

REPORT OF SOIL AND GROUNDWATER INVESTIGATION

Dublin Toyota UST Site  
6450 Dublin Court  
Dublin, California

Alameda County LOP Site ID No. 699  
GA Project No. 147-01-01

1/27/99

- high TPH<sub>g</sub> and MTBE in well MW-1
- do another 2 amr to verify/duplicate results.
- may need add'l MW to SW of tank pit in future to delineate extent

Prepared for: *q plume*

Mr. Scott Anderson  
Dublin Toyota  
6450 Dublin Court  
Dublin, California

Prepared by:

Gribi Associates  
1350 Hayes Street, Suite C-14  
Benicia, CA 94510  
(707)743-7743

January 20, 1999

January 20, 1999

Alameda County Department of  
Environmental Health  
1131 Harbor Bay Parkway, 2<sup>nd</sup> Floor  
Alameda, CA 94502

Attention: Eva Chu

Subject: Report of Soil and Groundwater Investigation  
Dublin Toyota UST Site  
6450 Dublin Court, Dublin, California  
Alameda County LOP Site ID No. 699  
GA Project No. 147-01-01

Ladies and Gentlemen:

Gribi Associates is pleased to submit this report on behalf of Dublin Toyota providing results of a recently-completed soil and groundwater investigation conducted at the Dublin Toyota underground storage tank (UST) site located at 6450 Dublin Court in Dublin, California. The soil and groundwater investigation included: (1) Drilling and sampling four Geoprobe™ borings (IB-1 through IB-4) in a northeast, east, southeast, and south direction from the former UST excavation cavity; and (2) Drilling, installing, and sampling two groundwater monitoring wells, including one (MW-2) southeast and the other (MW-1) south-southwest from the former UST excavation cavity. The goal of this investigation was to provide an initial assessment of soil and groundwater quality adjacent to former UST components at the project site.

Extremely low levels of diesel- and motor oil-range hydrocarbons, with no detectable levels of gasoline-range hydrocarbons, were detected in soil samples collected at about seven feet in depth in all borings except well boring MW-1. Soil samples collected at about five feet and ten feet in depth in MW-1 contained low levels of Toluene and MTBE, with no detectable levels of diesel- or motor oil-range hydrocarbons. Thus, it appears that gasoline- and diesel-range hydrocarbon releases encountered in subsurface soils during UST removal sampling have had only minimal impact on subsurface soils to the northeast to south-southwest from the former USTs.

The groundwater sample from MW-2, located southeast from the former USTs, contained low levels of motor oil-range hydrocarbons, with no significant levels of diesel- or gasoline-range hydrocarbons. The groundwater sample from MW-1, located south-southwest from the former USTs, contained 46 parts per million (ppm) of TPH-G and 62 ppm of MTBE, with no significant levels of BTEX constituents or diesel- to motor oil-range hydrocarbons. We discussed the TPH-G/BTEX/MTBE laboratory chromatogram for the MW-1 sample with Acculabs, Inc. personnel, and we agreed that the TPH-G result for the MW-1 water sample is due solely to the MTBE in the sample.

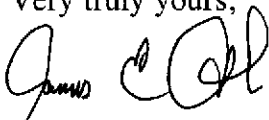
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Environmental Health  
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MTBE is a gasoline additive that is extremely soluble and mobile in groundwater. Given these characteristics of MTBE, two possible explanations for the detection of a relatively high concentration of MTBE only in the MW-1 water sample, with no detectable levels of other gasoline constituents, include: (1) Other gasoline constituents, which are generally less soluble in water than MTBE, may have volatilized from groundwater, leaving only the MTBE still present in the groundwater; or (2) The MTBE in the MW-1 water sample may represent the "leading edge" of a small groundwater hydrocarbon plume extending southward from the former USTs.

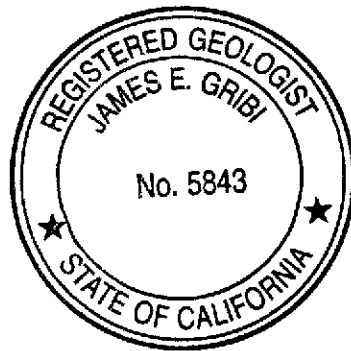
Based on results of this investigation, we recommend conducting quarterly groundwater monitoring of the two project site wells to determine whether or not groundwater results from this investigation are representative of actual groundwater conditions at the site.

We appreciate the opportunity to present this report for your review. Please call if you have questions or require additional information.

Very truly yours,



James E. Gribi  
Registered Geologist  
California No. 5843



JEG/ct  
Enclosure

c Mr. Scott Anderson, Dublin Toyota

File: GA-27/DubToy.rpl

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## 1.0 INTRODUCTION

This report documents a recently-completed soil and groundwater investigation conducted at the Dublin Toyota underground storage tank (UST) site located at 6450 Dublin Court in Dublin, California (see Figure 1). This investigation included: (1) Drilling and sampling four geoprobe borings adjacent to the former UST excavation cavity; and (2) Drilling, installing, and sampling two groundwater monitoring wells in the expected downgradient direction from the former UST excavation cavity. The goal of this investigation was to provide an initial assessment of soil and groundwater quality adjacent to the former underground storage tanks (USTs) at the project site.

### 1.1 Site Background

The Dublin Toyota UST site consisted of three USTs located in a common tank farm which was located in the northeast corner of the maintenance garage (see Figure 2). The USTs included two 2,000-gallon steel gasoline tanks and one 1,000-gallon steel waste oil tank. The three USTs were removed from a common excavation by Scott Company on June 10, 1998. A soil sample collected at the east end of the UST excavation cavity and a grab groundwater sample collected from the UST excavation cavity contained elevated levels of gasoline- and diesel-range hydrocarbons. On June 18, 1998, the UST excavation cavity was excavated vertically to the groundwater table, at about 12 feet in depth. Three grab groundwater samples collected from the excavation cavity following overexcavation contained elevated levels of gasoline-range hydrocarbons, and one soil sample collected from the south excavation sidewall contained elevated levels of gasoline- and diesel-range hydrocarbons. Following overexcavation and sampling, the UST excavation cavity was backfilled with clean imported fill material, and approximately 92 tons of hydrocarbon-impacted soil was transported to BAS for thermal de-sorption.

### 1.2 Scope of Work

Gribi Associates was contracted by Dublin Toyota to conduct the following scope of work:

- **Task 1**      **Prepare workplan.**
- **Task 2**      **Conduct prefield activities.**
- **Task 3**      **Conduct drilling and well installation activities.**
- **Task 4**      **Conduct groundwater monitoring.**
- **Task 5**      **Conduct laboratory analyses.**
- **Task 6**      **Prepare report of findings.**
- **Task 7**      **Manage investigative spoils**
- **Task 8**      **Conduct quarterly groundwater monitoring**

These tasks were conducted in accordance with guidelines contained in *Tri-Regional Board Staff Recommendations for Preliminary Evaluation and Investigation of Underground Tank Sites*, (August 10, 1990) and *LUFT Field Manual*, (October 18, 1989).

### 1.3 Limitations

The services provided under this contract as described in this report include professional opinions and judgments based on data collected. These services have been provided according to generally accepted environmental protocol. The opinions and conclusions contained in this report are typically based on information obtained from:

1. Observations and measurements made by our field staff.
2. Contacts and discussions with regulatory agencies and others.
3. Review of available hydrogeologic data.

## 2.0 DESCRIPTION OF FIELD ACTIVITIES

Drilling and well installation activities were conducted on Wednesday, December 9, 1998. The two newly-installed wells were purged and sampled on Tuesday, December 15, 1998.

### 2.1 Prefield Activities

Gribi Associates submitted a workplan to the Alameda County Department of Environmental Health to drill four soil borings using Geoprobe™ coring equipment, and to drill, install, and sample two groundwater monitoring wells using hollow stem auger drilling equipment (*Workplan to Conduct Soil and Groundwater Investigation*, Gribi Associates, October 1, 1998). This workplan was approved by Alameda County Department of Environmental Health on October 16, 1998.

Prior to initiating drilling and well installation activities, an Application For Well Construction, Well Destruction Or Soil Borings was submitted, along with the requisite fees, to the Alameda County Zone 7 Water Agency. A copy of this permit is included in Appendix A. In addition, Gribi Associates notified Ms. Eva Chu of Alameda County Department of Environmental Health more than three days prior to drilling.

Prior to initiating drilling and well installation activities, proposed soil boring and well locations were marked with white paint, and Underground Services Alert (USA) was notified. Also, ForeSite Utility Surveys, a private underground utility locator, cleared proposed soil boring locations. Prior to initiating drilling activities, a Site Safety Plan was prepared, and a tailgate safety meeting was conducted with all site workers.

### 2.2 Location of Soil Borings

Locations of the four investigative soil borings, IB-1 through IB-4, and the two groundwater monitoring wells, MW-1 and MW-2, are shown on Figure 2. Based on the expected south-southeasterly groundwater flow direction in the project site area, the four investigative borings, IB-1 through IB-4, were sited on the east to southwest sides of the former UST excavation cavity. The two groundwater monitoring wells were sited on the southeast and southwest sides of the former UST excavation cavity in order to account for any variation from the expected groundwater flow direction.

### **2.3 Drilling and Sampling of Soil Borings**

The four investigative borings were drilled to a total depth of approximately 16 feet below surface grade by Gregg Drilling using Geoprobe hydraulically-driven soil coring equipment. This coring system allowed for the retrieval of almost continuous soil cores, which were contained in a clear plastic acetate tube nested inside a stainless steel core barrel. After the core barrel was brought to the surface and exposed, the soil core was examined, logged, and field screened for hydrocarbons using sight and smell by Mr. Jim Gribi, R.G. Boring logs for the four investigative soil borings are contained in Appendix B.

Soil samples were collected from each of the investigative borings at depths of about seven feet and 11 feet below surface grade. An additional soil sample was collected in IB-1 at a depth of about four feet below surface grade. After the sample and core barrel was raised to the surface, each sample was collected as follows: (1) The soil-filled clear acetate tube was exposed for visual examination; (2) The selected sampling interval was collected by cutting the sample and acetate plastic tubing to the desired length (typically about five inches); (3) The ends of the selected sample were quickly wrapped with foil, capped with plastic end caps, labeled and wrapped tightly with tape; and (4) The sealed soil sample was labeled and immediately placed in cold storage for transport to the analytical laboratory under formal chain-of-custody. Following completion, the four investigative borings, IB-1 through IB-4, were grouted to match existing surface grade. All coring and sampling equipment was thoroughly cleaned and decontaminated between each sample collection by triple rinsing first with water, then with dilute tri-sodium phosphate solution, and finally with distilled water.

### **2.4 Drilling and Sampling of Groundwater Monitoring Wells**

The two well borings were drilled to a total depth of approximately 20 feet below grade (groundwater was encountered at approximately 8 to 11 feet in depth) using hollow stem auger equipment. Soils from each well boring were logged by Mr. Jim Gribi, R.G. using sight and smell. Soil cuttings were placed in sealed DOT-approved 55-gallon drums pending laboratory results.

Soil samples were collected from the two well borings at depths of about five feet and ten feet below surface grade. Undisturbed soils were sampled in advance of the auger as follows: (1) A two-inch inside diameter California-style split spoon sampler was driven into undisturbed soil ahead of the drill bit; (2) The sampler was raised quickly to the surface and the brass liners exposed; (3) The brass liner containing the most undisturbed soil was quickly sealed with aluminum foil and plastic end caps, labeled, and wrapped tightly with tape; and (4) The sealed soil sample was placed immediately in a cooler with crushed ice for transport to the analytical laboratory under formal chain-of-custody. All sampling equipment was thoroughly cleaned and decontaminated between each sample collection by triple rinsing.

### **2.5 Installation of Groundwater Monitoring Wells**

The two groundwater monitoring wells were constructed using two-inch diameter Schedule 40 threaded PVC casing according to the following specifications: (1) 0.020-inch slotted well casing was placed from approximately 20 feet to 5 feet in depth; (2) Filter sand was placed around the casing to a depth of approximately four feet below grade; (3) A one-foot bentonite seal was placed above the filter sand to approximately three feet below grade; and (4) The remaining annulus was grouted using a cement/sand slurry (bentonite less than 5 percent) to approximate grade. The top

of the well was enclosed in a traffic-rated locking box set in concrete slightly above grade. Well construction details for each well are included with the well boring logs in Appendix B.

## **2.6 Well Development and Sampling**

After allowing the cement seal to cure for approximately three days, each monitoring well was developed and sampled using a disposable PVC bailer. Well development consisted of purging each well of at least three well volumes before sampling. During well development, groundwater was monitored periodically for presence of free-floating product and odor, pH, specific conductance, temperature and visible clarity. Groundwater sampling data sheets for each well are contained in Appendix C. After these parameters had stabilized, groundwater was sampled directly from the bailer in the following manner: (1) Three 40-ml glass V.A. vials and two 0.5 liter amber bottles were completely filled directly from the bailer with a minimum of agitation; (2) After making sure that no air bubbles are present, each container was tightly sealed with a Teflon-lined septum; and (3) Each container was labeled and placed in cold storage for transport to the analytical laboratory under formal chain-of-custody. All purged groundwater was stored onsite in a sealed 55-gallon drum. All sampling equipment was thoroughly cleaned and decontaminated between each sample collection by triple rinsing as described above.

## **2.7 Laboratory Analysis of Vapor and Groundwater Samples**

A total of 11 soil samples and two groundwater samples were analyzed for the following parameters with standard method turn around time on results.

USEPA 8015M Total Petroleum Hydrocarbons as Gasoline (TPH-G)  
USEPA 8020/602 Benzene, Toluene, Ethylbenzene, Xylenes (BTEX)  
USEPA 8020/602 Methyl-t-butyl Ether (MTBE)  
USEPA 8015M Total Petroleum Hydrocarbons as Diesel/Motor Oil (TPH-D/MO)

All analyses were conducted by Acculabs, Inc., a California-certified analytical laboratory, with standard turnaround on results. In addition to the above analysis, the groundwater sample from MW-1 was also analyzed for the following parameter.

USEPA 8260B Methyl-t-butyl Ether (MTBE) Confirmation

Note that because the MTBE confirmation analysis for the MW-1 groundwater sample was run after the two-week sample hold time, the laboratory results should be viewed qualitatively, and not strictly quantitatively.

## **3.0 RESULTS OF INVESTIGATION**

### **3.1 General Subsurface Conditions**

Soils encountered in the four investigative borings and two well borings were generally similar, consisting of soft to firm dark grey green to grey brown silty clay and clayey silts down to 20 feet in depth. The materials became stiffer and the color changed to dark grey brown with depth. No hydrocarbon odors were noted in soils from IB-2, IB-3, IB-4 and MW-2, and only slight hydrocarbon odors were noted in soils in IB-1 and MW-1.



Groundwater was encountered in the investigative and well borings during drilling at a depth of about ten feet below surface grade. Prior to purging and sampling, groundwater was encountered in the two groundwater monitoring wells at a depth of about five feet below surface grade. No hydrocarbon odors or sheens were noted in purged water from MW-1 or MW-2.

### 3.2 Results of Laboratory Analyses

Soil and groundwater analytical results are summarized in Table 1. Laboratory data reports (including laboratory chromatograms) and chain-of-custody records for soil and groundwater analyses are contained in Appendix D.

Sample ID	Sample Depth	Concentration (ppm)							
		TPH-D	TPH-MO	TPH-G	B	T	E	X	MTBE
<b>Soil Samples</b>									
IB-1.1	3.5 ft	<2.0 <sup>1</sup>	<10	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.050
IB-1.2	7.5 ft	2.1	12	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.050
IB-1.3	11.5 ft	5.5	<10	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.050
IB-2.1	7.5 ft	3.1	13	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.050
IB-3.1	11.5 ft	4.6	<10	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.050
IB-4.1	7.5 ft	1.2	<10	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.050
IB-4.2	11.5 ft	<1.0	<10	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.050
MW-1.1	5.5 ft	<1.0	<10	<2.0	<0.010	0.020	<0.010	<0.010	2.1
MW-1.2	10.5 ft	<1.0	<10	<1.0	<0.0050	0.017	<0.0050	<0.0050	0.35
MW-2.1	5.5 ft	1.5	19	<1.0	<0.0050	0.0085	<0.0050	<0.0050	<0.050
MW-2.2	10.5 ft	2.3	<10	<1.0	<0.0050	0.012	<0.0050	<0.0050	<0.050
<b>Groundwater Samples</b>									
MW-1	5.74 <sup>2</sup>	<0.050	0.110	46	<0.10	<0.10	<0.10	<0.10	62 <sup>3</sup>
MW-2	4.30 <sup>2</sup>	<0.050	0.570	<0.050	<0.00050	0.00090	<0.00050	0.00150	<0.0050

TPH-D = Total Petroleum Hydrocarbons as Diesel  
 TPH-MO = Total Petroleum Hydrocarbons as Motor Oil  
 TPH-G = Total Petroleum Hydrocarbons as Gasoline  
 B = Benzene  
 T = Toluene  
 E = Ethylbenzene  
 X = Xylenes

MTBE = Methyl-t-Butyl Ether  
 1 = Acculabs report states "Increased reporting limit due to oil range interference."  
 2 = Groundwater depths measured from top of casing.  
 3 = MTBE confirmation analysis detected 110 ppm of MTBE (analysis was conducted after sample holding time).

