GETTLER-RYAN INC.

December 5, 2003

Marie Schweickert
515 South Livermore Avenue
Livermore, California

Alameda County
DEC 09 2003
Environmental Health

Subject: Limited Subsurface Assessment Report
Marie Schweickert Property
515 South Livermore Avenue
Livermore, California
ACEH Fuel Leak Investigation RO0002595

Dear Ms. Schweickert;

This report presents the results of a subsurface investigation performed by Gettler-Ryan Inc. (GR) at the above referenced site. The work was performed at the request of Marie Schweickert to evaluate the extent of dissolved petroleum hydrocarbons in soil and groundwater at the site. This work was performed in response to an Alameda County Environmental Health (ACEH) letter dated October 27, 2003, that requested a Work Plan be prepared for this site. The scope of work performed included: preparing a site safety plan; obtaining a drilling permit from the ACEH; collecting soil samples from the soil boring for description and possible chemical analysis; and collecting a groundwater sample; analyzing selected soil and groundwater samples; and preparing a report documenting the work performed. The scope of work performed during this investigation was originally proposed in GR report #948209, *Work Plan For Limited Subsurface Investigation*, dated November 6, 2003, and was approved by the ACEH in a letter dated November 18, 2003.

Site Description

The subject site is located at 515 Livermore Avenue in Livermore, California (Figure 1). Topography in the vicinity of the subject site is relatively flat at an elevation of approximately 500 feet above mean sea level. The closest surface water is Arroyo Mocho Creek, which is approximately 2,700 feet south of the site. Below ground facilities consisted of one 350-gallon heating oil UST. Pertinent site features and the location of the excavation are shown on Figure 2.

Background

On July 29, 2003, GR conducted compliance soil sampling during the removal of one 350-gallon, steel heating oil UST (Figure 2). No indications of a release such as holes or cracks were observed in the UST and no groundwater was observed in the excavation. On soil sample (TP-1(5)) was collected at the base of the UST excavation at 5 feet below ground surface (bgs). Laboratory results indicated that a TPHd concentration 36 parts per million (ppm) was detected in excavation sample TP-1(5). Laboratory results also indicated that concentrations of BTEX and O&G were below laboratory method detection limits. A summary of historical analytical data associated with the heating oil UST excavation sampling is included in Table 1.

6747 Sierra Court, Suite J • **Dublin**, CA 94568 • (925) 551-7555 • Fax (925) 551-7888
3140 Gold Camp Drive, Suite 170 • **Rancho Cordova**, CA 95670 • (916) 631-1300 • Fax (916) 631-1317
1364 N. McDowell Blvd., Suite B2 • **Petaluma**, CA 94954 • (707) 789-3255 • Fax (707) 789-3218

Field Activities

To evaluate the extent of petroleum hydrocarbons in soil and groundwater beneath the former heating oil UST, GR advanced one soil boring. Field work was performed in accordance with GR's Site Safety Plan #948209, dated November 11, 2003. GR Field Methods and Procedures are attached. A copy of drilling permit #23150 from the ACEH is attached. Underground Service Alert was notified prior to beginning site activities. The soil boring and groundwater sampling was performed by Vironex Field Services (C57 #705927).

Soil boring B-1 was advanced on November 21, 2003. The soil boring B-1 was drilled to a depth of 50 bgs using a track-mounted Geoprobe rig, which continuously cored subsurface material in five-foot long clear plastic sleeves. A GR geologist observed the drilling activities. Soil samples were collected from the soil boring at 5-foot intervals for visual description, log preparation, and for possible chemical analysis. Boring logs are attached. Location of soil boring is shown on Figure 2. No soil cuttings were generated during drilling activities

A temporary well consisting of 45 feet of 1-inch diameter Schedule 40 polyvinyl chloride (PVC) casing and 5 feet machine-slotted screen material was constructed in soil boring B-1. The temporary monitoring well was screened from 45 to 50 feet bgs. After water sampling was completed the screen and casing was removed and the boring was properly abandoned with neat cement.

Results of Subsurface Investigation

Soil encountered during this investigation consisted of sand and gravel fill material in the former heating oil UST excavation from ground surface to approximately 8 feet bgs. Below the fill, native sand and gravel was underlain by silt at 14 feet bgs. The silt was underlain by a sand and gravel at 18 feet bgs, which extended from 18 to 34 feet bgs and underlain by a silt/clay layer at 34 feet. Field observations of the sand and gravel from 30 to 34 feet bgs indicate that this interval may be saturated on a seasonal basis (wet season). The silt/clay layer extended from 34 to 38 feet bgs and was underlain by sand and gravel that extended from 38 to 47 feet bgs. The sand and gravel was underlain by another silt/clay layer at 47 feet and extended to the total depth of the boring at 50 feet bgs. Groundwater was encountered at approximately 45 feet bgs in soil boring B-1. Detailed descriptions of the soil encountered during drilling are presented on the attached boring logs.

Chemical Analytical Procedures

The soil and groundwater samples were analyzed for Total Petroleum Hydrocarbons as diesel (TPHd) by EPA Method 8015, benzene, toluene, ethylbenzene, and xylenes (BTEX), methyl tert-butyl ether (MtBE) and tert-Butyl Alcohol (TBA) by EPA Method 8260B. A total of 4 soil samples from the soil boring, and one groundwater sample were submitted under chain-of-custody for chemical analysis. Analyses were performed by Kiff Analytical (ELAP #2236). Copies of the laboratory reports and chain-of-custody forms are attached. Soil and groundwater chemical analytical data are summarized in Table 1.

Soil Analytical Results

TPHd concentrations ranged from 65 to 1,900 ppm. In an effort to remove any masking effects from organic matter present in the soil samples, a THPd with silica-gel cleanup analysis was also performed. The results of this analysis indicate that there is little difference between TPHd and TPHd with silica gel cleanup analysis. BTEX, MtBE and TBA were not detected in soil samples collected from soil boring B-1

except one instance in sample B1-30.0 with a xylene concentration of 0.015 ppm. A summary of the analytical results for the most recent soil sampling is included presented in Table 1.

