#### **GRIBI** Associates

Geological and Environmental Consulting Services

MAY 2 1 2002

May 13, 2002

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 Boring Investigation

660 San Pablo Avenue UST Site

Albany, California

GA Project No. 146-01-01

#### Ladies and Gentlemen:

Gribi Associates is pleased to submit this report on behalf of Mr. Ralph Trueblood for the site located at 660 San Pablo Avenue in Albany, California. A topographic site location map and a detailed site map are attached as Figures 1 and 2, respectively. The following report details environmental investigation activities conducted at the site on March 18, 2002 to assess soil and groundwater conditions in the vicinity of the former 300-gallon waste oil underground storage tank (UST) formerly located at the site.

#### Background

One 300-gallon waste oil UST was removed from the site by Semco in February 1997. One soil sample collected beneath the removed UST at a depth of six feet below surface contained low levels of gasoline and diesel constituents, 550 milligrams per kilogram (mg/kg) of Total Oil and Grease, 0.030 mg/kg of Tetrachloroethene (PCE), 1.2 mg/kg of Phenanthrene, 1.5 mg/kg of Fluoranthene, and 2.0 mg/kg of Pyrene. Based on the results of UST removal and sampling activities, the Alameda County Department of Environmental Health Services requested that a workplan be submitted to investigate the soil and groundwater quality adjacent to the former UST. On October 1, 1998, Gribi Associates submitted a workplan to the Alameda County Department of Environmental Health Services proposing to advance three soil borings in the vicinity of the former UST area. Ms. Eva Chu of the Alameda County Department of Environmental Health Services approved the workplan in correspondence dated October 26, 1998.

#### **Description of Field Activities**

The three investigative borings, IB-1, IB-2, and IB-3, were drilled and sampled on Monday, March 18, 2002. All activities were conducted in accordance with regulatory guidelines and protocols.

#### Prefield Activities

Prior to implementing field activities, a soil boring installation permit was obtained from the Alameda County Public Works Agency. A copy of this permit is contained in Appendix A. Also, Ms. Eva Chu of the Alameda County Department of Environmental Health Services was notified at least 72 hours prior to conducting field activities. In addition, proposed boring locations were marked with white paint, and Underground Services Alert (USA) was notified at least 48 hours prior to drilling. Also, a private underground utility locator cleared proposed boring locations prior to drilling. Finally, prior to initiating drilling activities, a Site Safety Plan was prepared, and a tailgate safety meeting was conducted with all site workers.

#### Drilling and Sampling of Investigative Soil Borings

Soil borings IB-1 and IB-2 were advanced inside the project site building and were located to the north and east of the former UST location, respectively. Soil boring IB-3 was located outside of the project site building, immediately south of the former UST location. Soil boring locations are shown on Figure 2. The investigative soil borings were advanced by Gregg Drilling using Geoprobe<sup>TM</sup> hydraulically-driven soil coring equipment. Soil borings IB-1, IB-2, and IB-3 were advanced into the top of the shallow groundwater table located at total depths of seven and one-half feet, nine and one-half feet, and 16 feet below grade level, respectively.

The Geoprobe coring system utilized for the advancement of the borings 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 logged by a qualified Gribi Associates geologist using visual and olfactory senses. Boring logs for the investigative soil borings are contained in Appendix B. Following completion, the investigative borings were grouted to match existing grade using a cement\sand slurry.

A total of eight soil samples were collected from the three soil borings. These soil samples were collected using the following procedure: (1) The filled acetate tube was brought to the surface and exposed for visual examination; (2) The selected sampling interval was collected by cutting the sample and acetate plastic tubing to the desired length; (3) The ends of the selected sample were quickly wrapped with Teflon sheets, capped with plastic end caps, labeled and wrapped tightly with tape; and (4) The sealed soil sample was immediately placed in cold storage for transport to the analytical laboratory under formal chain-of-custody. 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.

Following the collection of the subsurface soil samples, grab groundwater samples were collected from each of the soil borings. Upon reaching total depth, a three-quarter inch diameter schedule 40 PVC well screen and riser were temporarily installed for the purposes of collecting grab groundwater samples from each boring. The groundwater samples were collected using a clean small diameter bailer, and poured directly into laboratory-supplied containers. Each sample container was then

tightly sealed, labeled, and placed in cold storage for transport to the laboratory under formal chain-of-custody. Note that due to low recharge, only 40-ml VOA vials and half-liter amber jars were filled and preserved for borings IB-2 and IB-3.

Laboratory Analysis of Soil and Groundwater Samples

Gribi Associates conducted the following laboratory analyses for the three soil and three grab groundwater samples collected during the Phase II ESA.

One soil sample and one grab groundwater sample from each of the three investigative borings were analyzed for the following parameters:

USEPA 8015M Total Petroleum Hydrocarbons as Diesel and (TPH-D) USEPA 8015M Total Petroleum Hydrocarbons as Motor Oil(TPH-MO)

Two soil and two groundwater samples, collected from soil borings IB-1 and IB-2, were analyzed for the following parameters:

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)

Additionally, the grab groundwater sample collected from soil boring IB-1 was analyzed for the following parameters:

USEPA 8260B Halogenated Volatile Organic Compounds (HVOCs) USEPA 8270 Semi-Volatile Organic Compounds (SVOCs)

All laboratory analyses were conducted by Acculabs, Inc., a California-certified analytical laboratory, with two-week turn around on lab results.

#### Results of Phase II ESA

General Subsurface Conditions

Native soils encountered in the three soil borings advanced at the site consisted primarily of grey to reddish-brown gravelly, sandy silts and silty, sandy clays. These units appeared to be laterally and vertically gradational, with only limited noticeable vertical "layering" in each boring and little lateral correlation of specific soil types between borings. Soils encountered in the three borings during drilling exhibited no unusual odors or staining.

Groundwater was encountered at about 7.5 feet in depth in boring IB-1 and at about 11 feet in depth in borings IB-2 and IB-3. Groundwater recharge into the borings was fair in boring IB-1 and poor in borings IB-2 and IB-3. Groundwater encountered in the three soil borings exhibited no unusual odors or sheens.

Results of Laboratory Analysis

Soil and groundwater laboratory analytical results are summarized in Table 1. The laboratory data report for these analyses is contained in Appendix C.