### 4.0 CONCLUSIONS

Extremely low levels of diesel- and motor oil-range hydrocarbons, with no detectable levels of gasoline-range hydrocarbons, were detected in soil samples collected at about seven feet in depth in all borings except well boring MW-1. Soil samples collected at about five feet and ten feet in depth in MW-1 contained low levels of Toluene and MTBE, with no detectable levels of diesel- or motor

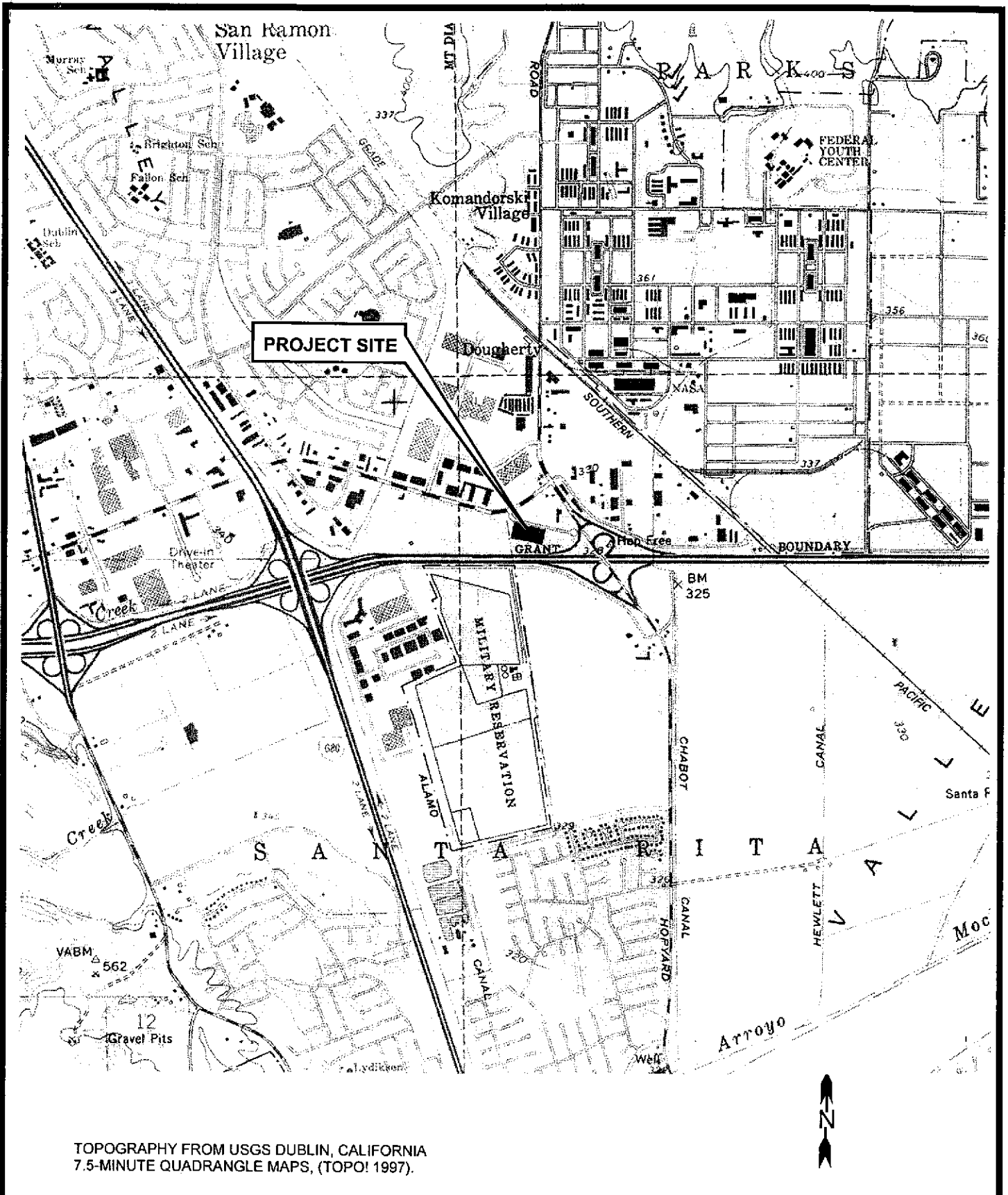
oil-range hydrocarbons. Thus, it appears that gasoline- and diesel-range hydrocarbon releases encountered in subsurface soils during UST removal sampling have had only minimal impact on subsurface soils to the northeast to south-southwest from the former USTs.

The groundwater sample from MW-2, located southeast from the former USTs, contained low levels of motor oil-range hydrocarbons, with no significant levels of diesel- or gasoline-range hydrocarbons. The groundwater sample from MW-1, located south-southwest from the former USTs, contained 46 parts per million (ppm) of TPH-G and 62 ppm of MTBE, with no significant levels of BTEX constituents or diesel- to motor oil-range hydrocarbons. We discussed the TPH-G/BTEX/MTBE laboratory chromatogram for the MW-1 sample with Acculabs, Inc. personnel, and we agreed that the TPH-G result for the MW-1 water sample is due solely to the MTBE in the sample.

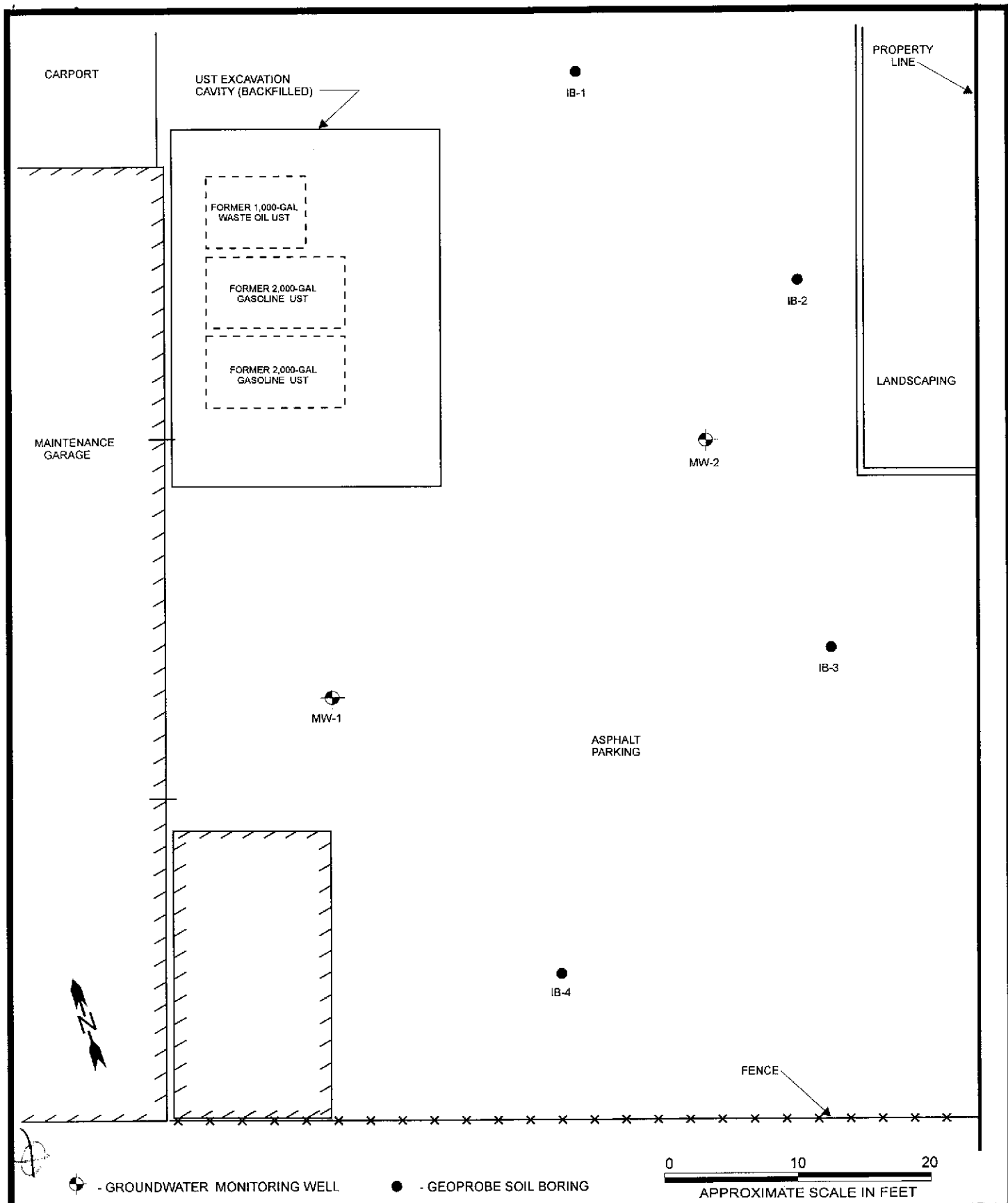
MTBE is a gasoline additive that is extremely soluble and mobile in groundwater. Given these characteristics of MTBE, two possible explanations for the detection of a relatively high concentration of MTBE only in the MW-1 water sample, with no detectable levels of other gasoline constituents, include: (1) Other gasoline constituents, which are generally less soluble in water than MTBE, may have volatilized from groundwater, leaving only the MTBE still present in the groundwater; or (2) The MTBE in the MW-1 water sample may represent the "leading edge" of a small groundwater hydrocarbon plume extending southward from the former USTs.

## **5.0 RECOMMENDATIONS**

Based on results of this investigation, we recommend conducting quarterly groundwater monitoring of the two project site wells to determine whether or not groundwater results from this investigation are representative of actual groundwater conditions at the site.



DESIGNED BY:	CHECKED BY:	<b>SITE VICINITY MAP</b>	DATE: 10/01/98	FIGURE: 1
DRAWN BY: JG	SCALE: 1:24,000		<b>GRIBI Associates</b>	
PROJECT NO: 137-01-01		DUBLIN TOYOTA UST SITE 6450 DUBLIN COURT DUBLIN, CALIFORNIA		



☉ - GROUNDWATER MONITORING WELL

● - GEOPROBE SOIL BORING

0 10 20  
APPROXIMATE SCALE IN FEET

DESIGNED BY:	CHECKED BY:
DRAWN BY: JG	SCALE:
PROJECT NO: 147-01-01	

**SITE PLAN**

DUBLIN TOYOTA UST SITE  
6450 DUBLIN COURT  
DUBLIN, CALIFORNIA

DATE: 01/18/99      FIGURE: 2

**GRIBI Associates**

**APPENDIX A**

**SOIL BORING AND WELL INSTALLATION PERMIT**

To: WYMAN (HONG)



# ZONE 7 WATER AGENCY

5997 PARKSIDE DRIVE, PLEASANTON, CALIFORNIA 94588-5127 PHONE (510) 484-2600 X235  
FAX (510) 462-3914

## DRILLING PERMIT APPLICATION

### FOR APPLICANT TO COMPLETE

### FOR OFFICE USE

LOCATION OF PROJECT DUBLIN TOYOTA  
6450 DUBLIN COURT, DUBLIN CA

PERMIT NUMBER 98198

WELL NUMBER 3S/1E 6F29 & 6F30

APN 941 1400 007 00

California Coordinates Source \_\_\_\_\_ ft. Accuracy ± \_\_\_\_\_ ft.  
CCN \_\_\_\_\_ " CCE \_\_\_\_\_ ft.  
APN \_\_\_\_\_

### PERMIT CONDITIONS

Circled Permit Requirements Apply

CLIENT  
Name DUBLIN TOYOTA PONTIAC  
Address 6450 DUBLIN COURT Phone 925/551-620  
City DUBLIN CA Zip \_\_\_\_\_

- 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.

APPLICANT  
Name JIM GRIBI  
GRIBI ASSOCIATES Fax 707/864-5543  
Address 884 VINTAGE AVE Phone 707/864-5543  
City SUISUN CA Zip 94585

- 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.

TYPE OF PROJECT  
Well Construction  
Cathodic Protection   
Water Supply   
Monitoring   
Geotechnical Investigation  
General   
Contamination   
Well Destruction

- 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.

PROPOSED WATER SUPPLY WELL USE  
New Domestic   
Municipal   
Industrial   
Replacement Domestic   
Irrigation   
Other \_\_\_\_\_

- 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.

DRILLING METHOD:  
Mud Rotary   
Cable   
Air Rotary   
Other   
Auger-wells   
Geoprobe borings

- E. CATHODIC. Fill hole above anode zone with concrete placed by tremie.
- F. WELL DESTRUCTION. See attached.
- G. SPECIAL CONDITIONS

DRILLER'S LICENSE NO. 485-615 (Gregg)

WELL PROJECTS  
Drill Hole Diameter 8 in. Maximum \_\_\_\_\_  
Casing Diameter 2" in. Depth 25 ft.  
Surface Seal Depth 8 ft. Number 2

GEOTECHNICAL PROJECTS  
Number of Borings 4 Maximum \_\_\_\_\_  
Hole Diameter 2 1/2 in. Depth 15 ft.

ESTIMATED STARTING DATE 12/9/98  
ESTIMATED COMPLETION DATE 12/10/98

Approved Wyman Hong Date 2 Dec 98  
Wyman Hong

I hereby agree to comply with all requirements of this permit and Alameda County Ordinance No. 73-68.

APPLICANT'S SIGNATURE James C. Gribi Date 12/9/98

# LOG OF WELL BORING

SHEET 1 OF 1

BORING NUMBER: **IB-1**

BORING LOCATION:  
NORTHEAST SIDE OF USTS

BORING TYPE: INVESTIGATIVE BORING

PROJECT NAME:  
DUBLIN TOYOTA UST SITE

PROJECT NUMBER: 147-01-01

## GRIBI Associates

START DATE: 12/09/98

COMPLETION DATE: 12/09/98

DRILLING CONTRACTOR: GREGG DRILLING

DRILLING METHOD: GEOPROBE

BOREHOLE DIAMETER: 2-1/2 INCHES

BORING TOTAL DEPTH: 16 FEET

COMPLETION METHOD: GROUTED

DEPTH SCALE (FEET)	SAMPLE NO.	SAMPLE DEPTH	INTERVAL	RECOVERY	BLOWS PER 6 IN.	USCS	LOG OF MATERIAL	PIEZOMETRY WELL INSTALLATION
							0 - 1.0 Ft. Asphalt & base rock.	
5	IB-1.1	3.5 FT				ML	1.0 - 5.0 Ft. Dark grey clayey SILT, soft, moist, swampy odor.	
	IB-1.2	7.5 FT				ML	5.0 - 9.0 Ft. Grey green sandy SILT, moist, slight hydrocarbon odor.	
10	IB-1.3	11.5 FT				CL	9.0 - 12.0 Ft. Grey green to brown silty CLAY, moist, no hydrocarbon odors or staining.	
15							12.0 - 16.0 Ft. No recovery, groundwater at approximately 12.0 feet causes the sample to pull out of the shoe.	
20							TOTAL DEPTH: 16 FEET GROUNDWATER DEPTH: APPROX. 12 FEET	

# LOG OF WELL BORING

SHEET \_1\_ OF \_1\_

BORING NUMBER : IB-2

BORING LOCATION:  
EAST OF USTS

BORING TYPE: INVESTIGATIVE BORING

PROJECT NAME:  
DUBLIN TOYOTA UST SITE

PROJECT NUMBER: 147-01-01

## GRIBI Associates

START DATE: 12/09/98

COMPLETION DATE: 12/09/98

DRILLING CONTRACTOR : GREGG DRILLING

DRILLING METHOD: GEOPROBE

BOREHOLE DIAMETER: 2-1/2 INCHES

BORING TOTAL DEPTH: 16 FEET

COMPLETION METHOD: GROUTED

DEPTH SCALE (FEET)	SAMPLE NO.	SAMPLE DEPTH	INTERVAL	RECOVERY	BLOWS PER 6 IN.	USCS	LOG OF MATERIAL	PIEZOMETER WELL INSTALLATION
<p>5</p> <p>10</p> <p>15</p> <p>20</p>	<p>IB-2.1</p>	<p>7.5 FT</p>	<p>[RECOVERY BAR]</p>			<p>CL</p>	<p>0 - 2.0 Ft. Asphalt &amp; base rock.</p> <p>2.0 - 8.0 Ft. Dark grey green silty CLAY, firm, moist, no hydrocarbon odor.</p> <p>8.0 - 16.0 Ft. No recovery, groundwater at approximately 11.0 feet causes the sample to pull out of the shoe.</p> <p>TOTAL DEPTH: 16 FEET GROUNDWATER DEPTH: APPROX. 11 FEET</p>	



# LOG OF WELL BORING

SHEET \_1\_ OF \_1\_

BORING NUMBER : **IB-3**

BORING LOCATION:  
SOUTHEAST OF USTS

BORING TYPE: INVESTIGATIVE BORING

PROJECT NAME:  
DUBLIN TOYOTA UST SITE

PROJECT NUMBER: 147-01-01

START DATE: 12/09/98

COMPLETION DATE: 12/09/98

DRILLING CONTRACTOR : GREGG DRILLING

DRILLING METHOD: GEOPROBE

BOREHOLE DIAMETER: 2-1/2 INCHES

BORING TOTAL DEPTH: 16 FEET

COMPLETION METHOD: GROUTED

## GRIBI Associates

DEPTH SCALE (FEET)	SAMPLE NO.	SAMPLE DEPTH	INTERVAL	RECOVERY	BLOWS PER 6 IN.	USCS	LOG OF MATERIAL	PIEZOMETER WELL INSTALLATION
0							0 - 2.0 Ft. Asphalt & base rock.	
5						CL	2.0 - 6.0 Ft. Grey green silty CLAY, soft to firm, moist, no hydrocarbon odor or staining.	
10	IB-3.1	11.5 FT				CL	6.0 - 12.0 Ft. Grey to brown CLAY, occasionally silty, firm, moist, no hydrocarbon odor.	
15							12.0 - 16.0 Ft. No recovery.	
20							TOTAL DEPTH: 16 FEET GROUNDWATER DEPTH: APPROX. 12 FEET	



# LOG OF WELL BORING

SHEET \_1\_ OF \_1\_

BORING NUMBER : **MW-1**

BORING LOCATION:  
SOUTH OF USTS

BORING TYPE: MONITORING WELL

PROJECT NAME:  
DUBLIN TOYOTA UST SITE

PROJECT NUMBER: 147-01-01

## GRIBI Associates

START DATE: 12/09/98

COMPLETION DATE: 12/09/98

DRILLING CONTRACTOR : GREGG DRILLING

DRILLING METHOD: HOLLOW STEM AUGER

BOREHOLE DIAMETER: 6 INCHES

BORING TOTAL DEPTH: 20 FEET

COMPLETION METHOD: WELL

DEPTH SCALE (FEET)	SAMPLE NO.	SAMPLE DEPTH	INTERVAL	RECOVERY	BLOWS PER 6 IN.	USCS	LOG OF MATERIAL	PIEZOMETER WELL INSTALLATION
0							0 - 1.0 Ft. Asphalt & base rock.	
5	MW-1.1	5.5 FT				CL 1.0 - 7.0 Ft. Grey green silty CLAY, soft to firm, moist, slight hydrocarbon odor.		
10	MW-1.2	10.5 FT				ML 7.0 - 12.0 Ft. Grey green to brown clayey SILT, soft to firm, no hydrocarbon odor or staining.		
15						CL 12.0 - 20.0 Ft. Dark grey brown CLAY, stiff, no hydrocarbon odor or staining.		
20							TOTAL DEPTH: 20 FEET GROUNDWATER DEPTH: APPROX. 11 FEET	
<b>WELL SPECIFICATIONS</b>								
A - WELL SCREEN DEPTH: 5.07 FT      CASING TYPE: SCH 40 PVC B - WELL SCREEN LENGTH: 15.23 FT      CASING SIZE: 2.0-INCH C - DEPTH TO TOP OF SAND 4.0 FT      SLOT SIZE: 0.020-INCH D - DEPTH BENTONITE SEAL 3.0 FT      NO. 3 FILTER SAND								