Groundwater Analytical Results

B-1 not MW-3

TPHd was reported in well MW-3 at a concentration of 100,000 parts per billion (ppb) using TPHd with silica-gel cleanup analysis. BTEX, MtBE and TBA were not detected in the groundwater sample from soil boring B-1 with the exception of a xylene concentration of 3.1 ppb. A summary of groundwater analytical results has been presented in Table 1.

Discussion

The purpose of this investigation was to assess the extent of the petroleum hydrocarbon impact beneath the former heating oil UST at the site. Based on the results of this investigation, as evidenced by the low TPHd concentrations in the 5-foot (36 ppm), 10-foot (61 ppm) and 20-foot (31 ppm) soil samples, it appears that a significant leak or release from the Schweickert heating oil UST has not occurred.

Higher concentrations of TPHd found in the 30-foot (2,000 ppm) and 40-foot (330) are most likely from another offsite source in the neighborhood. A silt/clay layer at approximately 34 feet bgs is the base of what appears to be a seasonally saturated zone and has high TPHd concentrations much like the deeper saturated zone from 45 to 50 feet bgs below it (see subsurface description above and boring logs for details).

Please call if there are any questions or comments regarding this report.

Sincerely,

REGISTERED GEOLOGIST • ROBERT A. LAURITZEN • No. 7504 • STATE OF CALIFORNIA

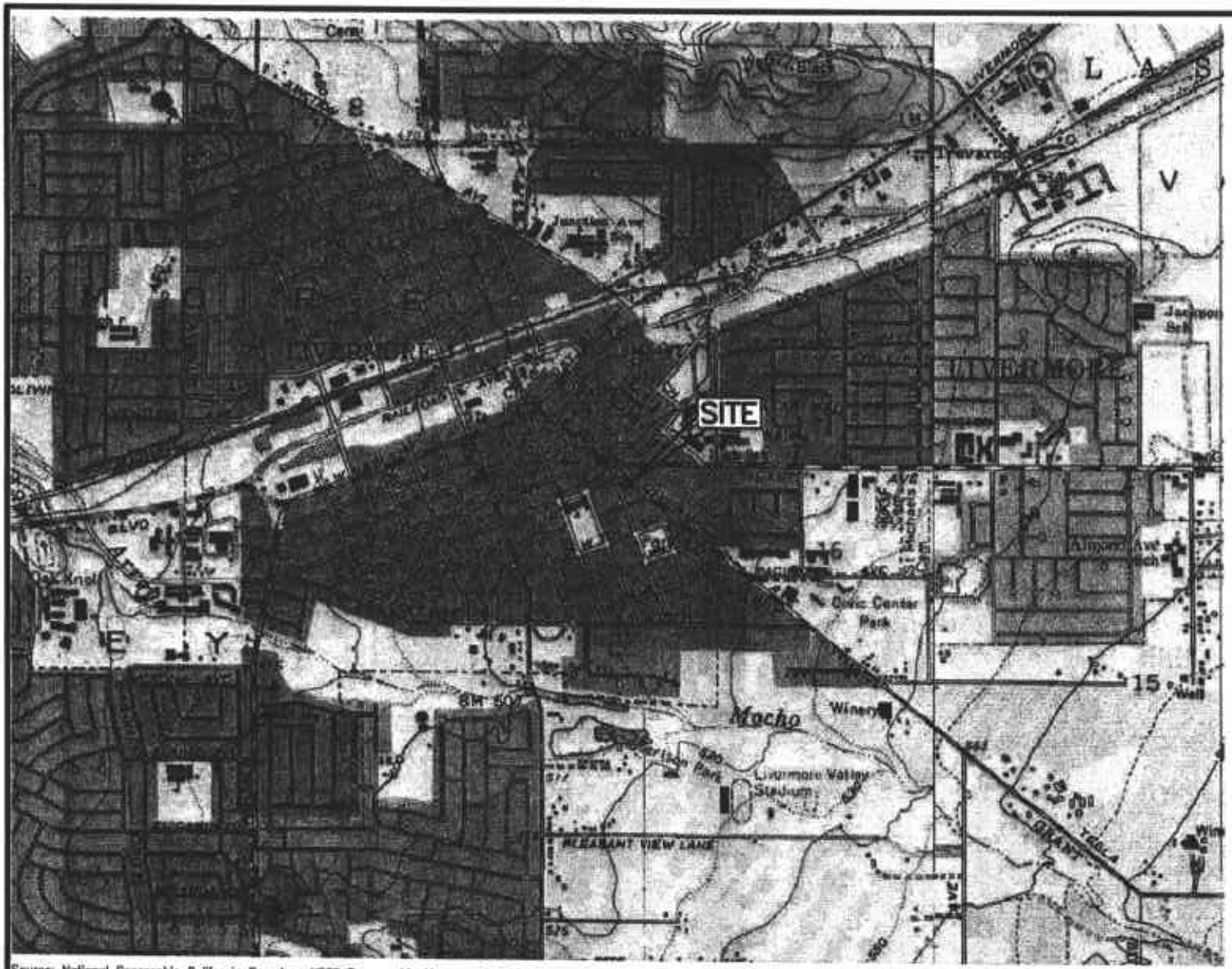
Robert A. Lauritzen, RG #7504
Senior Geologist

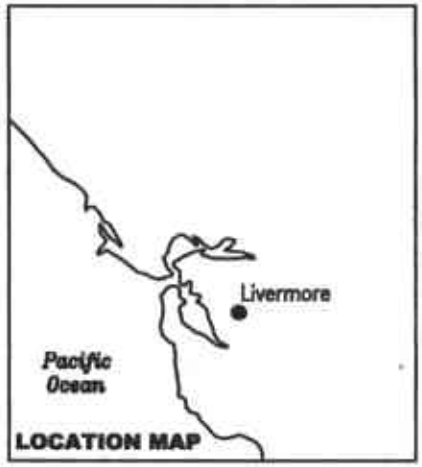
Greg A. Gurss
Senior Project Manager

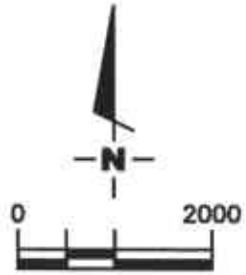
Attachments:

Table 1. Soil and Groundwater Chemical Analytical Results
Figure 1. Vicinity Map
Figure 2. Site Map
Field Methods and Procedures
Alameda County Environmental Health Permit
Boring Logs
Chemical Analytical Report and Chain-of-Custody Forms

Cc: Roseanna E. Garcia-La Grille, Alameda County Health Services Agency, 1131 Harbor Bay Parkway, Suite 250, Alameda, CA 94502-6577







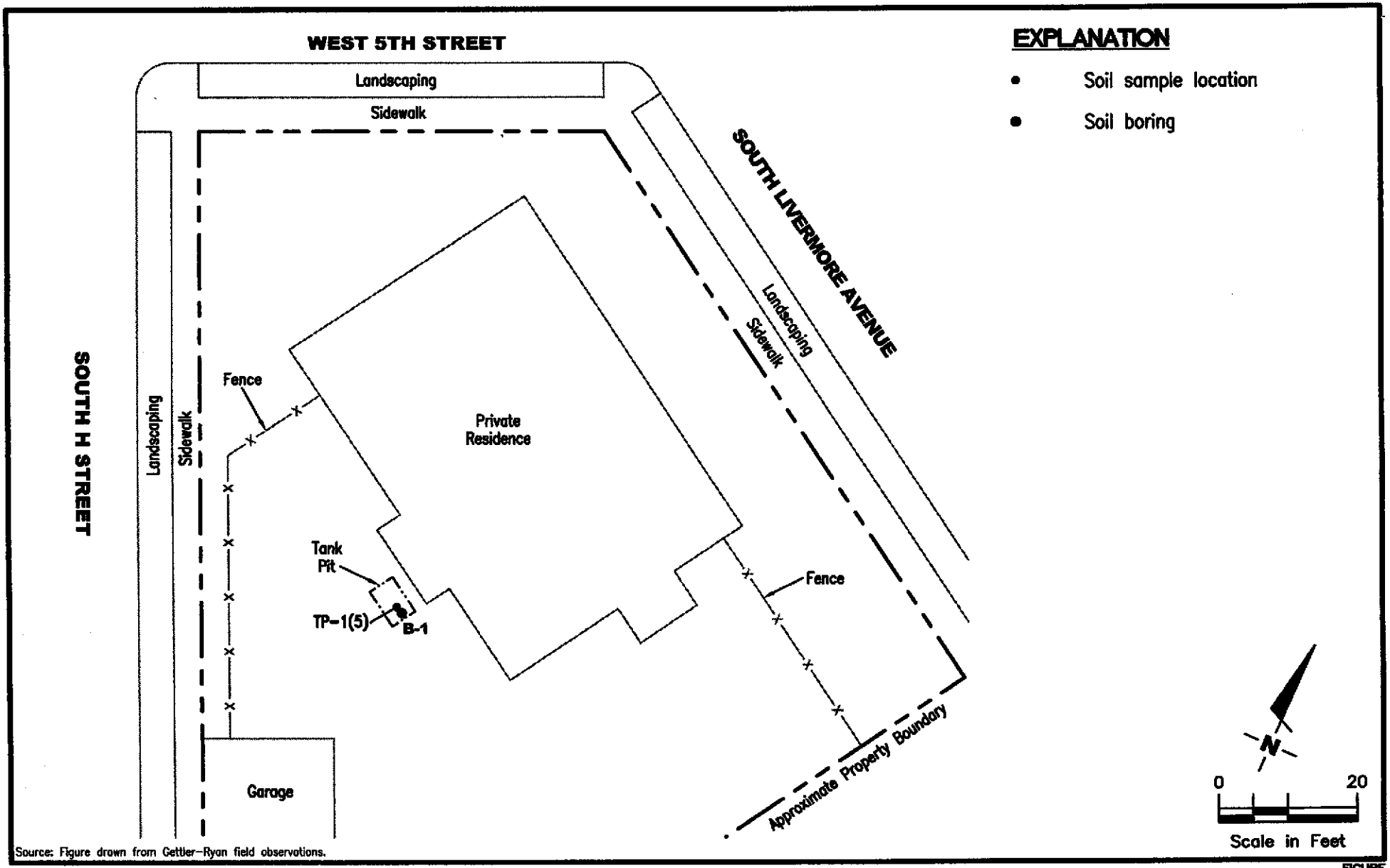
GETTLER - RYAN INC.
6747 Sierra Ct., Suite J
Dublin, CA 94568
(925) 551-7555

VICINITY MAP
Marie Schweickert Party
515 South Livermore Avenue
Livermore, California

FIGURE
1

PROJECT NUMBER	REVIEWED BY	DATE	REVISED DATE
51171		8/03	

FILE NAME: P:\ENVIRO\MARIE SCHWEICKERT PROPERTY\VIC-515.DWG | Layout Tab: Vic Map



Source: Figure drown from Gettler-Ryan field observations.

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6747 Sierra Ct., Suite J
Dublin, CA 94568
(925) 551-7555

SITE PLAN
Marie Schweickert Property
515 South Livermore Avenue
Livermore, California

FIGURE
2

PROJECT NUMBER	REVIEWED BY	DATE	REVISED DATE
948209.1		12/03	

FILE NAME: P:\ENVIRO\MARIE SCHWEICKERT PROPERTY\A03-MARIE SCHWEICKERT.DWG | Layout Tab: Boring Rpt. 12-03

Table 1 - Chemical Analytical Results

Marie Schweickert Property
515 South Livermore Ave.
Livermore, California

Sample ID	Sample Depth (ft)	Sample Date	TPHd* (ppm)	Benzene (ppm)	Toluene (ppm)	Ethylbenzene (ppm)	Xylenes (ppm)	MtBE (ppm)	TBA (ppm)	O&G (ppm)
Historical Soil Data										
TP-1(5)	5.0	7/29/2003	36	<0.0050	<0.0050	<0.0050	<0.0050	----	----	<0.0050
Comp-1(A,B,C,D)	---	7/29/2003	29	<0.0050	<0.0050	<0.0050	<0.0050	----	----	<0.0050
Soil Boring B-1										
B1-10.0	10.0	11/21/2003	65/61	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	----
B1-20.0	20.0	11/21/2003	35/31	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	----
B1-30.0	30.0	11/21/2003	1,900/2,000	<0.0050	<0.0050	<0.0050	0.015	<0.0050	<0.010	----
B1-40.0	40.0	11/21/2003	350/330	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	----