#### Conclusions and Recommendations

Based on the results of this investigation, it appears that releases related to the former site waste oil UST have not significantly impacted soil and groundwater beneath the site. A soil sample collected at the approximate soil/groundwater interface at 7.5 feet in depth in east boring IB-1 contained no detectable hydrocarbon constituents, and the grab groundwater sample from this boring contained very low levels of some gasoline- and diesel-range hydrocarbons, with no detectable Halogenated Volatile Organic Compounds (HVOCs). A soil sample collected at the approximate soil/groundwater interface at 9.5 feet in depth in north boring IB-2 contained 700 mg/kg of Total Petroleum Hydrocarbons as Motor Oil (TPH-MO), with no detectable gasoline-range hydrocarbons, and the grab groundwater sample from this boring contained only 0.0010 milligrams per liter (mg/l) of Benzene, 0.0097 mg/l of Toluene, and 0.00086 mg/l of Xylenes, with no detectable TPH-G, TPH-D or TPH-MO. The soil and grab groundwater samples from south boring IB-3 contained no detectable hydrocarbon constituents.

Given the very limited impacts in soil and groundwater relative to the former waste oil UST, as well as the downgradient commercial land uses and the lack of beneficial groundwater uses in the area, we recommend that regulatory closure be granted for this site.

We appreciate this opportunity to provide this report for your review. Please contact us if there are questions or if additional information is required.

Very truly yours,

James E. Gribi Registered Geologist

California No. 5843

EGH:ct Enclosure

cc

Eric G. Hetrick Project Geologist

uments and Settings\All Users\Documents\PROJECTS\Trueblood Albany\Soil Investigation wpd

Mr. Ralph Trueblood

	Table 1 SUMMARY OF SOIL AND WATER ANALYTICAL RESULTS 660 San Pablo Avenue UST Site											
Sample	Sample	Sample			Con	centration (p	pm)					·
ID	Matrix	Depth	TPH-D		TPH-G	В	<u> </u>	E	X	MTBE	HV0Cs	SVOCs
IB-1.2	Soil	7.5 ft.	<1.0	<10	<1.0	<0.005	<0.005	<0.005	<0.005	<0.050	_	
<u>IB-1</u> W	Water		<0.175	2.80	0.052	<0.0005	0.016	<0.0005	0.00095	<0.005	<0.00050 <sup>2</sup>	0.040 <sup>3</sup>
IB-2.3	Soil	9.5 ft.	<130 <sup>1</sup>	700	<1.0	<0.005	<0.005	<0.005	<0.005	<0.050		<del></del>
IB-2W	Water		<0.050	<0.100	<0.050	0.0010	0.0097	<0.0005	0.00086	<0.005		
IB-3.3	Soil	11.5 ft.	<1.0	<10								
IB-3W	Water		< 0.050	<0 100			~= <del>~</del>					
				<u></u>								

TPH-G = Total Petroleum Hydrocarbons as Gasoline.

TPH-D = Total Petroleum Hydrocarbons as Diesel.

TPH-MO = Total Petroleum Hydrocarbons as Motor Oil.

B = Benzene

T = Toluene

E = Ethylbenzene

X = Xylenes

MTBE = Methyl-t-Butyl Ether

HVOCS = Halogenated Volatile Organic Compounds

SVOCS = Semi-Volatile Organic Compounds

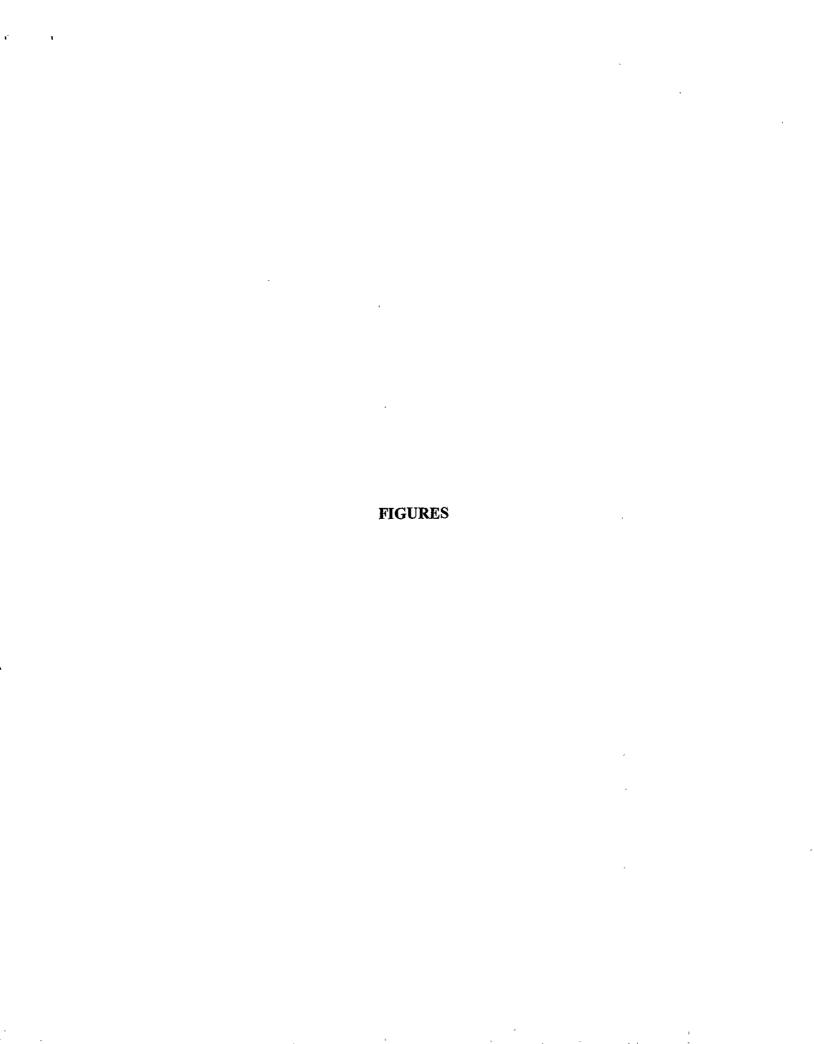
<1.0 = Not detected above the expressed detection level.

