



**ENVIRONMENTAL BIO-SYSTEMS, INC.**  
Innovative Solutions for a Better Environment

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HAZMAT

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*POSSIBLY  
C*

27 May 1994

Mr. Al Pelton  
Dreisbach Associates  
36-D Bluff Road  
Watsonville, CA 95076

**RE: 8410 Amelia Street, Oakland, California- Amended Page to  
Report #079-327-01A**

Mr. Pelton:

It has recently come to my attention that page 14 of the referenced report contains a typo. In paragraph number 1 under recommendations we mistakenly included TPHk along with analyses to be run on future samples from site wells.

We apologize for this error and have included an amended page 14. Please use it to replace the existing page of this number.

Sincerely,  
ENVIRONMENTAL BIO-SYSTEMS, INC.

Timothy M. Babcock  
Environmental Scientist, Project Manager

TMB/

encl: Amended page 14 to report #079-237-01A

cc: Mr. Barney Chan, Alameda Cnty. Env. Health Svcs. Dept., Haz. Mat. Div. ✓

## 12. RECOMMENDATIONS

Based upon the accumulated data, EBS recommends the following:

1. Quarterly sampling of the three ground water wells should continue. The samples should be analyzed for TPHg and BTEX. Should the concentrations of impacting constituents found in the samples remain at present levels or decrease through one complete hydrologic cycle, case closure should be requested from the ACHCSA and the San Francisco Bay Regional Water Quality Control Board (RWQCB).
2. Depth to ground water should be measured as part of quarterly well sampling. Ground water flow direction and gradient maps should be generated and submitted with all quarterly reports.
3. A copy of this report, and subsequent quarterly ground water monitoring reports should be submitted to the ACHCSA and the RWQCB.

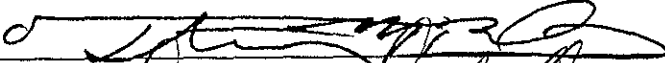
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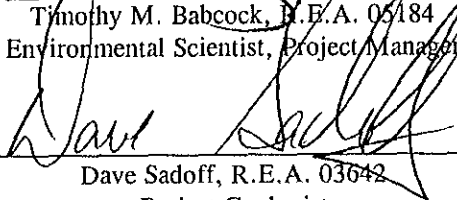
SUBSURFACE SOIL AND  
GROUND WATER EXPLORATION  
PROJECT #079-237-01A

8410 AMELIA STREET  
OAKLAND, CA

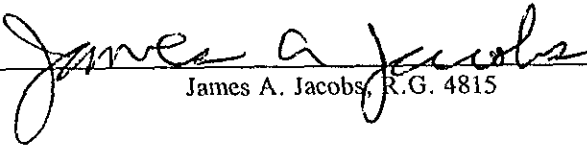
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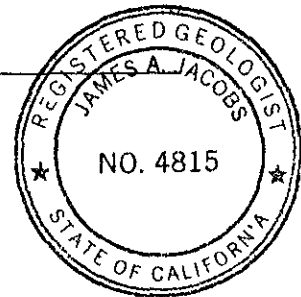
PREPARED BY ENVIRONMENTAL BIO-SYSTEMS, INC.  
FOR  
DREISBACH ENTERPRISES, INC.

  
Timothy M. Babcock, R.E.A. 05184  
Environmental Scientist, Project Manager

  
Dave Sadoff, R.E.A. 03642  
Project Geologist

Reviewed by:

  
James A. Jacobs, R.G. 4815



9 March 1994

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## **ENVIRONMENTAL BIO-SYSTEMS, INC.**

Innovative Solutions for a Better Environment

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### **1. INTRODUCTION**

Environmental Bio-Systems, Inc. (EBS) provides this report describing subsurface soil and ground water exploration performed for Dreisbach Enterprises, Inc. (the client) at 8410 Amelia Street in Oakland, CA (the site). Mr. Al Pelton of Dreisbach Enterprises, Inc. retained EBS to conduct this exploration subsequent to a request by the Alameda County Health Care Services Agency (ACHCSA).

The subject site is owned by the Client. The principal site contacts are:

**Principal Client Contact:** Mr. Al Pelton, 36-D Bluff Road  
Watsonville, CA 95076, (510)533-1527

**Consultant:** Environmental Bio-Systems, Inc., 30028 Industrial  
Parkway Southwest, Suite C, Hayward, CA 94544, (510) 429-9988,  
Mr. Timothy M. Babcock - Project Manager.

### **2. SCOPE OF WORK**

This report describes the installation of two ground water monitoring wells at the site and the subsequent sampling of both of these wells in addition to existing monitoring well MW1. The wells were installed to evaluate petroleum hydrocarbon impact to the subsurface.