# LOG OF WELL BORING

SHEET\_1\_ OF \_1\_

BORING NUMBER : **MW-2**

BORING LOCATION:  
EAST OF USTS

BORING TYPE: MONITORING WELL

PROJECT NAME:  
DUBLIN TOYOTA UST SITE

PROJECT NUMBER: 147-01-01

## GRIBI Associates

START DATE: 12/09/98

COMPLETION DATE: 12/09/98

DRILLING CONTRACTOR : GREGG DRILLING

DRILLING METHOD: HOLLOW STEM AUGER

BOREHOLE DIAMETER: 6 INCHES

BORING TOTAL DEPTH: 20 FEET

COMPLETION METHOD: WELL

DEPTH SCALE (FEET)	SAMPLE NO.	SAMPLE DEPTH	INTERVAL	RECOVERY	BLOWS PER 6 IN.	USCS	LOG OF MATERIAL	PIEZOMETER WELL INSTALLATION
							0 - 1.0 Ft. Asphalt & base rock.	
5	MW-2.1	5.5 FT				CL	1.0 - 5.0 Ft. Dark Grey CLAY, silty, soft to firm, moist, no hydrocarbon odor or staining.	
10	MW-2.2	10.5 FT				ML	5.0 - 13.0 Ft. Grey green clayey SILT, firm, moist, occasional sand, no hydrocarbon odor or staining.	
15						CL	13.0 - 20.0 Ft. Grey green to brown CLAY, stiff, wet, no hydrocarbon odor or staining.	
20							TOTAL DEPTH: 20 FEET GROUNDWATER DEPTH: APPROX. 8 to 10 FEET	
<b>WELL SPECIFICATIONS</b> A - WELL SCREEN DEPTH: 5.25 FT    CASING TYPE: SCH 40 PVC B - WELL SCREEN LENGTH: 15.08 FT    CASING SIZE: 2.0-INCH C - DEPTH TO TOP OF SAND 4.0 FT    SLOT SIZE: 0.020-INCH D - DEPTH BENTONITE SEAL 3.0 FT    NO. 3 FILTER SAND								

**APPENDIX C**

**GROUNDWATER SAMPLING DATA SHEETS**

GROUNDWATER SAMPLING RECORD

GRIBI Associates

Well No. MW-10	Well Loc.
Project Name Dublin Toyota	Project No. 147-01-01
Date 12/15/90 Time	TOC Elevation GW Elevation
Depth to Water 5.74	Well Depth 20 Well Diameter 2"
Purge Water, 2": Wtr Column X 0.163 X 3 = 7.5	Purge Water, 4": Wtr Column X 0.653 X 3 =
Purge/Sample Method	Lab Analyses
Weather Conditions	Laboratory

Time	Volume Purged	Temp.	Cond.	pH	Visual
	0	67.1	3.97	7.22	clr - No S.S.
	2	64.2	3.74	6.92	mk, grey No S.S.
	4	62.1	2.92	7.49	
	6	61.0	2.63	7.51	
	8.0	59.8	2.93	7.50	

Remarks  
 Slow sech<sup>between</sup> a 2-4 gal, then  
 increased

**GROUNDWATER SAMPLING RECORD**

**GRIBI Associates**

Well No. <u>MW-2</u>	Well Loc.
Project Name <u>Dub Toyo</u>	Project No.
Date <u>12/15</u> Time	TOC Elevation GW Elevation
Depth to Water <u>4.30</u>	Well Depth Well Diameter
Purge Water, 2": Wtr Column X 0.163 X 3 =	Purge Water, 4": Wtr Column X 0.653 X 3 =
Purge/Sample Method	Lab Analyses
Weather Conditions	Laboratory

Time	Volume Purged	Temp.	Cond.	pH	Visual
	0	66.6	2.95	8.09	CLR - NO O/S
	2	60.4	2.92	7.64	MKY grey NO O/S
	4	64.2	2.88	7.53	
	6	63.4	2.63	7.47	
	8	63.5	2.57	7.43	

Remarks  
 OK recharge

**APPENDIX D**

**LABORATORY DATA REPORTS AND  
CHAIN OF CUSTODY RECORDS**





# Acculabs Inc.

Davis

1046 Olive Drive, Suite 2, Davis CA 95616 ■ 530-757-0920 ■ Fax 753-6091

Sample Log 19368  
December 18, 1998

Jim Gribi  
Gribi Associates  
884 Vintage  
Suisun, CA 94585

Subject : 11 Soil Samples  
Project Name : DublinToyota  
Project Number : 147-01-01

Dear Mr. Gribi,

Chemical analysis on 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. USEPA protocols for sample storage and preservation were followed.

Acculabs - Davis is certified by the State of Arizona (AZ0583) and the State of California (# I-2330). If you have any questions regarding procedures or results, please call me at 530-757-0920.

Sincerely,

Tom Kwoka



# Acculabs Inc.

Davis

1046 Olive Drive, Suite 2, Davis CA 95616 ■ 530-757-0920 ■ Fax 753-6091

Sample Log 19368

MTBE (Methyl-t-butyl ether) By EPA Method 8020/602

From : DublinToyota (Proj. # 147-01-01)


Sampled : 12/09/98

Received : 12/11/98

Matrix : Soil

SAMPLE	Date Analyzed	(MRL) <small>mg/kg</small>	Measured Value <small>mg/kg</small>
IB-1.1 (3.5')	12/16/98	(.050)	<.050
IB-1.2 (7.5')	12/16/98	(.050)	<.050
IB-1.3 (11.5')	12/16/98	(.050)	<.050
IB-2.1 (7.5')	12/16/98	(.050)	<.050
IB-3.1 (11.5')	12/16/98	(.050)	<.050
IB-4.1 (7.5')	12/16/98	(.050)	<.050
IB-4.2 (11.5')	12/16/98	(.050)	<.050
MW-1.1 (5.5')	12/18/98	(.10)	2.1
MW-1.2 (10.5')	12/17/98	(.050)	.35
MW-2.1 (5.5')	12/17/98	(.050)	<.050
MW-2.2 (10.5')	12/17/98	(.050)	<.050

Approved By:

  
\_\_\_\_\_  
Tom Kwoka  
Lab Director



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Sample Log 19368

19368-01

Sample: IB-1.1 (3.5')

From : DublinToyota (Proj. # 147-01-01)

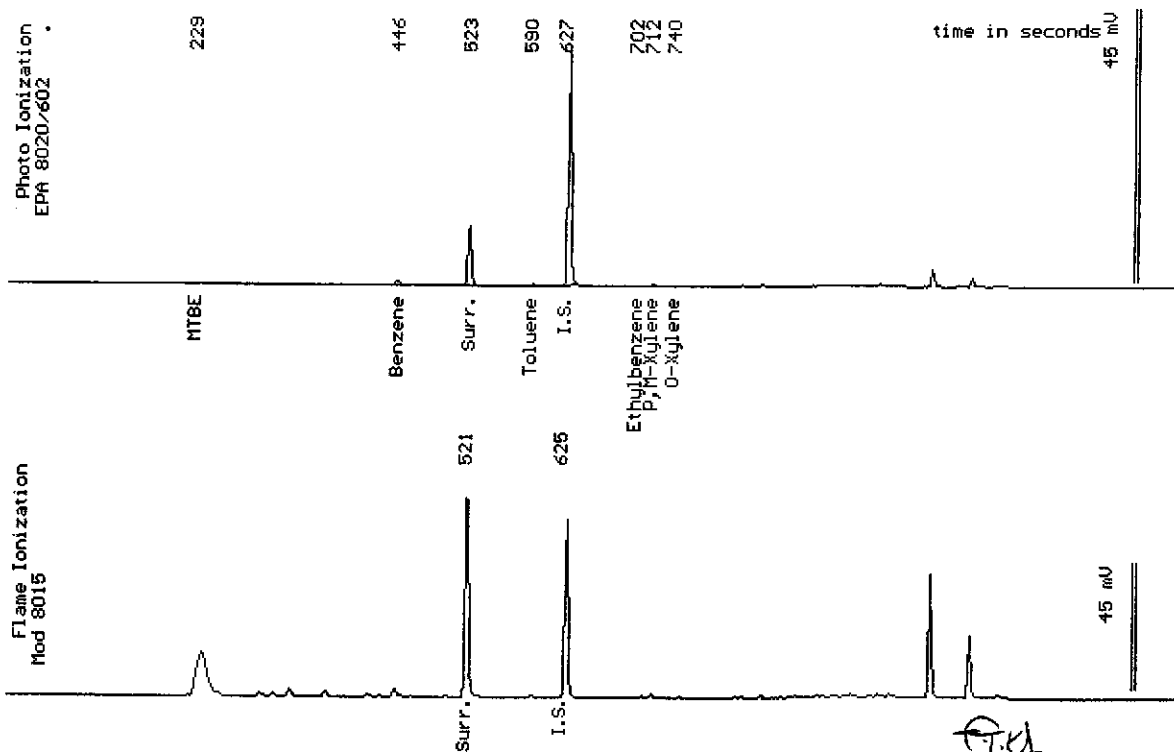
Sampled : 12/09/98

Dilution : 1:1

Matrix : Soil

Run Log : 2176M

Parameter	(MRL) mg/kg	Measured Value mg/kg
Benzene	(.0050)	<.0050
Toluene	(.0050)	<.0050
Ethylbenzene	(.0050)	<.0050
Total Xylenes	(.0050)	<.0050
TPH as Gasoline	(1.0)	<1.0
Surrogate Recovery		105 %



Date Analyzed: 12-16-98  
Column : 0.53mm X 60m Restek Rtx-1301

Stewart Podolsky  
Senior Chemist



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Sample Log 19368

19368-02

Sample: IB-1.2 (7.5')

From : DublinToyota (Proj. # 147-01-01)

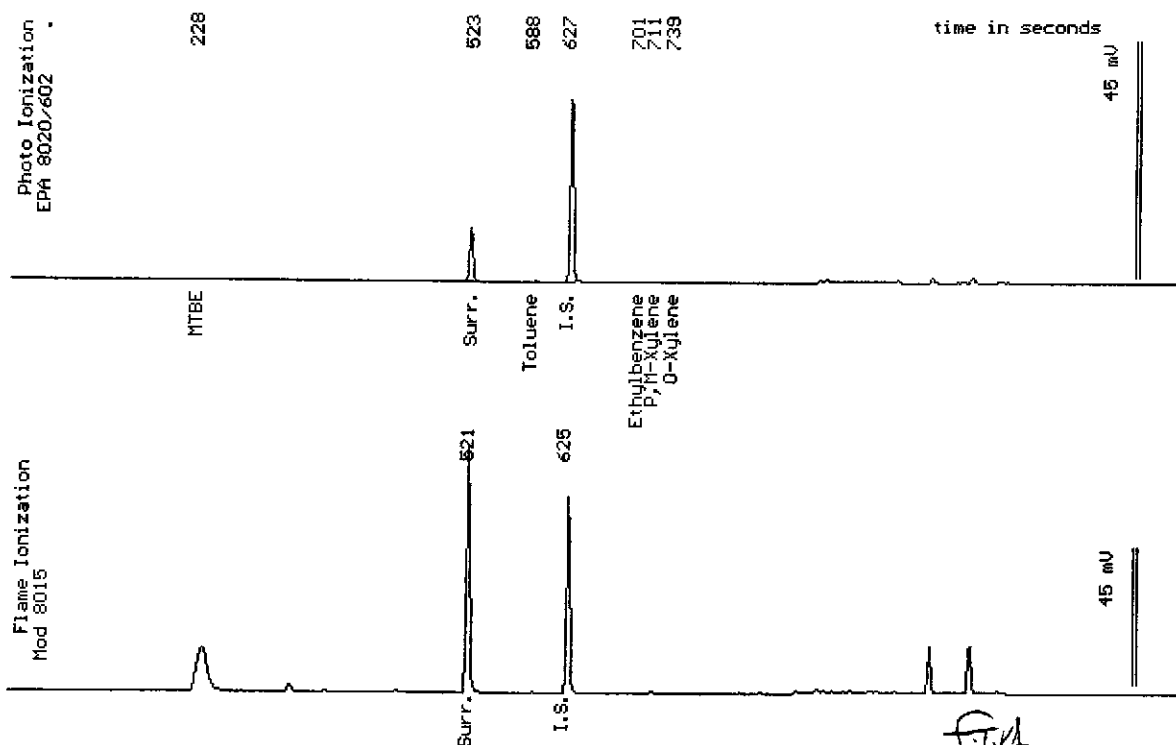
Sampled : 12/09/98

Dilution : 1:1

Matrix : Soil

Run Log : 2176M

Parameter	(MRL) mg/kg	Measured Value mg/kg
Benzene	(.0050)	<.0050
Toluene	(.0050)	<.0050
Ethylbenzene	(.0050)	<.0050
Total Xylenes	(.0050)	<.0050
TPH as Gasoline	(1.0)	<1.0
Surrogate Recovery		99 %



Date Analyzed: 12-16-98  
Column : 0.53mm X 60m Restek Rtx-1301

Stewart Podolsky  
Senior Chemist



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Sample Log 19368

19368-03

Sample: IB-1.3 (11.5')

From : DublinToyota (Proj. # 147-01-01)

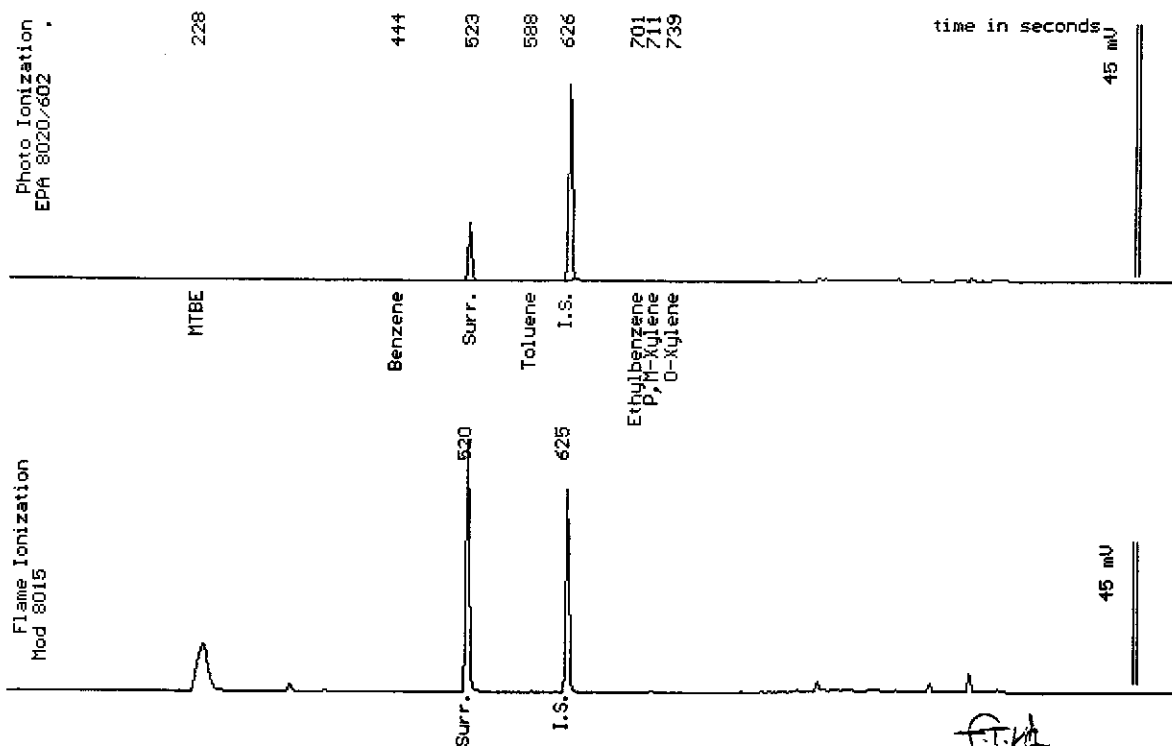
Sampled : 12/09/98

Dilution : 1:1

Run Log : 2176M

Matrix : Soil

Parameter	(MRL) mg/kg	Measured Value mg/kg
Benzene	(.0050)	<.0050
Toluene	(.0050)	<.0050
Ethylbenzene	(.0050)	<.0050
Total Xylenes	(.0050)	<.0050
TPH as Gasoline	(1.0)	<1.0
Surrogate Recovery		99 %



Date Analyzed: 12-16-98  
Column : 0.53mm X 60m Restek Rtx-1301

*[Signature]*  
Stewart Podolsky  
Senior Chemist



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Sample Log 19368

19368-04

Sample: IB-2.1 (7.5')

From : DublinToyota (Proj. # 147-01-01)

