc.com \* CA DHS ELAP# 2496

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**Gas/BTEX Fuel Oxygenates by 8260B**

ETIC Oakland

Attn.: Eric Zickler

1333 Broadway, Suite 1015

Oakland, CA 94612

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

Project: TMSFT1

Strough Family

Received: 02/28/2005 16:55

---

**Legend and Notes**

---

**Analysis Flag**

L2

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

Severn Trent Laboratories, Inc.

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A part of Severn Trent Plc

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Page 7 of 7

**Diesel**

ETIC Oakland

Attn.: Eric Zickler

1333 Broadway, Suite 1015

Oakland, CA 94612

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

Project: TMSFT1

Strough Family

Received: 02/28/2005 16:55

**Samples Reported**

Sample Name	Date Sampled	Matrix	Lab #
EFFLUENT	02/28/2005 11:00	Water	1
MIDFLUENT	02/28/2005 11:10	Water	2
INFLUENT	02/28/2005 11:20	Water	3

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03/07/2005 17:14

**Diesel**

ETIC Oakland  
Attn.: Eric Zickler

1333 Broadway, Suite 1015  
Oakland, CA 94612  
Phone: (510) 208-1600 Fax: (510) 208-1604

Project: TMSFT1  
Strough Family

Received: 02/28/2005 16:55

Prep(s):	3510/8015M	Test(s):	8015M
Sample ID:	EFFLUENT	Lab ID:	2005-02-0818 - 1
Sampled:	02/28/2005 11:00	Extracted:	3/2/2005 11:24
Matrix:	Water	QC Batch#:	2005/03/02-03.10

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Diesel	ND	50	ug/L	1.00	03/03/2005 11:29	
<i>Surrogate(s)</i> o-Terphenyl	82.0	60-130	%	1.00	03/03/2005 11:29	

**Diesel**

ETIC Oakland  
Attn.: Eric Zickler

1333 Broadway, Suite 1015  
Oakland, CA 94612  
Phone: (510) 208-1600 Fax: (510) 208-1604

Project: TMSFT1  
Strough Family

Received: 02/28/2005 16:55

Prep(s):	3510/8015M	Test(s):	8015M
Sample ID:	MIDFLUENT	Lab ID:	2005-02-0818 - 2
Sampled:	02/28/2005 11:10	Extracted:	3/2/2005 11:24
Matrix:	Water	QC Batch#:	2005/03/02-03.10

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Diesel	ND	50	ug/L	1.00	03/03/2005 12:51	
<b>Surrogate(s)</b>						
o-Terphenyl	51.7	60-130	%	1.00	03/03/2005 12:51	S6

**Diesel**

ETIC Oakland  
Attn.: Eric Zickler

1333 Broadway, Suite 1015  
Oakland, CA 94612  
Phone: (510) 208-1600 Fax: (510) 208-1604

Project: TMSFT1  
Strough Family

Received: 02/28/2005 16:55

Prep(s):	3510/8015M	Test(s):	8015M
Sample ID:	INFLUENT	Lab ID:	2005-02-0818 - 3
Sampled:	02/28/2005 11:20	Extracted:	3/2/2005 11:24
Matrix:	Water	QC Batch#:	2005/03/02-03.10

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Diesel	1700	50	ug/L	1.00	03/03/2005 15:06	Q2
<b>Surrogate(s)</b>						
o-Terphenyl	49.2	60-130	%	1.00	03/03/2005 15:06	S6

**Diesel**

ETIC Oakland

Attn.: Eric Zickler

1333 Broadway, Suite 1015

Oakland, CA 94612

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

Project: TMSFT1

Strough Family

Received: 02/28/2005 16:55

**Batch QC Report**

Prep(s): 3510/8015M

Method Blank

MB: 2005/03/02-03.10-001

Water

Test(s): 8015M

QC Batch # 2005/03/02-03.10

Date Extracted: 03/02/2005 11:24

Compound	Conc.	RL	Unit	Analyzed	Flag
Diesel	ND	50	ug/L	03/02/2005 16:28	
<i>Surrogates(s)</i> o-Terphenyl	83.6	60-130	%	03/02/2005 16:28	

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Tel 925 484 1919 Fax 925 484 1096 \* www.stl-inc.com \* CA DHS ELAP# 2496

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**Diesel**

ETIC Oakland  
Attn.: Eric Zickler

1333 Broadway, Suite 1015  
Oakland, CA 94612  
Phone: (510) 208-1600 Fax: (510) 208-1604

Project: TMSFT1  
Strough Family

Received: 02/28/2005 16:55

**Batch QC Report**

Prep(s): 3510/8015M

Test(s): 8015M

**Laboratory Control Spike**

**Water**

**QC Batch # 2005/03/02-03.10**

LCS 2005/03/02-03.10-002

Extracted: 03/02/2005

Analyzed: 03/03/2005 16:00

LCSD 2005/03/02-03.10-003

Extracted: 03/02/2005

Analyzed: 03/04/2005 00:26

Compound	Conc. ug/L		Exp. Conc.	Recovery %		RPD	Ctrl. Limits %		Flags	
	LCS	LCSD		LCS	LCSD		%	Rec.	RPD	LCS
Diesel	846	831	1000	84.6	83.1	1.8	60-130	25		
Surrogates(s) o-Terphenyl	18.3	19.9	20.0	91.5	99.3		60-130	0		

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Tel 925 484 1919 Fax 925 484 1096 \* www.stl-inc.com \* CA DHS ELAP# 2496

03/07/2005 17:14

**Diesel**

ETIC Oakland  
Attn.: Eric Zickler

1333 Broadway, Suite 1015  
Oakland, CA 94612  
Phone: (510) 208-1600 Fax: (510) 208-1604

Project: TMSFT1  
Strough Family

Received: 02/28/2005 16:55

**Batch QC Report**

Prep(s): 3510/8015M

Test(s): 8015M

**Matrix Spike ( MS / MSD )**

**Water**

**QC Batch # 2005/03/02-03.10**

INFLUENT >> MS

Lab ID: 2005-02-0818 - 003

MS: 2005/03/02-03.10-004

Extracted: 03/02/2005

Analyzed: 03/03/2005 15:06

Dilution: 1.00

MSD: 2005/03/02-03.10-005

Extracted: 03/02/2005

Analyzed: 03/03/2005 13:45

Dilution: 1.00

Compound	Conc. ug/L			Spk.Level ug/L	Recovery %			Limits %		Flags	
	MS	MSD	Sample		MS	MSD	RPD	Rec.	RPD	MS	MSD
Diesel	2000	2190	1670	1000	33.0	52.0	44.7	60-130	25	M5	R2
Surrogate(s) o-Terphenyl	11.0	12.3		20.0	55.2	61.5		60-130	0	S6	

Severn Trent Laboratories, Inc.

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Tel 925 484 1919 Fax 925 484 1096 \* www.stl-inc.com \* CA DHS ELAP# 2496

03/07/2005 17:14



**Diesel**

ETIC Oakland

Attn.: Eric Zickler

1333 Broadway, Suite 1015

Oakland, CA 94612

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

Project: TMSFT1

Strough Family

Received: 02/28/2005 16:55

---

**Legend and Notes**

---

**Result Flag**

M5

MS/MSD spike recoveries were below acceptance limits.  
See blank spike (LCS).

Q2

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

R2

Analyte RPD was out of QC limits due to sample heterogeneity.

S6

Surrogate recoveries lower than acceptance limits.  
Matrix interference suspected

Severn Trent Laboratories, Inc.

STL San Francisco \* 1220 Quarry Lane, Pleasanton, CA 94566

Tel 925 484 1919 Fax 925 484 1096 \* www.stl-inc.com \* CA DHS ELAP# 2496

03/07/2005 17:14



STL San Francisco

Sample Receipt Checklist

Submission #: 2005-02-0818

Checklist completed by: (initials) [Signature] Date: 2/28/05

Courier name:  STL San Francisco  Client

Custody seals intact on shipping container/samples Yes \_\_\_ No \_\_\_ Not Present

Chain of custody present? Yes  No \_\_\_

Chain of custody signed when relinquished and received? Yes  No \_\_\_

Chain of custody agrees with sample labels? Yes \_\_\_ No \_\_\_

Samples in proper container/bottle? Yes  No \_\_\_

Sample containers intact? Yes  No \_\_\_

Sufficient sample volume for indicated test? Yes \_\_\_ No \_\_\_

All samples received within holding time? Yes  No \_\_\_

Container/Temp Blank temperature in compliance (4°C ± 2)? Temp: 6°C Yes  No \_\_\_

Water 6°C / Air 20°C

Potential reason for > 6°C: Ice melted  Ice in bags  Not enough ice  Not enough blue ice  Samples in boxes

Sampled < 4hr. ago?  Ice not required (e.g. air or bulk sample)  Ice Present Yes  No \_\_\_

Water - VOA vials have zero headspace? No VOA vials submitted Yes  No \_\_\_

(if bubble is present, refer to approximate bubble size and itemize in comments as S (small ~ O), M (medium ~ O) or L (large ~ O))

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 comment section below:

Comments: No method SPECIFIED STEX - WATER & AIR SAMPLES (logged by 8260FO method)

Project Management [Routing for instruction of indicated discrepancy(ies)]

Project Manager: (initials) \_\_\_\_\_ Date: \_\_\_\_/\_\_\_\_/05

Client contacted:  Yes  No

Summary of discussion: \_\_\_\_\_

Corrective Action (per PM/Client): \_\_\_\_\_

ETIC Oakland

April 12, 2005

1333 Broadway, Suite 1015  
Oakland, CA 94612

Attn.: Eric Zickler

Project#: TMSFT1

Project: Strough Family Trust

RECEIVED

APR 26 2005

ETIC ENGINEERING

Attached is our report for your samples received on 03/23/2005 15:47.

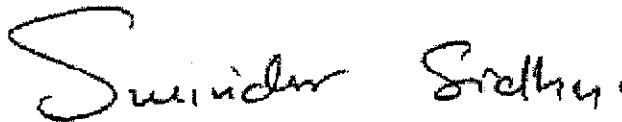
This report has been reviewed and approved for release. Reproduction of this report is permitted only in its entirety.

Please note that any unused portion of the samples will be discarded after 05/07/2005 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: [ssidhu@stl-inc.com](mailto:ssidhu@stl-inc.com)

Sincerely,



Surinder Sidhu  
Project Manager

Severn Trent Laboratories, Inc.

STL San Francisco \* 1220 Quarry Lane, Pleasanton, CA 94566

Tel 925 484 1919 Fax 925 484 1096 \* [www.stl-inc.com](http://www.stl-inc.com) \* CA DHS ELAP# 2496

**Fuel Oxygenates by 8260B**

ETIC Oakland

Attn.: Eric Zickler

1333 Broadway, Suite 1015

Oakland, CA 94612

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

Project: TMSFT1

Strough Family Trust

Received: 03/23/2005 15:47

**Samples Reported**

Sample Name	Date Sampled	Matrix	Lab #
EFFLUENT	03/23/2005 10:00	Water	1
MIDFLUENT	03/23/2005 10:10	Water	2
INFLUENT	03/23/2005 10:20	Water	3

Severn Trent Laboratories, Inc.