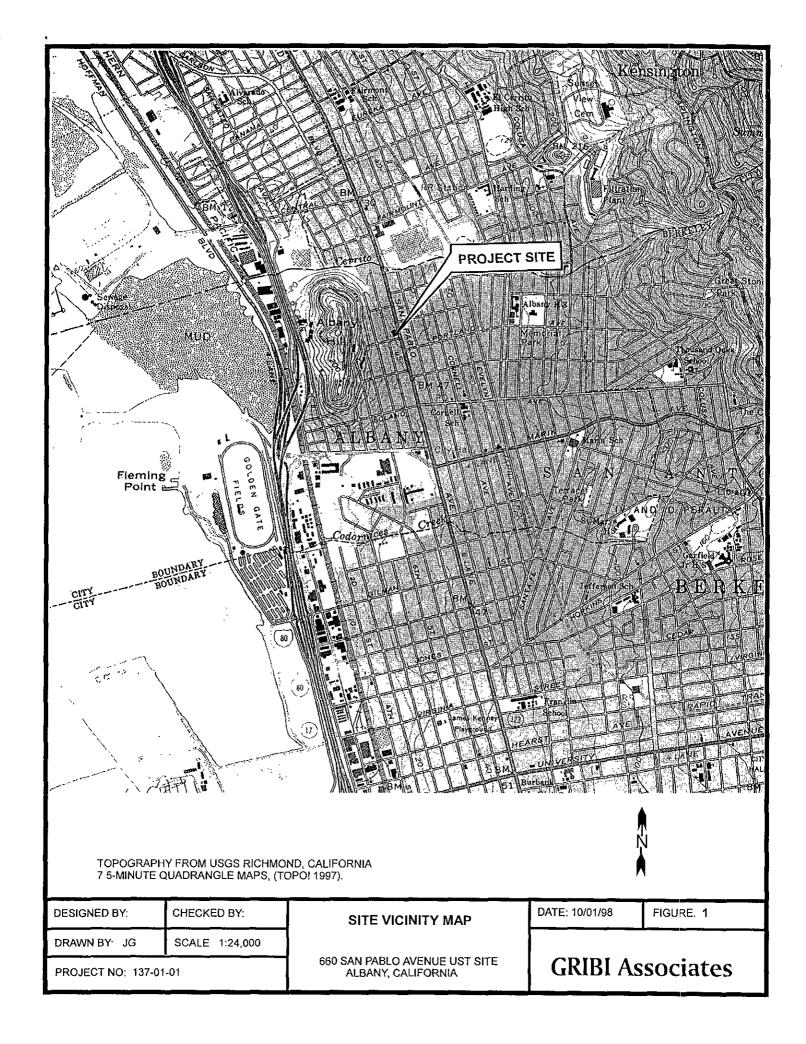
-- = Not analyzed for this analyte.

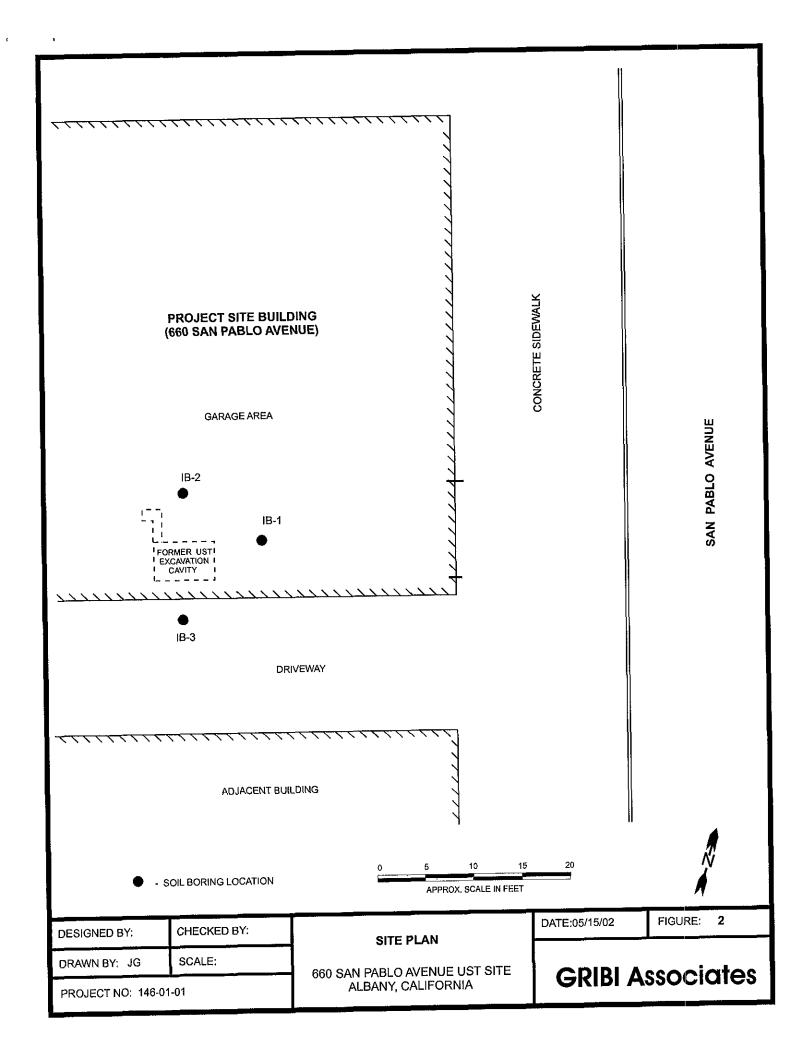
1 = Lab report states: "Elevated TPH as Diesel Reporting Limit due to oil range interference."

2 = No detectable levels of 28 HVOC analytes.

3 = Sample contained 0.015 ppm of Acenaphthene, 0.012 ppm of Fluoranthene, and 0.013 ppm of Pyrene. No detectable levels of remaining 62 SVOC compounds.







# APPENDIX A DRILLING PERMIT

P.02

P. 03/02

ALAMEDA COUNTY PUA RM236 FAX NO. 5107821939



או ה בינו אם אבה : הזהה שני

## ALAMEDA COUNTY PUBLIC WORKS AGENCY

WATER RESOURCES SECTION JOB ELMIKERST ST. HATWARD CA. 8454-1795 PHONE (\$16) 670-3934 MARLON MAGALLANES/PRANK CODD (\$15) 670-3783

