

September 19, 2003

Re 242

UST Local Oversight Program
Alameda County Health Agency
Department of Environmental Health
1131 Harbor Bay Parkway
Alameda, CA 94502-6577

Alameda County
OCT 15 2003
Environmental Health

Attention: Barney Chan

Subject: Report of Soil and Groundwater Investigation
3838 West Street UST Site
Oakland, California
GA Project No. 140-01-02
LOP Site ID No.: 4262

Ladies and Gentlemen:

Gribi Associates is pleased to submit this report on behalf of Mr. Johnny Houston documenting a recently-completed soil and groundwater investigation at the 3838 West Street underground storage tank (UST) site in Oakland, California (see Figure 1 and Figure 2). This investigation included the installation and sampling of two water monitoring wells, MW-2 and MW-3, adjacent to a gasoline UST formerly located at the project site. The purpose of these activities are to further assess soil and groundwater quality adjacent to the former UST in order to address regulatory site closure.

Background

One 550-gallon gasoline UST, which apparently had been unused for at least 20 years, was removed from the project site on January 8, 1992. Prior to removing the UST, approximately 650 gallons of water was pumped from the tank. Following removal of the UST, the Alameda County Department of Environmental Health inspector noted holes in the tank, and hydrocarbon odors and sheens in the excavation. Two soil samples collected at about eight feet in depth in the UST excavation cavity contained no detectable gasoline constituents and low levels of lead. One four-point composite soil sample collected from the excavated soil stockpile contained 4.3 parts per million (ppm) of TPH-G, with low levels of BTEX constituents and 32 ppm of Total Lead. A grab groundwater sample collected from the UST excavation cavity following tank removal contained 16 ppm of TPH-G, with low or no detectable levels of BTEX constituents.

In August 1998, Gribi Associates drilled and sampled one soil boring, IB-1, immediately southeast from the former site UST, and drilled, installed, and sampled one temporary groundwater monitoring well, MW-1, immediately southwest from the former site UST. Well MW-1 was purged and sampled on August 19, 1998, March 24, 1999, and September 1, 1999. Results of these activities have indicated the presence of aged gasoline-range hydrocarbons in soil and groundwater immediately southeast and southwest from the former site UST.

On June 9, 2003, Alameda County Environmental Health, Local Oversight Program (ACEH), issued a letter requesting additional groundwater assessment at the site. In response to this request, Gribi Associates submitted a workplan to ACEH on June 17, 2003 proposing the installation of two groundwater monitoring wells at the site. This workplan was approved by ACEH on June 24, 2003.

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.

DESCRIPTION OF FIELD ACTIVITIES

Two groundwater monitoring wells were drilled and installed by Gribi Associates on July 18, 2003. Soil samples were collected from specified depths during well installation. On September 8, 2003, a representative from Gribi Associates purged and sampled groundwater in the two newly-installed wells, MW-2 and MW-3, and existing well MW-1.

Prefield Activities

Prior to beginning field activities, Gribi Associates marked proposed boring locations and notified Underground Services Alert (USA). In addition, Gribi Associates obtained a drilling permit from Alameda County Public Works Department. A copy of this permit is contained in Appendix A.

Location of Soil Borings and Monitoring Wells

Locations of the two newly-installed groundwater monitoring wells, MW-2 and MW-3, are shown on Figure 2. Well MW-2 is located immediately southeast of the former site UST, and MW-3 is located southwest from the former site UST, near the western property line.

Drilling and Sampling of Well Borings

Well borings MW-2 and MW-3 were drilled to a depth of about 16 feet below surface grade using direct-push coring equipment. During drilling, retrieved soil cuttings were logged by Mr. Jim Gribi, a California-registered geologist. Boring logs for the two borings are contained in Appendix B. All 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.

Soil samples were collected from the two borings at depths of about seven feet, nine feet, and 11.5 feet below surface grade. Each of the soil samples was collected using the following method: (1) Exposed soil was scraped away; (2) A clean 2-inch by 6-inch brass tube was completely filled with undisturbed soil, taking care to minimize excess void in the tube; (3) The tube was then quickly sealed with aluminum foil and plastic end caps, wrapped tightly with tape and labeled; and (4) The sealed tube was immediately placed in cold storage for transport to the laboratory.

Installation and Sampling of Groundwater Monitoring Wells

Groundwater monitoring wells MW-2 and MW-3 were constructed using 1-1/4 inch diameter Schedule 40 threaded PVC casing according to the following specifications: (1) 0.020-inch slotted well casing was placed from approximately 15.0 feet to 5.0 feet in depth; (2) Filter sand was placed around the casing to a depth of about 4.0 feet below grade; (3) A bentonite seal was placed around the casing from 4.0 feet to 3.0 feet in depth; and (4) The remaining annulus was grouted using a cement/sand slurry (bentonite less than 5 percent). The top of each well was enclosed in a traffic rated locking box set in concrete slightly above grade. Well construction specifications for each well are shown on the boring logs, which are contained in Appendix B.

After allowing the cement seal to cure for at least 48 hours, wells MW-2 and MW-3 were developed and sampled on September 8, 2003, using clean disposable PVC bailers. Well development consisted of purging the well of at least three well volumes before sampling. During well development, groundwater was periodically monitored for the presence of free-floating product and odor, pH, specific conductance, temperature and visible clarity. Groundwater sampling data sheets for MW-1, MW-2 and MW-3 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 VOA vials were completely filled directly from the bailer with a minimum of agitation; (2) After making sure that no air bubbles were 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 sampling equipment was thoroughly cleaned and decontaminated between each sample collection by triple rinsing as described previously in this report.

Wellhead top of casing elevations were surveyed to an arbitrary datum for each of the three wells on September 10, 2003.

Laboratory Analysis of Soil and Groundwater Samples

A total of six soil samples and three groundwater samples were analyzed for the following parameters:

USEPA 8015M Total Petroleum Hydrocarbons as Gasoline (TPH-G)
USEPA 8020/602 Benzene, Toluene, Ethylbenzene, Xylenes (BTEX)
USEPA 8260B Oxygenates & Lead Scavengers (TBA, MTBE, DIPE, ETBE, TAME)

All laboratory analyses were conducted by SunStar Laboratories, Inc., a California-certified analytical laboratory, with standard turn around on lab results.

RESULTS OF INVESTIGATION

General Subsurface Conditions

Subsurface soils in the two well borings were generally similar, consisting primarily of interbedded silts, sand, and gravels down to about 12 feet in depth, followed by reddish brown silty clays down to total depth. Slight to moderate hydrocarbon odors were noted in soils between about eight feet and 11 feet in depth in the two well borings.

Hydrologic Conditions

Groundwater flow gradient, as depicted on Figure 3, is to the south at about 0.20 ft/ft. Purged groundwater from MW-1 exhibited a slight hydrocarbon odor with no hydrocarbon sheen, and purged water from MW-3 exhibited a moderate hydrocarbon odor. Purged groundwater from MW-2 exhibited no hydrocarbon odors or sheen.

Results of Laboratory Analyses

Soil and water analytical results are summarized in Table 1. Laboratory data reports for soil and water samples are contained in Appendix D.