STL San Francisco \* 1220 Quarry Lane, Pleasanton, CA 94566

Tel 925 484 1919 Fax 925 484 1096 \* www.stl-inc.com \* CA DHS ELAP# 2496

04/12/2005 16:25

Fuel Oxygenates by 8260B

ETIC Oakland  
Attn.: Eric Zickler

1333 Broadway, Suite 1015  
Oakland, CA 94612  
Phone: (510) 208-1600 Fax: (510) 208-1604

Project: TMSFT1  
Strough Family Trust

Received: 03/23/2005 15:47

Prep(s): 5030B Test(s): 8260B  
Sample ID: EFFLUENT Lab ID: 2005-03-0734 - 1  
Sampled: 03/23/2005 10:00 Extracted: 4/2/2005 12:01  
Matrix: Water QC Batch#: 2005/04/02-01.68

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	ND	50	ug/L	1.00	04/02/2005 12:01	
Benzene	ND	0.50	ug/L	1.00	04/02/2005 12:01	
Toluene	ND	0.50	ug/L	1.00	04/02/2005 12:01	
Ethylbenzene	ND	0.50	ug/L	1.00	04/02/2005 12:01	
Total xylenes	ND	1.0	ug/L	1.00	04/02/2005 12:01	
<b>Surrogate(s)</b>						
1,2-Dichloroethane-d4	113.1	73-130	%	1.00	04/02/2005 12:01	
Toluene-d8	102.9	81-114	%	1.00	04/02/2005 12:01	



**Fuel Oxygenates by 8260B**

ETIC Oakland  
Attn.: Eric Zickler

1333 Broadway, Suite 1015  
Oakland, CA 94612  
Phone: (510) 208-1600 Fax: (510) 208-1604

Project: TMSFT1  
Strough Family Trust

Received: 03/23/2005 15:47

Prep(s): 5030B Test(s): 8260B  
Sample ID: **INFLUENT** Lab ID: 2005-03-0734 - 3  
Sampled: 03/23/2005 10:20 Extracted: 4/6/2005 16:40  
Matrix: Water QC Batch#: 2005/04/06-01.69  
Analysis Flag: L2 ( See Legend and Note Section )

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	70000	2500	ug/L	50.00	04/06/2005 16:40	
Benzene	360	25	ug/L	50.00	04/06/2005 16:40	
Toluene	2300	25	ug/L	50.00	04/06/2005 16:40	
Ethylbenzene	740	25	ug/L	50.00	04/06/2005 16:40	
Total xylenes	6300	50	ug/L	50.00	04/06/2005 16:40	
<b>Surrogate(s)</b>						
1,2-Dichloroethane-d4	99.6	73-130	%	50.00	04/06/2005 16:40	
Toluene-d8	88.3	81-114	%	50.00	04/06/2005 16:40	



**Fuel Oxygenates by 8260B**

ETIC Oakland  
Attn.: Eric Zickler

1333 Broadway, Suite 1015  
Oakland, CA 94612  
Phone: (510) 208-1600 Fax: (510) 208-1604

Project: TMSFT1  
Strough Family Trust

Received: 03/23/2005 15:47

**Batch QC Report**

Prep(s): 5030B

Method Blank

MB: 2005/04/01-02.66-043

Water

Test(s): 8260B

QC Batch # 2005/04/01-02.66

Date Extracted: 04/01/2005 19:43

Compound	Conc.	RL	Unit	Analyzed	Flag
Gasoline	ND	50	ug/L	04/01/2005 19:43	
Benzene	ND	0.5	ug/L	04/01/2005 19:43	
Toluene	ND	0.5	ug/L	04/01/2005 19:43	
Ethylbenzene	ND	0.5	ug/L	04/01/2005 19:43	
Total xylenes	ND	1.0	ug/L	04/01/2005 19:43	
<b>Surrogates(s)</b>					
1,2-Dichloroethane-d4	100.2	73-130	%	04/01/2005 19:43	
Toluene-d8	103.8	81-114	%	04/01/2005 19:43	

**Fuel Oxygenates by 8260B**

ETIC Oakland  
Attn.: Eric Zickler

1333 Broadway, Suite 1015  
Oakland, CA 94612  
Phone: (510) 208-1600 Fax: (510) 208-1604

Project: TMSFT1  
Strough Family Trust

Received: 03/23/2005 15:47

**Batch QC Report**

Prep(s): 5030B

Test(s): 8260B

Method Blank

Water

QC Batch # 2005/04/02-01.68

MB: 2005/04/02-01.68-034

Date Extracted: 04/02/2005 11:34

Compound	Conc.	RL	Unit	Analyzed	Flag
Gasoline	ND	50	ug/L	04/02/2005 11:34	
Benzene	ND	0.5	ug/L	04/02/2005 11:34	
Toluene	ND	0.5	ug/L	04/02/2005 11:34	
Ethylbenzene	ND	0.5	ug/L	04/02/2005 11:34	
Total xylenes	ND	1.0	ug/L	04/02/2005 11:34	
<b>Surrogates(s)</b>					
1,2-Dichloroethane-d4	90.6	73-130	%	04/02/2005 11:34	
Toluene-d8	102.8	81-114	%	04/02/2005 11:34	

**Fuel Oxygenates by 8260B**

ETIC Oakland  
Attn.: Eric Zickler

1333 Broadway, Suite 1015  
Oakland, CA 94612  
Phone: (510) 208-1600 Fax: (510) 208-1604

Project: TMSFT1  
Strough Family Trust

Received: 03/23/2005 15:47

**Batch QC Report**

Prep(s): 5030B  
Method Blank  
MB: 2005/04/06-01.69-007

Water

Test(s): 8260B  
QC Batch # 2005/04/06-01.69  
Date Extracted: 04/06/2005 09:07

Compound	Conc.	RL	Unit	Analyzed	Flag
Gasoline	ND	50	ug/L	04/06/2005 09:07	
Benzene	ND	0.5	ug/L	04/06/2005 09:07	
Toluene	ND	0.5	ug/L	04/06/2005 09:07	
Ethylbenzene	ND	0.5	ug/L	04/06/2005 09:07	
Total xylenes	ND	1.0	ug/L	04/06/2005 09:07	
<b>Surrogates(s)</b>					
1,2-Dichloroethane-d4	92.0	73-130	%	04/06/2005 09:07	
Toluene-d8	93.2	81-114	%	04/06/2005 09:07	

**Fuel Oxygenates by 8260B**

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

Project: TMSFT1  
Strough Family Trust

Received: 03/23/2005 15:47

**Batch QC Report**

Prep(s): 5030B

Test(s): 8260B

Laboratory Control Spike

Water

QC Batch # 2005/04/01-02.66

LCS 2005/04/01-02.66-017  
LCSD

Extracted: 04/01/2005

Analyzed: 04/01/2005 19:17

Compound	Conc. ug/L		Exp.Conc.	Recovery %		RPD	Ctrl.Limits %		Flags	
	LCS	LCSD		LCS	LCSD		%	Rec.	RPD	LCS
Benzene	23.2		25.0	92.8			69-129	20		
Toluene	26.5		25.0	106.0			70-130	20		
<b>Surrogates(s)</b>										
1,2-Dichloroethane-d4	485		500	97.0			73-130			
Toluene-d8	518		500	103.6			81-114			

Severn Trent Laboratories, Inc.

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04/12/2005 16:25

**Fuel Oxygenates by 8260B**

ETIC Oakland  
Attn.: Eric Zickler

1333 Broadway, Suite 1015  
Oakland, CA 94612  
Phone: (510) 208-1600 Fax: (510) 208-1604

Project: TMSFT1  
Strough Family Trust

Received: 03/23/2005 15:47

**Batch QC Report**

Prep(s): 5030B

Test(s): 8260B

Laboratory Control Spike

Water

QC Batch # 2005/04/02-01.68

LCS 2005/04/02-01.68-017

Extracted: 04/02/2005

Analyzed: 04/02/2005 11:17

LCSD

Compound	Conc. ug/L		Exp.Conc.	Recovery %		RPD	Ctrl.Limits %		Flags	
	LCS	LCSD		LCS	LCSD		%	Rec.	RPD	LCS
Benzene	25.8		25.0	103.2			69-129	20		
Toluene	28.2		25.0	112.8			70-130	20		
<b>Surrogates(s)</b>										
1,2-Dichloroethane-d4	366		500	73.2			73-130			
Toluene-d8	531		500	106.2			81-114			

**Fuel Oxygenates by 8260B**

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Oakland, CA 94612  
Phone: (510) 208-1600 Fax: (510) 208-1604

Project: TMSFT1  
Strough Family Trust

Received: 03/23/2005 15:47

**Batch QC Report**

Prep(s): 5030B

Test(s): 8260B

Laboratory Control Spike

Water

QC Batch # 2005/04/06-01.69

LCS 2005/04/06-01.69-047

Extracted: 04/06/2005

Analyzed: 04/06/2005 08:47

LCSD

Compound	Conc. ug/L		Exp.Conc.	Recovery %		RPD	Ctrl.Limits %			Flags	
	LCS	LCSD		LCS	LCSD		%	Rec.	RPD	LCS	LCSD
Benzene	24.7		25.0	98.8			69-129	20			
Toluene	26.1		25.0	104.4			70-130	20			
<b>Surrogates(s)</b>											
1,2-Dichloroethane-d4	443		500	88.6			73-130				
Toluene-d8	463		500	92.6			81-114				

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**Fuel Oxygenates by 8260B**

ETIC Oakland  
Attn.: Eric Zickler

1333 Broadway, Suite 1015  
Oakland, CA 94612  
Phone: (510) 208-1600 Fax: (510) 208-1604

Project: TMSFT1  
Strough Family Trust

Received: 03/23/2005 15:47

**Batch QC Report**

Prep(s): 5030B

Test(s): 8260B

Matrix Spike ( MS / MSD )

Water

QC Batch # 2005/04/01-02.66

MS/MSD

Lab ID: 2005-03-0771 - 001

MS: 2005/04/01-02.66-034

Extracted: 04/01/2005

Analyzed: 04/01/2005 21:34

Dilution: 1.00

MSD: 2005/04/01-02.66-059

Extracted: 04/01/2005

Analyzed: 04/01/2005 21:59

Dilution: 1.00

Compound	Conc. ug/L			Spk.Level ug/L	Recovery %			Limits %		Flags	
	MS	MSD	Sample		MS	MSD	RPD	Rec.	RPD	MS	MSD
Benzene	24.9	20.3	ND	25.0	99.6	81.2	20.4	69-129	20		R4
Toluene	28.2	22.6	ND	25.0	112.8	90.4	22.0	70-130	20		R4
<i>Surrogate(s)</i>											
1,2-Dichloroethane-d4	461	486		500	92.2	97.2		73-130			
Toluene-d8	510	506		500	101.9	101.2		81-114			

**Fuel Oxygenates by 8260B**

ETIC Oakland

Attn.: Eric Zickler

1333 Broadway, Suite 1015

Oakland, CA 94612

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

Project: TMSFT1

Strough Family Trust

Received: 03/23/2005 15:47

**Batch QC Report**

Prep(s): 5030B

Test(s): 8260B

**Matrix Spike ( MS / MSD )**

**Water**

**QC Batch # 2005/04/02-01.68**

EFFLUENT >> MS

Lab ID: 2005-03-0734 - 001

MS: 2005/04/02-01.68-035

Extracted: 04/02/2005

Analyzed: 04/02/2005 12:18

Dilution: 1.00

MSD: 2005/04/02-01.68-036

Extracted: 04/02/2005

Analyzed: 04/02/2005 12:36

Dilution: 1.00

Compound	Conc. ug/L			Spk.Level ug/L	Recovery %			Limits %		Flags	
	MS	MSD	Sample		MS	MSD	RPD	Rec.	RPD	MS	MSD
Benzene	26.7	29.0	ND	25.0	106.8	116.0	8.3	69-129	20		
Toluene	27.4	30.8	ND	25.0	109.8	123.2	11.7	70-130	20		
<b>Surrogate(s)</b>											
1,2-Dichloroethane-d4	357	479		500	71.4	95.8		73-130	0	S6	
Toluene-d8	519	529		500	103.8	105.8		81-114	0		

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Tel 925 484 1919 Fax 925 484 1096 \* www.stl-inc.com \* CA DHS ELAP# 2496

04/12/2005 16:25



**Fuel Oxygenates by 8260B**

ETIC Oakland  
Attn.: Eric Zickler

1333 Broadway, Suite 1015  
Oakland, CA 94612  
Phone: (510) 208-1600 Fax: (510) 208-1604

Project: TMSFT1  
Strough Family Trust

Received: 03/23/2005 15:47

**Batch QC Report**

Prep(s): 5030B

Test(s): 8260B

**Matrix Spike ( MS / MSD )**

**Water**

**QC Batch # 2005/04/06-01.69**

MS/MSD

Lab ID: 2005-03-0884 - 014

MS: 2005/04/06-01.69-025

Extracted: 04/06/2005

Analyzed: 04/06/2005 13:25

Dilution: 1.00

MSD: 2005/04/06-01.69-044

Extracted: 04/06/2005

Analyzed: 04/06/2005 13:44

Dilution: 1.00

Compound	Conc. ug/L		Spk.Level	Recovery %			Limits %		Flags		
	MS	MSD		Sample	ug/L	MS	MSD	RPD	Rec.	RPD	MS
Benzene	22.6	23.7	ND	25.0	90.4	94.8	4.8	69-129	20		
Toluene	24.0	24.8	ND	25.0	96.0	99.2	3.3	70-130	20		
<i>Surrogate(s)</i>											
1,2-Dichloroethane-d4	438	441		500	87.6	88.2		73-130			
Toluene-d8	453	453		500	90.6	90.6		81-114			

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04/12/2005 16:25

**Fuel Oxygenates by 8260B**

ETIC Oakland  
Attn.: Eric Zickler

1333 Broadway, Suite 1015  
Oakland, CA 94612  
Phone: (510) 208-1600 Fax: (510) 208-1604

Project: TMSFT1  
Strough Family Trust

Received: 03/23/2005 15:47

---

**Legend and Notes**

---

**Analysis Flag**

L2

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

**Result Flag**

R4

RPD exceeded method control limit; % recoveries within limits.

S6

Surrogate recoveries lower than acceptance limits.  
Matrix interference suspected

**Diesel**

ETIC Oakland

Attn.: Eric Zickler

1333 Broadway, Suite 1015

Oakland, CA 94612

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

Project: TMSFT1

Strough Family Trust

Received: 03/23/2005 15:47

**Samples Reported**

Sample Name	Date Sampled	Matrix	Lab #
EFFLUENT	03/23/2005 10:00	Water	1
MIDFLUENT	03/23/2005 10:10	Water	2
INFLUENT	03/23/2005 10:20	Water	3

Severn Trent Laboratories, Inc.