Sample ID	Sample Depth (ft)	Sample Date	TPHd (si-gel) (ppb)	Benzene (ppb)	Toluene (ppb)	Ethylbenzene (ppb)	Xylenes (ppb)	MtBE (ppb)	TBA (ppb)
Groundwater Sample									
B-1	50	11/21/2003	100,000	<0.50	<0.0050	<0.0050	3.1	<0.50	<5.0

Explanation:
TPHd = Total Petroleum Hydrocarbons as diesel
BTEX = Benzene, toluene, ethylbezene, xylenes
MtBE = Methyl tert-butyl ether
TBA = tert-Butyl alcohol
ppm = parts per million
ppb = parts per billion
--- = not analyzed
* = TPHd/TPHd (silica gel)

Analytical Methods:
TPHd by EPA Method 8015
BTEX, MtBE and TBA by EPA Method 8260B

Analytical Laboratory:
Kiff Analytical (ELAP # 2236)

GETTLER-RYAN INC.

FIELD METHODS AND PROCEDURES
GEOPROBE®

Site Safety Plan

Field work performed by Gettler-Ryan Inc. (GR) is conducted in accordance with GR's Health and Safety Plan and the Site Safety Plan. GR personnel and subcontractors who perform work at the site are briefed on the contents of these plans prior to initiating site work. The GR geologist or engineer at the site when the work is performed acts as the Site Safety Officer. GR utilizes a photoionization detector (PID) to monitor ambient conditions as part of the Health and Safety Plan.

Collection of Soil Samples

Collection, preservation, and analysis of samples is performed in accordance with the California Code of Regulations Title 23, Division 3, Chapter 16, *Underground Tank Regulations* (June 2001), the Central Valley Regional Water Quality Control Board's *Tri-Regional Board Staff Recommendations for Preliminary Investigation And Evaluation Of Underground Tank Sites* (August 1990), Environmental Protection Agency *SW-846 Methods* (November 2000), and local agency guidelines.

Soil borings are advanced by a California-licensed well driller. A GR geologist is present to observe the drilling, collect soil samples for description, physical testing, and chemical analysis, and prepare a log of the exploratory soil boring under the supervision of a California Registered Geologist. Soil samples obtained with a Geoprobe® rig are collected from the soil boring with a split-barrel sampling device fitted with 1.5-inch-diameter, clean brass or acrylic tubes. The Geoprobe® drives the sampling device approximately 24 inches, and the filled sampler is then retrieved from the boring. The encountered soils are described using the Unified Soil Classification System (ASTM 2488-93) and the Munsell Soil Color Chart or GSA Rock Color Chart. Upon completion, the boring is backfilled to ground surface with neat cement

After removal from the sampling device, soil samples for chemical analysis are covered on both ends with teflon sheeting, capped, labeled, and placed in a cooler with blue ice for preservation to 48C628C. A chain-of-custody form is initiated in the field and accompanies the selected soil samples to a California state-certified hazardous material testing laboratory. Samples are selected for chemical analysis based in part on:

a. depth relative to underground storage tanks and existing ground surface
b. depth relative to known or suspected groundwater
c. depth relative to areas of known hydrocarbon impact at the site
d. presence or absence of contaminant migration pathways
e. presence or absence of discoloration or staining
f. presence or absence of obvious gasoline hydrocarbon odors
g. presence or absence of organic vapors detected by headspace analysis

Field Screening of Soil Samples

A PID is used to perform head-space analysis in the field for the presence of organic vapors from soil samples. This test procedure involves placing a small amount of the soil to be screened in a sealable plastic bag. The bag is warmed in the sun to allow organic compounds in the soil sample to volatilize. The PID probe is inserted through the wall of the bag and into the headspace inside, and the meter reading is recorded in the field notes. An alternative method involves placing a plastic cap over the end of the sample tube. The PID probe is placed through a hole in the plastic cap, and vapors with the covered tube measured. Head-space screening is performed and results recorded as reconnaissance data only. GR does not consider field screening techniques to be verification of the presence or absence of hydrocarbons.

Grab Groundwater Sampling

Grab samples of groundwater are collected from the boring using a parastaltic pump or micro-bailer. With the parastaltic pump, new Tygon® tubing is placed in the pump prior to collection of each sample. The tubing is lowered into the boring through the GeoProbe equipment after groundwater has been allowed to collect. The parastaltic pump is used to evacuate water from the boring where it is discharged to laboratory-supplied containers appropriate for the anticipated analyses. With the micro-bailer, the cleaned bailer is lowered through the GeoProbe equipment into the groundwater. The bailer is allowed to fill, then is brought to the surface where the water is decanted into the sample container. The micro-bailer may also consist of a clean piece of tubing with a check valve at the bottom. The tubing is pumped up and down to bring the water sample to the surface and discharge the sample to the appropriate container.

Following collection of the groundwater sample, the sample bottles are then labeled and placed in chilled storage for transport to the analytical laboratory. A chain-of-custody form is initiated in the field and accompanies the groundwater samples to the analytical laboratory.

Soil Vapor Sampling

Soil vapor samples are collected by advancing the Geoprobe® to a discrete depth. Once the desired depth is attained, a 1/4-inch polyethylene tubing is threaded through the inside diameter of the drive rods and connected either to a tedlar bag or summa canister. The bottom portion of the drive rod is retracted and a vacuum is induced to purge a soil vapor sample. Used tubing is discarded after each sample.