Table 1									
SUMMARY OF SOIL AND GROUNDWATER ANALYTICAL RESULTS									
3838 West Street UST Site									
<i>Sample ID</i>	<i>Sample Date</i>	<i>Sample Depth</i>	<i>Constituent (parts per million)</i>						
			<i>TPH-G</i>	<i>B</i>	<i>T</i>	<i>E</i>	<i>X</i>	<i>MTBE</i>	<i>OXYG</i>
Soil Samples									
IB-1.1	08/13/98	7.0 ft	120 ¹	<0.10	<0.10	0.19	0.22	<1.0	--
MW-1.1	08/13/98	6.5 ft	190 ¹	<0.25	<0.25	0.77	0.53	<2.5	--
MW-2-7.5	07/18/03	7.5 ft.	<0.5	<0.005	<0.005	<0.005	<0.010	<0.020	--
MW-2-9.0	07/18/03	9.0 ft.	30.0	<0.005	<0.005	<0.005	<0.010	<0.020	--
MW-2-11.5	07/18/03	11.5 ft.	<0.5	<0.005	<0.005	<0.005	<0.010	<0.020	--
MW-3-7.5	07/18/03	7.5 ft.	12.0	<0.005	<0.005	<0.005	<0.010	<0.020	--
MW-3-9.0	07/18/03	9.0 ft.	19.0	<0.005	<0.005	<0.005	<0.010	<0.020	--
MW-3-11.5	07/18/03	11.5 ft.	<0.5	<0.005	<0.005	<0.005	<0.010	<0.020	--

Table 1
SUMMARY OF SOIL AND GROUNDWATER ANALYTICAL RESULTS
 3838 West Street UST Site

Sample ID	Sample Date	Sample Depth	Constituent (parts per million)						
			TPH-G	B	T	E	X	MTBE	OXYG
Groundwater Samples DTW									
IB-1W	08/19/98	—	26	<0.025	0.085	0.180	0.058	<0.250	--
MW-1	08/19/98	7.83 ft	1.8	0.0028	0.011	0.0059	0.0027	<0.025	--
<20.00>	03/24/99	4.52 ft	2.6	0.0058	0.048	0.026	0.024	<0.050	--
	09/01/99	7.23 ft	6.0 ¹	<0.0025	0.028	0.061	0.025	<0.025	--
	09/08/03	7.38 ft	1.4	<0.001	<0.001	<0.001	<0.001	<0.002	<0.002
MW-2	09/08/03	9.45 ft	<0.050	<0.001	<0.001	<0.001	<0.001	<0.002	<0.002
<20.64>									
MW-3	09/08/03	9.40 ft	<0.050	<0.001	<0.001	<0.001	<0.001	<0.002	<0.002
<19.54>									

TPH-G = Total Petroleum Hydrocarbons as Gasoline

B = Benzene, T = Toluene, E = Ethylbenzene, X = Xylenes

MTBE = Methyl-t-butyl Ether

OXYG = Oxygenates (except MTBE), including Ter-Butyl Alcohol (TBA), Di-isopropyl Ether (DIPE), Ethyl-t-butyl Ether (ETBE), and Tert-amyl Methyl Ether (TAME).

<0.10 = Not detected above the expressed value.

<20.00> = Top of casing elevation. Measured to an arbitrary datum.

1 = Acculabs, Inc. laboratory report states "Product is not typical gasoline."

4.0 CONCLUSIONS

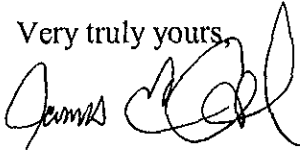
Soil and groundwater laboratory analytical results from this and previous investigations clearly show no significant impacts to both soil and groundwater beneath the site. While there are some detectable concentrations of TPH-G in some soil and groundwater samples, there are no significant concentrations of BTEX or oxygenate constituents, indicating considerable degradation of any gasoline releases. Further, it appears likely based on these results that residual gasoline constituents present in soil and groundwater beneath the site do not pose a significant risk to potential indoor air receptors at the site.

Based on these conclusions, we recommend that Alameda County UST Local Oversight Program review this site for regulatory case closure.

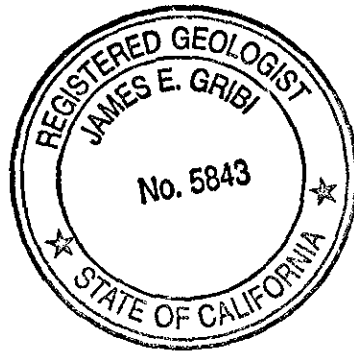
UST Local Oversight Program
Alameda County Health Agency
Department of Environmental Health
September 19, 2003
Page 6

We appreciate the opportunity to provide these services for you. Please call if you have questions or require additional information.