EBS workplan #WP93001, submitted to the ACHCSA on 12 April 1993, outlined the scope of work intended to be performed at the site. The work plan was approved by the ACHCSA in a letter dated 5 May 1993.

The scope of work included in this report is outlined below:

- Procurement of permits for the installation of two ground water monitoring wells.
- Drilling of two soil borings to a depth of approximately 10-15 below the depth at which ground water was first encountered.
- Collection of 4 soil samples to be analyzed for chemical analysis to detect total petroleum hydrocarbons as gasoline (TPHg) with the hydrocarbon constituents benzene, toluene, ethylbenzene, and xylene isomers (BTEX).
- Logging of subsurface conditions by an EBS geologist.
- Construction of two ground water monitoring wells.
- Development of the two ground water monitoring wells.
- Collection of three ground water samples to be analyzed for TPHg and BTEX
- Elevation and geographical survey of the top of well casings and boxes.
- Storage of drill cuttings on-site.
- Storage and subsequent disposal of decontamination and purged well water.
- Interpretation of field and laboratory data.

### **3. SITE DESCRIPTION**

The site is located at 8410 Amelia Street in the City of Oakland, County of Alameda, California. A site location Map is presented as Figure 1. A site diagram showing the locations of proposed monitoring wells and relevant site structures is included as Figure 2.

The location of the site is approximately 1/3-mile east of the east shore of the San Francisco Bay. The site lies adjacent to a Union Pacific Railroad right of way. The site is bounded by light industrial and office buildings to the east and west; by 85th Avenue to the south, and by Amelia Street to the west.

One underground storage tank (UST) was excavated from the site in 1988. The tank was reportedly used to contain gasoline.

Seven buildings are currently located at this address. The areas adjacent and to the east of the former UST excavation hold a 33,229-square foot building of tilt-up concrete construction and a 5,066-square foot office building. Half of the larger (northern) building is used by Paccetti Wood Products, a wood furniture manufacturing operation. The other half of this building is vacant. The smaller of the two buildings is used for offices by Crosby & Overton, Inc., a hazardous waste transportation company.



#### 4. PREVIOUS ENVIRONMENTAL WORK

##### April 1988

Crosby & Overton Environmental Services, Inc. of Oakland, California excavated and disposed of a 6,000-gallon gasoline UST. A soil sample collected from below the northern end of the UST showed levels of total petroleum hydrocarbons as gasoline (TPHg) at concentrations exceeding the typically mandated clean up level at that time of 1,000-milligrams per kilogram (mg/Kg). Elevated concentrations of benzene, toluene, ethylbenzene, and xylenes (BTEX) were also found.

##### 2 May 1988

Subsurface exploration consisting of the drilling and sampling of 6 soil borings performed by Uriah, Inc. of Livermore, CA. Levels of TPHg were found to exceed 100-mg/Kg in soil samples from 3 of the borings. Elevated concentrations of benzene, toluene, ethylbenzene, and xylenes (BTEX) were also found in some of the analyzed soil samples.

##### 30 June 1988

One ground water monitoring well installed at the site by Uriah, Inc. Sampling of soil collected from the boring showed TPHg at a maximum of 1,100-mg/Kg, as well as elevated concentrations of BTEX, at the reported soil/ground water interface. Sampling of water from the well for TPHg and BTEX showed only benzene at 0.6-micrograms per liter ( $\mu\text{g/L}$ ).

**28 November 1988 through 27 October 1989**

Quarterly well sampling by Uriah, Inc. See Table 1 for results sample analyses.

**5. PERMITS**

The following permits and regulatory agency work plan approvals were requested and procured prior to the commencement of field work:

- California Department of Water Resources Notice of Intent
- Alameda County Flood Control and Water Conservation District  
Zone 7 Ground Water Protection Ordinance Permit
- Alameda County Health Care Services Agency Work Plan Approval
- City of Oakland Minor Encroachment Permit
- City of Oakland Street Excavation Permit

Copies of these documents are included in Appendix A.

**6. FIELD PROCEDURES**

Drilling was performed on 2 December 1993. Well development and sampling were performed on 6 and 8 December 1993, respectively. Surveying of well casing elevations was performed on 14 December 1993.

## 6.1. DRILLING

Two soil borings were drilled by S&G Drilling of Menlo Park, California (C-57 license #589237) on 2 December 1993. The borings were drilled at the locations depicted on the site diagram. The boreholes were drilled using a truck mounted Failing F2 drill rig equipped with 8-inch diameter hollow stem augers. The designation of the boreholes MW2 and MW3 correspond to the monitoring wells constructed within them. The logs of soil borings and well construction details are presented in Appendix B.