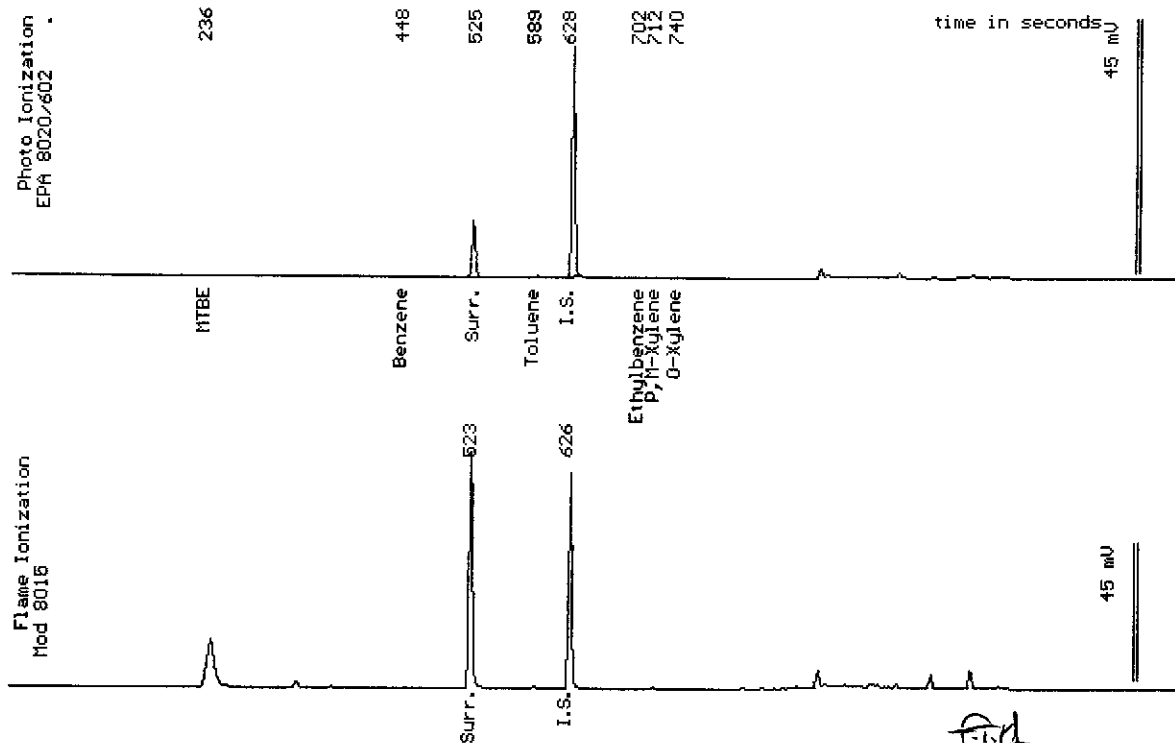
Sampled : 12/09/98

Dilution : 1:1

Matrix : Soil

Run Log : 2176M

Parameter	(MRL) mg/kg	Measured Value mg/kg
Benzene	(.0050)	<.0050
Toluene	(.0050)	<.0050
Ethylbenzene	(.0050)	<.0050
Total Xylenes	(.0050)	<.0050
TPH as Gasoline	(1.0)	<1.0
Surrogate Recovery		103 %



Date Analyzed: 12-16-98  
Column : 0.53mm X 60m Restek Rtx-1301

Stewart Podolsky  
Senior Chemist



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Sample Log 19368

19368-06

Sample: IB-4.1 (7.5')

From : DublinToyota (Proj. # 147-01-01)

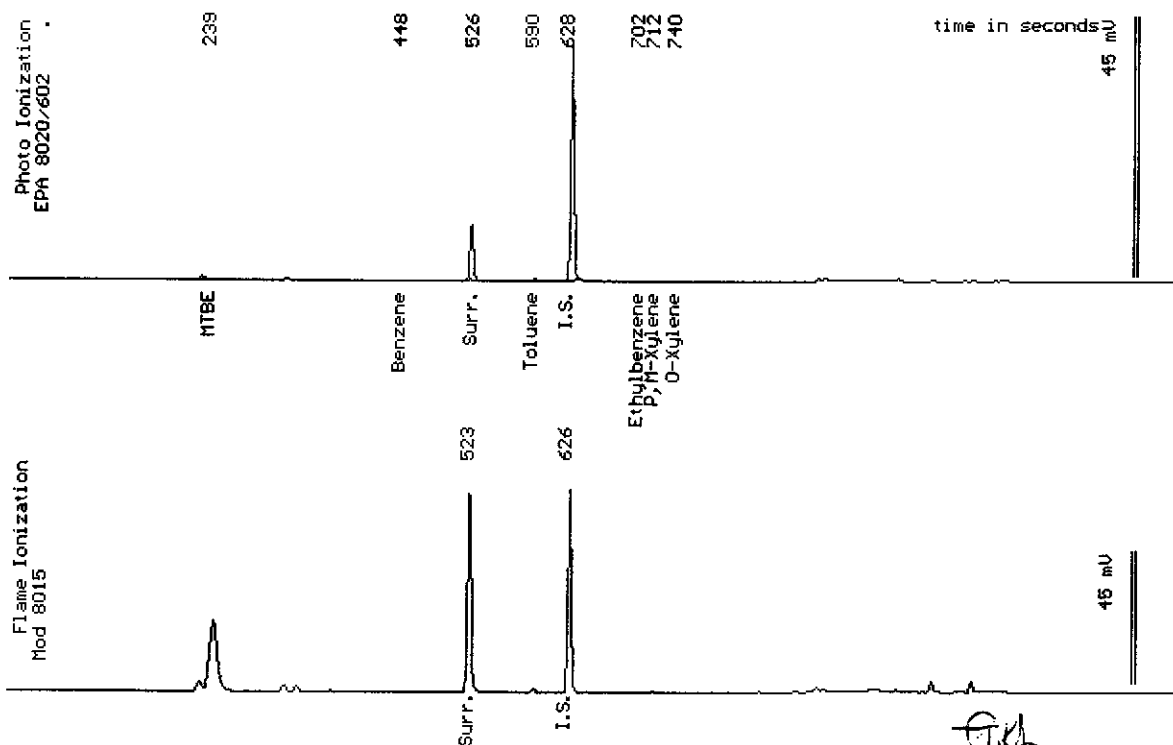
Sampled : 12/09/98

Dilution : 1:1

Matrix : Soil

Run Log : 2176M

Parameter	(MRL) mg/kg	Measured Value mg/kg
Benzene	(.0050)	<.0050
Toluene	(.0050)	<.0050
Ethylbenzene	(.0050)	<.0050
Total Xylenes	(.0050)	<.0050
TPH as Gasoline	(1.0)	<1.0
Surrogate Recovery		100 %



Date Analyzed: 12-16-98  
Column : 0.53mm X 60m Restek Rtx-1301

Stewart Rodolsky  
Senior Chemist



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Sample Log 19368  
19368-07

Sample: IB-4.2 (11.5')

From : DublinToyota (Proj. # 147-01-01)

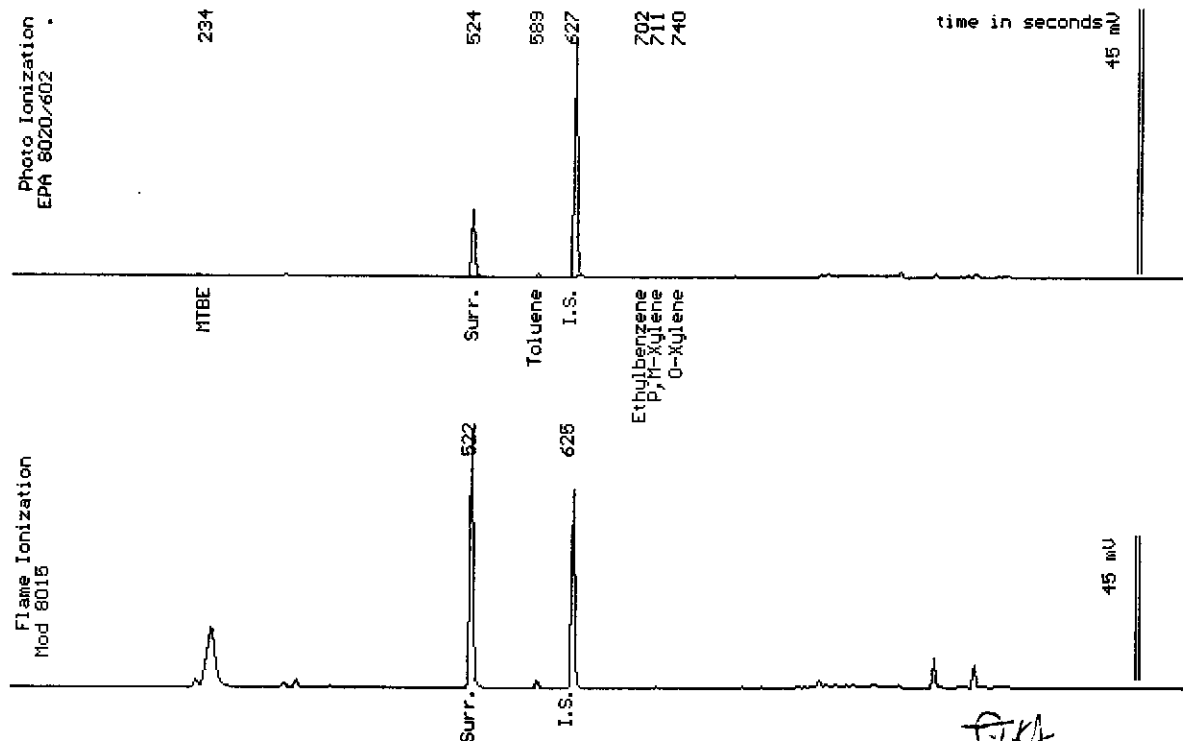
Sampled : 12/09/98

Dilution : 1:1

Run Log : 2176M

Matrix : Soil

Parameter	(MRL) mg/kg	Measured Value mg/kg
Benzene	(.0050)	<.0050
Toluene	(.0050)	<.0050
Ethylbenzene	(.0050)	<.0050
Total Xylenes	(.0050)	<.0050
TPH as Gasoline	(1.0)	<1.0
Surrogate Recovery		102 %



Date Analyzed: 12-16-98  
Column : 0.53mm X 60m Restek Rtx-1301

Stewart Podolsky  
Senior Chemist





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Sample Log 19368

19368-08

Sample: MW-1.1 (5.5')

From : DublinToyota (Proj. # 147-01-01)

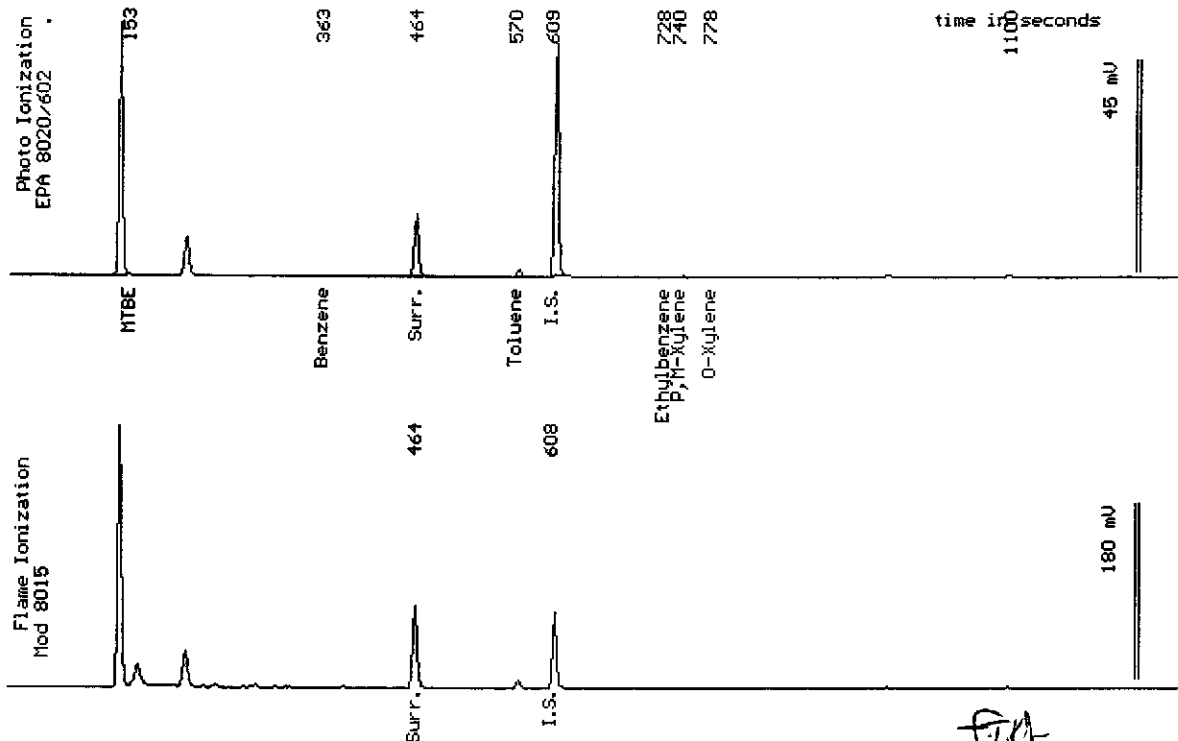
Sampled : 12/09/98

Dilution : 1:2

Run Log : 4179U

Matrix : Soil

Parameter	(MRL) mg/kg	Measured Value mg/kg
Benzene	(.010)	<.010
Toluene	(.010)	.020
Ethylbenzene	(.010)	<.010
Total Xylenes	(.010)	<.010
TPH as Gasoline	(2.0)	<2.0
Surrogate Recovery		112 %



Date Analyzed: 12-18-98  
Column : 0.53mm ID X 60m Restek Rtx-1701

*Stu*  
Stewart Podolsky  
Senior Chemist



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Sample Log 19368

19368-09

Sample: MW-1.2 (10.5')

From : DublinToyota (Proj. # 147-01-01)

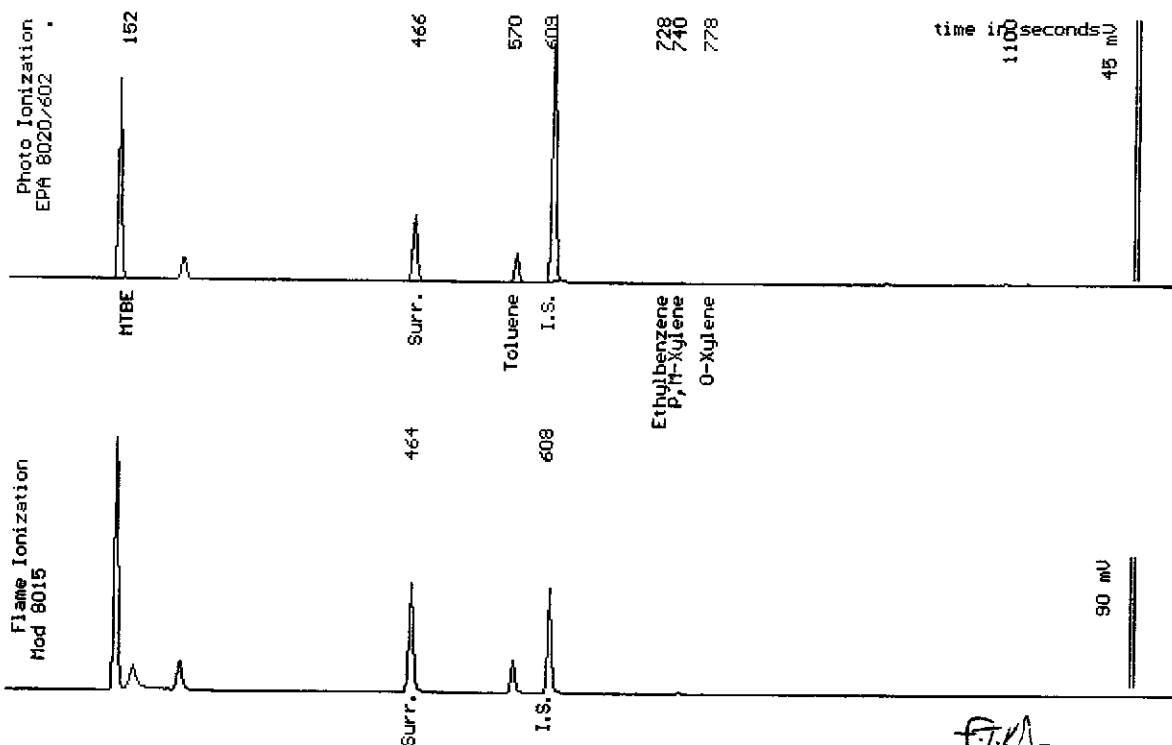
Sampled : 12/09/98

Dilution : 1:1

Matrix : Soil

Run Log : 4179U

Parameter	(MRL) mg/kg	Measured Value mg/kg
Benzene	(.0050)	<.0050
Toluene	(.0050)	.017
Ethylbenzene	(.0050)	<.0050
Total Xylenes	(.0050)	<.0050
TPH as Gasoline	(1.0)	<1.0
Surrogate Recovery		108 %



Date Analyzed: 12-17-98  
Column : 0.53mm ID X 60m Restek Rtx-1701

*Stewart Podolsky*  
Stewart Podolsky  
Senior Chemist



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Sample Log 19368

19368-10

Sample: MW-2.1 (5.5')

From : DublinToyota (Proj. # 147-01-01)