Very truly yours,



James E. Gribi
Registered Geologist
California No. 5843

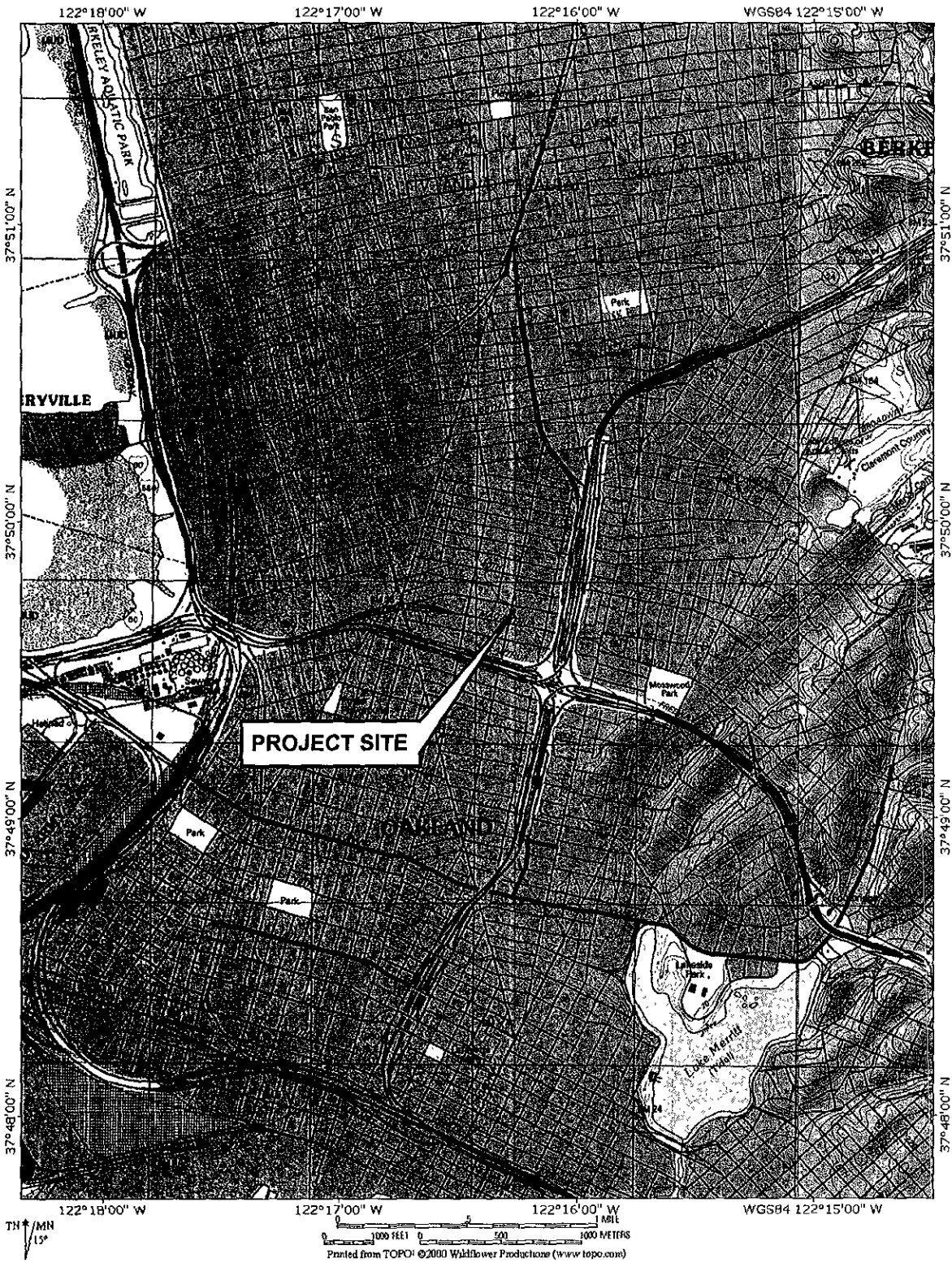


Shawn Hanson
Geologist

JEG/ct
Enclosures

File: GA-23/jh-west.rpl

FIGURES



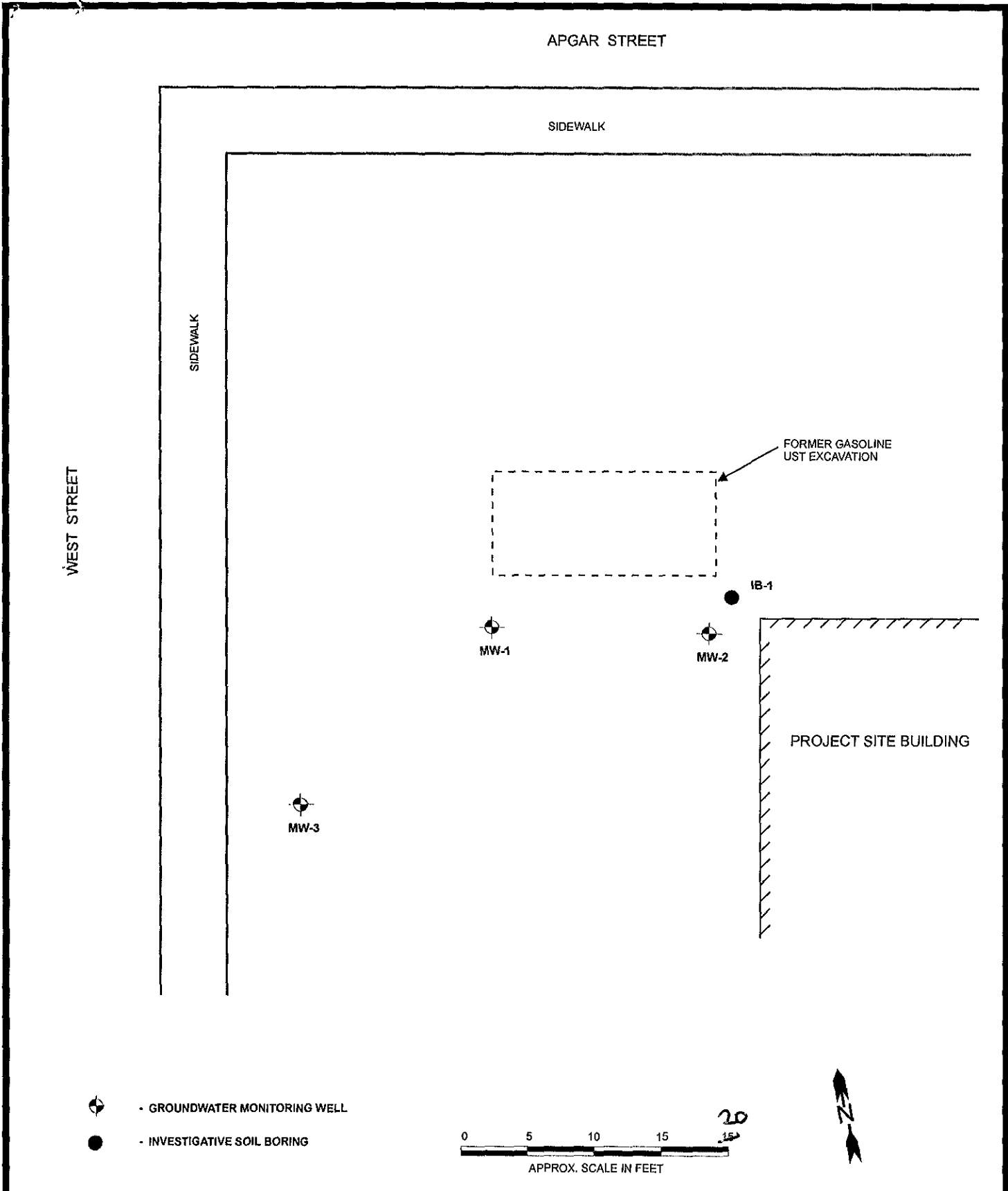
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MIN
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0 1000 FEET 0 500 1000 METERS
Printed from TOPO! ©2000 Wildflower Productions (www.topo.com)

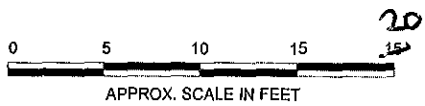
DESIGNED BY:	CHECKED BY:
DRAWN BY: SH	SCALE: 1"=0.6 MILES
PROJECT NO: 140-01-01	

SITE VICINITY MAP
3838 WEST STREET
OAKLAND, CALIFORNIA

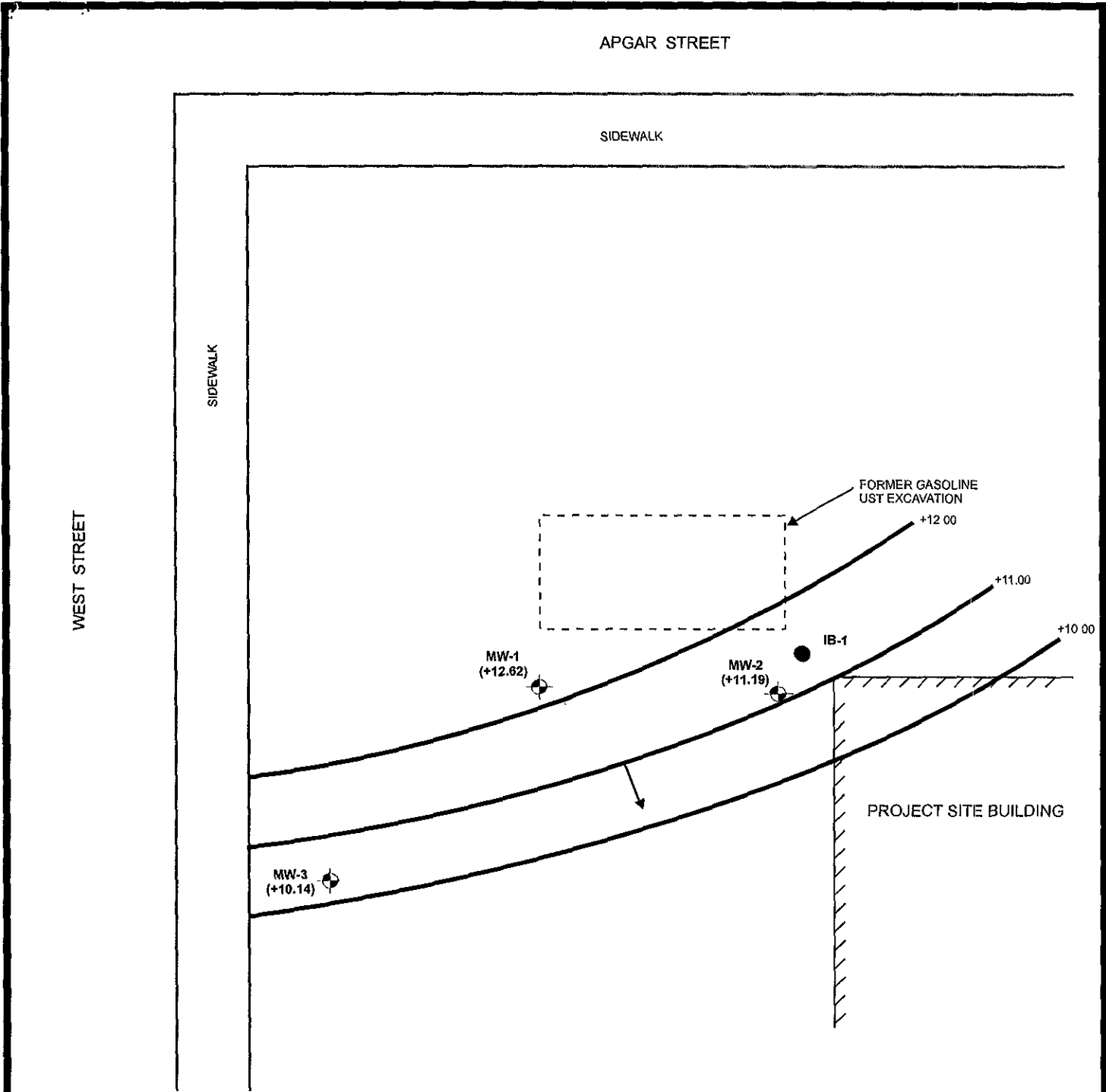
DATE: 10/9/03	FIGURE: 1
GRIBI Associates	






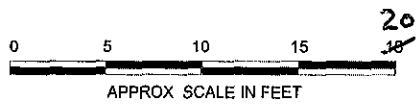
-  - GROUNDWATER MONITORING WELL
-  - INVESTIGATIVE SOIL BORING



DESIGNED BY:	CHECKED BY:	SITE PLAN 3838 WEST STREET OAKLAND, CALIFORNIA	DATE: 10/9/03	FIGURE: 2
DRAWN BY: JG	SCALE:		GRIBI Associates	
PROJECT NO: 140-01-01				



-  - GROUNDWATER MONITORING WELL
-  - INVESTIGATIVE SOIL BORING
-  - GROUNDWATER CONTOURS (RELATIVE TO ARBITRARY DATUM)