STL San Francisco \* 1220 Quarry Lane, Pleasanton, CA 94566

Tel 925 484 1919 Fax 925 484 1096 \* www.stl-inc.com \* CA DHS ELAP# 2496

03/30/2005 16:05

**Diesel**

ETIC Oakland  
Attn.: Eric Zickler

1333 Broadway, Suite 1015  
Oakland, CA 94612  
Phone: (510) 208-1600 Fax: (510) 208-1604

Project: TMSFT1  
Strough Family Trust

Received: 03/23/2005 15:47

Prep(s):	3510/8015M	Test(s):	8015M
Sample ID:	EFFLUENT	Lab ID:	2005-03-0734 - 1
Sampled:	03/23/2005 10:00	Extracted:	3/29/2005 08:34
Matrix:	Water	QC Batch#:	2005/03/29-01:10

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Diesel	ND	50	ug/L	1.00	03/29/2005 16:47	
<i>Surrogate(s)</i>						
o-Terphenyl	82.4	60-130	%	1.00	03/29/2005 16:47	

**Diesel**

ETIC Oakland  
Attn.: Eric Zickler

1333 Broadway, Suite 1015  
Oakland, CA 94612  
Phone: (510) 208-1600 Fax: (510) 208-1604

Project: TMSFT1  
Strough Family Trust

Received: 03/23/2005 15:47

Prep(s):	3510/8015M	Test(s):	8015M
Sample ID:	MIDFLUENT	Lab ID:	2005-03-0734 - 2
Sampled:	03/23/2005 10:10	Extracted:	3/29/2005 08:34
Matrix:	Water	QC Batch#:	2005/03/29-01.10

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Diesel	ND	50	ug/L	1.00	03/29/2005 18:08	
<i>Surrogate(s)</i>						
o-Terphenyl	60.1	60-130	%	1.00	03/29/2005 18:08	

**Diesel**

ETIC Oakland  
Attn.: Eric Zickler

1333 Broadway, Suite 1015  
Oakland, CA 94612  
Phone: (510) 208-1600 Fax: (510) 208-1604

Project: TMSFT1  
Strough Family Trust

Received: 03/23/2005 15:47

Prep(s):	3510/8015M	Test(s):	8015M
Sample ID:	INFLUENT	Lab ID:	2005-03-0734 - 3
Sampled:	03/23/2005 10:20	Extracted:	3/29/2005 08:34
Matrix:	Water	QC Batch#:	2005/03/29-01.10

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Diesel	4000	50	ug/L	1.00	03/29/2005 18:35	Q2
<i>Surrogate(s)</i>						
o-Terphenyl	62.1	60-130	%	1.00	03/29/2005 18:35	

**Diesel**

ETIC Oakland  
Attn: Eric Zickler

1333 Broadway, Suite 1015  
Oakland, CA 94612  
Phone: (510) 208-1600 Fax: (510) 208-1604

Project: TMSFT1  
Strough Family Trust

Received: 03/23/2005 15:47

**Batch QC Report**

Prep(s): 3510/8015M

Test(s): 8015M

Method Blank

Water

QC Batch # 2005/03/29-01.10

MB: 2005/03/29-01.10-001

Date Extracted: 03/29/2005 08:34

Compound	Conc.	RL	Unit	Analyzed	Flag
Diesel	ND	50	ug/L	03/29/2005 15:26	
<i>Surrogates(s)</i> o-Terphenyl	81.5	60-130	%	03/29/2005 15:26	

**Diesel**

ETIC Oakland  
Attn.: Eric Zickler

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Oakland, CA 94612  
Phone: (510) 208-1600 Fax: (510) 208-1604

Project: TMSFT1  
Strough Family Trust

Received: 03/23/2005 15:47

**Batch QC Report**

Prep(s): 3510/8015M

Test(s): 8015M

**Laboratory Control Spike**

**Water**

**QC Batch # 2005/03/29-01.10**

LCS 2005/03/29-01.10-002

Extracted: 03/29/2005

Analyzed: 03/29/2005 15:53

LCSD 2005/03/29-01.10-003

Extracted: 03/29/2005

Analyzed: 03/29/2005 16:20

Compound	Conc. ug/L		Exp.Conc.	Recovery %		RPD	Ctrl.Limits %		Flags	
	LCS	LCSD		LCS	LCSD		%	Rec.	RPD	LCS
Diesel	820	742	1000	82.0	74.2	10.0	60-130	25		
<i>Surrogates(s)</i> o-Terphenyl	18.3	17.1	20.0	91.4	85.3		60-130	0		

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Tel 925 484 1919 Fax 925 484 1096 \* www.stl-inc.com \* CA DHS ELAP# 2496

03/30/2005 16:05



**Diesel**

ETIC Oakland  
Attn.: Eric Zickler

1333 Broadway, Suite 1015  
Oakland, CA 94612  
Phone: (510) 208-1600 Fax: (510) 208-1604

Project: TMSFT1  
Strough Family Trust

Received: 03/23/2005 15:47

**Batch QC Report**

Prep(s): 3510/8015M

Test(s): 8015M

Matrix Spike ( MS / MSD )

Water

QC Batch # 2005/03/29-01.10

MIDFLUENT >> MS

Lab ID: 2005-03-0734 - 002

MS: 2005/03/29-01.10-004

Extracted: 03/29/2005

Analyzed: 03/29/2005 17:14

Dilution: 1.00

MSD: 2005/03/29-01.10-005

Extracted: 03/29/2005

Analyzed: 03/29/2005 17:41

Dilution: 1.00

Compound	Conc.		Sample	Spk. Level ug/L	Recovery %			Limits %		Flags	
	MS	MSD			MS	MSD	RPD	Rec.	RPD	MS	MSD
Diesel	597	742	ND	1000	59.7	74.2	21.7	60-130	30	M5	
Surrogate(s) o-Terphenyl	14.8	17.5		20.0	74.2	87.5		60-130	0		

Diesel

ETIC Oakland  
Attn.: Eric Zickler

1333 Broadway, Suite 1015  
Oakland, CA 94612  
Phone: (510) 208-1600 Fax: (510) 208-1604

Project: TMSFT1  
Strough Family Trust

Received: 03/23/2005 15:47

---

Legend and Notes

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Result Flag

M5

MS/MSD spike recoveries were below acceptance limits.  
See blank spike (LCS).

Q2

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

**2005-03-0734**

**Report To** **Analysis Request**

Attn: Eric Zickler  
Company: ETIC Engineering  
Address: 1333 Broadway, Oakland, CA 94612  
Phone: 510-208-1600 Email: [ezickler@eticeng.com](mailto:ezickler@eticeng.com)  
Bill To: ETIC Engineering  
Attn: Katherine Brandt

Sampled By:  
S. Mcner  
Phone: 208-1600 x11

Sample ID	Date	Time	Matrix	Pre ser v	TPH EPA - <input type="checkbox"/> 80156021 <input type="checkbox"/> 82608 <input type="checkbox"/> Gas w/ <input type="checkbox"/> BTEX <input type="checkbox"/> MTBE	Purgeable Aromatics BTEX EPA - <input type="checkbox"/> 8021 <input type="checkbox"/> 82608	TEPH EPA 8015M <input type="checkbox"/> Silica Gel <input type="checkbox"/> Diesel <input type="checkbox"/> Motor Oil <input type="checkbox"/> Other	Fuel Tests EPA 8260B: <input type="checkbox"/> Gas <input type="checkbox"/> BTEX <input type="checkbox"/> Five Oxyanates <input type="checkbox"/> DCA, EDB <input type="checkbox"/> Ethanol	Purgeable Halocarbons (HVOCs) EPA 8021	Volatile Organics GC/MS (VOCs) <input type="checkbox"/> EPA 8260B <input type="checkbox"/> 624	Semivolatiles GC/MS <input type="checkbox"/> EPA 8270 <input type="checkbox"/> 625	Oil and Grease <input type="checkbox"/> Petroleum (EPA 1664) <input type="checkbox"/> Total	Pesticides <input type="checkbox"/> EPA 8081 <input type="checkbox"/> 808 PCBs <input type="checkbox"/> EPA 8082 <input type="checkbox"/> 808	PNAs by <input type="checkbox"/> 8270 <input type="checkbox"/> 8310	CAM17 Metals (EPA 6010/7470/7471)	Metals: <input type="checkbox"/> Lead <input type="checkbox"/> LUFT <input type="checkbox"/> RCRA <input type="checkbox"/> Other:	W.E.T (STLC) TCLP	Hexavalent Chromium pH (24h hold time for H <sub>2</sub> O)	Spec Cond. <input type="checkbox"/> Alkalinity TSS <input type="checkbox"/> TDS	Anions: <input type="checkbox"/> Cl <input type="checkbox"/> SO <sub>4</sub> <input type="checkbox"/> NO <sub>3</sub> <input type="checkbox"/> F <input type="checkbox"/> Br <input type="checkbox"/> NO <sub>2</sub> <input type="checkbox"/> PO <sub>4</sub>	Number of Containers
Effluent	3-23-05	1000	H <sub>2</sub> O		X																3
		↓	H <sub>2</sub> O				X														2
Midfluent		1010	H <sub>2</sub> O		X																3
		↓	H <sub>2</sub> O				X														2
Influent		1020	H <sub>2</sub> O		X																3
		↓	H <sub>2</sub> O				X														2
Outlet		1100	Air				X														2
Inlet		1110	Air				X														2

Please report with both units  
ppmv and µg/L

**Project Info.**  
Project Name: Strough Family Trust  
Project#: TMSFT1  
PO#: \_\_\_\_\_  
Credit Card#: \_\_\_\_\_

**Sample Receipt**  
# of Containers: \_\_\_\_\_  
Head Space: \_\_\_\_\_  
Temp: 6/17°  
Conforms to record: \_\_\_\_\_

1) Relinquished by:  
S. Mcner 1547  
Signature Time  
S. Mcner 3/23/05  
Printed Name Date  
ETIC  
Company

2) Relinquished by:  
Signature Time  
Printed Name Date  
Company

3) Relinquished by:  
Signature Time  
Printed Name Date  
Company

Report:  Routine  Level 3  Level 4  EDD  State Tank Fund EDF  
Special Instructions / Comments: \_\_\_\_\_

1) Received by:  
[Signature] 1547  
Signature Time  
Mafoid 3-23-05  
Printed Name Date  
STL-SF  
Company

2) Received by:  
Signature Time  
Printed Name Date  
Company

3) Received by:  
Signature Time  
Printed Name Date  
Company

STL San Francisco

Sample Receipt Checklist

Submission #: 2005-03-0734

Checklist completed by: (initials) JOK Date: 3/25/05

Courier name:  STL San Francisco  Client

Custody seals intact on shipping container/samples Yes \_\_\_ No \_\_\_ Not Present

Chain of custody present? Yes  No \_\_\_

Chain of custody signed when relinquished and received? Yes  No \_\_\_

Chain of custody agrees with sample labels? Yes  No \_\_\_

Samples in proper container/bottle? Yes  No \_\_\_

Sample containers intact? Yes  No \_\_\_

Sufficient sample volume for indicated test? Yes  No \_\_\_

All samples received within holding time? Yes  No \_\_\_

Container/Temp Blank temperature in compliance (4° C ± 2)? Temp: 6/17° C Yes  No \_\_\_

Potential reason for > 6°C - Ice melted  Ice in bags  Not enough ice  Not enough blue ice  Samples in boxes

Sampled < 4hr. ago?  Ice not required (e.g. air or bulk sample)  Ice Present Yes  No \_\_\_

Water - VOA vials have zero headspace? No VOA vials submitted \_\_\_ Yes  No \_\_\_

(if bubble is present, refer to approximate bubble size and itemize in comments as S (small ~ O), M (medium ~ O) or L (large ~ O))

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 comment section below:

Comments: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Project Management [Routing for instruction of indicated discrepancy(ies)]

Project Manager: (initials) \_\_\_\_\_ Date: \_\_\_\_/\_\_\_\_/04 Client contacted:  Yes  No

Summary of discussion: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Corrective Action (per PM/Client): \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

ETIC Oakland

April 12, 2005

1333 Broadway, Suite 1015  
Oakland, CA 94612

Attn.: Eric Zickler

Project#: TMSFT1

Project: Strough Family Trust

RECEIVED  
APR 26 2005  
ETIC ENGINEERING

Attached is our report for your samples received on 03/28/2005 16:30

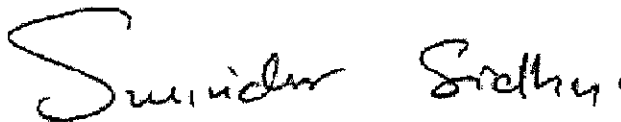
This report has been reviewed and approved for release. Reproduction of this report is permitted only in its entirety.

Please note that any unused portion of the samples will be discarded after 05/12/2005 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: [ssidhu@stl-inc.com](mailto:ssidhu@stl-inc.com)

Sincerely,



Surinder Sidhu  
Project Manager

Severn Trent Laboratories, Inc.