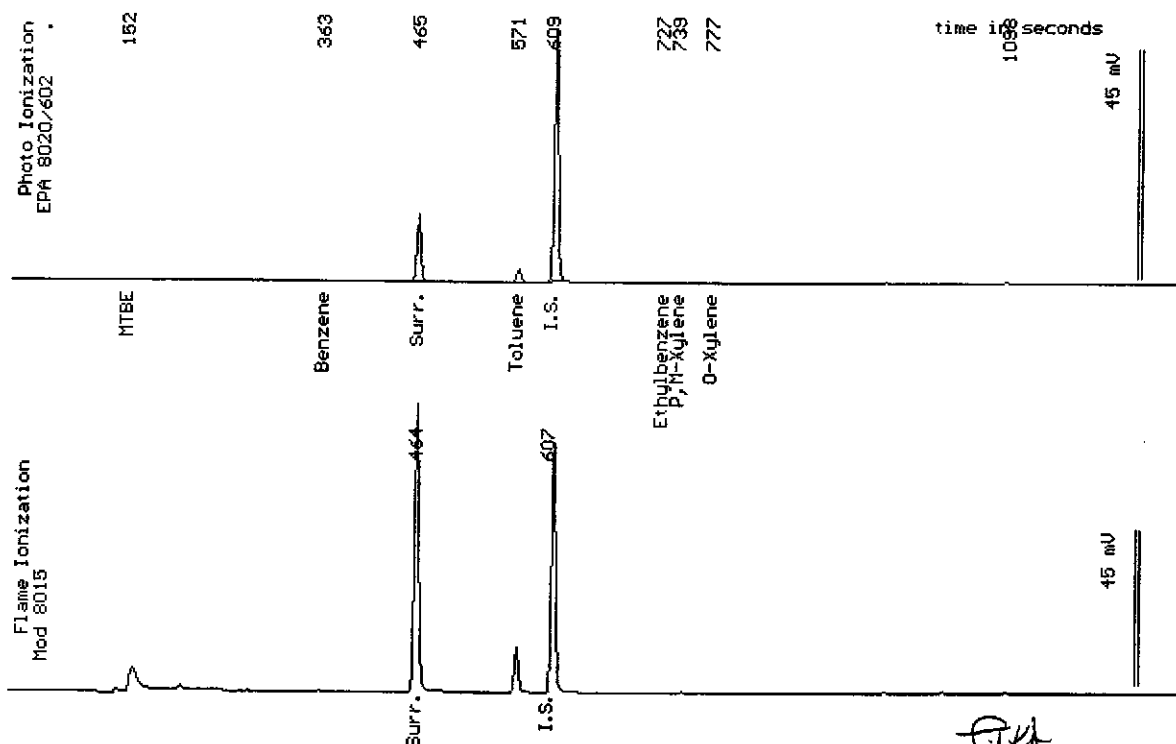
Sampled : 12/09/98

Dilution : 1:1

Matrix : Soil

Run Log : 4179T

Parameter	(MRL) mg/kg	Measured Value mg/kg
Benzene	(.0050)	<.0050
Toluene	(.0050)	.0085
Ethylbenzene	(.0050)	<.0050
Total Xylenes	(.0050)	<.0050
TPH as Gasoline	(1.0)	<1.0
Surrogate Recovery		110 %



Date Analyzed: 12-17-98  
Column : 0.53mm ID X 60m Restek Rtx-1701

Stewart Podolsky  
Senior Chemist



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Sample Log 19368

19368-11

Sample: MW-2.2 (10.5')

From : DublinToyota (Proj. # 147-01-01)

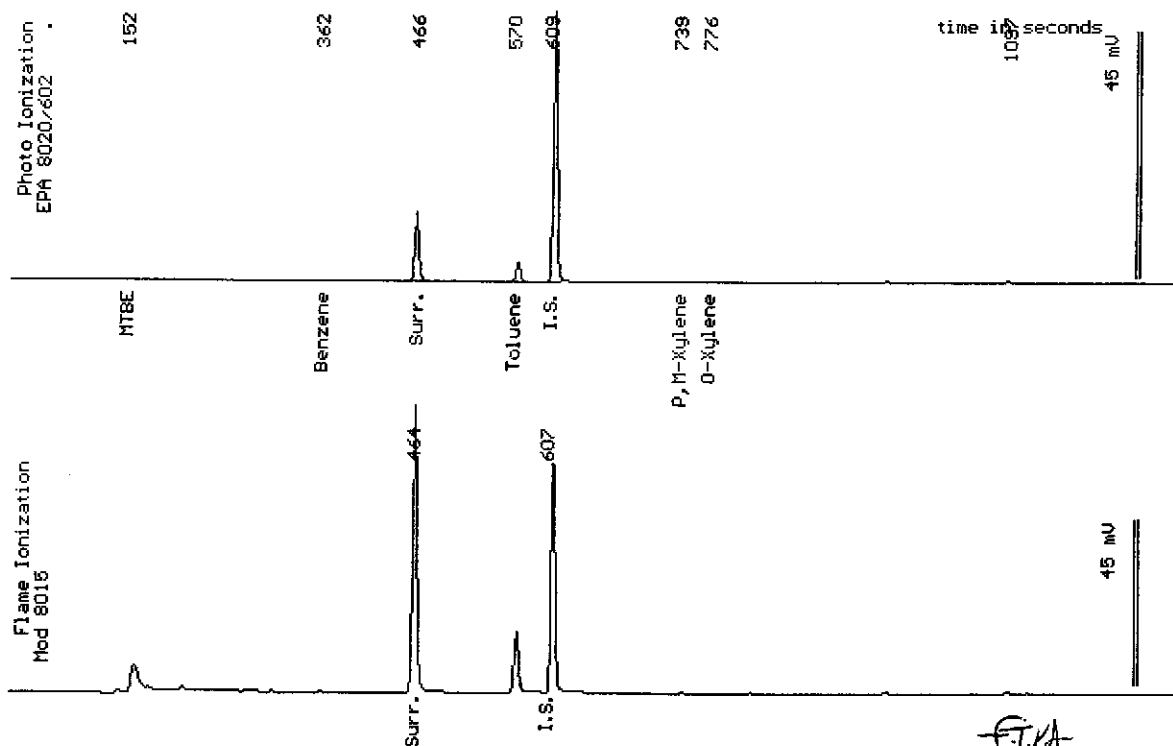
Sampled : 12/09/98

Dilution : 1:1

Matrix : Soil

Run Log : 4179T

Parameter	(MRL) <small>ug/kg</small>	Measured Value <small>ug/kg</small>
Benzene	(.0050)	<.0050
Toluene	(.0050)	.012
Ethylbenzene	(.0050)	<.0050
Total Xylenes	(.0050)	<.0050
TPH as Gasoline	(1.0)	<1.0
Surrogate Recovery		109 %



Date Analyzed: 12-17-98  
Column : 0.53mm ID X 60m Restek Rtx-1701

Stewart Podolsky  
Senior Chemist

Acculabs Inc.

December 18, 1998  
Sample Log 19368


QC Report for EPA 8020 & Modified EPA 8015  
Run Log : 4179Q  
From : DublinToyota (Proj. # 147-01-01)  
Sample(s) Received : 12/11/98

Parameter	Matrix Spike % Recovery	Matrix Spike Duplicate % Recovery	RPD *
Benzene	98	98	0
Ethylbenzene	102	102	0
TPH as Gasoline	103	106	3

\* RPD = Relative Percent Difference

Parameter	Laboratory Control Sample % Recovery
Benzene	105
Ethylbenzene	107
Gasoline	113

Parameter	Method Blank
Benzene	<0.005 mg/Kg
Toluene	<0.005 mg/Kg
Ethylbenzene	<0.005 mg/Kg
Total Xylenes	<0.005 mg/Kg
TPH as Gasoline	<1.0 mg/kg

  
Tom Kwoka  
Lab Director

Acculabs Inc.

December 18, 1998  
Sample Log 19368

QC Report for EPA 8020 & Modified EPA 8015  
Run Log : 2176L  
From : DublinToyota (Proj. # 147-01-01)  
Sample(s) Received : 12/11/98

Parameter	Matrix Spike % Recovery	Matrix Spike Duplicate % Recovery	RPD *
Benzene	100	96	4
Ethylbenzene	98	93	5
TPH as Gasoline	103	102	1

\* RPD = Relative Percent Difference

Parameter	Laboratory Control Sample % Recovery
Benzene	98
Ethylbenzene	100
Gasoline	112

Parameter	Method Blank
Benzene	<0.005 mg/Kg
Toluene	<0.005 mg/Kg
Ethylbenzene	<0.005 mg/Kg
Total Xylenes	<0.005 mg/Kg
TPH as Gasoline	<1.0 mg/kg

  
Tom Kwoka  
Lab Director



# Acculabs Inc.

Davis

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Sample Log 19368  
19368-01

Sample: IB-1.1 (3.5')

From : DublinToyota (Proj. # 147-01-01)

Sampled : 12/09/98

Extracted: 12/15/98

Dilution : 1:1

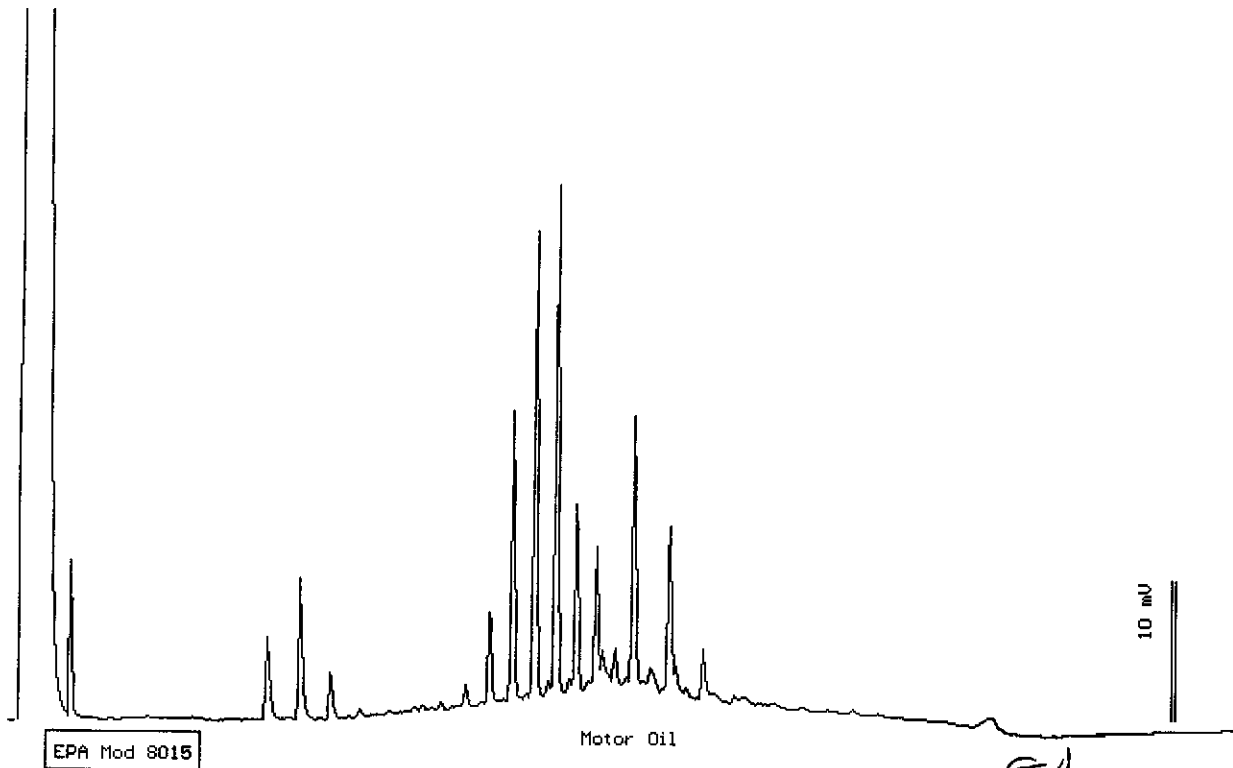
Matrix : Soil

QC Batch : DS981204

Run Log : 7424F

Parameter	(MRL) mg/kg	Measured Value mg/kg
TPH as Diesel	(2.0)	<2.0 *
TPH as Motor Oil	(10)	<10

\* Increased reporting limit due to oil range interference.



EPA Mod 8015

Date: 12-17-98 Time: 16:39:25  
Column : 0.53mm ID X 15m DB1 (J&W Scientific)

*Stewart Podolsky*  
Stewart Podolsky  
Senior Chemist



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Sample Log 19368  
19368-02

Sample: IB-1.2 (7.5')

From : DublinToyota (Proj. # 147-01-01)

Sampled : 12/09/98

Extracted: 12/15/98

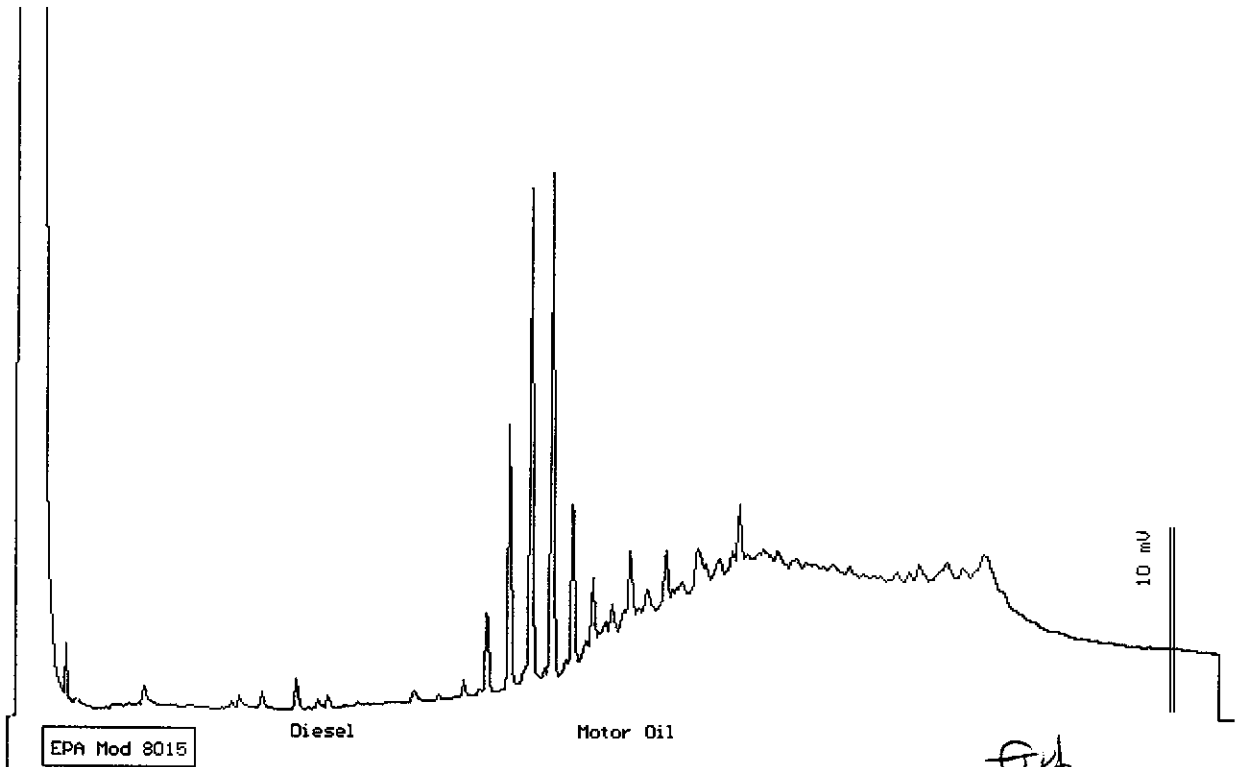
Dilution : 1:1

Matrix : Soil

QC Batch : DS981204

Run Log : 7424D

Parameter	(MRL) mg/kg	Measured Value mg/kg
TPH as Diesel	(1.0)	2.1
TPH as Motor Oil	(10)	12



Date: 12-16-98 Time: 18:34:49  
Column : 0.53mm ID X 15m DB1 (J&W Scientific)

*Stewart Podolsky*  
Stewart Podolsky  
Senior Chemist





# Acculabs Inc.

Davis

1046 Olive Drive, Suite 2, Davis CA 95616 ■ 530-757-0920 ■ Fax 753-6091

Sample Log 19368

19368-03

Sample: IB-1.3 (11.5')

From : DublinToyota (Proj. # 147-01-01)

Sampled : 12/09/98

Extracted: 12/15/98

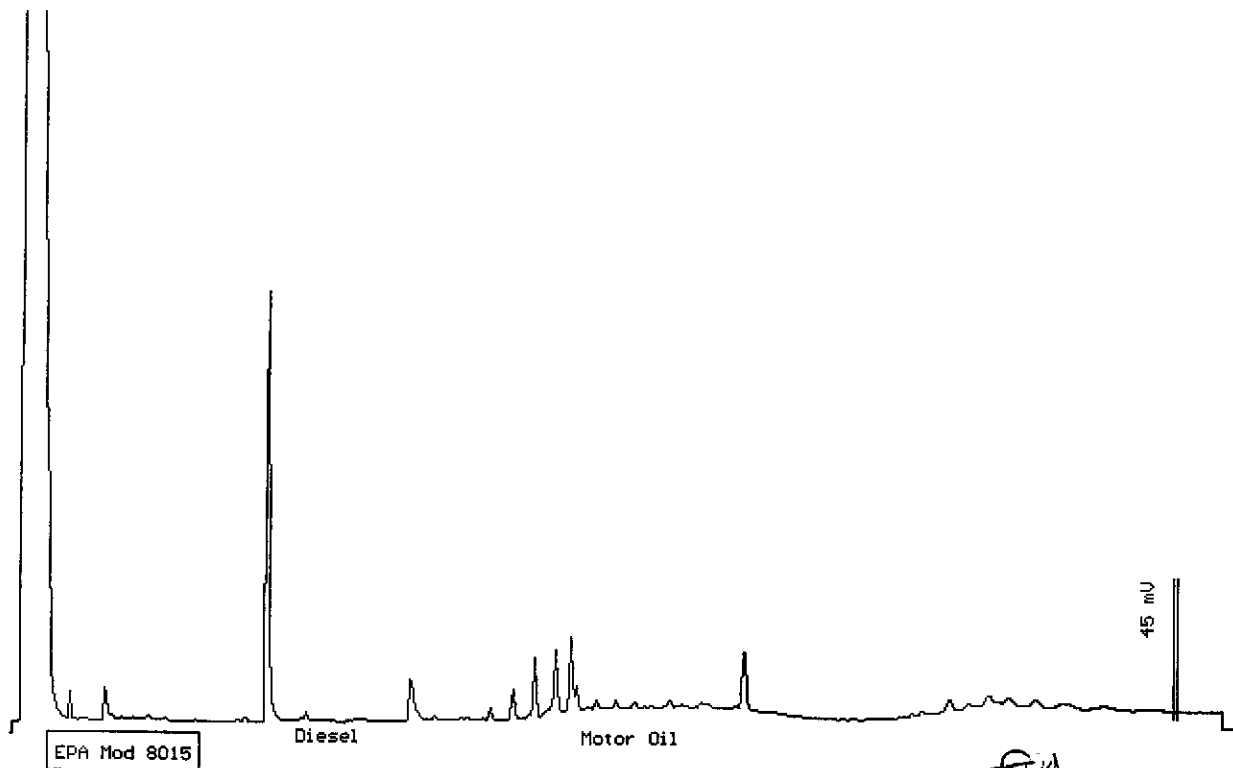
Dilution : 1:1

Matrix : Soil

QC Batch : DS981204

Run Log : 7424D

Parameter	(MRL) mg/kg	Measured Value mg/kg
TPH as Diesel	(1.0)	5.5
TPH as Motor Oil	(10)	<10