DESIGNED BY:	CHECKED BY:
DRAWN BY: JG	SCALE:
PROJECT NO: 140-01-01	

**GROUNDWATER
CONTOUR MAP**
3838 WEST STREET
OAKLAND, CALIFORNIA

DATE: 10/9/03	FIGURE: 3
GRIBI Associates	

APPENDIX A

ALAMEDA COUNTY DRILLING PERMIT



ALAMEDA COUNTY PUBLIC WORKS AGENCY

WATER RESOURCES SECTION
399 ELMHURST ST. HAYWARD CA. 94544-1395
PHONE (510) 678-6633 Janet Yao
FAX (510) 782-1939

APPLICANTS: PLEASE ATTACH A SITE MAP FOR ALL DRILLING PERMIT APPLICATIONS
DESTRUCTION OF WELLS OVER 45 FEET REQUIRES A SEPARATE PERMIT APPLICATION

DRILLING PERMIT APPLICATION

FOR APPLICANT TO COMPLETE

LOCATION OF PROJECT 3838 WEST STREET
OAKLAND CA 94608

CLIENT Name: JENNIFER HUSTON
Address: 3838 WEST ST Phone: 510-847-5465
City: OAKLAND CA Zip: 94608

APPLICANT Name: Jim Gribi
Address: 1350 HAYES ST #C-14 Phone: 707-740-7263
City: Berkeley CA Zip: 94702

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

PROPOSED WATER SUPPLY WELL USE
New Domestic Replacement Domestic
Municipal Irrigation
Industrial Other: MONITORING

DRILLING METHOD:
Mud Rotary Air Rotary Auger
Cable Other: DIRECT PUSH

DRILLER'S NAME Gregg Drilling

DRILLER'S LICENSE NO. 485165

WELL PROJECTS
Drill Hole Diameter 3 1/2 in. Maximum Depth 15 ft.
Casing Diameter 2 1/4 in. Owner's Well Number MW-2
Surface Seal Depth 8 ft.

GEOTECHNICAL PROJECTS
Number of Borings _____ in. Maximum Depth _____ ft.

STARTING DATE 7-18-03

COMPLETION DATE 7-18-03

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

APPLICANT'S SIGNATURE Jim Gribi DATE 7-14-03

PLEASE PRINT NAME Jim Gribi, RG Rev. 9-18-02

FOR OFFICE USE

PERMIT NUMBER WD3 0646
WELL NUMBER _____
APN _____

PERMIT CONDITIONS

Circled Permit Requirements Apply

A. GENERAL

1. A permit application should be submitted so as to arrive at the ACPWA office five days prior to proposed starting date.
2. Submit to ACPWA within 60 days after completion of permitted original Department of Water Resources-Well Completion Report.
3. Permit is void if project has begun within 90 days of approval date.

B. WATER SUPPLY WELLS

1. Minimum surface seal thickness is two inches of cement grout placed by tremie.
2. Minimum seal depth is 50 feet for municipal and industrial wells or 20 feet for domestic and irrigation wells unless a lesser depth is specially approved.

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 10 feet.

D. GEOTECHNICAL

Backfill bore hole by tremie with cement grout or cement grout/sand mixture. Upper two-three feet replaced is kind or with compacted cuttings.

E. CATHODIC

Fill hole annulus zone with concrete placed by tremie.

F. WELL DESTRUCTION

Send a map of work site. A separate permit is required for wells deeper than 45 feet.

G. SPECIAL CONDITIONS

#-MW1

NOTE: One application must be submitted for each well or well destruction. Multiple borings on one application are allowable for geotechnical and contamination investigations.

APPROVED _____ DATE 7-15-03



ALAMEDA COUNTY PUBLIC WORKS AGENCY

WATER RESOURCES SECTION
 399 ELMHURST ST. HAYWARD CA, 94544-1395
 PHONE (510) 678-6633 James Yoo
 FAX (510) 782-1939
APPLICANTS: PLEASE ATTACH A SITE MAP FOR ALL DRILLING PERMIT APPLICATIONS
DESTRUCTION OF WELLS OVER 4 FEET REQUIRES A SEPARATE PERMIT APPLICATION

DRILLING PERMIT APPLICATION

FOR APPLICANT TO COMPLETE
 LOCATION OF PROJECT 3838 West Street
OAKLAND CA 94608

FOR OFFICE USE
 PERMIT NUMBER W03 0647
 WELL NUMBER _____
 APN _____

CLIENT
 Name Johanny Huston
 Address 3838 West St Phone 510 547-5465
 City OAKLAND CA Zip 94608

APPLICANT
 Name Jim Grubi
Grid1 Assoc Fax 247-748-7763
 Address 1874 Hayes St Phone 247-748-7743
 City OAKLAND CA Zip 94612

TYPE OF PROJECT

Well Construction	<input type="checkbox"/>	Geotechnical Investigation	<input type="checkbox"/>
Cathodic Protection	<input type="checkbox"/>	General	<input type="checkbox"/>
Water Supply	<input checked="" type="checkbox"/>	Contamination	<input checked="" type="checkbox"/>
Monitoring	<input checked="" type="checkbox"/>	Well Destruction	<input type="checkbox"/>

PROPOSED WATER SUPPLY WELL USE

New Domestic	<input type="checkbox"/>	Replacement Domestic	<input type="checkbox"/>
Municipal	<input type="checkbox"/>	Irrigation	<input type="checkbox"/>
Industrial	<input type="checkbox"/>	Other <u>MONITORING</u>	<input type="checkbox"/>

DRILLING METHOD:

Mud Rotary	<input type="checkbox"/>	Air Rotary	<input type="checkbox"/>	Auger	<input type="checkbox"/>
Cable	<input type="checkbox"/>	Other	<input checked="" type="checkbox"/>	<u>Direct Push</u>	

DRILLER'S NAME Coregg Drilling
DRILLER'S LICENSE NO. 485165

WELL PROJECTS

Drill Hole Diameter	<u>3 1/2</u> in.	Maximum Depth	<u>15</u> ft.
Casing Diameter	<u>3 1/2</u> in.	Owner's Well Number	<u>MW-3</u>
Surface Seal Depth	<u>5</u> ft.		

GEOTECHNICAL PROJECTS

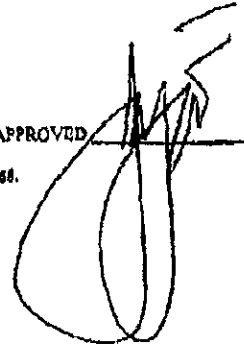
Number of Borings	_____	Maximum Depth	_____ ft.
Hole Diameter	_____ in.		

STARTING DATE 7-18-03
COMPLETION DATE 7-18-03

I hereby agree to comply with all requirements of this permit and Alameda County Ordinance No. 73-48.
APPLICANT'S SIGNATURE James Yoo **DATE** 7-14-03
PLEASE PRINT NAME Jim Grubi, RC Rev. 9-18-02

- PERMIT CONDITIONS**
 Circled Permit Requirements Apply
- A. GENERAL**
 1. A permit application should be submitted so as to arrive at the ACPWA office five days prior to proposed starting date.
 2. Submit to ACPWA within 60 days after completion of permitted original Department of Water Resources-Well Completion Report.
 3. Permit is void if project not begun within 90 days of approval date.
 - B. WATER SUPPLY WELLS**
 1. Minimum surface seal thickness is two inches of cement grout placed by tremie.
 2. Minimum seal depth is 30 feet for municipal and industrial wells or 20 feet for domestic and irrigation wells unless a lesser depth is specially approved.
 - C. GROUNDWATER MONITORING WELLS INCLUDING PIEZOMETERS**
 1. Minimum surface seal thickness is two inches of cement grout placed by tremie.
 2. Minimum seal depth for monitoring wells is the maximum depth practicable or 20 feet.
 - D. GEOTECHNICAL**
 Backfill bore hole by tremie with cement grout or cement grout and sandstone. Upper two-three feet replaced in kind or with compacted cuttings.
 - E. CATHODIC**
 Fill hole anode zone with concrete placed by tremie.
 - F. WELL DESTRUCTION**
 Send a map of work site. A separate permit is required for wells deeper than 45 feet.
 - G. SPECIAL CONDITIONS** #1 MW 1

NOTE: One application must be submitted for each well or well destruction. Multiple borings on one application are acceptable for geotechnical and contamination investigations.