Ground water was first encountered in the boring of ground water monitoring well MW2 at approximately 12-feet bgs. This boring was completed to a depth of 25-feet bgs. Ground water was first encountered at approximately 11.5-feet bgs in the boring of MW3. This boring was completed to a depth of 20-feet bgs.

### 6.1.1. Soil Sample Collection

Soil samples were collected from the borings at 5-foot intervals using a California modified split-spoon sampler. For collection, the sampler was driven 18-inches (the total sampler length) into the soil by a 140-pound weight falling a distance of approximately 30-inches. The number of blows required to drive the sampler each 6-inches was counted as an indicator of the relative density of the soil.

Soil samples were removed from the sampler as soon as it was opened. The ends of all tubes submitted to the laboratory were covered with Teflon<sup>®</sup> tape and sealed with plastic end caps. The sample tubes were labeled, stored in a cooler on crushed ice, and transported to American Environmental Network (AEN) of Pleasant Hill, California. AEN is certified by the State of California to perform the stated analyses.

#### 6.2. GROUND WATER MONITORING WELL CONSTRUCTION

Two ground water monitoring wells of were constructed within the soil borings. Graphic depictions of well construction details are shown on the logs of borings included in Appendix B.

The wells were constructed of four-inch polyvinyl chloride (PVC) casing and screen connected with threaded joints, and a threaded bottom end cap. The screened intervals of the wells were perforated by the factory with 0.020-inch wide slots. Blank casing was used to complete the upper portion of the wells.

Filter sand (Lonestar #3) was used to pack the annular space between the well casings and borehole sides. The sand was extended to a depth of approximately 2-feet above the perforated pipe section. A 1-foot bentonite spacer was placed above the sand and hydrated in place. The upper annulus (to a depth of approximately 1-foot bgs) was sealed with neat cement grout.

A locking well cap fitted with a watertight gasket was secured and locked in place over the top of the casing. A traffic box with a bolt-on lid was placed over the well head and secured in place with concrete grout.

### 6.3. WELL DEVELOPMENT

Development of the ground water monitoring wells was conducted on 6 December 1993. The depth to water and total well depths were measured upon opening of the wells. Measurements were taken using a water level indicator (Slope Indicator Model #51453).

Depth to water was measured at 7.14 and 6.76-feet bgs in MW2 and MW3, respectively. The total depths of the wells were measured at (approximately) 19.01 and 15.50-feet bgs in MW2 and MW3, respectively.

The wells were developed by alternately surging with a surge block, and bailing. This method is utilized to remove sediment from the well screen and to increase well production efficiency. Approximately 55-gallons of water was purged from each well during the development activities. All water evacuated from the wells was contained on-site in DOT approved 55-gallon drums pending disposal.

#### 6.4. GROUND WATER SAMPLING

Sampling of the three ground water monitoring wells at the site was performed on 8 December 1993. Appendix D contains copies of the sample collection logs completed during well purging and sampling.

The depth to water and total well depths were measured upon opening of the wells using a water level indicator (Slope Indicator Co. Model #51453). The volume of water contained within the wells was then calculated.

A disposable Teflon bailer was used to withdraw a sample of water from the wells to evaluate the presence of free product prior to purging. Visual observations by this method found no free product within the wells.

A volume of water, not less than 4-well volumes, was then purged from the well using a 3-foot long PVC bailer (approximately 1-liter capacity). Periodic measurement of pH, temperature, and conductivity were taken from the bailer until the reading were found to stabilize. Table 1 lists these measurements taken during the well purging prior to sampling.

Approximately 50-gallons of ground water was purged from MW1, 40-gallons from MW2, and 30-gallons from MW3. All water removed from the wells was contained on-site in DOT approved 55-gallon drums pending disposal.

The ground water level was allowed to recover at least 80% in each well prior to sampling of the well. A new disposable bailer was used to collect a ground water sample from each well. Ground water samples were contained within laboratory cleaned amber 1-liter bottles and 40-milliliter volatile organic analysis vials (VOAs) containing hydrochloric acid as a preservative.

The sample bottles were labeled, placed in a cooler on top of crushed ice, and transported to AEN for analysis. A chain of custody accompanied each sample to the laboratory.

## **7. DECONTAMINATION PROCEDURES**

The modified California split-spoon sampler was washed with Alconox detergent and double rinsed with distilled water between the collection of soil cores and samples. The augers used to drill the borings were steam cleaned on-site between the drilling of each borehole.

The PVC bailers used for purging were first cleaned using Alconox detergent, rinsed with clean water, then triple rinsed with distilled water. Disposable bailers used to collect the samples were discarded after a single use.