Date: 12-16-98 Time: 19:08:37  
Column : 0.53mm ID X 15m DB1 (J&W Scientific)

*[Signature]*  
Stewart Podolsky  
Senior Chemist



# Acculabs Inc.

Davis

1046 Olive Drive, Suite 2, Davis CA 95616 ■ 530-757-0920 ■ Fax 753-6091

Sample Log 19368  
19368-04

Sample: IB-2.1 (7.5')

From : DublinToyota (Proj. # 147-01-01)

Sampled : 12/09/98

Extracted: 12/15/98

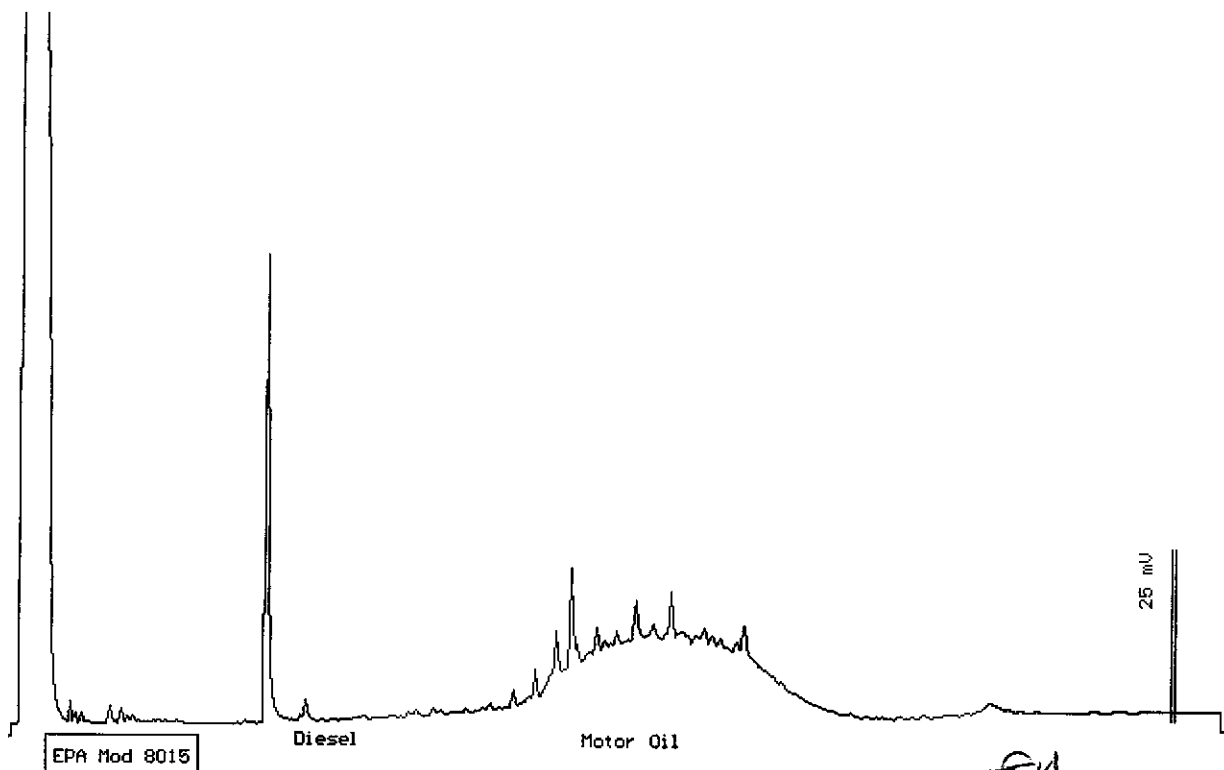
Dilution : 1:1

Matrix : Soil

QC Batch : DS981204

Run Log : 7424D

Parameter	(MRL) mg/kg	Measured Value mg/kg
TPH as Diesel	(1.0)	3.1
TPH as Motor Oil	(10)	13



Date: 12-16-98 Time: 21:57:01  
Column : 0.53mm ID X 15m DB1 (J&W Scientific)

*Stewart Podolsky*  
Stewart Podolsky  
Senior Chemist



# Acculabs Inc.

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Sample Log 19368  
19368-05

Sample: IB-3.1 (11.5')

From : DublinToyota (Proj. # 147-01-01)

Sampled : 12/09/98

Extracted: 12/15/98

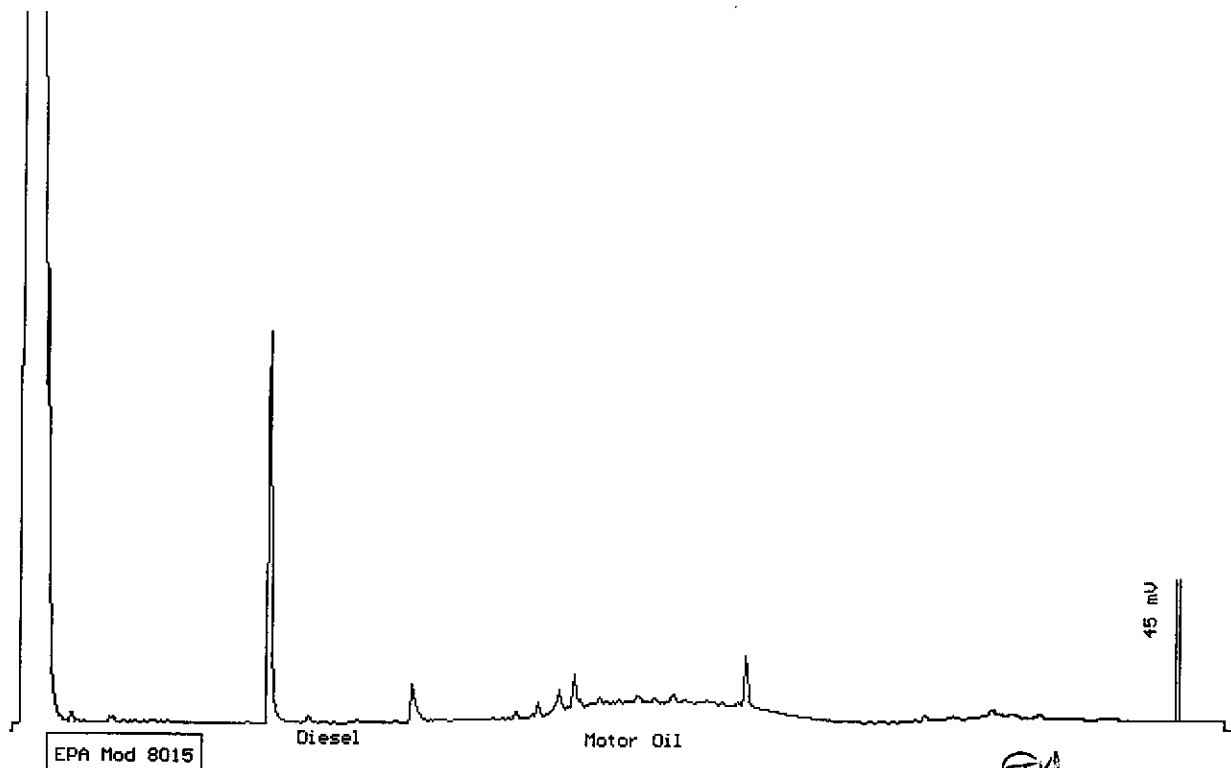
Dilution : 1:1

Matrix : Soil

QC Batch : DS981204

Run Log : 7424D

Parameter	(MRL) mg/kg	Measured Value mg/kg
TPH as Diesel	(1.0)	4.6
TPH as Motor Oil	(10)	<10



Date: 12-16-98 Time: 22:30:10  
Column : 0.53mm ID X 15m DB1 (J&W Scientific)

*Stewart Podolsky*  
Stewart Podolsky  
Senior Chemist



# Acculabs Inc.

Davis

1046 Olive Drive, Suite 2, Davis CA 95616 ■ 530-757-0920 ■ Fax 753-6091

Sample Log 19368  
19368-06

Sample: IB-4.1 (7.5')

From : DublinToyota (Proj. # 147-01-01)

Sampled : 12/09/98

Extracted: 12/15/98

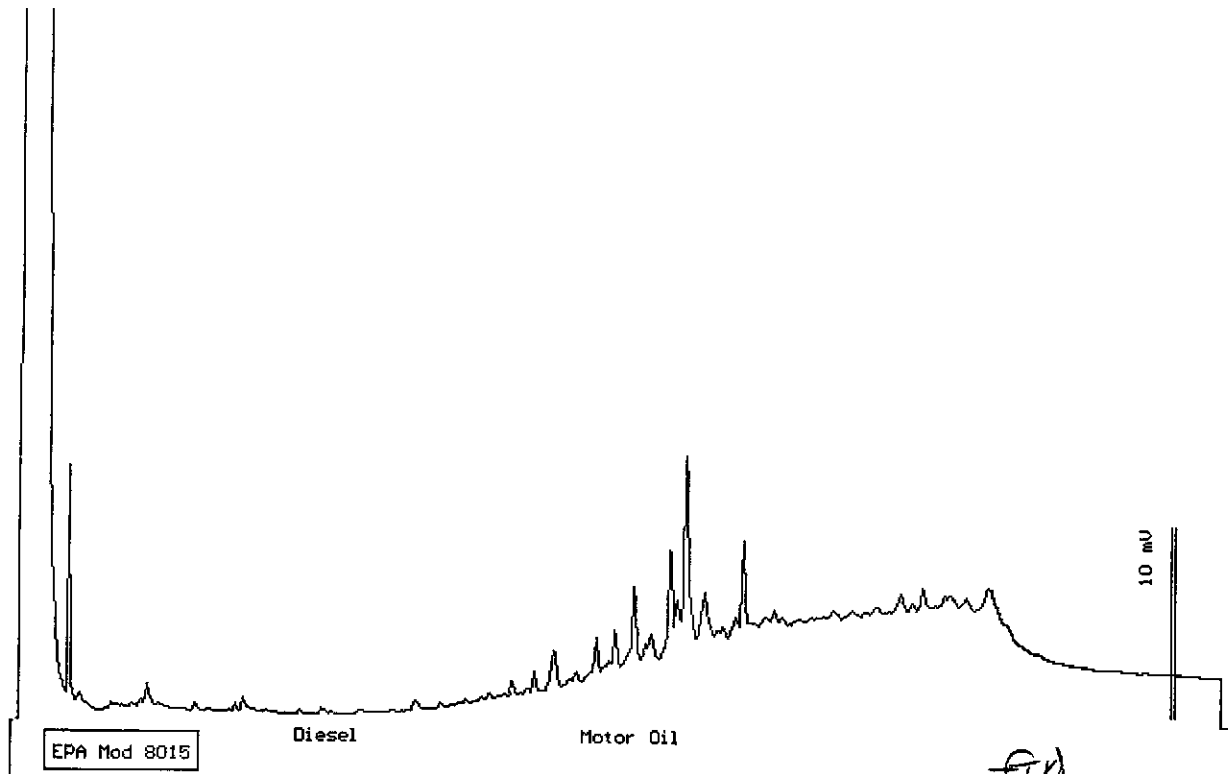
Dilution : 1:1

Matrix : Soil

QC Batch : DS981204

Run Log : 7424D

Parameter	(MRL) mg/kg	Measured Value mg/kg
TPH as Diesel	(1.0)	1.2
TPH as Motor Oil	(10)	<10



Date: 12-16-98 Time: 23:03:15  
Column : 0.53mm ID X 15m DB1 (J&W Scientific)

*[Signature]*  
Stewart Podolsky  
Senior Chemist



# Acculabs Inc.

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Sample Log 19368

19368-07

Sample: IB-4.2 (11.5')

From : DublinToyota (Proj. # 147-01-01)

Sampled : 12/09/98

Extracted: 12/15/98

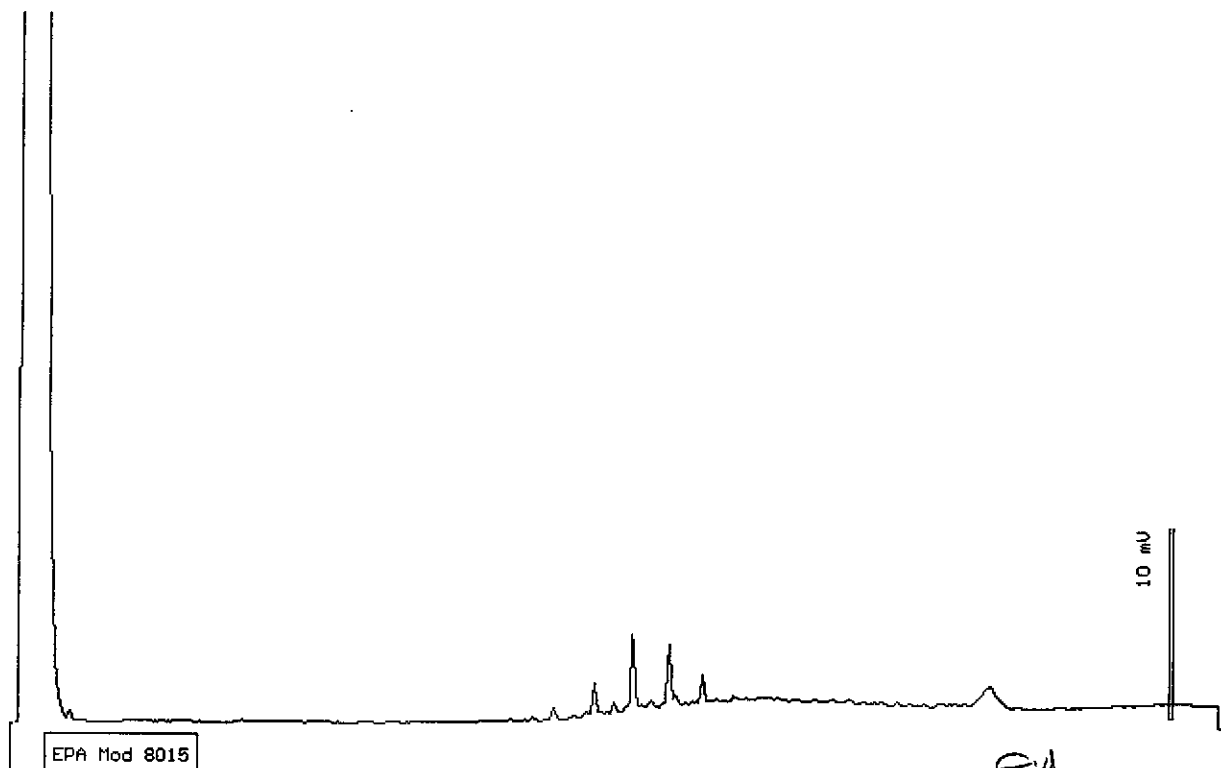
Dilution : 1:1

Matrix : Soil


QC Batch : DS981204

Run Log : 7424D

Parameter	(MRL) mg/kg	Measured Value mg/kg
TPH as Diesel	(1.0)	<1.0
TPH as Motor Oil	(10)	<10



Date: 12-16-98 Time: 23:36:11  
Column : 0.53mm ID X 15m DB1 (J&W Scientific)

  
Stewart Podolsky  
Senior Chemist



# Acculabs Inc.

Davis

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Sample Log 19368  
19368-08

Sample: MW-1.1 (5.5')

From : DublinToyota (Proj. # 147-01-01)

Sampled : 12/09/98

Extracted: 12/15/98

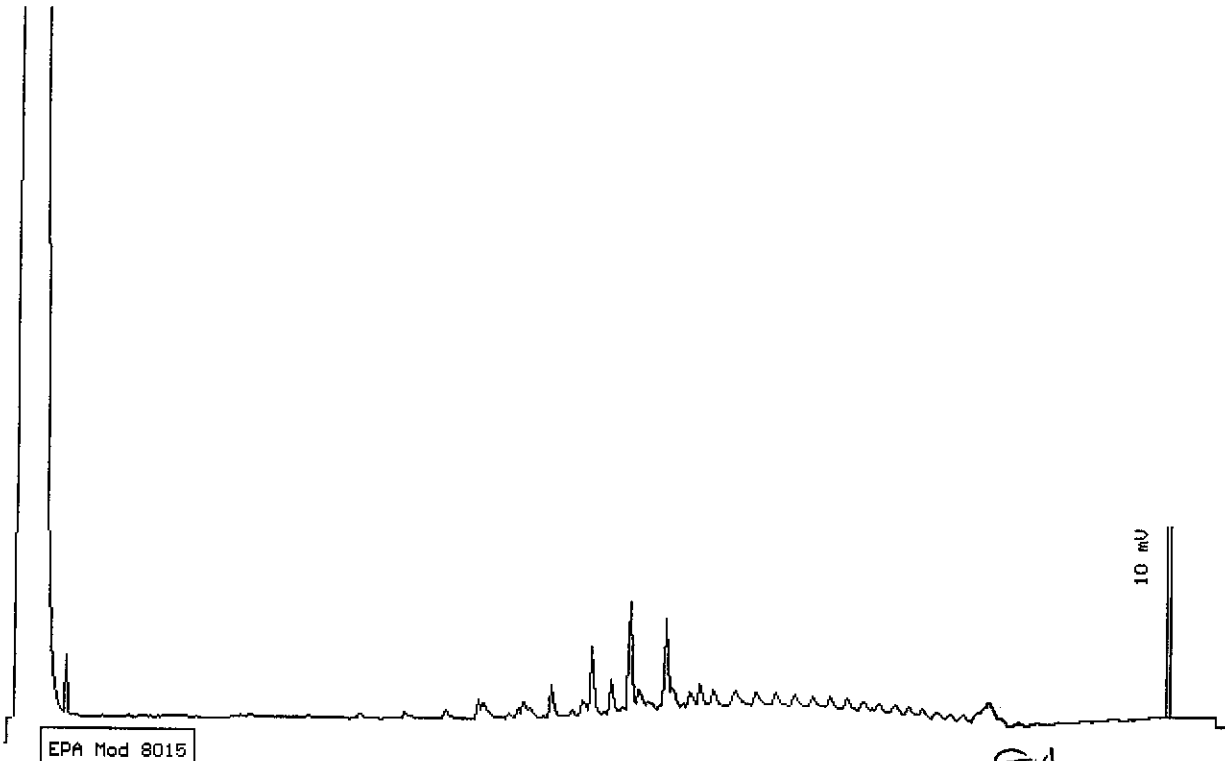
Dilution : 1:1

Matrix : Soil


QC Batch : DS981204

Run Log : 7424D

Parameter	(MRL) mg/kg	Measured Value mg/kg
TPH as Diesel	(1.0)	<1.0
TPH as Motor Oil	(10)	<10