APPROVED  **DATE** 7-15-03

APPENDIX B

SOIL BORING LOGS

BORING NUMBER : MW-2

BORING LOCATION: NEAR NW CORNER OF BUILDING

BORING TYPE: MONITORING WELL

PROJECT NAME: 3838 WEST STREET FORMER UST SITE

GA PROJECT NUMBER: 140-01-02

LOG OF SOIL BORING

GRIBI Associates

SHEET 1 OF 1

DRILLING CONTRACTOR: GREGG DRILLING

DRILLING METHOD: GEOPROBE

BOREHOLE DIAMETER: 2.5 INCHES

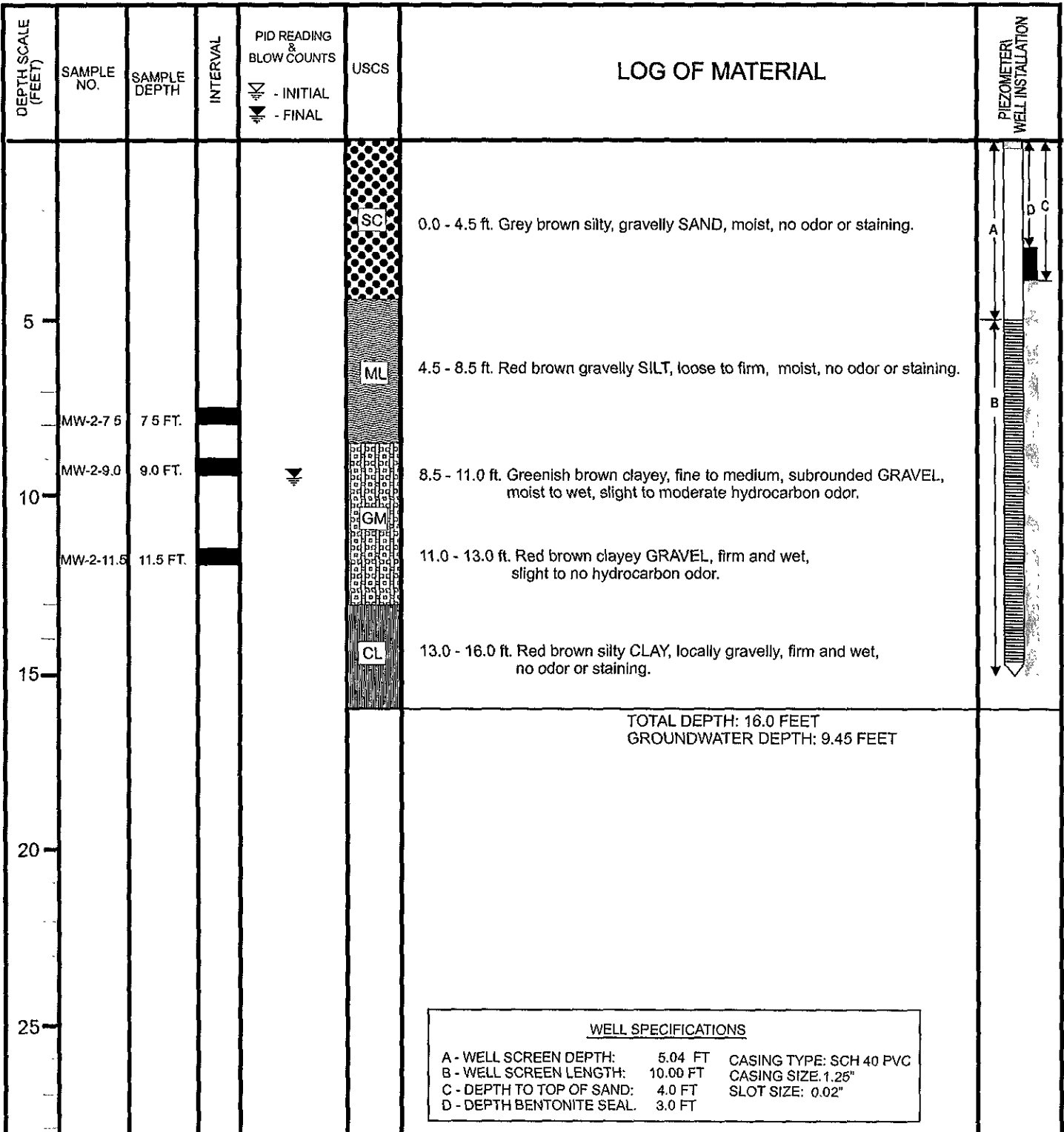
COMPLETION METHOD: MONITORING WELL

BORING TOTAL DEPTH: 16.0 FEET

GROUNDWATER DEPTH: 9.45 FEET

START DATE: 07/18/03

COMPLETION DATE: 07/18/03



BORING NUMBER : MW- 3

BORING LOCATION: NEAR STREET

BORING TYPE: MONITORING WELL

PROJECT NAME: 3838 WEST STREET
FORMER UST SITE

GA PROJECT NUMBER: 140-01-02

LOG OF SOIL BORING

GRIBI Associates

SHEET 1 OF 1

DRILLING CONTRACTOR: GREGG DRILLING

DRILLING METHOD: GEOPROBE

BOREHOLE DIAMETER: 2.5 INCHES

COMPLETION METHOD: MONITORING WELL

BORING TOTAL DEPTH: 16.0 FEET

GROUNDWATER DEPTH: 9.40 FEET

START DATE: 07/18/03

COMPLETION DATE: 07/18/03

DEPTH SCALE (FEET)	SAMPLE NO.	SAMPLE DEPTH	INTERVAL	PID READING & BLOW COUNTS ▽ - INITIAL ▲ - FINAL	USCS	LOG OF MATERIAL	PIEZOMETER WELL INSTALLATION
0						0.0 - 5.0 ft. Grey brown clayey, sandy GRAVEL, loose, no odor or staining.	
5					5.0 - 7.0 ft. Red brown clayey GRAVEL, moist, loose to firm, no odor or staining.		
	MW-3-7.5	7.5 FT.			7.0 - 8.0 ft. Red brown silty CLAY, firm, locally gravelly, no odor or staining.		
10	MW-3-9.0	9.0 FT.		▽	8.0 - 10.5 ft. Grey green sandy medium GRAVEL, loose to firm, moist to wet, moderate hydrocarbon odor.		
	MW-3-11.5	11.5 FT.			10.5 - 16.0 ft. Red brown silty CLAY, locally gravelly, firm and wet, no odor or staining.		
15							
20						TOTAL DEPTH: 16.0 FEET GROUNDWATER DEPTH: 9.40 FEET	
25							

WELL SPECIFICATIONS

A - WELL SCREEN DEPTH:	5.04 FT	CASING TYPE:	SCH 40 PVC
B - WELL SCREEN LENGTH:	10.00 FT	CASING SIZE:	1.25"
C - DEPTH TO TOP OF SAND:	4.0 FT	SLOT SIZE:	0.02"
D - DEPTH BENTONITE SEAL:	3.0 FT		

APPENDIX C

GROUNDWATER SAMPLING DATA SHEET

GROUNDWATER SAMPLING RECORD		GRIBI Associates	
Well No. MW-1		Well Loc.	
Project Name 3838 West St., Oakland		Project No.	
Date 9/8/03	Time	TOC Elevation	GW Elevation
Depth to Water 7.38 ft.		Well Depth 12.25 ft	Well Diameter 1"
Purge Water, 2": Wtr Column X 0.163 X 3 =		Purge Water, 4": Wtr Column X 0.653 X 3 =	
Purge/Sample Method	peristaltic pump	Lab Analyses	
Weather Conditions	clear & warm	Laboratory	

Time	Volume Purged	Temp. °C	Cond. µS	pH	Visual
1128	250 mL	23.2	142	6.56	odor / clear / colorless
1130	500 mL	23.2	120	6.44	
1136	750 mL	23.7	142	6.41	
1145	1 L	24.8	138	6.38	
1148	1.25 L	24.0	141	6.32	
1150	1.50 L	23.9	143	6.28	
1152	2.50 L	23.8	143	6.26	
1154	3.50 L	23.8	142	6.25	