All decontamination water was collected and stored on-site in department of transportation (DOT) approved 55-gallon drums. All soil cuttings generated during drilling were stored on-site on top of visqueen, and covered with weighted visqueen to prohibit runoff or infiltration by rainwater.

## **8. DISPOSAL**

Drummed liquids generated during well purging and equipment decontamination were contained on-site in 55-gallon drums approved by the Department of Transportation for this purpose.

Approximately 220-gallons of purge water were removed from the site by Allied Oil and Pumping (Allied) of San Jose, California using a vacuum truck. The water was subsequently transported to and disposed of by Allied at Gibson Environmental in Redwood City, California (EPA #CAD043260702).

## **9. SAMPLE ANALYSIS AND RESULTS**

All soil and ground water samples submitted for analysis were analyzed for TPHg and BTEX using Environmental Protection Agency (EPA) Method 5030, Modified 8015, and 8020.

Soil samples collected from boring MW2 at both five and ten-feet below grade showed reportable concentrations of TPHg (1.1 and 5.6-mg/Kg, respectively) and benzene (42 and 270- $\mu$ g/Kg, respectively). Sample MW2-10' was also found to contain reportable concentrations of toluene, xylenes, and ethylbenzene (20, 100, and 10- $\mu$ g/Kg, respectively).



Results of the soil sample analyses are summarized Tables 2. Results of ground water sample analyses are displayed in Table 3. The chain of custody forms and certified laboratory analytical reports are presented in Appendix D.

#### 10. EVALUATION OF GROUND WATER FLOW DIRECTION AND GRADIENT

The elevation of the tops of casings of wells MW1, MW2, and MW3 were surveyed on 14 December 1993 by Geotopo of Oakland, California. Geotopo is a licensed land surveyor (California Professional Licensed Surveyor # LS3300). The surveyor's map of the locations and elevations of the wells is included as Appendix E.

Ground water level measurements used to evaluate the direction and gradient were taken on 8 December 1993. The direction and gradient of ground water flow across the site as evaluated on this date were to the southwest and 0.004-ft/ft, respectively, and are shown on Figure 3.

#### 11. CONCLUSIONS

1. Two soil borings were drilled, lithologically logged, and sampled at the site. The borings were completed as four-inch diameter ground water monitoring wells designated as wells MW2 and MW3.
2. Four soil samples were collected from the borings and analyzed for TPHg and BTEX.

3. Soil samples collected from borings MW2 and MW3 at both five and ten-feet below grade showed reportable concentrations of TPHg (1.1 and 5.6-mg/Kg, respectively) and benzene (42 and 270- $\mu$ g/Kg, respectively). Sample MW2-10' was also found to contain reportable concentrations of toluene, xylenes, and ethylbenzene (20, 100, and 10- $\mu$ g/Kg, respectively).
4. One water sample was collected from each of the three ground water monitoring wells and analyzed for TPHg and BTEX.
5. Water samples collected from wells MW1 and MW2 showed reportable concentrations of TPHg (0.2, and 8.5-mg/L, respectively) and benzene (52 and 2,100- $\mu$ g/L, respectively). Sample MW2 was also found to contain reportable concentrations of toluene, xylenes, and ethylbenzene (660, 400, and 780- $\mu$ g/L, respectively).
5. Ground water flow direction and gradient were measured on 8 December 1993 at southwest and 0.004-ft/ft, respectively.

## 12. RECOMMENDATIONS

Based upon the accumulated data, EBS recommends the following:

1. Quarterly sampling of the three ground water wells should continue. The samples should be analyzed for TPHg, BTEX, TPHd, and TPHk. Should the concentrations of impacting constituents found in the samples remain at present levels or decrease through one complete hydrologic cycle, case closure should be requested from the ACHCSA and the San Francisco Bay Regional Water Quality Control Board (RWQCB).
2. Depth to ground water should be measured as part of quarterly well sampling. Ground water flow direction and gradient maps should be generated and submitted with all quarterly reports.
3. A copy of this report, and subsequent quarterly ground water monitoring reports should be submitted to the ACHCSA and the RWQCB.

### 13. REFERENCES

Environmental Bio-Systems, Inc., Work Plan #93001, Monitoring Well Installation and Sampling at 8210 Amelia Street, Oakland, California, 12 April 1993.

### 14. LIMITATIONS

The recommendations in this report were developed in accordance with generally accepted standards of current environmental practice in Northern California. These recommendations are time-dependent and should not be considered valid after a 1-year period from the issue of this report. After 1-year from the issue of this report, site conditions and recommendations contained within this report should be reviewed.