#### DRILLING PERMIT APPLICATION for applicant to complete UCCATION OF PROJECT Albany Par office use PERMITNUMBER WELL NUMBER PERMIT CONDITIONS CLISNY Citated Permit Requirements Apply Trutbloom A. GENERAL or ex ex bottlmeur ed bloom notingit es summitted so se arrive stille ACPWA office five days prier a APP CART Preposed surting date. Adjust 1950 tray con the Copy Beautiful Copy a Judenis to ACPWA within 60 styr after complisher of permitted work the original Depattment of White Resources. Well Completion Report 3 Permit is void if project not hagun within 90 days of 6 WATER SUPPLY WELLS 6. Winstown surface that thickness is two inches of TYPE OF PROJECT act correction Georgehalest investigation cament grout played by freme Schoole Prairellon Sater Suap y General 2 Minmum scal depth is 50 fest for municips, and fodustrial wells or 20 feet for domestic and impation Contomination Monitoring Weit Deitraginn walls unless a lescer depth is appointly approved. proposed water eloply well est C. GROUNDWATER MONITORING WELLS New Damestill, 14 INCLUDING PIEZOMETERS Repincement Jamestie 1 M remum surface and thickness is two inches of Mar cipal Trugghap Indicate of rumant grout placed by tremis. Other Section and 2.3. Infimum seet viewer for monitoring wells is the manimult depite practicable us in tuet. DRILLING METICOD. DECTICHNICAL. Mud Reary Air Rolary Backfill back to be by tremie with comunity stays or centers Other grouvered minture Upper two-three fact replaced in and 11 Geody obe or with compested outlings. DRILLER'S LICENSE NO 485165 SIGORTAD 13 Pill hole above snode zone with concrete placed by trame. F. WELL DESTRUCTION WELL PROJECTS Send a map of work alia. A sepurate permit is required Dnit Hale Drameter for wells desper then 45 fcst, Махипил C. SPECIAL CONDITIONS Cating Diameter ... Burfage Seal Depik Depth Number GEOTECHNICAL PROJECTS Number of Burings Hose Dismeter \_\_ 2/4 Maximum estimated starting date 3 15/02 MITIMATED COMPLETION DATE APPROVED I heliby agree to comply with all requirements of this permit and Alameda County Ordinance No. 73-64 APPLICANT'S SIGNATURE FLEASE PRINT NAME\_ Grisi

# APPENDIX B SOIL BORING LOGS

LOG OF BORING

**GRIBI** Associates

BORING NUMBER: IB-1

BORING LOCATION:

EAST OF FORMER WASTE OIL UST

BORING TYPE: INVESTIGATIVE BORING

PROJECT NAME:

TRUEBLOOD FACILITY 660 SAN PABLO AVENUE ALBANY, CALIFORNIA

PROJECT NUMBER: 146-01-01

START DATE: 03/18/02

COMPLETION DATE: 03/18/02

SHEET 1 OF 1

DRILLING CONTRACTOR: GREGG DRILLING

DRILLING METHOD: DIRECT PUSH

BOREHOLE DIAMETER: 2-1/2 INCHES

COMPLETION METHOD: GROUTED

BORING TOTAL DEPTH: 12.0 FEET

GROUNDWATER DEPTH: 7.5 FEET

DEPTH SCALE (FEET)	SAMPLE NO.	SAMPLE DEPTH	INTERVAL	PID READING & WATER LEVEL \(\supseteq\) - INITIAL \(\supseteq\) - FINAL	uscs	LOG OF MATERIAL	PIEZOMETER WELL INSTALLATION
5-	IB 1.1	3.5 FT		▽ ▼	### d	0 - 10 ft. CONCRETE and GRAVEL  10 - 5.0 ft. Black-grey CLAY, firm, no odors or staining observed  5.0 - 9.0 ft. Grey-brown GRAVEL with some clay and trace sand, wet, no odors or staining noted	
10-		7.5 FT				9,0 - 12 0 ft. Grey-green SILT with some clay and trace sand, wet, no odors or staining observed  Total Depth 12.0 ft.  Groundwater Depth 7.5 ft	

BORING NUMBER: IB-2

LOG OF BORING

## **GRIBI** Associates

BORING LOCATION:

NORTH OF FORMER WASTE OIL UST BORING TYPE: INVESTIGATIVE BORING

PROJECT NAME: TRUEBLOOD FACILITY 660 SAN PABLO AVENUE ALBANY, CALIFORNIA

START DATE: 03/18/02

COMPLETION DATE: 03/18/02

SHEET 1 OF 1

DRILLING CONTRACTOR: GREGG DRILLING

DRILLING METHOD: DIRECT PUSH

BOREHOLE DIAMETER: 2-1/2 INCHES

COMPLETION METHOD: GROUTED

BORING TOTAL DEPTH: 16.0 FEET

GROUNDWATER DEPTH:10.88 FEET

FID PARADING SAMPLE SAMPLE SAMPLE SAMPLE SAMPLE SEPTH SET SEPTH SET SAMPLE SEPTH SET	PROJECT NUMBER: 146-01-01							
1.5 - 6.0 ft. Reddish-brown dark grey CLAY with some slit, moist, no odors  1.5 - 6.0 ft. Reddish-brown SAND with some clay and slit and trace gravel, moist, no odors  1.5 - 14.0 ft Brown-grey SAND with some slit and sand, wel, no odors  1.5 - 14.0 ft Brown-grey SAND with some slit and sand, wel, no odors  1.5 - 14.0 ft Brown-grey SAND with some sand, no odors or staining observed  1.5 - 14.0 ft Brown-grey SAND with some sand, no odors or staining observed  1.5 - 14.0 ft Brown-grey SAND with some sand, no odors or staining observed  1.5 - 14.0 ft Brown-grey SAND with some sand, no odors or staining observed  1.5 - 14.0 ft Brown-grey SAND with some sand, no odors or staining observed  1.5 - 14.0 ft Brown-grey SAND with some sand, no odors or staining observed	DEPTH SCALE (FEET)	SAMPLE NO	SAMPLE DEPTH	INTERVAL	WATER LEVEL	USCS	LOG OF MATERIAL	PIEZOMETERI WELL INSTALLATION
	5• 10•	IB 2.2	7.5 FT			SC	<ul> <li>1.5 - 6.0 ft. Reddish-brown dark grey CLAY with some slit, moist, no odors</li> <li>6.0 - 8.5 ft Reddish-brown SAND with some clay and silt and trace gravet, moist, no odors</li> <li>8.5 - 14.0 ft Brown-grey SAND with some silt and sand, wet, no odors</li> <li>14.0 - 16.0 ft. Red-tan CLAY with some sand, no odors or staining observed</li> <li>Total Depth 16.0 ft.</li> </ul>	

LOG OF BORING

**GRIBI** Associates

BORING NUMBER: IB-3

SOUTH OF FORMER WASTE OIL UST

BORING TYPE: INVESTIGATIVE BORING

PROJECT NAME:

**BORING LOCATION:** 

TRUEBLOOD FACILITY 660 SAN PABLO AVENUE ALBANY, CALIFORNIA

PROJECT NUMBER: 146-01-01

START DATE: 03/18/02

COMPLETION DATE: 03/18/02

SHEET 1 OF 1

DRILLING CONTRACTOR: GREGG DRILLING

DRILLING METHOD: DIRECT PUSH

BOREHOLE DIAMETER: 2-1/2 INCHES

COMPLETION METHOD: GROUTED

BORING TOTAL DEPTH: 16.0 FEET

GROUNDWATER DEPTH: 10.75 FEET

PROJE	CT NUMB	ER: 146-0	/1-01				
DEPTH SCALE (FEET)	SAMPLE NO.	SAMPLE DEPTH	INTERVAL	PID READING & WATER LEVEL \$\foralle{\Pi} - INITIAL \$\foralle{\Pi} - FINAL	uscs	LOG OF MATERIAL	PIEZOMETER\ WELL INSTALLATION
5-	IB 3.1	35FT 7.0 FT 11 5 FT		÷ - FIIVAL		<ul> <li>0 - 1.0 ft. ASPHALT and GRAVEL</li> <li>1.0 - 5.0 ft Black CLAY with some silt and trace gravel, moist, no odors or staining observed</li> <li>5.0 - 9.0 ft Grey-brown GRAVEL with some clay and trace sand, moist, no odors or staining noted</li> <li>9.0 - 13.0 ft. Reddish-brown and dark-grey SAND with some clay, moist, no odors or staining observed</li> <li>13.0 - 16.0 ft. Reddish-brown SAND with some clay and gravel, wet, no odors or staining observed</li> </ul>	×
20						Total Depth 16.0 ft. Groundwater Depth 10.75 ft	

#### APPENDIX C

## LABORATORY REPORT AND CHAIN-OF-CUSTODY RECORD

ACCULABS, INC.

Sample Log 23568 March 27, 2002

Jim Gribi Gribi Associates 1350 Hayes Street, #C-14 Benicia, CA 94510

Subject:

2 Water and 9 Soil samples

Project Name:

Albany Hill Auto

Project Number: 146-01-01

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 California (# 2330), the State of Arizona (AZ0583) and the State of Nevada (CA00039-2000-32). If you have any questions regarding procedures or results, please call me at 530-757-0920.

Sincerely,

Tom Kwoka



Sample Log 23568 March 27, 2002

Subject:

2 Water and 9 Soil samples

Project Number:

Albany Hill Auto

Project Number: 146

146-01-01

## Case Narrative

Analysis: TPH as Diesel & Motor Oil

Due to a computer hard drive failure, the normal TPH as Diesel & Motor Oil reports with chromatograms are unavailable. If you require chromatograms for your project report, please contact the lab and chromatograms can be provided.





#### Sample Log 23568

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

From: Albany Hill Auto (Proj. # 146-01-01)
Sampled: 03/18/02
Received: 03/19/02
Matrix: Water

SAMPLE	Date Analyzed	(MRL) ug/L	Measured Value ug/L
IB-1W	03/26/02	(5.0)	<5.0
IB-2W	03/26/02	(5.0)	<5.0

Approved By:

Lab Director



#### Sample Log 23568

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

From: Albany Hill Auto (Proj. # 146-01-01)
Sampled: 03/18/02
Received: 03/19/02
Matrix: Soil

SAMPLE	Date Analyzed	(MRL) mg/kg	Measured Value <sub>ag/kg</sub>
IB-1.2 (7.5')	03/26/02	(.050)	<.050
IB-2.3 (9.5')	03/27/02	(.050)	<.050

Approved By:

Lab Director



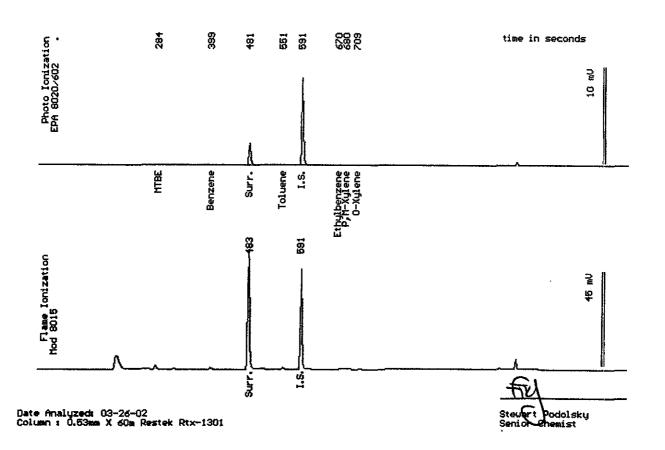
#### Sample Log 23568 23568-02

Sample: IB-1.2 (7.5')

From : Albany Hill Auto (Proj. # 146-01-01)
Sampled : 03/18/02
Dilution : 1:1 Run Log : 221 Run Log : 2215J

Matrix : Soil

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





Sample Log 23568 23568~03

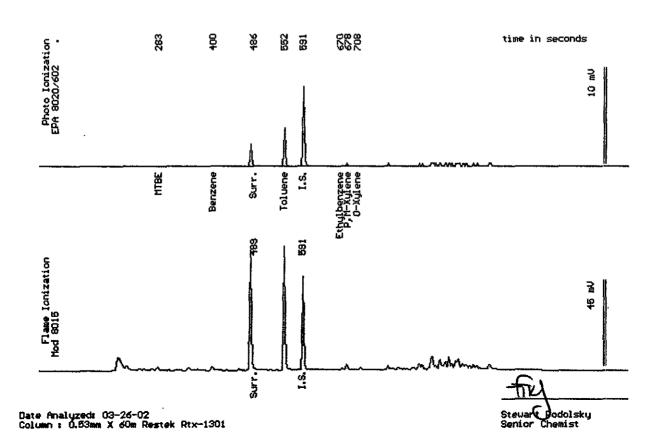
Sample: IB-1W

From : Albany Hill Auto (Proj. # 146-01-01)

Sampled: 03/18/02 Dilution: 1:1 Run Log : 2215I

Matrix : Water

Parameter	(MRL) ug/L	Measured Value ug/L		
Benzene Toluene Ethylbenzene Total Xylenes TPH as Gasoline	(.50) (.50) (.50) (.50) (50)	<.50 16 <.50 .95 52		
Surrogate Recovery	,	106 %		





Sample Log 23568 23568-06

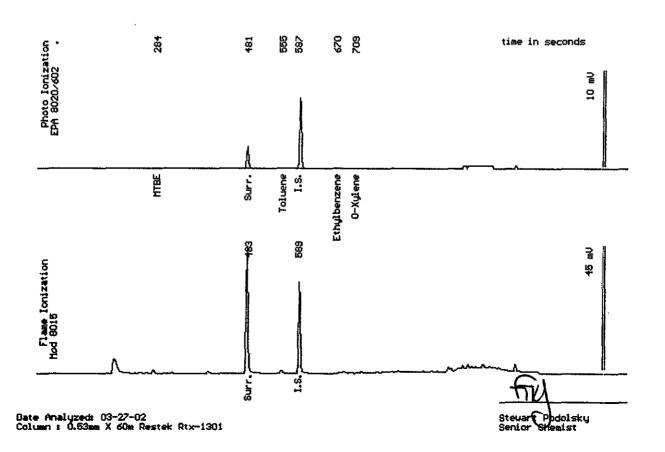
Sample: IB-2.3 (9.5')