Remarks
 Sampled @ 1158

GROUNDWATER SAMPLING RECORD		GRIBI Associates	
Well No. MW-2	Well Loc.		
Project Name 3838 West St., Oakland	Project No.		
Date 9/8/03	Time	TOC Elevation	GW Elevation
Depth to Water 9.45 ft	Well Depth 15.20 ft	Well Diameter 3/4"	
Purge Water, 2": Wtr Column X 0.163 X 3 =	Purge Water, 4": Wtr Column X 0.653 X 3 =		
Purge/Sample Method peristaltic pump	Lab Analyses		
Weather Conditions clear & warm	Laboratory		

Time	Volume Purged	Temp. °C	Cond. µS	pH	Visual
1054	500 mL	21.9	174	7.73	Brown / turbid
1056	750 mL	21.8	160	7.32	
1057	1.00 L	21.5	155	7.20	
1058	1.25 L	21.2	143	6.91	Dried
1103	1.50 L	21.3	144	6.90	

Remarks Sampled @ 1115

3 vol = 1.5 L

$$\frac{V_2}{\cancel{\pi R^2 H}} \quad \frac{V_4}{\cancel{\pi R_1^2 H}}$$

$$\frac{(4'')^2}{(2')^2} = \frac{16}{4} = 4$$

$$\frac{(2')^2}{(3/4')^2} = \frac{4}{9/16} = 4 \cdot \frac{16}{9} = 7.1$$

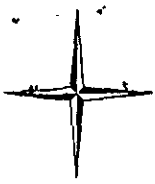
$$\frac{.163}{7.1} = 0.022$$

$$\frac{3}{4}'' \text{ Purge (swell) casing } (15 - 9.4) \times 0.022 \times 3 = .37 \text{ gal} = 1.4 \text{ l}$$

$$1 \text{ gal} = 3.79 \text{ l}$$

APPENDIX D

LABORATORY DATA REPORTS



SunStar Laboratories, Inc.

24 July 2003

Jim Gribi
Gribi Associates
1350 Hayes St. -- Suite C-14
Benicia, CA 94510
RE: Johnny Huston Site

Enclosed are the results of analyses for samples received by the laboratory on 07/20/03 10:20. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Jennifer Dahl
PM. Chemist III

SunStar Laboratories, Inc.

3002 Dow Avenue, Suite 212
Tustin, CA 92780
1-800-781-6777

T300790

Lab Number
Report Due Date:

Client: Gribi Associates	Date: 7/20/2003
Address: 1350 Hayes Street, Ste C-14	Project Name: Johnny Huston Site
City, State & Zip: Benicia, CA 94510	Collector's Name: Jim Gribi
Contact: Jim Gribi	Client's Project Number:
Phone: 707/748-7743	Batch Number:
Fax: 707/748-7763	Location (City): Oakland, CA

P.O. Number: Email Results: Y N Page: 1 of 1 Proposal Number:

SAMPLE TYPE CODES		Compliance Monitoring Y N	Sample Type	Compliance	Analyses Requested
DW = drinking water	TB = travel blank				
WW = waste water	SD = solid				
MW = monitoring well	SO = soil				
HW = hazardous waste	SL = sludge				

TPH-G/BTEX/MTBE

TURNAROUND TIME REQUESTED			Sample Type	Compliance	Analyses Requested	Lab ID Spl. No.
Standard	Lab Director Approval					
<input checked="" type="radio"/> Standard						
<input type="radio"/> RUSH						
<input type="radio"/> Special						
CLIENT'S SAMPLE ID/LOCATION	Date	Time				
MW-2-7.5	7/18/2003	1025	S	1	X	01
MW-2-9.0	7/18/2003	1035	S	1	X	02
MW-2-11.5	7/18/2003	1035	S	1	X	03
MW-3-7.5	7/18/2003	1135	S	1	X	04
MW-3-9.0	7/18/2003	1145	S	1	X	05
MW-3-11.5	7/18/2003	1145	S	1	X	06

Instructions/Comments/Special Requirements:	Detection Levels	Soil	Water	
		TPH-G&D	1.0 ppm	50.0 ppb
		BTEX/MTBE/VOCs	0.005 ppm	0.5 ppb
		O&G	50.0 ppm	5.0 ppm

SAMPLE RECEIPT	Date	Time	Samples Relinquished By	Samples Received By
Received Cold <input checked="" type="radio"/> Y <input checked="" type="radio"/> N (30)	7-20-03	1020	James [Signature]	Bill Hankel
Custody Seals <input type="radio"/> Y <input checked="" type="radio"/> N				
Seals Intact <input type="radio"/> Y <input checked="" type="radio"/> N				
No. of Containers	6			

Gribi Associates
1350 Hayes St. -- Suite C-14
Benicia CA, 94510

Project: Johnny Huston Site
Project Number: [none]
Project Manager: Jim Gribi

Reported:
7/24/03

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW-2-7.5	T300790-01	Soil	7/18/03	7/20/03
MW-2-9.0	T300790-02	Soil	7/18/03	7/20/03
MW-2-11.5	T300790-03	Soil	7/18/03	7/20/03
MW-3-7.5	T300790-04	Soil	7/18/03	7/20/03
MW-3-9.0	T300790-05	Soil	7/18/03	7/20/03
MW-3-11.5	T300790-06	Soil	7/18/03	7/20/03

SunStar Laboratories, Inc.



Jennifer Dahl, PM. Chemist III

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Gribi Associates 1350 Hayes St. -- Suite C-14 Benicia CA, 94510	Project: Johnny Huston Site Project Number: [none] Project Manager: Jim Gribi	Reported: 7/24/03
---	---	----------------------

Volatile Organic Compounds by EPA Methods 8021B/8015M
SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-2-7.5 (T300790-01) Soil Sampled: 07/18/03 10:25 Received: 07/20/03 10:20									
Methyl tert-butyl ether	ND	20	ug/kg	1	3072303	07/22/03	07/22/03	EPA 8021B/8015 m	
Benzene	ND	5.0	"	"	"	"	"	"	"
Toluene	ND	5.0	"	"	"	"	"	"	"
Ethylbenzene	ND	5.0	"	"	"	"	"	"	"
m,p-Xylene	ND	10	"	"	"	"	"	"	"
o-Xylene	ND	5.0	"	"	"	"	"	"	"
Gasoline Range Hydrocarbons	ND	500	"	"	"	"	"	"	"
Surrogate: 4-Bromofluorobenzene		76.0 %		65-135	"	"	"	"	"
MW-2-9.0 (T300790-02) Soil Sampled: 07/18/03 10:35 Received: 07/20/03 10:20									
Methyl tert-butyl ether	ND	20	ug/kg	1	3072303	07/22/03	07/23/03	EPA 8021B/8015 m	
Benzene	ND	5.0	"	"	"	"	"	"	"
Toluene	ND	5.0	"	"	"	"	"	"	"
Ethylbenzene	ND	5.0	"	"	"	"	"	"	"
m,p-Xylene	ND	10	"	"	"	"	"	"	"
o-Xylene	ND	5.0	"	"	"	"	"	"	"
Gasoline Range Hydrocarbons	30000	2000	"	4	"	"	"	"	"
Surrogate: 4-Bromofluorobenzene		82.4 %		65-135	"	"	"	"	"
MW-2-11.5 (T300790-03) Soil Sampled: 07/18/03 10:35 Received: 07/20/03 10:20									
Methyl tert-butyl ether	ND	20	ug/kg	1	3072303	07/22/03	07/23/03	EPA 8021B/8015 m	
Benzene	ND	5.0	"	"	"	"	"	"	"
Toluene	ND	5.0	"	"	"	"	"	"	"
Ethylbenzene	ND	5.0	"	"	"	"	"	"	"
m,p-Xylene	ND	10	"	"	"	"	"	"	"
o-Xylene	ND	5.0	"	"	"	"	"	"	"
Gasoline Range Hydrocarbons	ND	500	"	"	"	"	"	"	"
Surrogate: 4-Bromofluorobenzene		69.8 %		65-135	"	"	"	"	"

SunStar Laboratories, Inc.