STL San Francisco \* 1220 Quarry Lane, Pleasanton, CA 94566

Tel 925 484 1919 Fax 925 484 1096 \* [www.stl-inc.com](http://www.stl-inc.com) \* CA DHS ELAP# 2496

**Gas/BTEX Compounds by 8015M/8021**

ETIC Oakland

Attn.: Eric Zickler

1333 Broadway, Suite 1015

Oakland, CA 94612

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

Project: TMSFT1

Strough Family Trust

Received: 03/28/2005 16:30

**Samples Reported**

Sample Name	Date Sampled	Matrix	Lab #
EFFLUENT	03/28/2005 11:00	Water	1
MIDFLUENT	03/28/2005 11:10	Water	2
INFLUENT	03/28/2005 11:20	Water	3

Severn Trent Laboratories, Inc.

STL San Francisco \* 1220 Quarry Lane, Pleasanton, CA 94566

Tel 925 484 1919 Fax 925 484 1096 \* www.stl-inc.com \* CA DHS ELAP# 2496

04/12/2005 14:21

**Gas/BTEX Compounds by 8015M/8021**

ETIC Oakland  
Attn.: Eric Zickler

1333 Broadway, Suite 1015  
Oakland, CA 94612  
Phone: (510) 208-1600 Fax: (510) 208-1604

Project: TMSFT1  
Strough Family Trust

Received: 03/28/2005 16:30

Prep(s):	5030 5030	Test(s):	8015M 8021B
Sample ID:	EFFLUENT	Lab ID:	2005-03-0888 - 1
Sampled:	03/28/2005 11:00	Extracted:	4/8/2005 15:37
Matrix:	Water	QC Batch#:	2005/04/08-01.05

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	ND	50	ug/L	1.00	04/08/2005 15:37	
Benzene	ND	0.50	ug/L	1.00	04/08/2005 15:37	
Toluene	ND	0.50	ug/L	1.00	04/08/2005 15:37	
Ethyl benzene	ND	0.50	ug/L	1.00	04/08/2005 15:37	
Xylene(s)	ND	0.50	ug/L	1.00	04/08/2005 15:37	
<b>Surrogate(s)</b>						
Trifluorotoluene	104.0	58-124	%	1.00	04/08/2005 15:37	
4-Bromofluorobenzene-FID	92.9	50-150	%	1.00	04/08/2005 15:37	

Gas/BTEX Compounds by 8015M/8021

ETIC Oakland  
Attn.: Eric Zickler

1333 Broadway, Suite 1015  
Oakland, CA 94612  
Phone: (510) 208-1600 Fax: (510) 208-1604

Project: TMSFT1  
Strough Family Trust

Received: 03/28/2005 16:30

Prep(s): 5030  
5030  
Sample ID: MIDFLUENT  
Sampled: 03/28/2005 11:10  
Matrix: Water  
Test(s): 8015M  
8021B  
Lab ID: 2005-03-0888 - 2  
Extracted: 4/8/2005 16:11  
QC Batch#: 2005/04/08-01.05

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	ND	50	ug/L	1.00	04/08/2005 16:11	
Benzene	ND	0.50	ug/L	1.00	04/08/2005 16:11	
Toluene	ND	0.50	ug/L	1.00	04/08/2005 16:11	
Ethyl benzene	ND	0.50	ug/L	1.00	04/08/2005 16:11	
Xylene(s)	ND	0.50	ug/L	1.00	04/08/2005 16:11	
<b>Surrogate(s)</b>						
Trifluorotoluene	108.4	58-124	%	1.00	04/08/2005 16:11	
4-Bromofluorobenzene-FID	94.8	50-150	%	1.00	04/08/2005 16:11	



**Gas/BTEX Compounds by 8015M/8021**

ETIC Oakland  
Attn.: Eric Zickler

1333 Broadway, Suite 1015  
Oakland, CA 94612  
Phone: (510) 208-1600 Fax: (510) 208-1604

Project: TMSFT1  
Strough Family Trust

Received: 03/28/2005 16:30

---

Prep(s): 5030 Test(s): 8015M  
5030 8021B  
Sample ID: INFLUENT Lab ID: 2005-03-0888 - 3  
Sampled: 03/28/2005 11:20 Extracted: 4/9/2005 15:49  
Matrix: Water QC Batch#: 2005/04/09-1A.05  
Analysis Flag: L2 ( See Legend and Note Section )

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	7900	1000	ug/L	20.00	04/09/2005 15:49	
Benzene	240	10	ug/L	20.00	04/09/2005 15:49	
Toluene	1100	10	ug/L	20.00	04/09/2005 15:49	
Ethyl benzene	150	10	ug/L	20.00	04/09/2005 15:49	
Xylene(s)	1900	10	ug/L	20.00	04/09/2005 15:49	
<b>Surrogate(s)</b>						
Trifluorotoluene	103.2	58-124	%	20.00	04/09/2005 15:49	
4-Bromofluorobenzene-FID	92.2	50-150	%	20.00	04/09/2005 15:49	

**Gas/BTEX Compounds by 8015M/8021**

ETIC Oakland

Attn.: Eric Zickler

1333 Broadway, Suite 1015

Oakland, CA 94612

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

Project: TMSFT1

Strough Family Trust

Received: 03/28/2005 16:30

**Batch QC Report**

Prep(s): 5030

5030

Method Blank

MB: 2005/04/08-01.05-003

Test(s): 8015M

8021B

QC Batch # 2005/04/08-01.05

Date Extracted: 04/08/2005 08:29

Water

Compound	Conc.	RL	Unit	Analyzed	Flag
Gasoline	ND	50	ug/L	04/08/2005 08:29	
Benzene	ND	0.5	ug/L	04/08/2005 08:29	
Toluene	ND	0.5	ug/L	04/08/2005 08:29	
Ethyl benzene	ND	0.5	ug/L	04/08/2005 08:29	
Xylene(s)	ND	0.5	ug/L	04/08/2005 08:29	
<b>Surrogates(s)</b>					
Trifluorotoluene	113.4	58-124	%	04/08/2005 08:29	
4-Bromofluorobenzene-FID	101.3	50-150	%	04/08/2005 08:29	

Severn Trent Laboratories, Inc.

STL San Francisco \* 1220 Quarry Lane, Pleasanton, CA 94566

Tel 925 484 1919 Fax 925 484 1096 \* www.stl-inc.com \* CA DHS ELAP# 2496

04/12/2005 14:21

**Gas/BTEX Compounds by 8015M/8021**

ETIC Oakland

Attn.: Eric Zickler

1333 Broadway, Suite 1015

Oakland, CA 94612

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

Project: TMSFT1

Strough Family Trust

Received: 03/28/2005 16:30

**Batch QC Report**

Prep(s): 5030

5030

Method Blank

MB: 2005/04/09-1A.05-003

Test(s): 8015M

8021B

QC Batch # 2005/04/09-1A.05

Date Extracted: 04/09/2005 11:48

Water

Compound	Conc.	RL	Unit	Analyzed	Flag
Gasoline	ND	50	ug/L	04/09/2005 11:48	
Benzene	ND	0.5	ug/L	04/09/2005 11:48	
Toluene	ND	0.5	ug/L	04/09/2005 11:48	
Ethyl benzene	ND	0.5	ug/L	04/09/2005 11:48	
Xylene(s)	ND	0.5	ug/L	04/09/2005 11:48	
<b>Surrogates(s)</b>					
Trifluorotoluene	114.0	58-124	%	04/09/2005 11:48	
4-Bromofluorobenzene-FID	93.0	50-150	%	04/09/2005 11:48	

Severn Trent Laboratories, Inc.

STL San Francisco \* 1220 Quarry Lane, Pleasanton, CA 94566

Tel 925 484 1919 Fax 925 484 1096 \* www.stl-inc.com \* CA DHS ELAP# 2496

04/12/2005 14:21

**Gas/BTEX Compounds by 8015M/8021**

ETIC Oakland  
Attn.: Eric Zickler

1333 Broadway, Suite 1015  
Oakland, CA 94612  
Phone: (510) 208-1600 Fax: (510) 208-1604

Project: TMSFT1  
Strough Family Trust

Received: 03/28/2005 16:30

**Batch QC Report**

Prep(s): 5030

Test(s): 8021B

Laboratory Control Spike

Water

QC Batch # 2005/04/08-01.05

LCS 2005/04/08-01.05-004  
LCSD

Extracted: 04/08/2005

Analyzed: 04/08/2005 09:02

Compound	Conc. ug/L		Exp.Conc.	Recovery %		RPD	Ctrl.Limits %		Flags	
	LCS	LCSD		LCS	LCSD		%	Rec	RPD	LCS
Benzene	54.3		50.0	108.6			77-123	20		
Toluene	55.0		50.0	110.0			78-122	20		
Ethyl benzene	53.9		50.0	107.8			70-130	20		
Xylene(s)	161		150	107.3			75-125	20		
<b>Surrogates(s)</b>										
Trifluorotoluene	572		500	114.4			58-124			

Gas/BTEX Compounds by 8015M/8021

ETIC Oakland  
Attn.: Eric Zickler

1333 Broadway, Suite 1015  
Oakland, CA 94612  
Phone: (510) 208-1600 Fax: (510) 208-1604

Project: TMSFT1  
Strough Family Trust

Received: 03/28/2005 16:30

**Batch QC Report**

Prep(s): 5030

Test(s): 8015M

Laboratory Control Spike

Water

QC Batch # 2005/04/08-01.05

LCS 2005/04/08-01.05-005  
LCSD

Extracted: 04/08/2005

Analyzed: 04/08/2005 09:36

Compound	Conc. ug/L		Exp.Conc.	Recovery %		RPD	Ctrl.Limits %		Flags	
	LCS	LCSD		LCS	LCSD		%	Rec.	RPD	LCS
Gasoline	241		250	96.4			75-125	20		
<i>Surrogates(s)</i> 4-Bromofluorobenzene-FID	502		500	100.4			50-150			

Severn Trent Laboratories, Inc.

STL San Francisco \* 1220 Quarry Lane, Pleasanton, CA 94566

Tel 925 484 1919 Fax 925 484 1096 \* www.stl-inc.com \* CA DHS ELAP# 2496

04/12/2005 14:21

Gas/BTEX Compounds by 8015M/8021

ETIC Oakland  
Attn.: Eric Zickler

1333 Broadway, Suite 1015  
Oakland, CA 94612  
Phone: (510) 208-1600 Fax: (510) 208-1604

Project: TMSFT1  
Strough Family Trust

Received: 03/28/2005 16:30

**Batch QC Report**

Prep(s): 5030

Test(s): 8021B

Laboratory Control Spike

Water

QC Batch # 2005/04/09-1A.05

LCS 2005/04/09-1A.05-004  
LCSD

Extracted: 04/09/2005

Analyzed: 04/09/2005 12:21

Compound	Conc. ug/L		Exp. Conc.	Recovery %		RPD	Ctrl. Limits %		Flags	
	LCS	LCSD		LCS	LCSD		%	Rec.	RPD	LCS
Benzene	51.9		50	103.8			77-123	20		
Toluene	52.9		50	105.8			78-122	20		
Ethyl benzene	52.4		50	104.8			70-130	20		
Xylene(s)	158		150	105.3			75-125	20		
<b>Surrogates(s)</b>										
Trifluorotoluene	581		500	116.2			58-124			

Severn Trent Laboratories, Inc.

STL San Francisco \* 1220 Quarry Lane, Pleasanton, CA 94566

Tel 925 484 1919 Fax 925 484 1096 \* www.stl-inc.com \* CA DHS ELAP# 2496

04/12/2005 14:21

**Gas/BTEX Compounds by 8015M/8021**

ETIC Oakland  
Attn.: Eric Zickler

1333 Broadway, Suite 1015  
Oakland, CA 94612  
Phone: (510) 208-1600 Fax: (510) 208-1604

Project: TMSFT1  
Strough Family Trust

Received: 03/28/2005 16:30

**Batch QC Report**

Prep(s): 5030

Test(s): 8015M

Laboratory Control Spike

Water

QC Batch # 2005/04/09-1A.05

LCS 2005/04/09-1A.05-005  
LCSD

Extracted: 04/09/2005

Analyzed: 04/09/2005 12:55

Compound	Conc. ug/L		Exp.Conc.	Recovery %		RPD	Ctrl.Limits %		Flags	
	LCS	LCSD		LCS	LCSD		%	Rec.	RPD	LCS
Gasoline	224		250	89.6			75-125	20		
<i>Surrogates(s)</i>										
4-Bromofluorobenzene-FID	480		500	96.0			50-150			

Severn Trent Laboratories, Inc.