From: Albany Hill Auto (Proj. # 146-01-01) Sampled: 03/18/02

Dilution: 1:1 Run Log: 2215J

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	107 %	





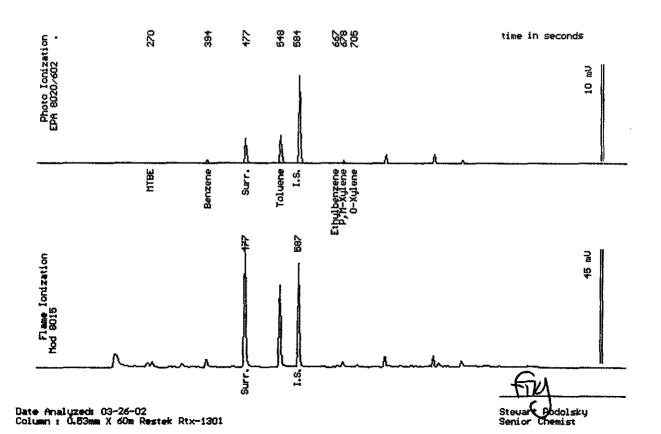
Sample Log 23568 23568-07

Sample: IB-2W

From : Albany Hill Auto (Proj. # 146-01-01)
Sampled : 03/18/02
Dilution : 1:1 Run Log : 221 Run Log : 2215J

Matrix : Water

Parameter	(MRL) ug/L	Measured Value ug/L
Benzene Toluene Ethylbenzene Total Xylenes TPH as Gasoline	(.50) (.50) (.50) (.50) (50)	1.0 9.7 <.50 .86 <50
Surrogate Recovery	97 %	





QC Report for EPA 8020 & Modified EPA 8015 Run Log: 2215J

From : Albany Hill Auto (Proj. # 146-01-01) Sample(s) Received : 03/19/02

Parameter	Matrix Spike % Recovery	Matrix Spike Duplicate % Recovery	RPD *
Benzene	91	97	6
Ethylbenzene	96	101	6
TPH as Gasoline	110	117	6

<sup>\*</sup> RPD = Relative Percent Difference

Parameter	Laboratory Control Sample % Recovery
Benzene	90
Ethylbenzene	100
Gasoline	98

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



QC Report for EPA 8020 & Modified EPA 8015

Run Log: 2215H,I

From: Albany Hill Auto (Proj. # 146-01-01)
Sample(s) Received: 03/19/02

Parameter	Matrix Spike % Recovery	Matrix Spike Duplicate % Recovery	RPD *
Benzene Ethylbenzene	93 101	96 103	3
TPH as Gasoline	98	99	2

\* RPD = Relative Percent Difference

Laboratory Control Sample % Recovery
89
97
100

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

The state of the s

### **TPH as Diesel & Motor Oil**



Sample Log: 23568

March 27, 2002

Project Name:

Albany Hill Auto

Date Received:

March 19, 2002

Project Number:

146-01-01

Sample Matrix:

Soil

Sample Date :

03/19/02

QC Batch:

DS020303

Extr. Method:

EPA 3545

Analysis Method:

8015 Mod.

		TPH as Diesel (mg/Kg)		TPH as Motor Oil (mg/Kg)		
CLIENT ID	ACCULABS ID	Value	MRL	Value	MRL	Dilution
IB-1.2 (7.5')	23568-02	<1.0	1.0	<10	10	1
IB-2.3 (9.5')	23568-06	<130 *	130	700	100	10
IB-3.3 (11.5')	23568-10	<1.0	1.0	<10	10	1

Approved By:

Tom Kwoka

<sup>\* =</sup> Elevated TPH as Diesel Reporting Limit due to oil range interference.



## Acculabs Inc. - Davis

## TPH Diesel by 8015 Mod QC Report

Matrix: Soil

Date Extracted: 03/25/2002

QC Batch: DS020303

Date Analyzed: 03/25/2002

QC Limits Set:5/30/01

	Spike Conc	LCS
Parameter	mg/Kg	% Rec
TPH as Diesel	33	113

Matrix spike	Matrix spike dup	
% Rec	% Rec	RPD
119	98	19

Control Chart Limits		
Lower	Upper	
72	136	

	MDL	Measured Value
Method Blank	mg/Kg	mg/Kg
TPH as Diesel	(1.0)	<1.0
TPH as Motor Oil	(10)	<10

Spiked Sample ID:

23586-01

Tom Kwoka

Laboratory Director



### **TPH as Diesel & Motor Oil**

Sample Log: 23568

March 27, 2002

Project Name:

Albany Hill Auto

Date Received :

March 19, 2002

Project Number:

146-01-01

Sample Matrix:

Water

Sample Date:

03/18/2002 & 03/19/2002

QC Batch:

DW020305

Extr. Method:

**EPA 3510** 

Analysis Method:

8015 Mod.

		TPH as Diesel (ug/L)		TPH as Motor Oil (ug/L)			
CLIENT ID	ACCULABS ID	Value	MRL	Value	MRL	Dilution	
IB-1W	23568-03	<175 *	175	2800	100	1	
IB-2W	23568-07	<50	50	<100	100	1	
IB-3W	23568-11	<50	50	<100	100	1	

Approved By: 100

Tom Kwoka

<sup>\* =</sup> Elevated TPH as Diesel Reporting Limit due to oil range interference.



## Acculabs Inc. - Davis

## TPH Diesel by 8015 Mod QC Report

Matrix: Water

Date Extracted: 03/25/02

QC Batch: DW020305

Date Analyzed: 03/26/02

QC Limits Set: 5/30/01

	Spike Conc	LCS	LCSD	
Parameter	ug/L	% Rec	% Rec	RPD
TPH as Diesel	1000	83	82	1.2

Control Chart Limits		
Lower	Upper	
81	130	

	MDL	Measured value	
Method Blank	ug/L	ug/L	
TPH as Diesel	(50)	<50	
TPH as Motor Oil	(100)	<100	