Jennifer Dahl, PM, Chemist III

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Gribi Associates
 1350 Hayes St. -- Suite C-14
 Benicia CA, 94510

Project: Johnny Huston Site
 Project Number: [none]
 Project Manager: Jim Gribi

Reported:
 7/24/03

Volatile Organic Compounds by EPA Methods 8021B/8015M
SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-3-7.5 (T300790-04) Soil Sampled: 07/18/03 11:35 Received: 07/20/03 10:20									
Methyl tert-butyl ether	ND	20	ug/kg	1	3072303	07/22/03	07/22/03	EPA 8021B/8015 m	
Benzene	ND	5.0	"	"	"	"	"	"	"
Toluene	ND	5.0	"	"	"	"	"	"	"
Ethylbenzene	ND	5.0	"	"	"	"	"	"	"
m,p-Xylene	ND	10	"	"	"	"	"	"	"
o-Xylene	ND	5.0	"	"	"	"	"	"	"
Gasoline Range Hydrocarbons	12000	500	"	"	"	"	"	"	"
<i>Surrogate: 4-Bromofluorobenzene</i>		<i>71.0 %</i>		<i>65-135</i>	"	"	"	"	"
MW-3-9.0 (T300790-05) Soil Sampled: 07/18/03 11:45 Received: 07/20/03 10:20									
Methyl tert-butyl ether	ND	20	ug/kg	1	3072303	07/22/03	07/23/03	EPA 8021B/8015 m	
Benzene	ND	5.0	"	"	"	"	"	"	"
Toluene	ND	5.0	"	"	"	"	"	"	"
Ethylbenzene	ND	5.0	"	"	"	"	"	"	"
m,p-Xylene	ND	10	"	"	"	"	"	"	"
o-Xylene	ND	5.0	"	"	"	"	"	"	"
Gasoline Range Hydrocarbons	19000	500	"	"	"	"	"	"	"
<i>Surrogate: 4-Bromofluorobenzene</i>		<i>72.0 %</i>		<i>65-135</i>	"	"	"	"	"
MW-3-11.5 (T300790-06) Soil Sampled: 07/18/03 11:45 Received: 07/20/03 10:20									
Methyl tert-butyl ether	ND	20	ug/kg	1	3072303	07/22/03	07/23/03	EPA 8021B/8015 m	
Benzene	ND	5.0	"	"	"	"	"	"	"
Toluene	ND	5.0	"	"	"	"	"	"	"
Ethylbenzene	ND	5.0	"	"	"	"	"	"	"
m,p-Xylene	ND	10	"	"	"	"	"	"	"
o-Xylene	ND	5.0	"	"	"	"	"	"	"
Gasoline Range Hydrocarbons	ND	500	"	"	"	"	"	"	"
<i>Surrogate: 4-Bromofluorobenzene</i>		<i>71.9 %</i>		<i>65-135</i>	"	"	"	"	"

SunStar Laboratories, Inc.



Jennifer Dahl, PM, Chemist III

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Gribi Associates
 1350 Hayes St. -- Suite C-14
 Benicia CA, 94510

Project: Johnny Huston Site
 Project Number: [none]
 Project Manager: Jim Gribi

Reported:
 7/24/03

Volatile Organic Compounds by EPA Methods 8021B/8015M - Quality Control
SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 3072303 - EPA 5030 Soil GC

Blank (3072303-BLK1)

Prepared & Analyzed: 07/23/03

Methyl tert-butyl ether	ND	20 ug/kg							
Benzene	ND	5.0 "							
Toluene	ND	5.0 "							
Ethylbenzene	ND	5.0 "							
m,p-Xylene	ND	10 "							
o-Xylene	ND	5.0 "							
Gasoline Range Hydrocarbons	ND	500 "							
Surrogate: 4-Bromofluorobenzene	85.8	"	125		68.6	65-135			

LCS (3072303-BS1)

Prepared & Analyzed: 07/23/03

Benzene	215	5.0 ug/kg	200		108	70-130			
Toluene	1040	5.0 "	928		112	70-130			
Ethylbenzene	243	5.0 "	218		111	70-130			
m,p-Xylene	898	10 "	750		120	70-130			
o-Xylene	344	5.0 "	302		114	70-130			
Surrogate: 4-Bromofluorobenzene	127	"	125		102	65-135			

Matrix Spike (3072303-MS1)

Source: T300789-01

Prepared & Analyzed: 07/23/03

Benzene	213	5.0 ug/kg	200	ND	106	70-130			
Toluene	1000	5.0 "	928	ND	108	70-130			
Ethylbenzene	214	5.0 "	218	ND	98.2	70-130			
m,p-Xylene	785	10 "	750	ND	105	70-130			
o-Xylene	302	5.0 "	302	ND	100	70-130			
Surrogate: 4-Bromofluorobenzene	127	"	125		102	65-135			

Matrix Spike Dup (3072303-MSD1)

Source: T300789-01

Prepared & Analyzed: 07/23/03

Benzene	208	5.0 ug/kg	200	ND	104	70-130	2.38	20	
Toluene	1000	5.0 "	928	ND	108	70-130	0.00	20	
Ethylbenzene	207	5.0 "	218	ND	95.0	70-130	3.33	20	
m,p-Xylene	761	10 "	750	ND	101	70-130	3.10	20	
o-Xylene	292	5.0 "	302	ND	96.7	70-130	3.37	20	
Surrogate: 4-Bromofluorobenzene	133	"	125		106	65-135			

SunStar Laboratories, Inc.



Jennifer Dahl, PM, Chemist III

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Gribi Associates
1350 Hayes St. -- Suite C-14
Benicia CA, 94510

Project: Johnny Huston Site
Project Number: [none]
Project Manager: Jim Gribi

Reported:
7/24/03

Notes and Definitions

DET Analyte DETECTED
ND Analyte NOT DETECTED at or above the reporting limit
NR Not Reported
dry Sample results reported on a dry weight basis
RPD Relative Percent Difference

SunStar Laboratories, Inc.



Jennifer Dahl, PM. Chemist III

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



SunStar Laboratories, Inc.

16 September 2003

Jim Gribi
Gribi Associates
1350 Hayes St. -- Suite C-14
Benicia, CA 94510
RE: Johnny Huston Site

Enclosed are the results of analyses for samples received by the laboratory on 09/11/03 10:20. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Ben Beauchaine For John Shepler
Laboratory Director

SunStar Laboratories, Inc.

3002 Dow Avenue, Suite 212
 Tustin, CA 92780
 1-800-781-6777

Lab Number
1300979
 Report
 Due Date:

Client	Gribi Associates	Date	9/11/2003
Address	1350 Hayes Street, Ste C-14	Project Name	Johnny Huston Site
City, State & Zip	Benicia, CA 94510	Collector's Name	Jim Gribi
Contact	Jim Gribi	Client's Project Number	
Phone	707/748-7743	Batch Number	
Fax	707/748-7763	Location (City)	Oakland, CA

P.O. Number: _____ Email Results Y N Page 1 of 1 Proposal Number: _____

SAMPLE TYPE CODES		Compliance Monitoring	Sample Type	Container	Analyses Requested
DW = drinking water	TB = travel blank				
WW = waste water	SD = solid				TPH-G/BTEX/MTBE OXYGENATES
MW = monitoring well	SO = soil				
HW = hazardous waste	SL = sludge				

TURNAROUND TIME REQUESTED		Standard	Lab Director Approval	CLIENT'S SAMPLE ID/LOCATION		Date	Time	W	3	X	X	Spt. No.
RUSH	Special											
				MW-1		9/8/2003		W	3	X	X	01
				MW-2		9/8/2003		W	3	X	X	02
				MW-3		9/8/2003		W	3	X	X	03

Instructions/Comments/Special Requirements:	Detection Levels	Soil	Water
	TPH-G&D	1.0 ppm	50.0 ppb
	BTEX/MTBE/VOCs	0.005 ppm	0.5 ppb
	O&G	50.0 ppm	5.0 ppm

SAMPLE RECEIPT	Date	Time	Samples Relinquished By	Samples Received By
Received Cold <input checked="" type="radio"/> Y <input type="radio"/> N <i>3°</i>	9/11/03	10:20	<i>[Signature]</i>	<i>Bill Hammer</i>
Custody Seals <input type="radio"/> Y <input checked="" type="radio"/> N				
Seals Intact <input type="radio"/> Y <input checked="" type="radio"/> N				
No. of Containers	9			

Gribi Associates
1350 Hayes St. -- Suite C-14
Benicia CA, 94510

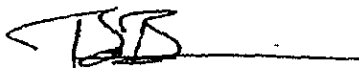
Project: Johnny Huston Site
Project Number: [none]
Project Manager: Jim Gribi

Reported:
9/16/03

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW-1	T300979-01	Water	9/8/03	9/11/03
MW-2	T300979-02	Water	9/8/03	9/11/03
MW-3	T300979-03	Water	9/8/03	9/11/03

SunStar Laboratories, Inc.