ZONE 7 WATER AGENCY
5997 PARKSIDE DRIVE PLEASANTON, CALIFORNIA 94588-5127 VOICE (925) 484-2600 X235
FAX (925) 462-3914

DRILLING PERMIT APPLICATION

FOR APPLICANT TO COMPLETE

LOCATION OF PROJECT 515 S. LIVERMORE AVE
LIVERMORE

California Coordinates Source ____ ft. Accuracy± ____ ft.
CCN ____ ft. CCE ____ ft.
APN ____

CLIENT
Name MARIE SCHWEICKERT
Address 515 S. LIVERMORE AVE Phone 447-2532
City LIVERMORE Zip 94550

APPLICANT
Name GETTLER-RYAN INC.
6747 SIERRA COURT Fax (925)551-7[illegible]
Address SUITE J Phone (925) 551-7555
City DUBLIN, CA Zip 94568

TYPE OF PROJECT

Well Construction		Geotechnical Investigation	
Cathodic Protection	☐	General	☐
Water Supply	☐	Contamination	☒
Monitoring	☐	Well Destruction	☐

PROPOSED WATER SUPPLY WELL USE

New Domestic	☐	Replacement Domestic	☐
Municipal	☐	Irrigation	☐
Industrial	☐	Other ____	☐

DRILLING METHOD:
Mud Rotary ☐ Air Rotary ☐ Auger ☒ * GEOPROBE, AUGERS IF GEOPROBE IS UNSUCCESSFUL
Cable ☐ Other *GEOPROBE*

DRILLER'S LICENSE NO. C-57 #705927

WELL PROJECTS
Drill Hole Diameter ____ in. Maximum
Casing Diameter ____ in. Depth ____ ft.
Surface Seal Depth ____ ft. Number ____

GEOTECHNICAL PROJECTS
Number of Borings 4
Hole Diameter 2" / 5.5" in. Maximum Depth 45 ft.

ESTIMATED STARTING DATE 11/13/03
ESTIMATED COMPLETION DATE 11/13/03

I hereby agree to comply with all requirements of this permit and Alameda County Ordinance No. 73-68.
APPLICANT'S SIGNATURE [signature] Date 11/6/03
DOUGLAS J. LEE

FOR OFFICE

PERMIT NUMBER 23150
WELL NUMBER ____
APN ____

PERMIT CONDITIONS

Circled Permit Requirements Apply

(A.) GENERAL
1. A permit application should be submitted so as to arrive at the Zone 7 office five days prior to proposed starting date.
2. Submit to Zone 7 within 60 days after completion of permitted work the original Department of Water Resources Water Well Drillers Report or equivalent for well projects, or drilling logs and location sketch for geotechnical projects.
3. Permit is void if project not begun within 90 days of approval date.

B. WATER SUPPLY WELLS
1. Minimum surface seal thickness is two inches of cement grout placed by tremie.
2. Minimum seal depth is 50 feet for municipal and industrial wells or 20 feet for domestic and irrigation wells unless a lesser depth is specially approved.
3. An access port at least 0.5 inches in diameter is required on the wellhead for water level measurements.
4. A sample port is required on the discharge pipe near the wellhead.

C. GROUNDWATER MONITORING WELLS INCLUDING PIEZOMETERS
1. Minimum surface seal thickness is two inches of cement grout placed by tremie.
2. Minimum seal depth for monitoring wells is the maximum depth practicable or 20 feet.

(D.) GEOTECHNICAL. Backfill bore hole with compacted cuttings or heavy bentonite and upper two feet with compacted material. In areas of known or suspected contamination, tremied cement grout shall be used in place of compacted cuttings.

E. CATHODIC. Fill hole above anode zone with concrete placed by tremie.

F. WELL DESTRUCTION. See attached.

G. SPECIAL CONDITIONS

Approved Wyman Hong Date 11/7/03
Wyman Hong

8/6/99

Gettler-Ryan, Inc.

Log of Boring B-1

PROJECT: *Marie Schweickert Property*	LOCATION: *515 South Livermore Avenue, Livermore, CA*
GR PROJECT NO.: *948209.1*	SURFACE ELEVATION: *N/A*
DATE STARTED: *11/21/03*	WL (ft. bgs): *45* DATE: *11/21/03* TIME: *12:00*
DATE FINISHED: *11/21/03*	WL (ft. bgs): DATE: TIME:
DRILLING METHOD: *1" Direct Push*	TOTAL DEPTH: *50 feet*
DRILLING COMPANY: *Vironex Drilling*	GEOLOGIST: *Bob Lauretzen*

DEPTH (feet)	PID (ppm)	SAMPLE NUMBER	SAMPLE INT.	GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION	REMARKS
						Sand and gravel (fill).	Boring backfilled with neat cement to ground surface.
8	3	B1-10.0			SP	POORLY GRADED SAND WITH GRAVEL (SP) – dark grayish brown (2.5Y 4/2), dry to moist, medium dense; 80% sand, 15% gravel, 5% silt.	
16	0	B1-15.0			ML	SILT (ML) – light olive brown (2.5Y 5/6), moist, stiff; 100% silt, some sand and gravel.	
					SP	POORLY GRADED SAND WITH GRAVEL (SP) – light olive brown (2.5Y 5/6), moist, medium dense; 80% sand, 20% gravel, some silt.	
20	0	B1-20.0					
24	0	B1-25.0					
28							

JOB NUMBER: *948209.1*

Gettler-Ryan, Inc.

Log of Boring B-1

PROJECT: *Marie Schweickert Property*	LOCATION: *515 South Livermore Avenue, Livermore, CA*
GR PROJECT NO.: *948209.1*	SURFACE ELEVATION: *N/A*
DATE STARTED: *11/21/03*	WL (ft. bgs): *45* DATE: *11/21/03* TIME: *12:00*
DATE FINISHED: *11/21/03*	WL (ft. bgs): DATE: TIME:
DRILLING METHOD: *1" Direct Push*	TOTAL DEPTH: *50 feet*
DRILLING COMPANY: *Vironex Drilling*	GEOLOGIST: *Bob Lauretzen*

DEPTH (feet)	PID (ppm)	SAMPLE NUMBER	SAMPLE INT.	GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION	REMARKS
						Sand and gravel (fill).	Boring backfilled with neat cement to ground surface.
8	3	B1-10.0			SP	POORLY GRADED SAND WITH GRAVEL (SP) – dark grayish brown (2.5Y 4/2), dry to moist, medium dense; 80% sand, 15% gravel, 5% silt.	
16	0	B1-15.0			ML	SILT (ML) – light olive brown (2.5Y 5/6), moist, stiff; 100% silt, some sand and gravel.	
					SP	POORLY GRADED SAND WITH GRAVEL (SP) – light olive brown (2.5Y 5/6), moist, medium dense; 80% sand, 20% gravel, some silt.	
20	0	B1-20.0					
24	0	B1-25.0					
28							

Gettler-Ryan, Inc.