This study was performed solely for the purpose of evaluating environmental conditions of the site subsurface relative to hydrocarbon impact at the subject site. No engineering or geotechnical references are implied or should be inferred.

Evaluation of the condition of the site, for the purpose of this study, was made from a limited number of observation points. Subsurface conditions may deviate away from these points. Additional work, including further study of the subsurface, can reduce the inherent uncertainties associated with this type of work.

This study was performed, and the report was prepared for the sole use of our client, Dreisbach Enterprises, Inc. This report and the findings contained herein shall not be disclosed to nor used by any other party without the prior written consent of Environmental Bio-Systems, Inc. It is the responsibility of the client to convey these recommendations to regulatory agencies and other parties, as appropriate.

The recommendations herein are professional opinions that our firm has endeavored to provide with competence and reasonable care. We are not able to eliminate the risks associated with environmental work. No guarantees or warrants, express or implied, are provided regarding our recommendations

**TABLE 1. MEASUREMENTS OF PH, TEMPERATURE,  
AND CONDUCTIVITY IN PURGED WATER  
FROM WELLS MW2, MW5, AND MW6**

WELL	VOLUME PURGED (gallons)	pH	TEMPERATURE (Fahrenheit)	CONDUCTIVITY (x10 <sup>3</sup> )
MW1	10	6.5	64.2	1.11
	20	6.5	64.5	1.08
	30	6.5	63.7	1.06
	40	6.5	63.5	1.03
	50	6.5	63.4	1.02
MW2	5	7.3	62.3	1.32
	10	7.2	63.2	1.26
	20	7.2	62.7	1.31
	30	7.1	62.6	1.37
	40	6.9	63.0	1.21
MW3	5	8.4	63.9	1.25
	10	8.2	62.3	1.14
	20	8.1	63.7	1.11
	30	7.9	61.5	1.06

**TABLE 2. RESULTS OF SOIL SAMPLE ANALYSES**

SAMPLE	TPHg (mg/Kg)	BENZENE (µg/Kg)	TOLUENE (µg/Kg)	XYLENES (µg/Kg)	ETHYL- BENZENE (µg/Kg)
MW2-5'	1.1	42	<sup>1</sup> ND	ND	ND
MW2-10'	5.6	270	20	100	10
MW3-5'	ND	ND	ND	ND	ND
MW3-10'	ND	ND	ND	ND	ND

<sup>1</sup>ND- Analyte not detected above stated limits.

NOTE: See laboratory reports for individual detection limits used.

**TABLE 3. RESULTS OF GROUND WATER SAMPLE ANALYSES**

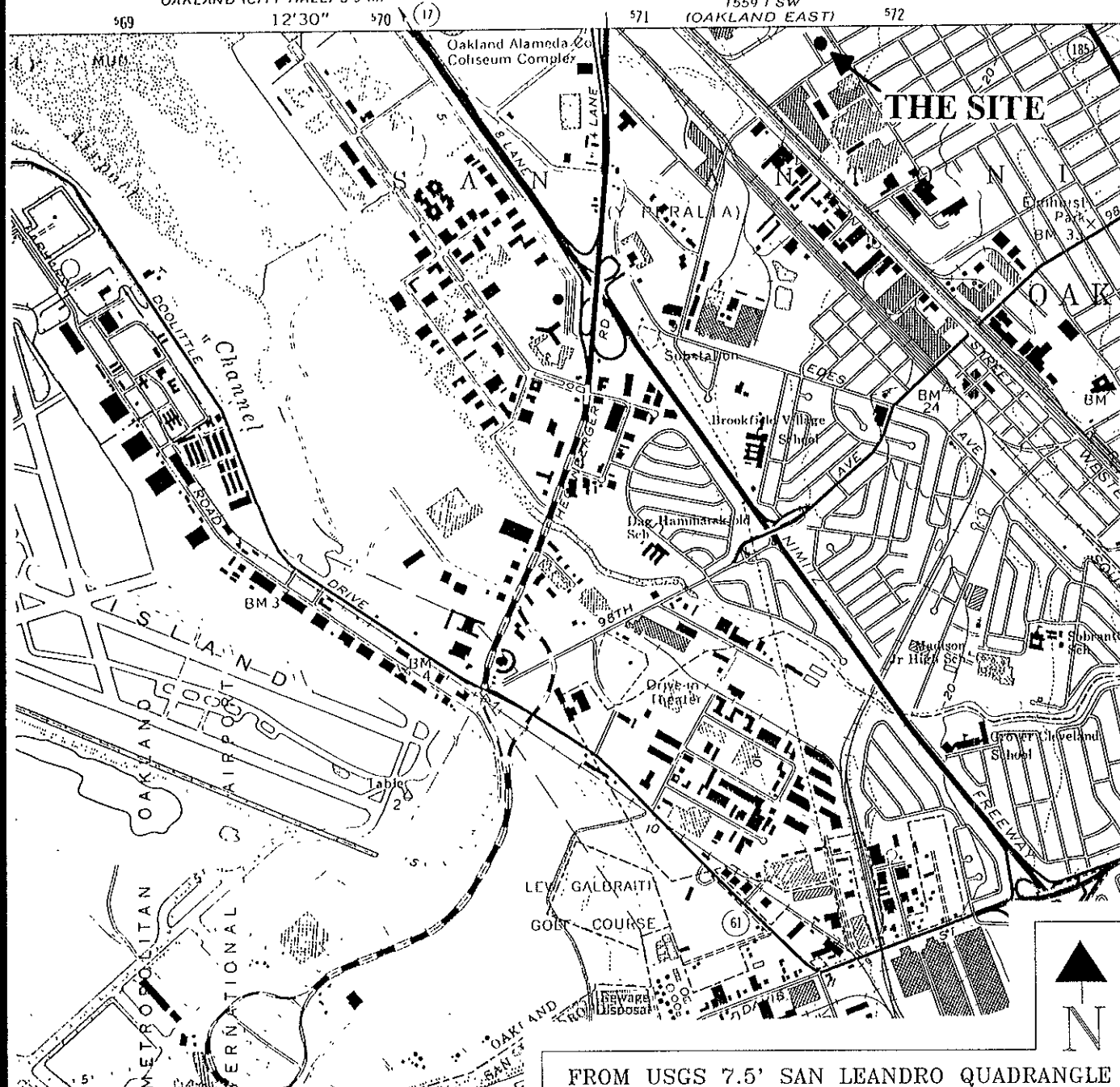
SAMPLE	TPHg (mg/L)	BENZENE (µg/L)	TOLUENE (µg/L)	XYLENES (µg/L)	ETHYL- BENZENE (µg/L)
MW1	0.2	52	<sup>1</sup> ND	ND	ND
MW2	8.5	2,100	660	400	780
MW3	ND	ND	ND	ND	ND