STL San Francisco \* 1220 Quarry Lane, Pleasanton, CA 94566

Tel 925 484 1919 Fax 925 484 1096 \* www.stl-inc.com \* CA DHS ELAP# 2496

04/12/2005 14:21

**Gas/BTEX Compounds by 8015M/8021**

ETIC Oakland  
Attn.: Eric Zickler

1333 Broadway, Suite 1015  
Oakland, CA 94612  
Phone: (510) 208-1600 Fax: (510) 208-1604

Project: TMSFT1  
Strough Family Trust

Received: 03/28/2005 16:30

**Batch QC Report**

Prep(s): 5030

Test(s): 8021B

**Matrix Spike ( MS / MSD )**

**Water**

**QC Batch # 2005/04/08-01.05**

MS/MSD

Lab ID: 2005-03-0911 - 003

MS: 2005/04/08-01.05-018

Extracted: 04/08/2005

Analyzed: 04/08/2005 17:18

Dilution: 1.00

MSD: 2005/04/08-01.05-019

Extracted: 04/08/2005

Analyzed: 04/08/2005 17:51

Dilution: 1.00

Compound	Conc. ug/L			Spk.Level ug/L	Recovery %			Limits %		Flags	
	MS	MSD	Sample		MS	MSD	RPD	Rec.	RPD	MS	MSD
Benzene	50.0	53.6	ND	50.0	100.0	107.2	6.9	65-135	20		
Toluene	50.0	54.8	ND	50.0	100.0	109.6	9.2	65-135	20		
Ethyl benzene	48.3	53.6	ND	50.0	96.6	107.2	10.4	65-135	20		
Xylene(s)	149	163	ND	150	99.3	108.7	9.0	65-135	20		
<b>Surrogate(s)</b>											
Trifluorotoluene	531	548		500	106.2	109.6		58-124			

Severn Trent Laboratories, Inc.

STL San Francisco \* 1220 Quarry Lane, Pleasanton, CA 94566

Tel 925 484 1919 Fax 925 484 1096 \* www.stl-inc.com \* CA DHS ELAP# 2496

04/12/2005 14:21



**Gas/BTEX Compounds by 8015M/8021**

ETIC Oakland  
Attn.: Eric Zickler

1333 Broadway, Suite 1015  
Oakland, CA 94612  
Phone: (510) 208-1600 Fax: (510) 208-1604

Project: TMSFT1  
Strough Family Trust

Received: 03/28/2005 16:30

**Batch QC Report**

Prep(s): 5030

Test(s): 8015M

**Matrix Spike ( MS / MSD )**

**Water**

**QC Batch # 2005/04/08-01.05**

MS/MSD

Lab ID: 2005-03-0911 - 004

MS: 2005/04/08-01.05-020

Extracted: 04/08/2005

Analyzed: 04/08/2005 18:25

Dilution: 1.00

MSD: 2005/04/08-01.05-021

Extracted: 04/08/2005

Analyzed: 04/08/2005 18:58

Dilution: 1.00

Compound	Conc. ug/L			Spk.Level	Recovery %			Limits %		Flags	
	MS	MSD	Sample		ug/L	MS	MSD	RPD	Rec.	RPD	MS
Gasoline	212	218	ND	250	84.8	87.2	2.8	65-135	20		
<i>Surrogate(s)</i>											
4-Bromofluorobenzene-FID	453	470		500	90.5	94.0		50-150			

Severn Trent Laboratories, Inc.

STL San Francisco \* 1220 Quarry Lane, Pleasanton, CA 94566

Tel 925 484 1919 Fax 925 484 1096 \* www.stl-inc.com \* CA DHS ELAP# 2496

04/12/2005 14:21

**Gas/BTEX Compounds by 8015M/8021**

ETIC Oakland  
Attn.: Eric Zickler

1333 Broadway, Suite 1015  
Oakland, CA 94612  
Phone: (510) 208-1600 Fax: (510) 208-1604

Project: TMSFT1  
Strough Family Trust

Received: 03/28/2005 16:30

**Batch QC Report**

Prep(s): 5030

Test(s): 8021B

**Matrix Spike ( MS / MSD )**

**Water**

**QC Batch # 2005/04/09-1A.05**

MS/MSD

Lab ID: 2005-04-0021 - 004

MS: 2005/04/09-1A.05-021

Extracted: 04/09/2005

Analyzed: 04/09/2005 21:57

Dilution: 1.00

MSD: 2005/04/09-1A.05-022

Extracted: 04/09/2005

Analyzed: 04/09/2005 22:30

Dilution: 1.00

Compound	Conc. ug/L			Spk.Level ug/L	Recovery %			Limits %		Flags	
	MS	MSD	Sample		MS	MSD	RPD	Rec.	RPD	MS	MSD
Benzene	54.3	52.7	ND	50	108.6	105.4	3.0	65-135	20		
Toluene	55.4	52.5	ND	50	110.8	105.0	5.4	65-135	20		
Ethyl benzene	55.1	50.9	ND	50	110.2	101.8	7.9	65-135	20		
Xylene(s)	168	154	ND	150	112.0	102.7	8.7	65-135	20		
<b>Surrogate(s)</b>											
Trifluorotoluene	532	519		500	106.4	103.7		58-124			

**Gas/BTEX Compounds by 8015M/8021**

ETIC Oakland  
Attn.: Eric Zickler

1333 Broadway, Suite 1015  
Oakland, CA 94612  
Phone: (510) 208-1600 Fax: (510) 208-1604

Project: TMSFT1  
Strough Family Trust

Received: 03/28/2005 16:30

**Batch QC Report**

Prep(s): 5030

Test(s): 8015M

**Matrix Spike ( MS / MSD )**

**Water**

**QC Batch # 2005/04/09-1A.05**

MS/MSD

Lab ID: 2005-04-0021 - 007

MS: 2005/04/09-1A.05-023

Extracted: 04/09/2005

Analyzed: 04/09/2005 23:04

Dilution: 1.00

MSD: 2005/04/09-1A.05-024

Extracted: 04/09/2005

Analyzed: 04/09/2005 23:37

Dilution: 1.00

Compound	Conc. ug/L			Spk.Level	Recovery %			Limits %		Flags	
	MS	MSD	Sample	ug/L	MS	MSD	RPD	Rec.	RPD	MS	MSD
Gasoline	296	303	136	250	64.0	66.8	4.3	65-135	20	M5	
<i>Surrogate(s)</i> 4-Bromofluorobenzene-FID	478	501		500	95.6	100.2		50-150			

Severn Trent Laboratories, Inc.

STL San Francisco \* 1220 Quarry Lane, Pleasanton, CA 94566

Tel 925 484 1919 Fax 925 484 1096 \* www.stl-inc.com \* CA DHS ELAP# 2496

04/12/2005 14:21

**Gas/BTEX Compounds by 8015M/8021**

ETIC Oakland

Attn.: Eric Zickler

1333 Broadway, Suite 1015

Oakland, CA 94612

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

Project: TMSFT1

Strough Family Trust

Received: 03/28/2005 16:30

---

**Legend and Notes**

---

**Analysis Flag**

L2

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

**Result Flag**

M5

MS/MSD spike recoveries were below acceptance limits. See blank spike (LCS).

Severn Trent Laboratories, Inc.

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Tel 925 484 1919 Fax 925 484 1096 \* www.stl-inc.com \* CA DHS ELAP# 2496

04/12/2005 14:21

**Diesel**

ETIC Oakland

Attn.: Eric Zickler

1333 Broadway, Suite 1015

Oakland, CA 94612

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

Project: TMSFT1

Strough Family Trust

Received: 03/28/2005 16:30

**Samples Reported**

Sample Name	Date Sampled	Matrix	Lab #
EFFLUENT	03/28/2005 11:00	Water	1
MIDFLUENT	03/28/2005 11:10	Water	2
INFLUENT	03/28/2005 11:20	Water	3

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04/04/2005 16:41

**Diesel**

ETIC Oakland  
Attn.: Eric Zickler

1333 Broadway, Suite 1015  
Oakland, CA 94612  
Phone: (510) 208-1600 Fax: (510) 208-1604

Project: TMSFT1  
Strough Family Trust

Received: 03/28/2005 16:30

Prep(s): 3510/8015M	Test(s): 8015M
Sample ID: EFFLUENT	Lab ID: 2005-03-0888 - 1
Sampled: 03/28/2005 11:00	Extracted: 3/31/2005 15:11
Matrix: Water	QC Batch#: 2005/03/31-06.10

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Diesel	ND	50	ug/L	1.00	04/01/2005 23:53	
<i>Surrogate(s)</i>						
o-Terphenyl	107.6	60-130	%	1.00	04/01/2005 23:53	

**Diesel**

ETIC Oakland

Attn.: Eric Zickler

1333 Broadway, Suite 1015

Oakland, CA 94612

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

Project: TMSFT1

Strough Family Trust

Received: 03/28/2005 16:30

Prep(s): 3510/8015M	Test(s): -8015M
Sample ID: MIDFLUENT	Lab ID: 2005-03-0888 - 2
Sampled: 03/28/2005 11:10	Extracted: 3/31/2005 15:11
Matrix: Water	QC Batch#: 2005/03/31-06.10

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Diesel	ND	50	ug/L	1.00	04/02/2005 00:20	
<i>Surrogate(s)</i> o-Terphenyl	98.7	60-130	%	1.00	04/02/2005 00:20	

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04/04/2005 16:41





**Diesel**

ETIC Oakland  
Attn.: Eric Zickler

1333 Broadway, Suite 1015  
Oakland, CA 94612  
Phone: (510) 208-1600 Fax: (510) 208-1604

Project: TMSFT1  
Strough Family Trust

Received: 03/28/2005 16:30

**Batch QC Report**

Prep(s): 3510/8015M

Test(s): 8015M

Method Blank

Water

QC Batch # 2005/03/31-06.10

MB: 2005/03/31-06.10-001

Date Extracted: 03/31/2005 15:11

Compound	Conc.	RL	Unit	Analyzed	Flag
Diesel	ND	50	ug/L	04/01/2005 22:32	
<i>Surrogates(s)</i> o-Terphenyl	100.1	60-130	%	04/01/2005 22:32	

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Tel 925 484 1919 Fax 925 484 1096 \* www.stl-inc.com \* CA DHS ELAP# 2496

04/04/2005 16:41

**Diesel**

ETIC Oakland  
Attn.: Eric Zickler

1333 Broadway, Suite 1015  
Oakland, CA 94612  
Phone: (510) 208-1600 Fax: (510) 208-1604

Project: TMSFT1  
Strough Family Trust

Received: 03/28/2005 16:30

**Batch QC Report**

Prep(s): 3510/8015M

Test(s): 8015M

Laboratory Control Spike

Water

QC Batch # 2005/03/31-06.10

LCS 2005/03/31-06.10-002

Extracted: 03/31/2005

Analyzed: 04/01/2005 22:59

LCSD 2005/03/31-06.10-003

Extracted: 03/31/2005

Analyzed: 04/01/2005 23:26

Compound	Conc. ug/L		Exp.Conc.	Recovery %		RPD	Ctrl.Limits %		Flags	
	LCS	LCSD		LCS	LCSD		%	Rec	RPD	LCS
Diesel	926	881	1000	92.6	88.1	5.0	60-130	25		
Surrogates(s) o-Terphenyl	19.2	18.6	20.0	95.9	92.9		60-130	0		

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Tel 925 484 1919 Fax 925 484 1096 \* www.stl-inc.com \* CA DHS ELAP# 2496

04/04/2005 16:41

**Diesel**

ETIC Oakland

Attn.: Eric Zickler

1333 Broadway, Suite 1015

Oakland, CA 94612

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

Project: TMSFT1

Strough Family Trust

Received: 03/28/2005 16:30

---

**Legend and Notes**

---

**Result Flag**

Q2

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

Severn Trent Laboratories, Inc.