Tom Kwoka

Laboratory Director

## ACCULABS, INC. Sample Log 23568 March 27, 2002

### VOCs by EPA 8260B

Sample Name : IB-1W

Project Name : Albany Hill Auto

Project Number : 146-01-01 Date Received : 03/19/02

Sample Date : 03/18/02 Dilution : 1:1

Date Analyzed : 03/27/02 Sample Matrix : Water

Lab Number : 23568-03

Parameter	MRL	Measured Conc.	Units
Chloromethane	1.0	<1.0	ug/L
Vinyl Chloride	1.0	<1.0	ug/L
Bromomethane	1.0	<1.0	ug/L
Chloroethane	1.0	<1.0	ug/L
Trichlorofluoromethane	1.0	<1.0	ug/L
1,1-Dichloroethene	0.50	<0.50	ug/L
Methylene Chloride	1.0	<1.0	ug/L
t-1,2-Dichloroethene	0.50	<0.50	ug/L
1,1-Dichloroethane	0.50	<0.50	ug/L
c-1,2-Dichloroethene	0.50	<0.50	ug/L
Chloroform	0.50	<0.50	ug/L
1,1,1-Trichloroethane	0.50	<0.50	ug/L
Carbon Tetrachloride	0.50	<0.50	ug/L
1,2-Dichloroethane	0.50	<0.50	ug/L
Trichloroethene	0.50	<0.50	ug/L
1,2-Dichloropropane	0.50	<0.50	ug/L
Bromodichloromethane	0.50	<0.50	ug/L
c-1,3-Dichloropropene	0.50	<0.50	ug/L
t-1,3-Dichloropropene	0.50	<0.50	ug/L
1,1,2-trichloroethane	0.50	<0.50	ug/L
Tetrachloroethene	0.50	<0.50	ug/L
Dibromochloromethane	0.50	<0.50	ug/L
Chlorobenzene	0.50	<0.50	ug/L
Bromoform	0.50	<0.50	ug/L
1,1,2,2-Tetrachloroethane	0.50	<0.50	ug/L
1,3-Dichlorobenzene	0.50	<0.50	ug/L
1,4-Dichlorobenzene	0.50	<0.50	ug/L
1,2-Dichlorobenzene	0.50	<0.50	ug/L
Dibromofluoromethane (surr)		112	% Recovery
Toluene - d8 (surr)		100	% Recovery
4-Bromofluorobenzene (surr)		108	% Recovery

MRL = Method Reporting Limit Conc. = Concentration

B = Analyte was detected in Method Blank.

E = Concentration exceeded calibration range.

Approved By:





## Acculabs Inc. - Davis

## EPA 8260B QC Report

Matrix: Water

Date Analyzed: 3/27/02

QC Batch: VW020327

QC Limits Set: 11/3/00

	Spike Conc	LCS	LCSD	
Parameter	ug/L	% Rec	% Rec	RPD
1,1-Dichloroethene	50	83	56	38.3
Benzene	50	97	112	14.4
Trichloroethene	50	96	109	13.6
Toluene	50	92	116	22.8
Chlorobenzene	50	93	130	33.3

Control Chart Limits			
Lower	Upper		
26	139		
83	127		
64	64 120		
64	64 129		
88 112			

	Control Chart Limits	
Surrogate Compound	Lower	Upper
Dibromofluoromethane	67	140
Toluene-d8	58	131
4-Bromofluorobenzene	56	135

Tom Kwoka

Laboratory Director

## ACCULABS, INC. Sample Log 23568 March 26, 2002

#### **EPA 8270C**

Sample Name : IB-1W

Project Name : Albany Hill Auto

Project Number : 146-01-01 Sample Date : 03/18/02

Date Extracted : 03/25/02 Extr. Method : EPA 3510

QC Batch : BW020303

Date Analyzed
Date Received

: 03/25/02 : 03/19/02

Dilution

: 03/19/02 : 1:1

Sample Matrix

: Water

Lab Number : 23568-03

Parameter	MRL	Measured Conc.	Units
N-Nitrosodimethylamine	10	<10	ug/L
Phenol	10	<10	ug/L
Aniline	10	<10	ug/L
bis(2-Chloroethyl)ether	10	<10	ug/L
2-Chlorophenol	10	<10	ug/L.
1,3-Dichlorobenzene	10	<10	ug/L
1,4-Dichlorobenzene	10	<10	ug/L
Benzyl Alcohol	20	<20	ug/L
1,2-Dichlorobenzene	10	<10	ug/L
2-Methylphenol	10	<10	ug/L
bis(2-Chloroisopropyl)ether	10	<10	ug/L
4-Methylphenol	10	<10	ug/L
N-Nitroso-di-n-propylamine	10	<10	ug/L
Hexachloroethane	10	<10	ug/L
Nitrobenzene	10	<10	ug/L
Isophorone	10	<10	ug/L
2-Nitrophenol	10	<10	ug/L
2,4-Dimethylphenol	10	<10	ug/L
bis(2-Chloroethoxy)methane	10	<10	ug/L
2,4-Dichlorophenol	10	<10	ug/L
Benzoic Acid	50	<50	ug/L
1,2,4-Trichlorobenzene	10	<10	ug/L
Naphthalene	10	<10	ug/L
4-Chloroaniline	20	<20	ug/L
Hexachlorobutadiene	10	<10	ug/L
4-Chioro-3-methylphenol	20	<20	ug/L
2-Methylnaphthalene	10	<10	ug/L
Hexachlorocyclopentadiene	10	<10	ug/L
2,4,6-Trichlorophenol	10	<10	ug/L
2,4,5-Trichlorophenol	10	<10	ug/L
2-Chloronaphthalene	10	<10	ug/L
2-Nitroaniline	50	<50	ug/L
Dimethylphthalate	10	<10	ug/L

MRL = Method Reporting Limit

B = Parameter detected in Method Blank.

E = Concentration exceeded calibration range.

Approved By:

Tom Kwoka

## ACCULABS, INC. Sample Log 23568 March 26, 2002

#### **EPA 8270C**

Sample Name : IB-1W

Project Name : Albany Hill Auto

: BW020303

 Project Number
 : 146-01-01

 Sample Date
 : 03/18/02

 Date Extracted
 : 03/25/02

 Extr. Method
 : EPA 3510

QC Batch

Date Analyzed
Date Received

: 03/25/02 : 03/19/02

Dilution : Sample Matrix :