<sup>1</sup>ND- Analyte not detected above stated limits.

NOTE: See laboratory reports for individual detection limits used.

STATE OF CALIFORNIA  
DEPARTMENT OF WATER RESOURCES

SAN FRANCISCO (CIVIC CENTER) 17 MI  
OAKLAND (CITY HALL) 5.9 MI



FROM USGS 7.5' SAN LEANDRO QUADRANGLE



ENVIRONMENTAL  
BIO-SYSTEMS, INC

DATE:  
2/23/94

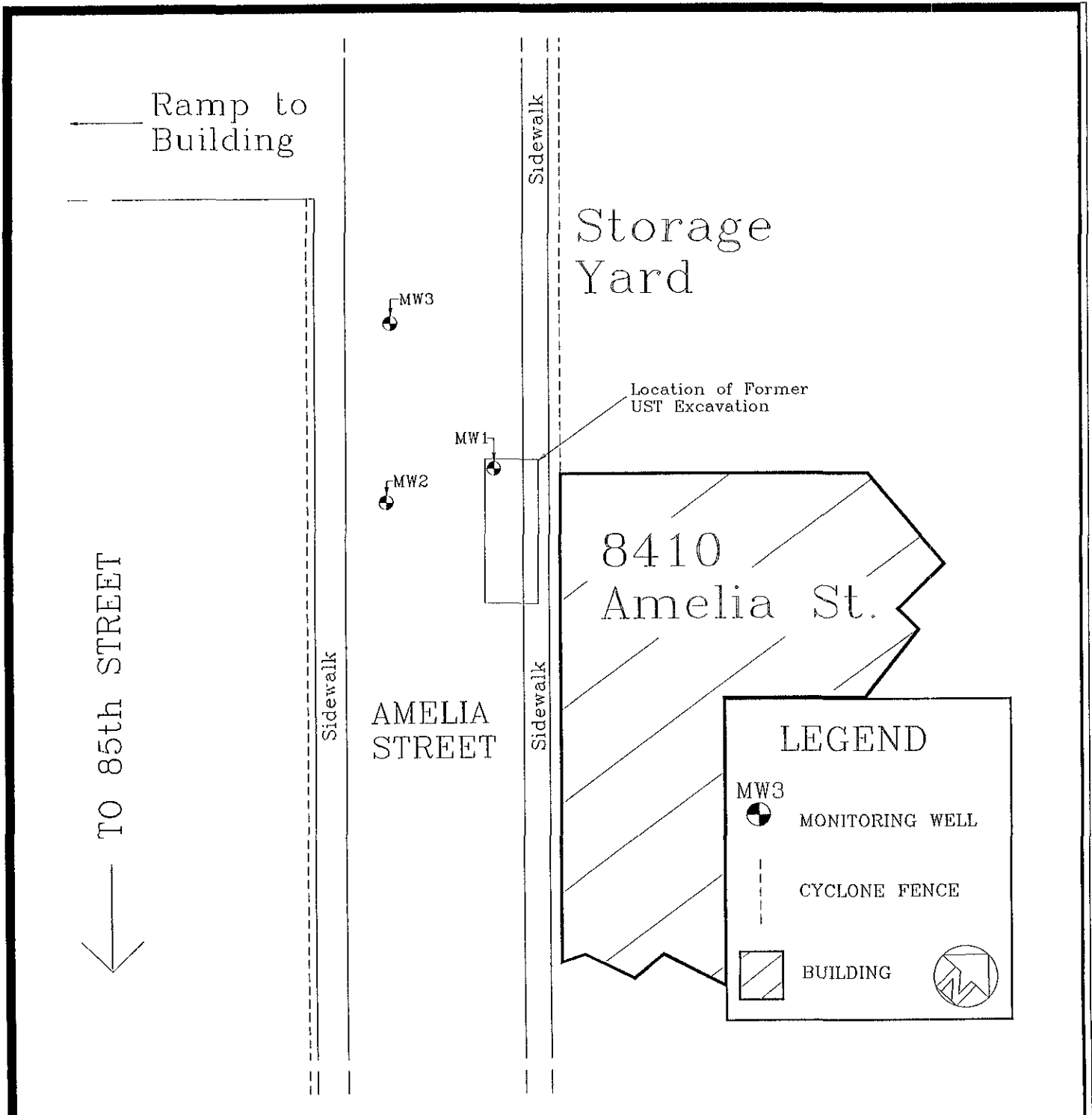
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TMB