STL San Francisco \* 1220 Quarry Lane, Pleasanton, CA 94566

Tel 925 484 1919 Fax 925 484 1096 \* www.stl-inc.com \* CA DHS ELAP# 2496

04/04/2005 16:41

2005-03-0888

Report To Analysis Request

Attn: Eric Zickler  
Company: ETIC Engineering  
Address: 1333 Broadway, Oakland, CA 94612  
Phone: 510-208-1600 Email: ezickler@eticeng.com  
Bill To: ETIC Engineering  
Attn: Katherine Brandt  
Sampled By: S. Mcneir  
Phone: 208-1600 x118

Sample ID	Date	Time	Matr x	Pre ser v.	TPH EPA - 8015/8021 <input type="checkbox"/> 8260B <input type="checkbox"/> Gas w/ <input type="checkbox"/> BTEX <input type="checkbox"/> MTBE	Purgeable Aromatics BTEX EPA - 8021 <input type="checkbox"/> 8260B	TEPH EPA 8015M <input type="checkbox"/> Silica Gel <input checked="" type="checkbox"/> Diesel <input type="checkbox"/> Motor Oil <input type="checkbox"/> Other	Fuel Tests EPA 8260B: <input checked="" type="checkbox"/> Gas <input checked="" type="checkbox"/> BTEX <input type="checkbox"/> Five Oxyanates <input type="checkbox"/> DCA, EPA <input type="checkbox"/> Ethanol	Purgeable Halocarbons (HVOCs) EPA 8021	Volatile Organics GC/MS (VOCs) <input type="checkbox"/> EPA 8260B <input type="checkbox"/> 624	Semivolatiles GC/MS <input type="checkbox"/> EPA 8270 <input type="checkbox"/> 625	Oil and Grease <input type="checkbox"/> Petroleum (EPA 1664) <input type="checkbox"/> Total	Pesticides <input type="checkbox"/> EPA 8081 <input type="checkbox"/> 608 PCBs <input type="checkbox"/> EPA 8082 <input type="checkbox"/> 608	PNAs by <input type="checkbox"/> 8270 <input type="checkbox"/> 8310	CAM17 Metals (EPA 8010/7470/7471)	Metals: <input type="checkbox"/> Lead <input type="checkbox"/> LUFT <input type="checkbox"/> RCRA <input type="checkbox"/> Other:	W.E.T (STLC) TCUP	Hexavalent Chromium pH (24h hold time for H <sub>2</sub> O)	Spec Cond. <input type="checkbox"/> Alkalinity TSS <input type="checkbox"/> TDS	Anions: <input type="checkbox"/> Cl <input type="checkbox"/> SO <sub>4</sub> <input type="checkbox"/> NO <sub>3</sub> <input type="checkbox"/> F <input type="checkbox"/> Br <input type="checkbox"/> NO <sub>2</sub> <input type="checkbox"/> PO <sub>4</sub>	Number of Containers
Effluent	3-28-05	1100	H <sub>2</sub> O	16/1	X																3
		6	H <sub>2</sub> O	na			X														2
Midfluent		1110	H <sub>2</sub> O	16/1	X																3
			H <sub>2</sub> O	na			X														2
Influent		1120	H <sub>2</sub> O	16/1	X																3
			H <sub>2</sub> O	na			X														2
Outlet		1030	Air	na				X													2
Inlet		1050	Air	na				X													2

Please report with both units  
ppmv and µg/L

Project Info.		Sample Receipt		1) Relinquished by:		2) Relinquished by:		3) Relinquished by:	
Project Name: Strough Family Trust		# of Containers:		S. Mcneir 16:30					
Project#: TMSFT1		Head Space:		Signature		Signature		Signature	
PO#:		Temp: 6°C		Time		Time		Time	
Credit Card#:		Conforms to record:		Printed Name		Printed Name		Printed Name	
				Date		Date		Date	
				Company		Company		Company	
A T		Other:		1) Received by:		2) Received by:		3) Received by:	
5 Day				Signature		Signature		Signature	
72h				Time		Time		Time	
48h				Printed Name		Printed Name		Printed Name	
24h				Date		Date		Date	
Report: <input type="checkbox"/> Routine <input type="checkbox"/> Level 3 <input type="checkbox"/> Level 4 <input type="checkbox"/> EDD <input type="checkbox"/> State Tank Fund EDF <input type="checkbox"/> Global ID		Special Instructions / Comments:		Signature		Signature		Signature	
				Time		Time		Time	
				Printed Name		Printed Name		Printed Name	
				Date		Date		Date	
				Company		Company		Company	

STL San Francisco

Sample Receipt Checklist

Submission #: 2005-03-0888

Checklist completed by: (initials) BT Date: 3/29/05

Courier name: [ ] STL San Francisco [X] Client

Custody seals intact on shipping container/samples

Yes \_\_\_ No \_\_\_ Not Present [X]

Chain of custody present?

Yes [X] No \_\_\_

Chain of custody signed when relinquished and received?

Yes [X] No \_\_\_

Chain of custody agrees with sample labels?

Yes [X] No \_\_\_

Samples in proper container/bottle?

Yes [X] No \_\_\_

Sample containers intact?

Yes [X] No \_\_\_

Sufficient sample volume for indicated test?

Yes [X] No \_\_\_

All samples received within holding time?

Yes [X] No \_\_\_

Container/Temp Blank temperature in compliance (4° C ± 2)?

Air 20° Temp: 6 °C Yes [X] No \_\_\_

Potential reason for > 6°C - Ice melted [ ] Ice in bags [ ] Not enough ice [ ] Not enough blue ice [ ] Samples in boxes [ ]

Sampled < 4hr. ago? [ ] Ice not required (e.g. air or bulk sample) [ ]

Ice Present Yes [X] No \_\_\_

Water - VOA vials have zero headspace?

No VOA vials submitted Yes [X] No \_\_\_

(if bubble is present, refer to approximate bubble size and itemize in comments as S (small ~ O), M (medium ~ O) or L (large ~ O))

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 comment section below:

Comments:

Project Management [Routing for instruction of indicated discrepancy(ies)]

Project Manager: (initials) \_\_\_\_\_ Date: \_\_\_\_\_ / \_\_\_\_\_ /04 Client contacted: [ ] Yes [ ] No

Summary of discussion:

Corrective Action (per PM/Client):

**Quarterly Monitoring  
Laboratory Analytical Results**

ETIC Oakland

1333 Broadway, Suite 1015  
Oakland, CA 94612

Attn.: Kathy Brandt

Project#: TMSFT1 Task #11

Project: Strough Family Trust

**RECEIVED**  
**APR 08 2005**  
**ETIC ENGINEERING**

March 30, 2005

Kathy

Attached is our report for your samples received on 03/15/2005 16:15

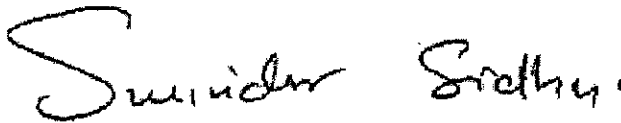
This report has been reviewed and approved for release. Reproduction of this report is permitted only in its entirety.

Please note that any unused portion of the samples will be discarded after 04/29/2005 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: [ssidhu@stl-inc.com](mailto:ssidhu@stl-inc.com)

Sincerely,



Surinder Sidhu  
Project Manager

**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: TMSFT1 Task #11  
Strough Family Trust

Received: 03/15/2005 16:15

**Samples Reported**

Sample Name	Date Sampled	Matrix	Lab #
MW1	03/14/2005 12:50	Water	1
MW2	03/14/2005 14:55	Water	2
MW3	03/14/2005 14:05	Water	3
MW4	03/14/2005 12:15	Water	4
MW5	03/14/2005 13:30	Water	5
MW6	03/14/2005 11:15	Water	6
MW7	03/14/2005 10:45	Water	7

Severn Trent Laboratories, Inc.

STL San Francisco \* 1220 Quarry Lane, Pleasanton, CA 94566

Tel 925 484 1919 Fax 925 484 1096 \* www.stl-inc.com \* CA DHS ELAP# 2496

03/24/2005 11:44



**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: TMSFT1 Task #11

Strough Family Trust

Received: 03/15/2005 16:15

---

Prep(s):	3510/8015M	Test(s):	8015M
Sample ID:	MW1	Lab ID:	2005-03-0521 - 1
Sampled:	03/14/2005 12:50	Extracted:	3/17/2005 05:28
Matrix:	Water	QC Batch#:	2005/03/17-01.10

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Diesel	73	50	ug/L	1.00	03/18/2005 05:21	Q2
Motor Oil	ND	500	ug/L	1.00	03/18/2005 05:21	
<b>Surrogate(s)</b> o-Terphenyl	78.2	60-130	%	1.00	03/18/2005 05:21	

Severn Trent Laboratories, Inc.

STL San Francisco \* 1220 Quarry Lane, Pleasanton, CA 94566

Tel 925 484 1919 Fax 925 484 1096 \* www.stl-inc.com \* CA DHS ELAP# 2496

03/24/2005 11:44

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: TMSFT1 Task #11  
Strough Family Trust

Received: 03/15/2005 16:15

Prep(s): 3510/8015M      Test(s): 8015M  
 Sample ID: MW2      Lab ID: 2005-03-0521 - 2  
 Sampled: 03/14/2005 14:55      Extracted: 3/17/2005 05:28  
 Matrix: Water      QC Batch#: 2005/03/17-01.10

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Diesel	43000	500	ug/L	10.00	03/23/2005 04:29	Q2
Motor Oil	ND	5000	ug/L	10.00	03/23/2005 04:29	
<i>Surrogate(s)</i> o-Terphenyl	NA	60-130	%	10.00	03/23/2005 04:29	S3

Severn Trent Laboratories, Inc.

STL San Francisco \* 1220 Quarry Lane, Pleasanton, CA 94566

Tel 925 484 1919 Fax 925 484 1096 \* www.stl-inc.com \* CA DHS ELAP# 2496

03/24/2005 11:44

**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: TMSFT1 Task #11  
Strough Family Trust

Received: 03/15/2005 16:15

Prep(s): 3510/8015M	Test(s): 8015M
Sample ID: MW3	Lab ID: 2005-03-0521 - 3
Sampled: 03/14/2005 14:05	Extracted: 3/17/2005 05:28
Matrix: Water	QC Batch#: 2005/03/17-01.10

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Diesel	670	50	ug/L	1.00	03/18/2005 04:54	Q2
Motor Oil	ND	500	ug/L	1.00	03/18/2005 04:54	
<i>Surrogate(s)</i> o-Terphenyl	72.5	60-130	%	1.00	03/18/2005 04:54	

**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: TMSFT1 Task #11  
Strough Family Trust

Received: 03/15/2005 16:15

Prep(s): 3510/8015M	Test(s): 8015M
Sample ID: MW4	Lab ID: 2005-03-0521 - 4
Sampled: 03/14/2005 12:15	Extracted: 3/17/2005 05:28
Matrix: Water	QC Batch#: 2005/03/17-01.10

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Diesel	ND	50	ug/L	1.00	03/17/2005 20:22	
Motor Oil	ND	500	ug/L	1.00	03/17/2005 20:22	
<i>Surrogate(s)</i> o-Terphenyl	72.6	60-130	%	1.00	03/17/2005 20:22	

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: TMSFT1 Task #11  
Strough Family Trust

Received: 03/15/2005 16:15

Prep(s): 3510/8015M Test(s): 8015M  
 Sample ID: MW5 Lab ID: 2005-03-0521 - 5  
 Sampled: 03/14/2005 13:30 Extracted: 3/17/2005 05:28  
 Matrix: Water QC Batch#: 2005/03/17-01.10

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Diesel	ND	50	ug/L	1.00	03/17/2005 21:16	
Motor Oil	ND	500	ug/L	1.00	03/17/2005 21:16	
<b>Surrogate(s)</b> o-Terphenyl	42.5	60-130	%	1.00	03/17/2005 21:16	S6

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Tel 925 484 1919 Fax 925 484 1096 \* www.stl-inc.com \* CA DHS ELAP# 2496

03/24/2005 11:44

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: TMSFT1 Task #11

Strough Family Trust

Received: 03/15/2005 16:15

Prep(s): 3510/8015M      Test(s): 8015M  
 Sample ID: MW6      Lab ID: 2005-03-0521 - 6  
 Sampled: 03/14/2005 11:15      Extracted: 3/17/2005 05:28  
 Matrix: Water      QC Batch#: 2005/03/17-01.10

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Diesel	ND	50	ug/L	1.00	03/17/2005 19:55	
Motor Oil	ND	500	ug/L	1.00	03/17/2005 19:55	
<i>Surrogate(s)</i> o-Terphenyl	67.4	60-130	%	1.00	03/17/2005 19:55	

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STL San Francisco \* 1220 Quarry Lane, Pleasanton, CA 94566

Tel 925 484 1919 Fax 925 484 1096 \* www.stl-inc.com \* CA DHS ELAP# 2496

03/24/2005 11:44

**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: TMSFT1 Task #11  
Strough Family Trust

Received: 03/15/2005 16:15

Prep(s): 3510/8015M                      Test(s): 8015M  
 Sample ID: MW7                              Lab ID: 2005-03-0521 - 7  
 Sampled: 03/14/2005 10:45              Extracted: 3/17/2005 05:28  
 Matrix: Water                                QC Batch#: 2005/03/17-01.10

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Diesel	ND	50	ug/L	1.00	03/17/2005 20:49	
Motor Oil	ND	500	ug/L	1.00	03/17/2005 20:49	
<i>Surrogate(s)</i> o-Terphenyl	63.9	60-130	%	1.00	03/17/2005 20:49	

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: TMSFT1 Task #11  
Strough Family Trust

Received: 03/15/2005 16:15

**Batch QC Report**

Prep(s): 3510/8015M

Method Blank

MB: 2005/03/17-01.10-001

Water

Test(s): 8015M

QC Batch # 2005/03/17-01.10

Date Extracted: 03/17/2005 05:28

Compound	Conc.	RL	Unit	Analyzed	Flag
Diesel	ND	50	ug/L	03/17/2005 22:36	
Motor Oil	ND	500	ug/L	03/17/2005 22:36	
<i>Surrogates(s)</i> o-Terphenyl	77.4	60-130	%	03/17/2005 22:36	

Severn Trent Laboratories, Inc.