The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Ben Beauchaine For John Shepler, Laboratory Director

Gribi Associates
 1350 Hayes St. -- Suite C-14
 Benicia CA, 94510

Project: Johnny Huston Site
 Project Number: [none]
 Project Manager: Jim Gribi

Reported:
 9/16/03

Volatile Organic Compounds by EPA Method 8260B
SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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MW-1 (T300979-01) Water Sampled: 09/08/03 00:00 Received: 09/11/03 10:20

Gasoline Range Hydrocarbons	1400	50	ug/l	1	3091502	09/12/03	09/14/03	EPA 8260B	
Benzene	ND	1.0	"	"	"	"	"	"	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
m,p-Xylene	ND	1.0	"	"	"	"	"	"	
o-Xylene	ND	1.0	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	2.0	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	2.0	"	"	"	"	"	"	
Tert-amyl methyl ether	ND	2.0	"	"	"	"	"	"	
Di-isopropyl ether	ND	2.0	"	"	"	"	"	"	
Tert-butyl alcohol	ND	10	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		106 %		86-118	"	"	"	"	
Surrogate: Toluene-d8		95.8 %		86-115	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		91.8 %		86-115	"	"	"	"	

MW-2 (T300979-02) Water Sampled: 09/08/03 00:00 Received: 09/11/03 10:20

Gasoline Range Hydrocarbons	ND	50	ug/l	1	3091502	09/12/03	09/14/03	EPA 8260B	
Benzene	ND	1.0	"	"	"	"	"	"	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
m,p-Xylene	ND	1.0	"	"	"	"	"	"	
o-Xylene	ND	1.0	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	2.0	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	2.0	"	"	"	"	"	"	
Tert-amyl methyl ether	ND	2.0	"	"	"	"	"	"	
Di-isopropyl ether	ND	2.0	"	"	"	"	"	"	
Tert-butyl alcohol	ND	10	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		104 %		86-118	"	"	"	"	
Surrogate: Toluene-d8		96.0 %		86-115	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		93.2 %		86-115	"	"	"	"	

SunStar Laboratories, Inc.



Ben Beauchaine For John Shepler, Laboratory Director

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Gribi Associates
1350 Hayes St. -- Suite C-14
Benicia CA, 94510

Project: Johnny Huston Site
Project Number: [none]
Project Manager: Jim Gribi

Reported:
9/16/03

Volatile Organic Compounds by EPA Method 8260B
SunStar Laboratories, Inc.

Analyte	Result	Reporting			Batch	Prepared	Analyzed	Method	Notes
		Limit	Units	Dilution					
MW-3 (T300979-03) Water Sampled: 09/08/03 00:00 Received: 09/11/03 10:20									
Gasoline Range Hydrocarbons	ND	50	ug/l	1	3091502	09/12/03	09/14/03	EPA 8260B	
Benzene	ND	1.0	"	"	"	"	"	"	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
m,p-Xylene	ND	1.0	"	"	"	"	"	"	
o-Xylene	ND	1.0	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	2.0	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	2.0	"	"	"	"	"	"	
Tert-amyl methyl ether	ND	2.0	"	"	"	"	"	"	
Di-isopropyl ether	ND	2.0	"	"	"	"	"	"	
Tert-butyl alcohol	ND	10	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		105 %		86-118	"	"	"	"	
Surrogate: Toluene-d8		97.2 %		86-115	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		93.2 %		86-115	"	"	"	"	

SunStar Laboratories, Inc.



Ben Beauchaine For John Shepler, Laboratory Director

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Gribi Associates
 1350 Hayes St. -- Suite C-14
 Benicia CA, 94510

Project: Johnny Huston Site
 Project Number: [none]
 Project Manager: Jim Gribi

Reported:
 9/16/03

Volatile Organic Compounds by EPA Method 8260B - Quality Control
SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	-----------------------	-------------	---------------	------	-------------	-----	-----------	-------

Batch 3091502 - EPA 5030 Water MS

Blank (3091502-BLK1)

Prepared: 09/12/03 Analyzed: 09/14/03

Gasoline Range Hydrocarbons	ND	50 ug/l							
Benzene	ND	1.0 "							
Toluene	ND	1.0 "							
Ethylbenzene	ND	1.0 "							
m,p-Xylene	ND	1.0 "							
o-Xylene	ND	1.0 "							
Methyl tert-butyl ether	ND	2.0 "							
Ethyl tert-butyl ether	ND	2.0 "							
Tert-amyl methyl ether	ND	2.0 "							
Di-isopropyl ether	ND	2.0 "							
Tert-butyl alcohol	ND	10 "							
Surrogate: Dibromofluoromethane	42.0	"	40.0		105	86-118			
Surrogate: Toluene-d8	38.0	"	40.0		95.0	86-115			
Surrogate: 4-Bromofluorobenzene	37.4	"	40.0		93.5	86-115			

LCS (3091502-BS1)

Prepared: 09/12/03 Analyzed: 09/14/03

Benzene	112	1.0 ug/l	100	ND	112	75-125			
Toluene	98.7	1.0 "	100	ND	98.7	75-125			
Surrogate: Toluene-d8	38.7	"	40.0		96.8	86-115			
Surrogate: 4-Bromofluorobenzene	38.9	"	40.0		97.2	86-115			
Surrogate: Dibromofluoromethane	39.5	"	40.0		98.8	86-118			
Surrogate: Dibromofluoromethane	39.5	"	40.0		98.8	86-118			
Surrogate: Toluene-d8	38.7	"	40.0		96.8	86-115			
Surrogate: 4-Bromofluorobenzene	38.9	"	40.0		97.2	86-115			

Matrix Spike (3091502-MS1)

Source: T300979-02

Prepared: 09/12/03 Analyzed: 09/14/03

Benzene	89.2	1.0 ug/l	100	ND	89.2	75-125			
Toluene	91.5	1.0 "	100	ND	91.5	75-125			
Surrogate: Toluene-d8	38.4	"	40.0		96.0	86-115			
Surrogate: 4-Bromofluorobenzene	36.5	"	40.0		91.2	86-115			
Surrogate: Dibromofluoromethane	40.2	"	40.0		100	86-118			
Surrogate: Dibromofluoromethane	40.2	"	40.0		100	86-118			
Surrogate: Toluene-d8	38.4	"	40.0		96.0	86-115			
Surrogate: 4-Bromofluorobenzene	36.5	"	40.0		91.2	86-115			

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Ben Beauchaine For John Shepler, Laboratory Director

Gribi Associates
 1350 Hayes St. -- Suite C-14
 Benicia CA, 94510

Project: Johnny Huston Site
 Project Number: [none]
 Project Manager: Jim Gribi

Reported:
 9/16/03

Volatile Organic Compounds by EPA Method 8260B - Quality Control
SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 3091502 - EPA 5030 Water MS

Matrix Spike Dup (3091502-MSD1) Source: T300979-02 Prepared: 09/12/03 Analyzed: 09/14/03

Benzene	87.9	1.0 ug/l	100	ND	87.9	75-125	1.47	20	
Toluene	89.1	1.0 "	100	ND	89.1	75-125	2.66	20	
<i>Surrogate: Toluene-d8</i>	38.9	"	40.0		97.2	86-115			
<i>Surrogate: 4-Bromofluorobenzene</i>	37.4	"	40.0		93.5	86-115			
<i>Surrogate: Dibromofluoromethane</i>	39.6	"	40.0		99.0	86-118			
<i>Surrogate: Dibromofluoromethane</i>	39.6	"	40.0		99.0	86-118			
<i>Surrogate: Toluene-d8</i>	38.9	"	40.0		97.2	86-115			
<i>Surrogate: 4-Bromofluorobenzene</i>	37.4	"	40.0		93.5	86-115			

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Ben Beauchaine For John Shepler, Laboratory Director

Gribi Associates
1350 Hayes St. -- Suite C-14
Benicia CA, 94510

Project: Johnny Huston Site
Project Number: [none]
Project Manager: Jim Gribi

Reported:
9/16/03

Notes and Definitions

DET Analyte DETECTED
ND Analyte NOT DETECTED at or above the reporting limit
NR Not Reported
dry Sample results reported on a dry weight basis
RPD Relative Percent Difference

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Ben Beauchaine For John Shepler, Laboratory Director

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