SCALE:  
1" = 40'

FIGURE 1:  
SITE LOCATION MAP

Dreisbach Enterprises, Inc.  
8410 Amelia Street  
Oakland, California





ENVIRONMENTAL  
BIO-SYSTEMS, INC.

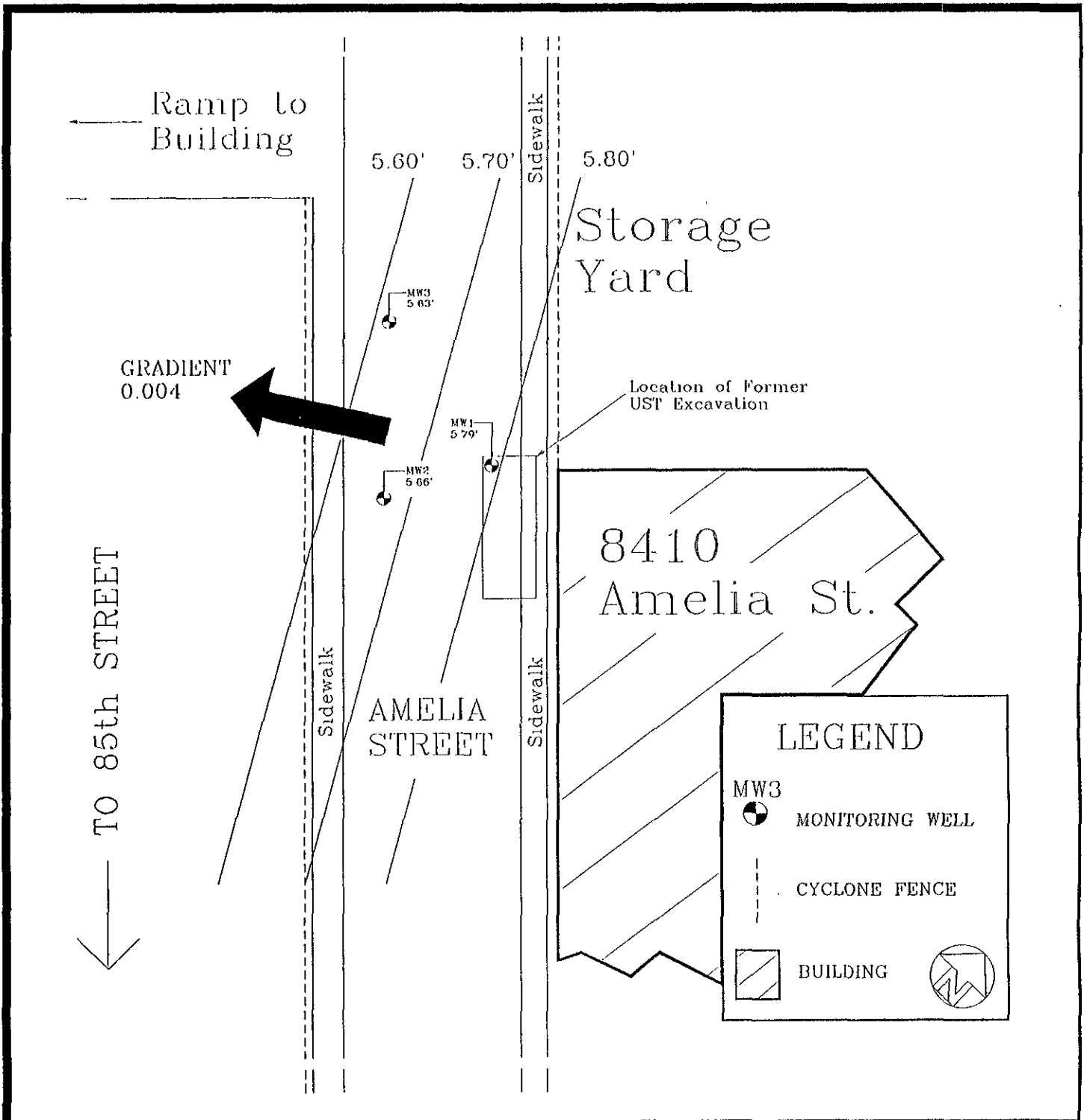
DATE:  
2/23/94


DRAWN BY:  
TMB

SCALE:  
1" = 40'

FIGURE 2: SITE DIAGRAM

Dreisbach Enterprises, Inc.  
8410 Amelia Street  
Oakland, CA



 <p>ENVIRONMENTAL BIO-SYSTEMS, INC.</p>	DATE: 2/23/94	FIGURE 3: GRADIENT MAP
	DRAWN BY: TMB	
	SCALE: 1" = 40'	

**APPENDIX A:**  
**PERMITS AND REGULATORY AGENCY**  
**WORK PLAN APPROVALS**



ALAMEDA COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT

6997 PARKSIDE DRIVE PLEASANTON, CALIFORNIA 94566 (415) 484-2600

GROUNDWATER PROTECTION ORDINANCE PERMIT APPLICATION

FOR APPLICANT TO COMPLETE

FOR OFFICE USE

(1) LOCATION OF PROJECT 8410 AMELIA ST. DALLAM, CA. 94621

PERMIT NUMBER 93656 LOCATION NUMBER

(2) CLIENT Name DREIBACH ENTERPRISES Address 36-D BLUFF City WATSONVILLE, CA Zip 95076 Phone (408) 761-6363

PERMIT CONDITIONS

Circled Permit Requirements Apply

(3) APPLICANT Name ENVIRONMENTAL BIO-SYSTEMS, INC. Address 30028 IND. PARKWAY, SUITE C HAYWARD, CA City HAYWARD, CA Zip 94544 Phone (510) 429-9985

- 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.

(4) DESCRIPTION OF PROJECT Water Well Construction Geotechnical Investigation Cathodic Protection General Well Destruction Contamination