Log of Boring B-1

PROJECT: *Marie Schweickert Property*

LOCATION: *515 South Livermore Avenue, Livermore, CA*

DEPTH (feet)	PID (ppm)	SAMPLE NUMBER	SAMPLE INT.	GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION	REMARKS
	0	B1-30.0			SP		
32						Color changes to dark grayish brown (2.5Y 4/2) at 32 feet bgs.	
					ML	SILT (ML) - light olive brown (2.5Y 5/6), moist, medium stiff; 90% silt, 10% clay, trace fine sand.	
	0	B1-35.0					
36							
					SP	POORLY GRADED SAND WITH GRAVEL (SP) - dark grayish brown (2.5Y 4/2), moist, medium dense; 55% sand, 45% gravel.	
	0	B1-40.0					
40							
44						▽ At 45 feet becomes wet.	
					ML	SILT WITH CLAY (ML) - dark grayish brown (2.5Y 4/2), moist to wet, medium stiff; 80% silt, 20% clay.	
48							
						Bottom of boring at 50 feet bgs.	
52							
56							
60							

JOB NUMBER: *948209.1*

KIFF ANALYTICAL LLC

Report Number : 35943
Date : 12/3/2003

Bob Lauritzen
Gettler-Ryan Inc.
3140 Gold Camp Dr., Suite 170
Rancho Cordova,CA 95670

Subject : 4 Soil Samples and 1 Water Sample
Project Name : Schweickert Residence
Project Number : 948209

Dear Mr. Lauritzen,

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

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

Sincerely,

Jeff Dahl

KIFF ANALYTICAL LLC

Report Number : 35943
Date : 12/3/2003

Project Name : **Schweickert Residence**
Project Number : **948209**

Sample : **B-1** Matrix : Water Lab Number : 35943-01
Sample Date :11/21/2003

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	**< 0.50**	0.50	ug/L	EPA 8260B	12/1/2003
Toluene	**< 0.50**	0.50	ug/L	EPA 8260B	12/1/2003
Ethylbenzene	**< 0.50**	0.50	ug/L	EPA 8260B	12/1/2003
Total Xylenes	**3.1**	0.50	ug/L	EPA 8260B	12/1/2003
Methyl-t-butyl ether (MTBE)	**< 0.50**	0.50	ug/L	EPA 8260B	12/1/2003
Tert-Butanol	**< 5.0**	5.0	ug/L	EPA 8260B	12/1/2003
Toluene - d8 (Surr)	93.5		% Recovery	EPA 8260B	12/1/2003
4-Bromofluorobenzene (Surr)	86.1		% Recovery	EPA 8260B	12/1/2003
TPH as Diesel (Silica Gel)	**100000**	5000	ug/L	M EPA 8015	12/1/2003

Approved By: Jeff Dahl

2795 2nd St., Suite 300 Davis, CA 95616 530-297-4800

KIFF ANALYTICAL LLC

Report Number : 35943
Date : 12/3/2003

Project Name : **Schweickert Residence**
Project Number : **948209**

Sample : **B1-10.0** Matrix : Soil Lab Number : 35943-02
Sample Date :11/21/2003

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	**< 0.0050**	0.0050	mg/Kg	EPA 8260B	11/27/2003
Toluene	**< 0.0050**	0.0050	mg/Kg	EPA 8260B	11/27/2003
Ethylbenzene	**< 0.0050**	0.0050	mg/Kg	EPA 8260B	11/27/2003
Total Xylenes	**< 0.0050**	0.0050	mg/Kg	EPA 8260B	11/27/2003
Methyl-t-butyl ether (MTBE)	**< 0.0050**	0.0050	mg/Kg	EPA 8260B	11/27/2003
Tert-Butanol	**< 0.0050**	0.0050	mg/Kg	EPA 8260B	11/27/2003
Toluene - d8 (Surr)	101		% Recovery	EPA 8260B	11/27/2003
4-Bromofluorobenzene (Surr)	93.1		% Recovery	EPA 8260B	11/27/2003
TPH as Diesel	**65**	1.0	mg/Kg	M EPA 8015	11/30/2003
TPH as Diesel (Silica Gel)	**61**	1.0	mg/Kg	M EPA 8015	12/2/2003
1-Chlorooctadecane (Diesel Surrogate)	91.3		% Recovery	M EPA 8015	11/30/2003
1-Chlorooctadecane (Silica Gel Surr)	Interference		% Recovery	M EPA 8015	12/2/2003

Approved By: Jeff Dahl

2795 2nd St., Suite 300 Davis, CA 95616 530-297-4800

KIFF ANALYTICAL LLC

Report Number : 35943
Date : 12/3/2003

Project Name : **Schweickert Residence**
Project Number : **948209**

Sample : **B1-20.0** Matrix : Soil Lab Number : 35943-03
Sample Date :11/21/2003

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	**< 0.0050**	0.0050	mg/Kg	EPA 8260B	11/27/2003
Toluene	**< 0.0050**	0.0050	mg/Kg	EPA 8260B	11/27/2003
Ethylbenzene	**< 0.0050**	0.0050	mg/Kg	EPA 8260B	11/27/2003
Total Xylenes	**< 0.0050**	0.0050	mg/Kg	EPA 8260B	11/27/2003
Methyl-t-butyl ether (MTBE)	**< 0.0050**	0.0050	mg/Kg	EPA 8260B	11/27/2003
Tert-Butanol	**< 0.0050**	0.0050	mg/Kg	EPA 8260B	11/27/2003
Toluene - d8 (Surr)	102		% Recovery	EPA 8260B	11/27/2003
4-Bromofluorobenzene (Surr)	94.6		% Recovery	EPA 8260B	11/27/2003
TPH as Diesel	**35**	1.0	mg/Kg	M EPA 8015	11/30/2003
TPH as Diesel (Silica Gel)	**26**	1.0	mg/Kg	M EPA 8015	12/2/2003
1-Chlorooctadecane (Diesel Surrogate)	73.2		% Recovery	M EPA 8015	11/30/2003
1-Chlorooctadecane (Silica Gel Surr)	84.6		% Recovery	M EPA 8015	12/2/2003