STL San Francisco \* 1220 Quarry Lane, Pleasanton, CA 94566

Tel 925 484 1919 Fax 925 484 1096 \* www.stl-inc.com \* CA DHS ELAP# 2496

03/24/2005 11:44



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: TMSFT1 Task #11  
Strough Family Trust

Received: 03/15/2005 16:15

**Batch QC Report**

Prep(s): 3510/8015M

Test(s): 8015M

Laboratory Control Spike

Water

QC Batch # 2005/03/17-01.10

LCS 2005/03/17-01.10-002

Extracted: 03/17/2005

Analyzed: 03/17/2005 23:03

LCSD 2005/03/17-01.10-003

Extracted: 03/17/2005

Analyzed: 03/17/2005 23:30

Compound	Conc. ug/L		Exp.Conc.	Recovery %		RPD	Ctrl.Limits %		Flags	
	LCS	LCSD		LCS	LCSD		%	Rec.	RPD	LCS
Diesel	833	870	1000	83.3	87.0	4.3	60-130	25		
Surrogates(s) o-Terphenyl	17.7	18.0	20.0	88.4	90.1		60-130	0		

Severn Trent Laboratories, Inc.

STL San Francisco \* 1220 Quarry Lane, Pleasanton, CA 94586

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03/24/2005 11:44

**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: TMSFT1 Task #11  
Strough Family Trust

Received: 03/15/2005 16:15

---

**Legend and Notes**

---

**Result Flag**

Q2

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

S3

Surrogate recovery not reportable due to required dilution.

S6

Surrogate recoveries lower than acceptance limits.  
Matrix interference suspected

Severn Trent Laboratories, Inc.

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03/24/2005 11:44

**Fuel Oxygenates by 8260B**

ETIC Oakland

Attn.: Kathy Brandt

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

Project: TMSFT1 Task #11  
Strough Family Trust

Received: 03/15/2005 16:15

**Samples Reported**

Sample Name	Date Sampled	Matrix	Lab #
MW1	03/14/2005 12:50	Water	1
MW2	03/14/2005 14:55	Water	2
MW3	03/14/2005 14:05	Water	3
MW4	03/14/2005 12:15	Water	4
MW5	03/14/2005 13:30	Water	5
MW6	03/14/2005 11:15	Water	6
MW7	03/14/2005 10:45	Water	7

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03/30/2005 13:10



**Fuel Oxygenates by 8260B**

ETIC Oakland

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Project: TMSFT1 Task #11  
Strough Family Trust

Received: 03/15/2005 16:15

Prep(s): 5030B Test(s): 8260B  
 Sample ID: MW2 Lab ID: 2005-03-0521 - 2  
 Sampled: 03/14/2005 14:55 Extracted: 3/26/2005 03:57  
 Matrix: Water QC Batch#: 2005/03/25-02.62  
 Analysis Flag: L2 ( See Legend and Note Section )

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	43000	20000	ug/L	400.00	03/26/2005 03:57	
Methyl tert-butyl ether (MTBE)	ND	200	ug/L	400.00	03/26/2005 03:57	
Benzene	780	200	ug/L	400.00	03/26/2005 03:57	
Toluene	3700	200	ug/L	400.00	03/26/2005 03:57	
Ethylbenzene	920	200	ug/L	400.00	03/26/2005 03:57	
Total xylenes	6400	400	ug/L	400.00	03/26/2005 03:57	
<b>Surrogate(s)</b>						
1,2-Dichloroethane-d4	121.4	73-130	%	400.00	03/26/2005 03:57	
Toluene-d8	108.6	81-114	%	400.00	03/26/2005 03:57	

**Fuel Oxygenates by 8260B**

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Project: TMSFT1 Task #11

Strough Family Trust

Received: 03/15/2005 16:15

Prep(s): 5030B Test(s): 8260B  
 Sample ID: MW3 Lab ID: 2005-03-0521 - 3  
 Sampled: 03/14/2005 14:05 Extracted: 3/26/2005 09:21  
 Matrix: Water QC Batch#: 2005/03/26-01.62  
 Analysis Flag: L2 ( See Legend and Note Section )

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	10000	1000	ug/L	20.00	03/26/2005 09:21	
Methyl tert-butyl ether (MTBE)	67	10	ug/L	20.00	03/26/2005 09:21	
Benzene	680	10	ug/L	20.00	03/26/2005 09:21	
Toluene	1700	10	ug/L	20.00	03/26/2005 09:21	
Ethylbenzene	380	10	ug/L	20.00	03/26/2005 09:21	
Total xylenes	1600	20	ug/L	20.00	03/26/2005 09:21	
<b>Surrogate(s)</b>						
1,2-Dichloroethane-d4	119.6	73-130	%	20.00	03/26/2005 09:21	
Toluene-d8	108.1	81-114	%	20.00	03/26/2005 09:21	

**Fuel Oxygenates by 8260B**

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Project: TMSFT1 Task #11

Strough Family Trust

Received: 03/15/2005 16:15

Prep(s): 5030B Test(s): 8260B  
 Sample ID: MW4 Lab ID: 2005-03-0521 - 4  
 Sampled: 03/14/2005 12:15 Extracted: 3/25/2005 04:06  
 Matrix: Water QC Batch#: 2005/03/24-03.62  
 Analysis Flag: L2 ( See Legend and Note Section )

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	930	500	ug/L	10.00	03/25/2005 04:06	Q6
Methyl tert-butyl ether (MTBE)	930	5.0	ug/L	10.00	03/25/2005 04:06	
Benzene	20	5.0	ug/L	10.00	03/25/2005 04:06	
Toluene	ND	5.0	ug/L	10.00	03/25/2005 04:06	
Ethylbenzene	ND	5.0	ug/L	10.00	03/25/2005 04:06	
Total xylenes	ND	10	ug/L	10.00	03/25/2005 04:06	
<b>Surrogate(s)</b>						
1,2-Dichloroethane-d4	103.3	73-130	%	10.00	03/25/2005 04:06	
Toluene-d8	96.3	81-114	%	10.00	03/25/2005 04:06	

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**Fuel Oxygenates by 8260B**

ETIC Oakland

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Project: TMSFT1 Task #11  
Strough Family Trust

Received: 03/15/2005 16:15

Prep(s): 5030B Test(s): 8260B  
 Sample ID: MW5 Lab ID: 2005-03-0521 - 5  
 Sampled: 03/14/2005 13:30 Extracted: 3/25/2005 04:32  
 Matrix: Water QC Batch#: 2005/03/24-03.62

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	82	50	ug/L	1.00	03/25/2005 04:32	
Methyl tert-butyl ether (MTBE)	ND	0.50	ug/L	1.00	03/25/2005 04:32	
Benzene	ND	0.50	ug/L	1.00	03/25/2005 04:32	
Toluene	1.3	0.50	ug/L	1.00	03/25/2005 04:32	
Ethylbenzene	1.5	0.50	ug/L	1.00	03/25/2005 04:32	
Total xylenes	8.6	1.0	ug/L	1.00	03/25/2005 04:32	
<b>Surrogate(s)</b>						
1,2-Dichloroethane-d4	106.5	73-130	%	1.00	03/25/2005 04:32	
Toluene-d8	93.8	81-114	%	1.00	03/25/2005 04:32	



**Fuel Oxygenates by 8260B**

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Project: TMSFT1 Task #11  
Strough Family Trust

Received: 03/15/2005 16:15

Prep(s): 5030B Test(s): 8260B  
 Sample ID: MW6 Lab ID: 2005-03-0521 - 6  
 Sampled: 03/14/2005 11:15 Extracted: 3/25/2005 04:58  
 Matrix: Water QC Batch#: 2005/03/24-03.62

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	160	50	ug/L	1.00	03/25/2005 04:58	
Methyl tert-butyl ether (MTBE)	190	0.50	ug/L	1.00	03/25/2005 04:58	
Benzene	ND	0.50	ug/L	1.00	03/25/2005 04:58	
Toluene	ND	0.50	ug/L	1.00	03/25/2005 04:58	
Ethylbenzene	ND	0.50	ug/L	1.00	03/25/2005 04:58	
Total xylenes	1.8	1.0	ug/L	1.00	03/25/2005 04:58	
<i>Surrogate(s)</i>						
1,2-Dichloroethane-d4	105.2	73-130	%	1.00	03/25/2005 04:58	
Toluene-d8	98.1	81-114	%	1.00	03/25/2005 04:58	

**Fuel Oxygenates by 8260B**

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Project: TMSFT1 Task #11  
Strough Family Trust

Received: 03/15/2005 16:15

Prep(s): 5030B	Test(s): 8260B
Sample ID: MW7	Lab ID: 2005-03-0521 - 7
Sampled: 03/14/2005 10:45	Extracted: 3/25/2005 05:24
Matrix: Water	QC Batch#: 2005/03/24-03.62

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	ND	50	ug/L	1.00	03/25/2005 05:24	
Methyl tert-butyl ether (MTBE)	ND	0.50	ug/L	1.00	03/25/2005 05:24	
Benzene	ND	0.50	ug/L	1.00	03/25/2005 05:24	
Toluene	ND	0.50	ug/L	1.00	03/25/2005 05:24	
Ethylbenzene	ND	0.50	ug/L	1.00	03/25/2005 05:24	
Total xylenes	ND	1.0	ug/L	1.00	03/25/2005 05:24	
<b>Surrogate(s)</b>						
1,2-Dichloroethane-d4	103.0	73-130	%	1.00	03/25/2005 05:24	
Toluene-d8	97.4	81-114	%	1.00	03/25/2005 05:24	

**Fuel Oxygenates by 8260B**

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Project: TMSFT1 Task #11  
Strough Family Trust

Received: 03/15/2005 16:15

**Batch QC Report**

Prep(s): 5030B

Method Blank

MB: 2005/03/24-02.64-015

Water

Test(s): 8260B

QC Batch # 2005/03/24-02.64

Date Extracted: 03/24/2005 18:15

Compound	Conc.	RL	Unit	Analyzed	Flag
Gasoline	ND	50	ug/L	03/24/2005 18:15	
Methyl tert-butyl ether (MTBE)	ND	0.5	ug/L	03/24/2005 18:15	
Benzene	ND	0.5	ug/L	03/24/2005 18:15	
Toluene	ND	0.5	ug/L	03/24/2005 18:15	
Ethylbenzene	ND	0.5	ug/L	03/24/2005 18:15	
Total xylenes	ND	1.0	ug/L	03/24/2005 18:15	
<b>Surrogates(s)</b>					
1,2-Dichloroethane-d4	100.8	73-130	%	03/24/2005 18:15	
Toluene-d8	104.8	81-114	%	03/24/2005 18:15	

**Fuel Oxygenates by 8260B**

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Project: TMSFT1 Task #11

Strough Family Trust

Received: 03/15/2005 16:15

**Batch QC Report**

Prep(s): 5030B

Method Blank

MB: 2005/03/24-03.62-013

Water

Test(s): 8260B

QC Batch # 2005/03/24-03.62

Date Extracted: 03/24/2005 19:13

Compound	Conc.	RL	Unit	Analyzed	Flag
Gasoline	ND	50	ug/L	03/24/2005 19:13	
Methyl tert-butyl ether (MTBE)	ND	0.5	ug/L	03/24/2005 19:13	
Benzene	ND	0.5	ug/L	03/24/2005 19:13	
Toluene	ND	0.5	ug/L	03/24/2005 19:13	
Ethylbenzene	ND	0.5	ug/L	03/24/2005 19:13	
Total xylenes	ND	1.0	ug/L	03/24/2005 19:13	
<b>Surrogates(s)</b>					
1,2-Dichloroethane-d4	108.2	73-130	%	03/24/2005 19:13	
Toluene-d8	108.4	81-114	%	03/24/2005 19:13	

**Fuel Oxygenates by 8260B**

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Project: TMSFT1 Task #11  
Strough Family Trust

Received: 03/15/2005 16:15

**Batch QC Report**

Prep(s): 5030B

Method Blank

MB: 2005/03/25-02.62-054

Water

Test(s): 8260B

QC Batch # 2005/03/25-02.62

Date Extracted: 03/25/2005 19:54

Compound	Conc.	RL	Unit	Analyzed	Flag
Gasoline	ND	50	ug/L	03/25/2005 19:54	
Methyl tert-butyl ether (MTBE)	ND	0.5	ug/L	03/25/2005 19:54	
Benzene	ND	0.5	ug/L	03/25/2005 19:54	
Toluene	ND	0.5	ug/L	03/25/2005 19:54	
Ethylbenzene	ND	0.5	ug/L	03/25/2005 19:54	
Total xylenes	ND	1.0	ug/L	03/25/2005 19:54	
<b>Surrogates(s)</b>					
1,2-Dichloroethane-d4	114.8	73-130	%	03/25/2005 19:54	
Toluene-d8	107.8	81-114	%	03/25/2005 19:54	