: 1:1 : Water

Lab Number : 23568-03

Parameter	MRL	Measured Conc.	Units
2,6-Dinitrotoluene	10	<10	ug/L
Acenaphthylene	10	<10	ug/L
3-Nitroaniline	50	<50	ug/L
Acenaphthene	10	15	ug/L
2,4-Dinitrophenol	50	<50	ug/L
4-Nitrophenol	50	<50	ug/L
Dibenzofuran	10	<10	ug/L
2,4-Dinitrotoluene	10	<10	ug/L
Diethylphthalate	10	<10	ug/L
4-Chlorophenyl-phenylether	10	<10	ug/L
Fluorene	10	<10	ug/L
4-Nitroaniline	50	<50	ug/L
4,6-Dinitro-2-methylphenol	50	<50	ug/L
N-Nitrosodiphenylamine	10	<10	ug/L
Azobenzene	10	<10	ug/L
4-bromophenyl Phenyl Ether	10	<10	ug/L
Hexachlorobenzene	10	<10	ug/L
Pentachlorophenol	50	<50	ug/L
Phenanthrene	10	<10	ug/L
Anthracene	10	<10	ug/L
Di-n-butylphthalate	10	<10	ug/L
Fluoranthene	10	12	ug/L.
Benzidine	20	<20	ug/L
Pyrene	10	13	ug/L
Butylbenzylphthalate	10	<10	ug/L
Benzo(a)anthracene	10	<10	ug/L
3-3'-Dichlorobenzidine	20	<20	ug/L
Chrysene	10	<10	ug/L
bis(2-Ethylhexyl)phthalate	10	<10	ug/L
Di-n-octylphthalate	10	<10	ug/L
Benzo(b)fluoranthene	10	<10	ug/L
Benzo(k)fluoranthene	10	<10	ug/L
Benzo(a)pyrene	10	<10	ug/L

MRL = Method Reporting Limit

B = Parameter detected in Method Blank.

E = Concentration exceeded calibration range.

Approved By:



## ACCULABS, INC. Sample Log 23568 March 26, 2002

#### **EPA 8270C**

Sample Name : IB-1W

Project Name : Albany Hill Auto Project Number : 146-01-01

Sample Date : 03/18/02 Date Extracted : 03/25/02

Extr. Method : EPA 3510 QC Batch : BW020303

: EPA 3510 Lab No

Date Received : 03/19/02 Dilution : 1:1 Sample Matrix : Water

Date Analyzed

Lab Number : 23568-03

: 03/25/02

Parameter	MRL	Measured Conc.	Units
Indeno(1,2,3-c,d)pyrene	10	<10	ug/L
Dibenzo(a,h)anthracene	10	<10	ug/L
Benzo(g,h,i)perylene	10	<10	ug/L
2-Fluorophenol		28	% Recovery
Phenol-d5		20	% Recovery
Nitrobenzene-d5		58	% Recovery
2-Fluorobiphenyl		45	% Recovery
2,4,6-Tribromophenol		45	% Recovery
Terphenyl-d14		28	% Recovery

MRL = Method Reporting Limit

B = Parameter detected in Method Blank.

E = Concentration exceeded calibration range.

Approved By:

Tom (Kwoka



## Acculabs Inc. - Davis

## EPA 8270C QC Report

Matrix: Water

Date Extracted: 3/25/02

QC Batch: BW020303

Date Analyzed: 3/25/02

QC Limits Set: 11/3/00

	Spike Conc	LCS	LCSD	
Parameter	ug/L	% Rec	% Rec	RPD
Phenol	200	28	24	14.4
2-Chlorophenol	200	83	79	4.9
1,4-Dichlorobenzene	100	81	77	4.6
N-Nitroso-di-n-propylamine	100	94	90	3.8
1,2,4-Trichlorobenzene	100	81	78	3.8
4-Chloro-3-methylphenol	200	93	85	8.7
Acenaphthene	100	88	84	4.4
4-Nitrophenol	200	30	26	14.3
2,4-Dinitrotoluene	100	91	86	5.6
Pentachlorophenol	200	90	87	3.9
Pyrene	100	105	92	12.7

Control Chart Limits			
Upper			
43			
93			
94			
112			
107			
108			
105			
50			
115			
134			
110			

	Control C	Control Chart Limits		
Surrogate Compounds	Lower	Upper		
2-Fluorophenol	20	65		
Phenol-d5	13	47		
Nitrobenzene-d5	49	115		
2-Fluorobiphenyl	41	117		
2,4,6-Tribromophenol	39	123		
Terphenyl-d14	35	127		

Tom Kwoka Laboratory Director

C:\EXCEL\QC\BW020303.XLS

#### 23568 [ ] 3902 E. University Dr. Phoenix AZ 85034 602-437-0979 Fax 437-0826 Report 520-884-5811 Fax 884-5812 [ ] 710 E. Evans Blvd. Tucson AZ 85713 [ ] 2020 W. Lone Cactus Dr. Phoenix AZ 85027 602-780-4800 Fax 780-7695 Due Date: ] 4663 Table Mountain Dr. Golden CO 80403 303-277-9514 Fax 277-9512 [ ] 992 Spice Islands Dr. Sparks NV 89431 702-355-0202 Fax 355-0817 [ ] 1046 Olive Drive #2 Davis CA 95616 530-757-0920 Fax 753-6091 PUBLIC WATER SUPPLY INFORMATION Client **Gribi Associates** Address 1350 Hayes Street, Ste C-14 System Name Report to State/EPA Y N City, State & Zip Benicia, CA 94510 PWS No. DWR No. Contact Jim Gribi POE No. ALBANY HILL AUTO 707/748-7743 Phone Project Name Collection Point 146-01-01 707/748-7763 Project Number Fax Collector's Name Fax Results Ν Page P.O. Number 4 of Location (City) SAMPLE TYPE CODES **Analyses** C Requested TB = travel blank Compliance DW = drinking water (a) WW = waste water SD = solidMonitoring MW = monitoring well SO = soil Y St. ≈ sludge HW = hazardous waste TURNAROUND TIME REQUESTED. Standard Lab Director Approval RUSH p. Special Θ£ CLIENTS SAMPLE ID LOCATION Date: Time Spl. No. 0( Ş 1 IB-1.1 (3.5')3/18/02 02 (7.5')S 1 X IB-1,2 3/18/02 03 W 7 Х $X \mid X$ X **IB-1W** 3/18/02 04 IB-2.1 (3.5')3/18/02 S 1 05 S 1 IB-2.2 (7.5')3/18/02 06 1 ĺΧ X S IB-2.3 (9.5')3/18/02 W X 07 IB-2W 4 3/19/02 08 S 1 IB-3.1 (3.5')3/18/02 09 S IB-3.2 (7.0')1 3/18/02 10 X **IB-3.3** S 1 (11.5)3/18/02 11 S 3 IB-3W 3/19/02 Instructions/Comments/Special Requirements: 3-19-02/1820 **Received Cold** Υ Ν **Custody Seals** N **Seals Intact** Y No. of Containers ถึงการ เกินสายงานโอกให้เกิดสารการอาโรดิ อกโรงสี จัดที่เอิงสีที่เริ่ม เลเกา inconjysts (ประเทศ

Lab Number

Acculabs inc.