Approved By: Jeff Dahl

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KIFF ANALYTICAL LLC

Report Number : 35943
Date : 12/3/2003

Project Name : **Schweickert Residence**
Project Number : **948209**

Sample : **B1-30.0** Matrix : Soil Lab Number : 35943-04
Sample Date :11/21/2003

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	**< 0.0050**	0.0050	mg/Kg	EPA 8260B	11/27/2003
Toluene	**< 0.0050**	0.0050	mg/Kg	EPA 8260B	11/27/2003
Ethylbenzene	**< 0.0050**	0.0050	mg/Kg	EPA 8260B	11/27/2003
Total Xylenes	**0.015**	0.0050	mg/Kg	EPA 8260B	11/27/2003
Methyl-t-butyl ether (MTBE)	**< 0.0050**	0.0050	mg/Kg	EPA 8260B	11/27/2003
Tert-Butanol	**< 0.010**	0.010	mg/Kg	EPA 8260B	11/27/2003
Toluene - d8 (Surr)	101		% Recovery	EPA 8260B	11/27/2003
4-Bromofluorobenzene (Surr)	92.1		% Recovery	EPA 8260B	11/27/2003
TPH as Diesel	**1900**	1.0	mg/Kg	M EPA 8015	11/30/2003
TPH as Diesel (Silica Gel)	**2000**	1.0	mg/Kg	M EPA 8015	12/2/2003
1-Chlorooctadecane (Diesel Surrogate)	102		% Recovery	M EPA 8015	11/30/2003
1-Chlorooctadecane (Silica Gel Surr)	74.2		% Recovery	M EPA 8015	12/2/2003

Approved By: Jeff Dahl

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KIFF ANALYTICAL LLC

Report Number : 35943
Date : 12/3/2003

Project Name : **Schweickert Residence**
Project Number : **948209**

Sample : **B1-40.0** Matrix : Soil Lab Number : 35943-05
Sample Date :11/21/2003

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	**< 0.0050**	0.0050	mg/Kg	EPA 8260B	11/27/2003
Toluene	**< 0.0050**	0.0050	mg/Kg	EPA 8260B	11/27/2003
Ethylbenzene	**< 0.0050**	0.0050	mg/Kg	EPA 8260B	11/27/2003
Total Xylenes	**< 0.0050**	0.0050	mg/Kg	EPA 8260B	11/27/2003
Methyl-t-butyl ether (MTBE)	**< 0.0050**	0.0050	mg/Kg	EPA 8260B	11/27/2003
Tert-Butanol	**< 0.0050**	0.0050	mg/Kg	EPA 8260B	11/27/2003
Toluene - d8 (Surr)	101		% Recovery	EPA 8260B	11/27/2003
4-Bromofluorobenzene (Surr)	95.1		% Recovery	EPA 8260B	11/27/2003
TPH as Diesel	**350**	1.0	mg/Kg	M EPA 8015	11/30/2003
TPH as Diesel (Silica Gel)	**330**	1.0	mg/Kg	M EPA 8015	12/2/2003
1-Chlorooctadecane (Diesel Surrogate)	105		% Recovery	M EPA 8015	11/30/2003
1-Chlorooctadecane (Silica Gel Surr)	104		% Recovery	M EPA 8015	12/2/2003

Approved By: Jeff Dahl

2795 2nd St., Suite 300 Davis, CA 95616 530-297-4800

Report Number : 35943

Date : 12/3/2003

QC Report : Method Blank Data

Project Name : **Schweickert Residence**

Project Number : **948209**

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
TPH as Diesel	< 1.0	1.0	mg/Kg	M EPA 8015	11/29/2003
TPH as Diesel (Silica Gel)	< 1.0	1.0	mg/Kg	M EPA 8015	11/29/2003
1-Chlorooctadecane (Diesel Surrogate)	77.3		%	M EPA 8015	11/29/2003
1-Chlorooctadecane (Silica Gel Surr)	77.3		%	M EPA 8015	11/29/2003
TPH as Diesel (Silica Gel)	< 50	50	ug/L	M EPA 8015	11/26/2003
Benzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	11/27/2003
Toluene	< 0.0050	0.0050	mg/Kg	EPA 8260B	11/27/2003
Ethylbenzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	11/27/2003
Total Xylenes	< 0.0050	0.0050	mg/Kg	EPA 8260B	11/27/2003
Methyl-t-butyl ether (MTBE)	< 0.0050	0.0050	mg/Kg	EPA 8260B	11/27/2003
Tert-Butanol	< 0.0050	0.0050	mg/Kg	EPA 8260B	11/27/2003
Toluene - d8 (Surr)	101		%	EPA 8260B	11/27/2003
4-Bromofluorobenzene (Surr)	94.0		%	EPA 8260B	11/27/2003
Benzene	< 0.50	0.50	ug/L	EPA 8260B	11/29/2003
Toluene	< 0.50	0.50	ug/L	EPA 8260B	11/29/2003
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	11/29/2003
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	11/29/2003
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	11/29/2003
Tert-Butanol	< 5.0	5.0	ug/L	EPA 8260B	11/29/2003
Toluene - d8 (Surr)	94.8		%	EPA 8260B	11/29/2003
4-Bromofluorobenzene (Surr)	98.3		%	EPA 8260B	11/29/2003