**Fuel Oxygenates by 8260B**

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Project: TMSFT1 Task #11

Strough Family Trust

Received: 03/15/2005 16:15

**Batch QC Report**

Prep(s): 5030B

Method Blank

MB: 2005/03/26-01.62-053

Water

Test(s): 8260B

QC Batch # 2005/03/26-01.62

Date Extracted: 03/26/2005 07:53

Compound	Conc.	RL	Unit	Analyzed	Flag
Gasoline	ND	50	ug/L	03/26/2005 07:53	
Methyl tert-butyl ether (MTBE)	ND	0.5	ug/L	03/26/2005 07:53	
Benzene	ND	0.5	ug/L	03/26/2005 07:53	
Toluene	ND	0.5	ug/L	03/26/2005 07:53	
Ethylbenzene	ND	0.5	ug/L	03/26/2005 07:53	
Total xylenes	ND	1.0	ug/L	03/26/2005 07:53	
<b>Surrogates(s)</b>					
1,2-Dichloroethane-d4	110.4	73-130	%	03/26/2005 07:53	
Toluene-d8	106.8	81-114	%	03/26/2005 07:53	

**Fuel Oxygenates by 8260B**

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Project: TMSFT1 Task #11

Strough Family Trust

Received: 03/15/2005 16:15

**Batch QC Report**

Prep(s): 5030B

Test(s): 8260B

Laboratory Control Spike

Water

QC Batch # 2005/03/24-02.64

LCS 2005/03/24-02.64-053

Extracted: 03/24/2005

Analyzed: 03/24/2005 17:53

LCSD

Compound	Conc. ug/L		Exp.Conc.	Recovery %		RPD	Ctrl.Limits %		Flags	
	LCS	LCSD		LCS	LCSD		%	Rec.	RPD	LCS
Methyl tert-butyl ether (MTBE)	26.2		25.0	104.8			65-165	20		
Benzene	26.2		25.0	104.8			69-129	20		
Toluene	27.6		25.0	110.4			70-130	20		
<b>Surrogates(s)</b>										
1,2-Dichloroethane-d4	485		500	97.0			73-130			
Toluene-d8	520		500	104.0			81-114			

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03/30/2005 13:10

**Fuel Oxygenates by 8260B**

ETIC Oakland

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Project: TMSFT1 Task #11  
Strough Family Trust

Received: 03/15/2005 16:15

**Batch QC Report**

Prep(s): 5030B

Test(s): 8260B

Laboratory Control Spike

Water

QC Batch # 2005/03/24-03.62

LCS 2005/03/24-03.62-047  
LCSD

Extracted: 03/24/2005

Analyzed: 03/24/2005 18:47

Compound	Conc. ug/L		Exp.Conc.	Recovery %		RPD %	Ctrl.Limits %		Flags	
	LCS	LCSD		LCS	LCSD		Rec.	RPD	LCS	LCSD
Methyl tert-butyl ether (MTBE)	27.3		25.0	109.2			65-165	20		
Benzene	27.4		25.0	109.6			69-129	20		
Toluene	28.3		25.0	113.2			70-130	20		
<b>Surrogates(s)</b>										
1,2-Dichloroethane-d4	502		500	100.4			73-130			
Toluene-d8	513		500	102.6			81-114			

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**Fuel Oxygenates by 8260B**

ETIC Oakland

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Project: TMSFT1 Task #11  
Strough Family Trust

Received: 03/15/2005 16:15

**Batch QC Report**

Prep(s): 5030B

Test(s): 8260B

Laboratory Control Spike

Water

QC Batch # 2005/03/25-02.62

LCS 2005/03/25-02.62-028  
LCSD

Extracted: 03/25/2005

Analyzed: 03/25/2005 19:28

Compound	Conc. ug/L		Exp. Conc.	Recovery %		RPD	Ctrl. Limits %		Flags	
	LCS	LCSD		LCS	LCSD		%	Rec.	RPD	LCS
Methyl tert-butyl ether (MTBE)	28.1		25.0	112.4			65-165	20		
Benzene	28.0		25.0	112.0			69-129	20		
Toluene	30.0		25.0	120.0			70-130	20		
<b>Surrogates(s)</b>										
1,2-Dichloroethane-d4	496		500	99.2			73-130			
Toluene-d8	547		500	109.4			81-114			

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03/30/2005 13:10

**Fuel Oxygenates by 8260B**

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Project: TMSFT1 Task #11  
Strough Family Trust

Received: 03/15/2005 16:15

**Batch QC Report**

Prep(s): 5030B

Test(s): 8260B

Laboratory Control Spike

Water

QC Batch # 2005/03/26-01.62

LCS 2005/03/26-01.62-027  
LCSD

Extracted: 03/26/2005

Analyzed: 03/26/2005 07:27

Compound	Conc. ug/L		Exp. Conc.	Recovery %		RPD	Ctrl. Limits %		Flags	
	LCS	LCSD		LCS	LCSD		%	Rec.	RPD	LCS
Methyl tert-butyl ether (MTBE)	22.1		25.0	88.4			65-165	20		
Benzene	25.1		25.0	100.4			69-129	20		
Toluene	26.9		25.0	107.6			70-130	20		
<b>Surrogates(s)</b>										
1,2-Dichloroethane-d4	484		500	96.8			73-130			
Toluene-d8	529		500	105.8			81-114			

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**Fuel Oxygenates by 8260B**

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Project: TMSFT1 Task #11  
Strough Family Trust

Received: 03/15/2005 16:15

**Batch QC Report**

Prep(s): 5030B

Test(s): 8260B

**Matrix Spike ( MS / MSD )**

**Water**

**QC Batch # 2005/03/24-02.64**

MW1 >> MS

Lab ID: 2005-03-0521 - 001

MS: 2005/03/24-02.64-023

Extracted: 03/24/2005

Analyzed: 03/24/2005 21:23

Dilution: 1.00

MSD: 2005/03/24-02.64-045

Extracted: 03/24/2005

Analyzed: 03/24/2005 21:45

Dilution: 1.00

Compound	Conc. ug/L			Spk.Level ug/L	Recovery %			Limits %		Flags	
	MS	MSD	Sample		MS	MSD	RPD	Rec.	RPD	MS	MSD
Methyl tert-butyl ether	32.8	32.1	ND	25.0	131.2	128.4	2.2	65-165	20		
Benzene	29.4	28.7	ND	25.0	117.6	114.8	2.4	69-129	20		
Toluene	31.7	30.4	ND	25.0	126.8	121.6	4.2	70-130	20		
<b>Surrogate(s)</b>											
1,2-Dichloroethane-d4	514	496		500	102.8	99.3		73-130			
Toluene-d8	451	466		500	90.1	93.3		81-114			

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**Fuel Oxygenates by 8260B**

ETIC Oakland

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Project: TMSFT1 Task #11  
Strough Family Trust

Received: 03/15/2005 16:15

**Batch QC Report**

Prep(s): 5030B

Test(s): 8260B

**Matrix Spike ( MS / MSD )**

**Water**

**QC Batch # 2005/03/24-03.62**

MS/MSD

Lab ID: 2005-03-0510 - 001

MS: 2005/03/24-03.62-008

Extracted: 03/25/2005

Analyzed: 03/25/2005 00:08

Dilution: 1.00

MSD: 2005/03/24-03.62-035

Extracted: 03/25/2005

Analyzed: 03/25/2005 00:35

Dilution: 1.00

Compound	Conc. ug/L			Spk.Level ug/L	Recovery %			Limits %		Flags	
	MS	MSD	Sample		MS	MSD	RPD	Rec.	RPD	MS	MSD
Methyl tert-butyl ether	29.8	31.5	0.907	25.0	115.6	122.4	5.7	65-165	20		
Benzene	24.3	25.1	ND	25.0	97.2	100.4	3.2	69-129	20		
Toluene	26.2	27.1	ND	25.0	104.8	108.4	3.4	70-130	20		
<i>Surrogate(s)</i>											
1,2-Dichloroethane-d4	530	527		500	106.0	105.4		73-130			
Toluene-d8	531	528		500	106.2	105.6		81-114			

Severn Trent Laboratories, Inc.

STL San Francisco \* 1220 Quarry Lane, Pleasanton, CA 94566

Tel 925 484 1919 Fax 925 484 1096 \* www.stl-inc.com \* CA DHS ELAP# 2496

03/30/2005 13:10

**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: TMSFT1 Task #11

Strough Family Trust

Received: 03/15/2005 16:15

**Batch QC Report**

Prep(s): 5030B

Test(s): 8260B

**Matrix Spike ( MS / MSD )**

**Water**

**QC Batch # 2005/03/25-02.62**

MS/MSD

Lab ID: 2005-03-0566 - 002

MS: 2005/03/25-02.62-048

Extracted: 03/25/2005

Analyzed: 03/25/2005 21:48

Dilution: 1.00

MSD: 2005/03/25-02.62-014

Extracted: 03/25/2005

Analyzed: 03/25/2005 22:14

Dilution: 1.00

Compound	Conc. ug/L			Spk. Level	Recovery %			Limits %		Flags	
	MS	MSD	Sample		ug/L	MS	MSD	RPD	Rec.	RPD	MS
Methyl tert-butyl ether	29.5	33.1	3.73	25.0	103.1	117.5	13.1	65-165	20		
Benzene	27.4	26.7	ND	25.0	109.6	106.8	2.6	69-129	20		
Toluene	28.8	28.2	ND	25.0	115.2	112.8	2.1	70-130	20		
<b>Surrogate(s)</b>											
1,2-Dichloroethane-d4	547	532		500	109.4	106.4		73-130			
Toluene-d8	543	525		500	108.6	105.0		81-114			

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03/30/2005 13:10

**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: TMSFT1 Task #11  
Strough Family Trust

Received: 03/15/2005 16:15

**Batch QC Report**

Prep(s): 5030B

Test(s): 8260B

**Matrix Spike ( MS / MSD )**

**Water**

**QC Batch # 2005/03/26-01.62**

MS/MSD

Lab ID: 2005-03-0504 - 012

MS: 2005/03/26-01.62-018

Extracted: 03/26/2005

Analyzed: 03/26/2005 13:18

Dilution: 1.00

MSD: 2005/03/26-01.62-044

Extracted: 03/26/2005

Analyzed: 03/26/2005 13:44

Dilution: 1.00

Compound	Conc. ug/L			Spk.Level ug/L	Recovery %			Limits %		Flags	
	MS	MSD	Sample		MS	MSD	RPD	Rec.	RPD	MS	MSD
Methyl tert-butyl ether	24.0	32.5	1.42	25.0	90.3	124.3	31.7	65-165	20		R1
Benzene	134	132	103	25.0	124.0	116.0	6.7	69-129	20		
Toluene	221	216	187	25.0	136.0	116.0	15.9	70-130	20	M4	
<i>Surrogate(s)</i>											
1,2-Dichloroethane-d4	486	533		500	97.2	106.6		73-130			
Toluene-d8	546	512		500	109.2	102.4		81-114			

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03/30/2005 13:10

**Fuel Oxygenates by 8260B**

ETIC Oakland

Attn.: Kathy Brandt

1333 Broadway, Suite 1015

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Project: TMSFT1 Task #11  
Strough Family Trust

Received: 03/15/2005 16:15

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**Legend and Notes**

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**Sample Comment**

Lab ID: 2005-03-0521-1

Siloxane peaks were found in the sample which are not believed to be gasoline related. If they were to be quantified as gasoline, concentration would be 85 ug/L.

**Analysis Flag**

L2

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

**Result Flag**

M4

MS/MSD spike recoveries were above acceptance limits.  
See blank spike (LCS).

Q6

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

R1

Analyte RPD was out of QC limits.





STL San Francisco

Sample Receipt Checklist

Submission #: 2005-03-0521

Checklist completed by: (initials) JM Date: 03/16/05

Courier name: [X] STL San Francisco [ ] Client

Custody seals intact on shipping container/samples Yes \_\_\_ No \_\_\_ Not Present [X]

Chain of custody present? Yes [X] No \_\_\_

Chain of custody signed when relinquished and received? Yes [X] No \_\_\_

Chain of custody agrees with sample labels? Yes [X] No \_\_\_

Samples in proper container/bottle? Yes [X] No \_\_\_

Sample containers intact? Yes [X] No \_\_\_

Sufficient sample volume for indicated test? Yes \_\_\_ No \_\_\_

All samples received within holding time? Yes [X] No \_\_\_

Container/Temp Blank temperature in compliance (4° C ± 2)? Temp: 2°C Yes [X] No \_\_\_

Potential reason for > 6°C - Ice melted [ ] Ice in bags [ ] Not enough ice [ ] Not enough blue ice [ ] Samples in boxes [ ]

Sampled < 4hr. ago? [ ] Ice not required (e.g. air or bulk sample) [ ] Ice Present Yes [X] No \_\_\_

Water - VOA vials have zero headspace? No VOA vials submitted \_\_\_ Yes [X] No \_\_\_

(if bubble is present, refer to approximate bubble size and itemize in comments as S (small ~ O), M (medium ~ O) or L (large ~ O))

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 comment section below:

Comments: \_\_\_\_\_

Project Management [Routing for instruction of indicated discrepancy(ies)]

Project Manager: (initials) \_\_\_\_\_ Date: \_\_\_\_/\_\_\_\_/04 Client contacted: [ ] Yes [ ] No

Summary of discussion: \_\_\_\_\_

Corrective Action (per PM/Client): \_\_\_\_\_