Date: 12-17-98 Time: 00:09:04  
Column : 0.53mm ID X 15m DB1 (J&W Scientific)

  
Stewart Podolsky  
Senior Chemist



# Acculabs Inc.

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Sample Log 19368  
19368-09

Sample: MW-1.2 (10.5')

From : DublinToyota (Proj. # 147-01-01)

Sampled : 12/09/98

Extracted: 12/15/98

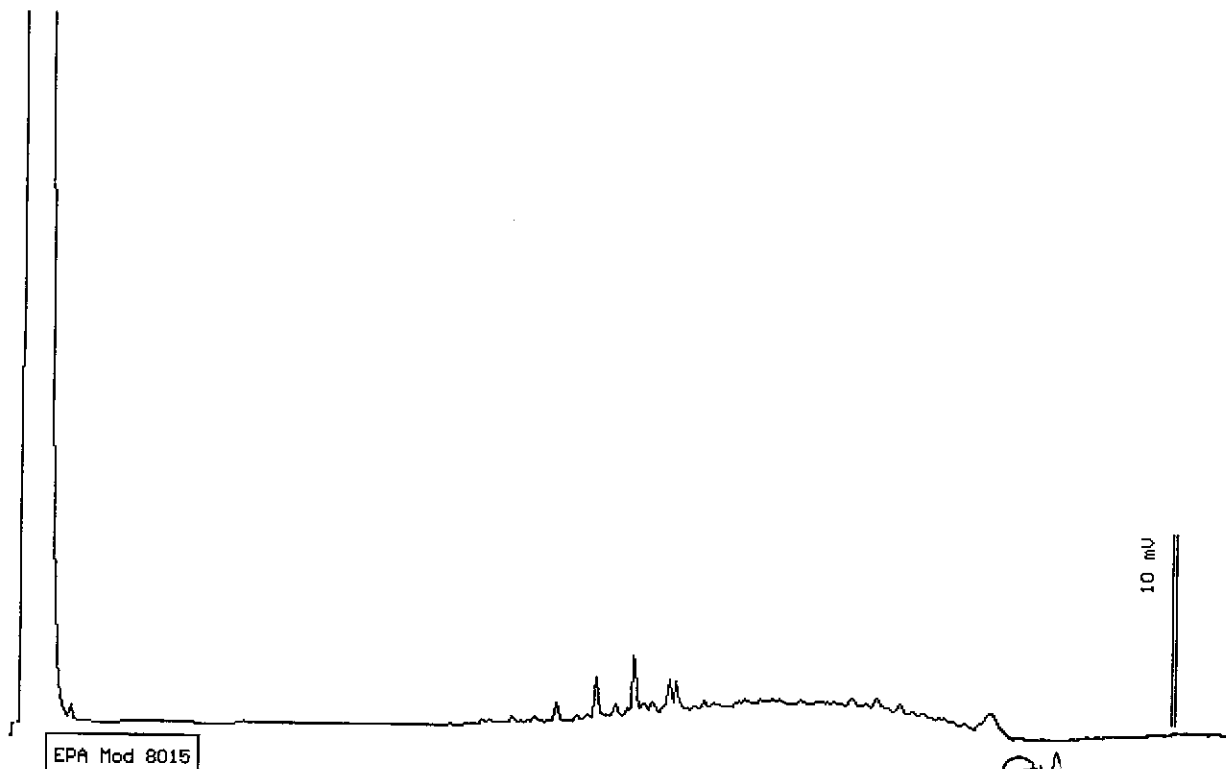
Dilution : 1:1

Matrix : Soil

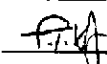
QC Batch : DS981204

Run Log : 7424D

Parameter	(MRL) mg/kg	Measured Value mg/kg
TPH as Diesel	(1.0)	<1.0
TPH as Motor Oil	(10)	<10



Date: 12-17-98 Time: 00:41:57  
Column : 0.53mm ID X 15m DB1 (J&W Scientific)

  
Stewart Podolsky  
Senior Chemist



# Acculabs Inc.

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Sample Log 19368  
19368-10

Sample: MW-2.1 (5.5')

From : DublinToyota (Proj. # 147-01-01)

Sampled : 12/09/98

Extracted: 12/15/98

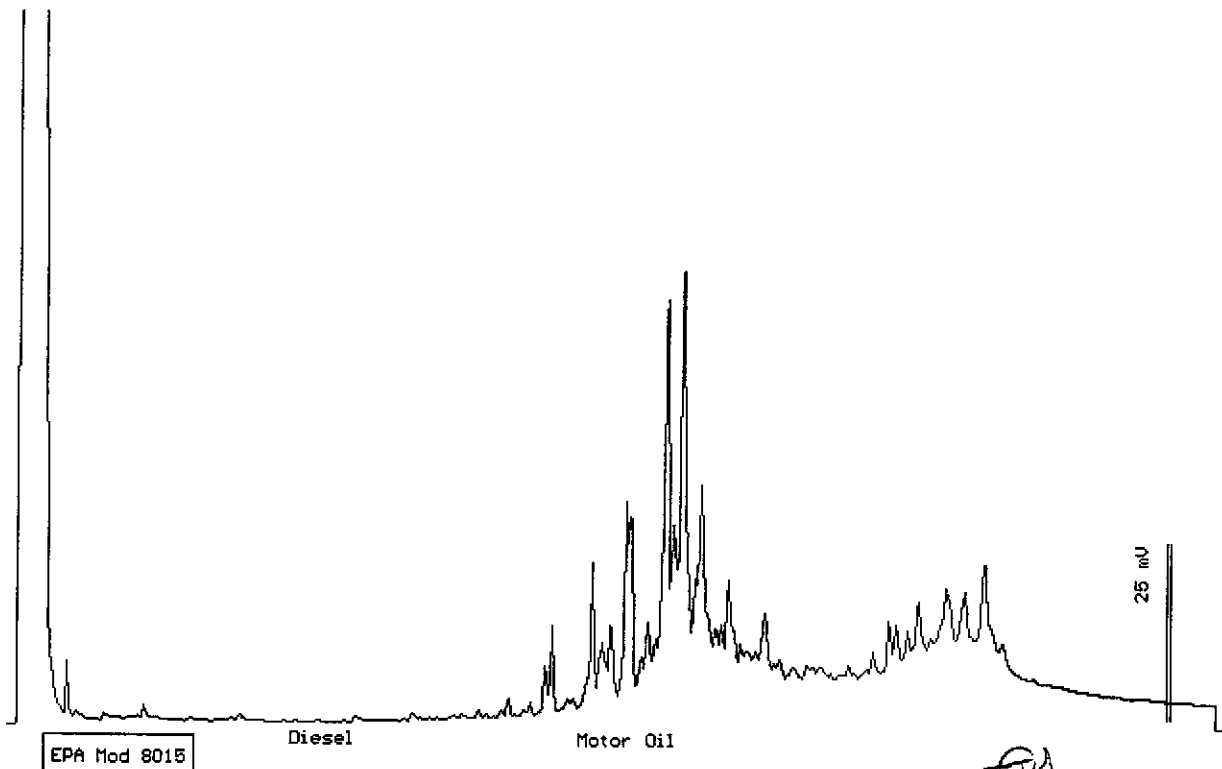
Dilution : 1:1

Matrix : Soil

QC Batch : DS981204

Run Log : 7424D

Parameter	(MRL) mg/kg	Measured Value mg/kg
TPH as Diesel	(1.0)	1.5
TPH as Motor Oil	(10)	19



Date: 12-17-98 Time: 01:14:46  
Column : 0.53mm ID X 15m DB1 (J&W Scientific)

*Stuart Podolsky*  
Stuart Podolsky  
Senior Chemist





# Acculabs Inc.

Davis

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Sample Log 19368

19368-11

Sample: MW-2.2 (10.5')

From : DublinToyota (Proj. # 147-01-01)

Sampled : 12/09/98

Extracted: 12/15/98

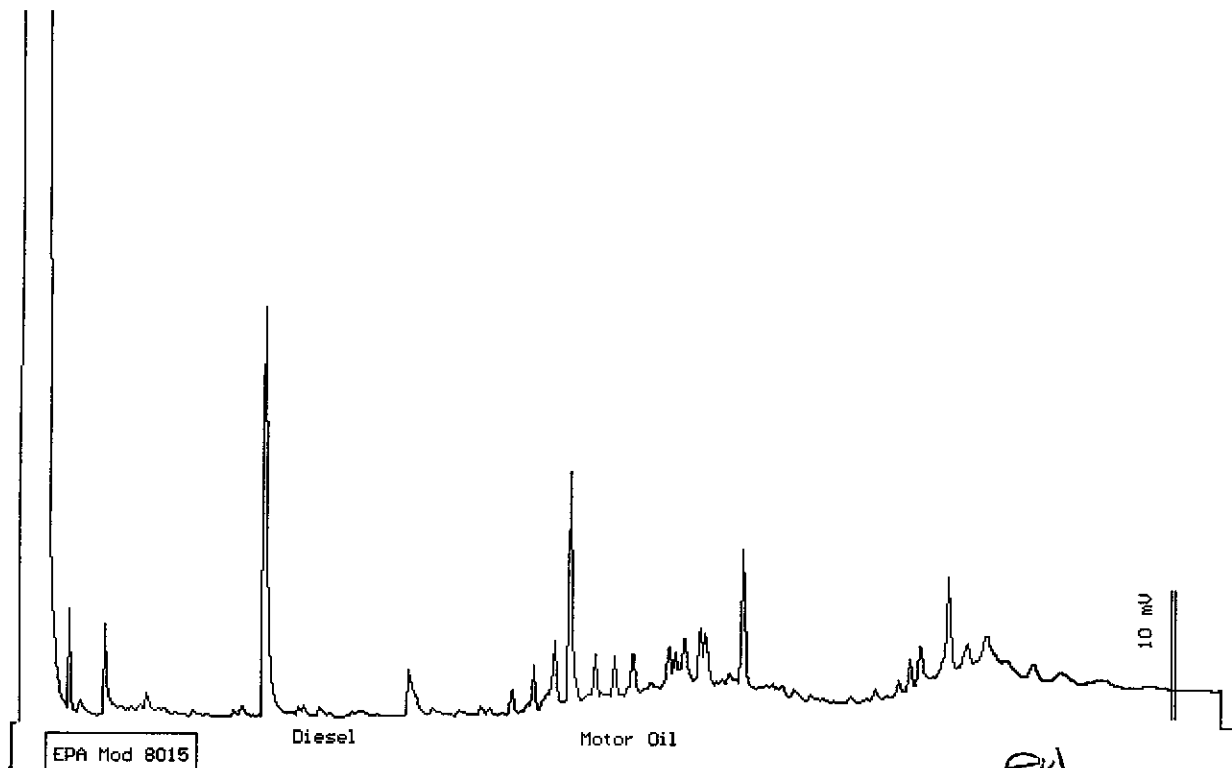
Dilution : 1:1

Matrix : Soil

QC Batch : DS981204

Run Log : 7424D

Parameter	(MRL) mg/kg	Measured Value mg/kg
TPH as Diesel	(1.0)	2.3
TPH as Motor Oil	(10)	<10



Date: 12-17-98 Time: 01:47:36  
Column : 0.53mm ID X 15m DB1 (J&W Scientific)

  
Stewart Podolsky  
Senior Chemist

Acculabs Inc.

December 17, 1998

QC Report  
TPH Diesel by 8015 Mod

QC Batch: DS981204

Matrix: Soil

**Spike and Spike Duplicate Results**


Parameter	Matrix Spike (%Rec)	Matrix Spike Dup. (%Rec)	RPD %
TPH as Diesel	NC	NC	NC
* Sample spiked was too contaminated. See LCS data below.			

**Laboratory Control Spike**

Parameter	Laboratory Control Spike (%Rec)
TPH as Diesel	114

**Method Blank**

Parameter	MDL(mg/Kg)	Measured Value(mg/Kg)
TPH as Diesel	(1.0)	<1.0
TPH as Motor Oil	(2.0)	<2.0

  
\_\_\_\_\_  
Tom Kwoka  
Lab Director

# Acculabs Inc.

[ ] 3902 E. University Dr. Phoenix AZ 85034  
 [ ] 710 E. Evans Blvd. Tucson AZ 85713  
 [ ] 2020 W. Lone Cactus Dr. Phoenix AZ 85027  
 [ ] 4663 Table Mountain Dr. Golden CO 80403  
 [ ] 992 Spice Islands Dr. Sparks NV 89431  
 [ ] 1046 Olive Drive #2 Davis CA 95616

602-437-0979 Fax 437-0826  
 520-884-5811 Fax 884-5812  
 602-780-4800 Fax 780-7695  
 303-277-9514 Fax 277-9512  
 702-355-0202 Fax 355-0817  
 530-757-0920 Fax 753-6091

Lab Number

19368

Report  
 Due Date:

Client Gribi Associates		<b>PUBLIC WATER SUPPLY INFORMATION</b>	
Address 884 Vintage Avenue		System Name	
City, State & Zip Suisun, CA 94585		PWS No.	Report to State/EPA Y N
Contact Jim Gribi		POE No.	DWR No.
Phone 707/864-5543	Project Name Dublin Toyota		Collection Point
Fax 707/864-5543	Project Number 147-01-01		Collector's Name
P.O. Number	Fax Results (Y) N	Page 1 of 1	Location (City)

SAMPLE TYPE CODES			S a m p l e  T Y P E	C o n t a i n e r s	Analyses Requested
DW = drinking water	TB = travel blank	Compliance Monitoring			
WW = waste water	SD = solid	Y N			
MW = monitoring well	SO = soil				
HW = hazardous waste	SL = sludge				

TURNAROUND TIME REQUESTED		S a m p l e  T Y P E	C o n t a i n e r s
Standard	Lab Director Approval		
RUSH			
Special			

CLIENT'S SAMPLE ID/LOCATION	Date	Time	S	C	Analyses Requested										Spl. No.		
1B-1.1 (3.5')	12/9		S	1	X	X											01
1B-1.2 (7.5')			S	1	X	X											02
1B-1.3 (11.5')			S	1	X	X											03
1B-2.1 (7.5')			S	1	X	X											04
1B-3.1 (11.5')			S	1	X	X											05
1B-4.1 (7.5')			S	1	X	X											06
1B-4.2 (11.5')			S	1	X	X											07
MW-1.1 (5.5')			S	1	X	X											08
MW-1.2 (10.5')			S	1	X	X											09
MW-2.1 (5.5')			S	1	X	X											10
MW-2.2 (10.5')			S	1	X	X											11

Instructions/Comments/Special Requirements:

SAMPLE RECEIPT			Date	Time	Samples Relinquished By	Samples Received By
Received Cold	Y	N	12/10	14:55	[Signature]	[Signature]
Custody Seals	Y	N	12/10	1700	[Signature]	[Signature]
Seals Intact	Y	N				
No. of Containers						

Acculabs' terms are: Net 40 (Payment must be received by the date shown on the invoice or any discount is void)



# Acculabs Inc.

Davis

1046 Olive Drive, Suite 2, Davis CA 95616 ■ 530-757-0920 ■ Fax 753-6091

Sample Log 19386

December 22, 1998

Jim Gribi  
Gribi Associates  
884 Vintage  
Suisun, CA 94585

Subject : 2 Water samples  
Project Name : Dublin Toyota  
Project Number : 147-01-01

Dear Mr. Gribi,

Chemical analysis on 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. USEPA protocols for sample storage and preservation were followed.

Acculabs - Davis is certified by the State of Arizona (AZ0583) and the State of California (# I-2330). If you have any questions regarding procedures or results, please call me at 530-757-0920.