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed

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Report Number : 35943

Date : 12/3/2003

QC Report : Matrix Spike/ Matrix Spike Duplicate

Project Name : **Schweickert Residence**

Project Number : **948209**

Parameter	Spiked Sample	Sample Value	Spike Level	Spike Dup. Level	Spiked Sample Value	Duplicate Spiked Sample Value	Units	Analysis Method	Date Analyzed	Spiked Sample Percent Recov.	Duplicate Spiked Sample Percent Recov.	Relative Percent Diff.	Spiked Sample Percent Recov. Limit	Relative Percent Diff. Limit
TPH as Diesel	35921-01	1.2	20.0	20.0	18.1	16.9	mg/Kg	M EPA 8015	11/30/03	85.1	79.4	6.83	60-140	25
Benzene	35986-02	<0.0050	0.0404	0.0401	0.0413	0.0408	mg/Kg	EPA 8260B	11/27/03	102	102	0.294	70-130	25
Toluene	35986-02	<0.0050	0.0404	0.0401	0.0406	0.0399	mg/Kg	EPA 8260B	11/27/03	100	99.6	0.850	70-130	25
Tert-Butanol	35986-02	<0.0050	0.202	0.200	0.186	0.184	mg/Kg	EPA 8260B	11/27/03	92.2	91.6	0.598	70-130	25
Methyl-t-Butyl Ether	35986-02	<0.0050	0.0404	0.0401	0.0410	0.0411	mg/Kg	EPA 8260B	11/27/03	101	102	1.05	70-130	25
Benzene	35983-01	<0.50	40.0	39.9	36.0	35.6	ug/L	EPA 8260B	11/29/03	90.1	89.2	1.03	70-130	25
Toluene	35983-01	<0.50	40.0	39.9	37.4	37.1	ug/L	EPA 8260B	11/29/03	93.5	93.0	0.617	70-130	25
Tert-Butanol	35983-01	220	200	200	418	426	ug/L	EPA 8260B	11/29/03	96.8	101	4.30	70-130	25
Methyl-t-Butyl Ether	35983-01	3.2	40.0	39.9	38.6	39.7	ug/L	EPA 8260B	11/29/03	88.5	91.5	3.34	70-130	25
TPH as Diesel	Blank	<50	1000	1000	1090	1010	ug/L	M EPA 8015	11/26/03	109	101	7.66	70-130	25

Approved By: Jeff Dahl

KIFF ANALYTICAL, LLC

2795 2nd St, Suite 300 Davis, CA 95616 530-297-4800

Report Number : 35943

Date : 12/3/2003

QC Report : Laboratory Control Sample (LCS)

Project Name : **Schweickert Residence**

Project Number : **948209**

Parameter	Spike Level	Units	Analysis Method	Date Analyzed	LCS Percent Recov.	LCS Percent Recov. Limit
TPH as Diesel	20.0	mg/Kg	M EPA 8015	11/29/03	90.4	70-130
Benzene	0.0382	mg/Kg	EPA 8260B	11/27/03	104	70-130
Toluene	0.0382	mg/Kg	EPA 8260B	11/27/03	101	70-130
Tert-Butanol	0.191	mg/Kg	EPA 8260B	11/27/03	94.4	70-130
Methyl-t-Butyl Ether	0.0382	mg/Kg	EPA 8260B	11/27/03	101	70-130
Benzene	40.0	ug/L	EPA 8260B	11/29/03	89.2	70-130
Toluene	40.0	ug/L	EPA 8260B	11/29/03	90.6	70-130
Tert-Butanol	200	ug/L	EPA 8260B	11/29/03	86.8	70-130
Methyl-t-Butyl Ether	40.0	ug/L	EPA 8260B	11/29/03	87.8	70-130

Approved By: Jeff Dahl

KIFF ANALYTICAL, LLC

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KIFF ANALYTICAL LLC

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Davis, CA 95616
Lab: 530.297.4800
Fax: 530.297.4808

Lab No. 35943 Page 1 of 1

Chain-of-Custody Record and Analysis Request

Project Contact (Hardcopy or PDF To): Bob Lauritzen

California EDF Report? ☐ Yes ☐ No

Company/Address: Gettler Ryan, Inc 3140 Gold Camp Dr. #170 Rancho Cordova 95670

Recommended but not mandatory to complete this section:
Sampling Company Log Code: - - -

Phone No.: 916-631-1300 FAX No.: 916-631-1317

Global ID: - - - - - - - - - - -

Project Number: 948209 P.O. No:

EDF Deliverable To (Email Address): blauritzen@grinc.com

Project Name: Schweickert Residence

Sampler Signature: Bob Lauritzen

Project Address: 515 S. Livermore Ave. Livermore, CA

Sample Designation	Sampling: Date	Sampling: Time	Container: 40 ml VOA	Container: SLEEVE	Container: 1 L. Amber	Preservative: HCl	Preservative: HNO_3	Preservative: ICE	Preservative: NONE	Matrix: WATER	Matrix: SOIL
B-1	11/24/03	1210	X		1	X				X	
B1-10.0		915		X				X			X
B1-20.0		936		X				X			X
B1-30.0		1130		X				X			X
B1-40.0		1140		X				X			X

Analysis Request

BTEX (8021B)	BTEX/TPH Gas/MTBE (8021B/M8015)	TPH as Diesel (M8015)	TPH as Motor Oil (M8015)	TPH Gas/BTEX/MTBE (8260B)	5 Oxygenates/TPH Gas/BTEX (8260B)	7 Oxygenates/TPH Gas/BTEX (8260B)	5 Oxygenates (8260B)	7 Oxygenates (8260B)	Lead Scav. (1,2 DCA & 1,2 EDB - 8260B)	EPA 8260B (Full List)	Volatile Halocarbons (EPA 8260B)	Lead (7421/239.2) TOTAL (X) W.E.T. (X)	TPH-Diesel (Silica Gel)	BTEX/MtBE/TBA by 8260B			TAT: 12 hr/24 hr/48 hr/72 hr/1 wk	For Lab Use Only
													X	X				01
													X	X				02
													X	X				03
													X	X				04
													X	X				05

Relinquished by:	Date	Time	Received by:
Robert A. Lauritzen	11/24/03		
Relinquished by:	Date	Time	Received by:
Relinquished by:	Date	Time	Received by Laboratory:
	11/24/03	1120	John Cuttle / Kiff Analytical

Remarks:

Bill to: Gettler-Ryan, Inc.

Distribution: White - Lab, Yellow - File, Pink - Originator

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