Sincerely,

Tom Kwoka



# Acculabs Inc.

Davis

1046 Olive Drive, Suite 2, Davis CA 95616 ■ 530-757-0920 ■ Fax 753-6091

December 21, 1998  
Sample Log 19386

MTBE (Methyl-t-butyl ether) By EPA Method 8020/602

From : Dublin Toyota (Proj. # 147-01-01)


Sampled : 12/15/98

Received : 12/15/98

Matrix : Water

SAMPLE	Date Analyzed	(MRL) ug/L	Measured Value ug/L
MW-1	12/21/98	(1000)	62000
MW-2	12/19/98	(5.0)	<5.0

Approved By:

  
\_\_\_\_\_  
Tom Kwoka  
Lab Director



# Acculabs Inc.

Davis

1046 Olive Drive, Suite 2, Davis CA 95616 ■ 530-757-0920 ■ Fax 753-6091

Sample Log 19386

19386-01

Sample: MW-1

From : Dublin Toyota (Proj. # 147-01-01)

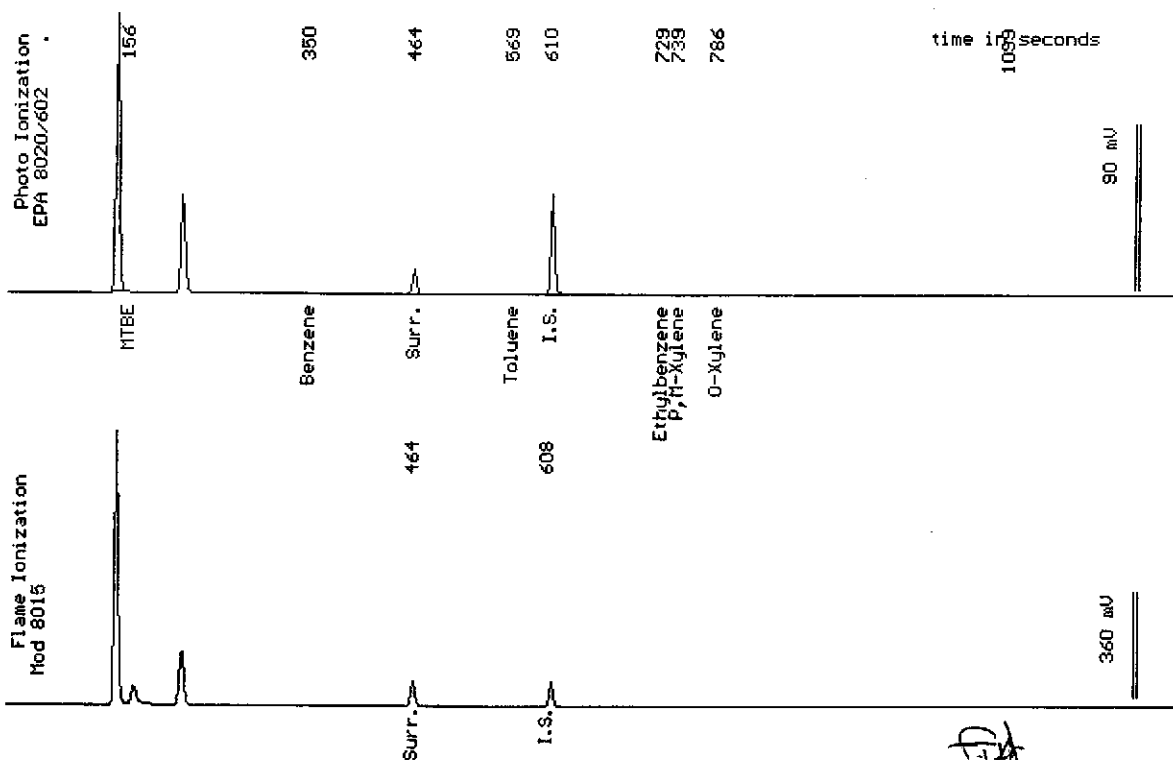
Sampled : 12/15/98

Dilution : 1:200

Matrix : Water

Run Log : 4179W

Parameter	(MRL) ug/L	Measured Value ug/L
Benzene	(100)	<100
Toluene	(100)	<100
Ethylbenzene	(100)	<100
Total Xylenes	(100)	<100
TPH as Gasoline	(10000)	46000
Surrogate Recovery		110 %



Date Analyzed: 12-21-98  
Column : 0.53mm ID X 60m Restek Rtx-1701

Stewart Podolsky  
Senior Chemist



# Acculabs Inc.

Davis

1046 Olive Drive, Suite 2, Davis CA 95616 ■ 530-757-0920 ■ Fax 753-6091

Sample Log 19386

19386-02

Sample: MW-2

From : Dublin Toyota (Proj. # 147-01-01)

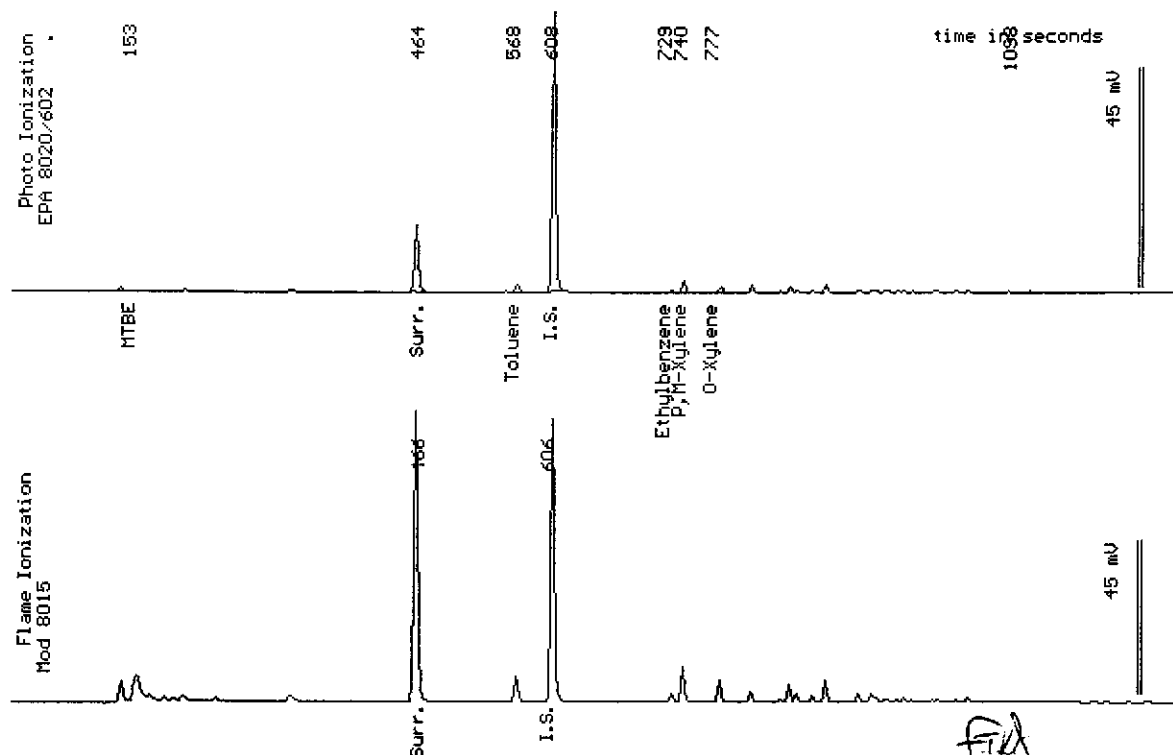
Sampled : 12/15/98

Dilution : 1:1

Run Log : 4179V

Matrix : Water

Parameter	(MRL) ug/L	Measured Value ug/L
Benzene	(.50)	<.50
Toluene	(.50)	.90
Ethylbenzene	(.50)	<.50
Total Xylenes	(.50)	1.5
TPH as Gasoline	(50)	<50
Surrogate Recovery		107 %



Date Analyzed: 12-19-98  
Column : 0.53mm ID X 60m Restek Rtx-1701

Stewart Podolsky  
Senior Chemist

*SP*

Acculabs Inc.

December 21, 1998  
Sample Log 19386

QC Report for EPA 602 & Modified EPA 8015  
Run Log : 4179V  
From : Dublin Toyota (Proj. # 147-01-01)  
Sample(s) Received : 12/15/98


Parameter	Matrix Spike % Recovery	Matrix Spike Duplicate % Recovery	RPD *
Benzene	104	93	11
Ethylbenzene	105	93	12

No gasoline spike recovery due to high gas in spiked sample.

\* RPD = Relative Percent Difference

Parameter	Laboratory Control Sample % Recovery
Benzene	94
Ethylbenzene	102
Gasoline	105

Parameter	Method Blank
Benzene	<0.50 ug/L
Toluene	<0.50 ug/L
Ethylbenzene	<0.50 ug/L
Total Xylenes	<0.50 ug/L
TPH as Gasoline	<50 ug/L

  
Tom Kwoka  
Lab Director





# Acculabs Inc.

Davis

1046 Olive Drive, Suite 2, Davis CA 95616 ■ 530-757-0920 ■ Fax 753-6091

Sample Log 19386  
19386-01

Sample: MW-1

From : Dublin Toyota (Proj. # 147-01-01)

Sampled : 12/15/98

Extracted: 12/16/98

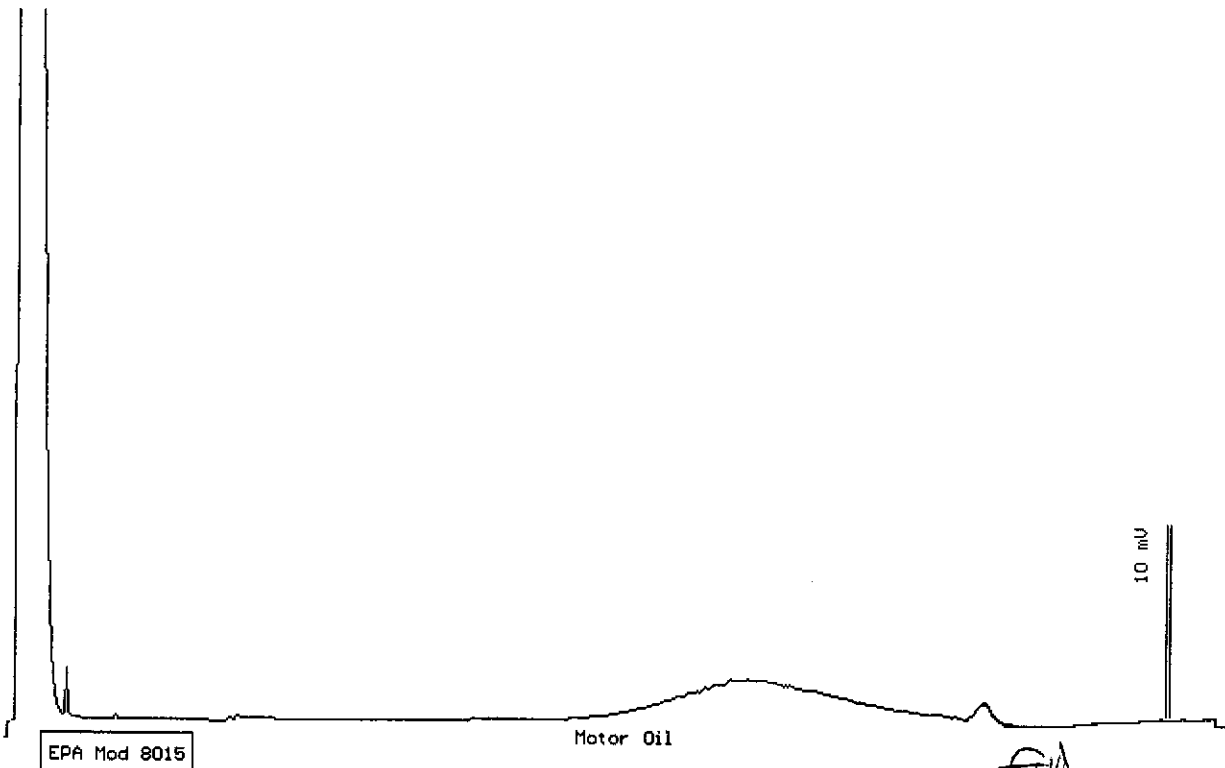
Dilution : 1:1

Matrix : Water


QC Batch : DW981202

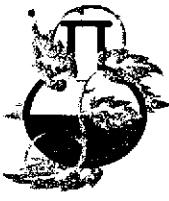
Run Log : 7424E

Parameter	(MRL) ug/L	Measured Value ug/L
TPH as Diesel	(50)	<50
TPH as Motor Oil	(100)	110



Date: 12-17-98 Time: 09:32:02  
Column : 0.53mm ID X 15m DB1 (J&W Scientific)

  
Stewart Podolsky  
Senior Chemist



# Acculabs Inc.

Davis

1046 Olive Drive, Suite 2, Davis CA 95616 ■ 530-757-0920 ■ Fax 753-6091

Sample Log 19386  
19386-02

Sample: MW-2

From : Dublin Toyota (Proj. # 147-01-01)

Sampled : 12/15/98

Extracted: 12/16/98

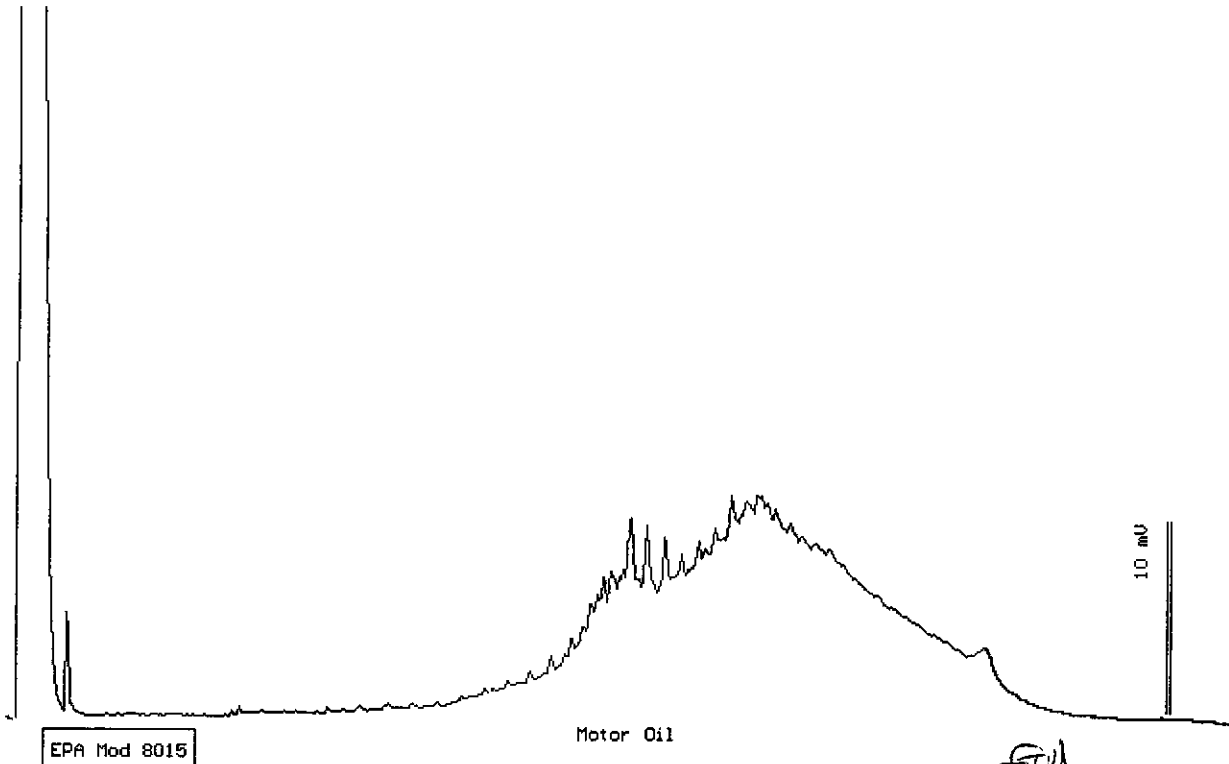
Dilution : 1:1

Matrix : Water

QC Batch : DW981202

Run Log : 7424E

Parameter	(MRL) ug/L	Measured Value ug/L
TPH as Diesel	(50)	<50
TPH as Motor Oil	(100)	570



Date: 12-17-98 Time: 11:12:19  
Column : 0.53mm ID X 15m DB1 (J&W Scientific)

*Stewart Podolsky*  
Stewart Podolsky  
Senior Chemist

Acculabs Inc.

December 17, 1998

QC Report  
TPH Diesel/Motor Oil by 8015 Mod

QC Batch DW981202

Matrix: Water

**Spike and Spike Duplicate Results**


Parameter	Matrix Spike (%Rec)	Matrix Spike Dup. (%Rec)	RPD %
TPH as Diesel	Not enough sample for spiking. See duplicate LCS Data.		

**Laboratory Control Spike**

Parameter	Laboratory Control Spike (%Rec)	Laboratory Control Spike Dup. (%Rec)	RPD %
TPH as Diesel	99	97	2

**Method Blank**

Parameter	MDL(ug/L)	Measured Value(ug/L)
TPH as Diesel	(50)	<50
TPH as Motor Oil	(100)	<100

  
\_\_\_\_\_  
Tom Kwoka  
Lab Director



**Acculabs Inc.****Davis**

1046 Olive Drive, Suite 2, Davis CA 95616 ■ 530-757-0920 ■ Fax 753-6091

Sample Log 19488  
January 19, 1999Jim Gribi  
Gribi Associates  
864 Vintage  
Suisun, CA 94585Subject : 1 Water sample  
Project Name : Dublin Toyota  
Project Number : 147-01-01

Dear Mr. Gribi,

Chemical analysis on 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. USEPA protocols for sample storage and preservation were followed.

Acculabs - Davis is certified by the State of Arizona (AZ0583) and the State of California (# I-2330). If you have any questions regarding procedures or results, please call me at 530-757-0920.

Sincerely,

Tom Kwoka



# Acculabs Inc.

**Davis**

1046 Olive Drive, Suite 2, Davis CA 95616 ■ 530-757-0920 ■ Fax 753-6091

## MTBE By EPA 8260B

Sample Log 19488  
January 19, 1999

Sample Name : **MW-1**

Project Name : Dublin Toyota

Project Number : 147-01-01

Sample Date : 12/15/98

Date Analyzed : 01/15/99

Date Received : 12/15/98

Dilution : 1:1000

Sample Matrix : Water

Lab Number : 19488-01


Parameter	MRL	Measured Conc.	Units
Methyl-tert-butyl ether	5000	110000	ug/L
Dibromofluoromethane (surr)		108	% Recovery

MRL = Method Reporting Limit; Conc. = Concentration

B = Analyte was detected in Method Blank.

E = Concentration exceeded calibration range.

Approved By :

  
Tom Kwoka



# CHANGE ORDER FORM

DATE: 1-14-99

TIME: 2:40 pm

COMPANY: Scribi Assoc.

PROJECT #: \_\_\_\_\_ SAMPLE LOG #: 19386

PROJECT NAME: \_\_\_\_\_

ORDER TAKEN BY: [Signature] ORDERED BY: Jim Scribi

SAMPLE #	CHANGE REQUESTED	TURN-AROUND-TIME (If Applicable)
----------	------------------	-------------------------------------

<u>- 01</u>	<u>please run MTBE confirmation</u>	
	<u>by 8:00.</u>	
	<u>- Sample past hold time but</u>	
	<u>for qualitative purposes only</u>	
	<u>per Jim Scribi</u>	

REMARKS: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

\*\*\*\*\*  
UPDATE SECTION: ( Initial / Date / Time )

FRONT COMPUTER	VOLATILES	DIESEL	SLOG BOOK
<u>[Signature] / 1-14-99 / 1735</u>	<u>1 / 1</u>	<u>1 / 1</u>	<u>[Signature] / 1-14-99 / 1745</u>