- B. WATER WELLS, INCLUDING PIEZOMETERS 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, irrigation, and monitoring wells unless a lesser depth is specially approved.

(5) PROPOSED WATER WELL USE Domestic Industrial Irrigation Municipal Monitoring Other

- C. 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. D. CATHODIC. Fill hole above anode zone with concrete placed by tremie. E. WELL DESTRUCTION. See attached.

(6) PROPOSED CONSTRUCTION Drilling Method: Mud Rotary Air Rotary Auger Cable Other

DRILLER'S LICENSE NO. 589237

WELL PROJECTS Drill Hole Diameter 10 in. Casing Diameter 4 in. Surface Seal Depth 5 ft. Maximum Depth 25 ft. Number 2

GEOTECHNICAL PROJECTS Number of Borings Hole Diameter Maximum Depth

(7) ESTIMATED STARTING DATE 11/12/93 ESTIMATED COMPLETION DATE 11/12/93

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

Approved Wyman Hong Date 19 Nov 93

APPLICANT'S SIGNATURE Date 11/11/93

CITY OF OAKLAND

OAKLAND AVATE IN STREETS RK AS SPECIFIED

EXC 190.00  
APPL 40.00  
\$230.00 X930150V

LOCATION OF WORK: 84<sup>th</sup> 10 Ave  
(Street or Address)

EN 84<sup>th</sup> Ave AND 85<sup>th</sup> Ave  
(Street/Ave.) (Specify)

PERMISSION TO EXCAVATE IN THE PUBLIC RIGHT-OF

APPLICANT: SEG Drilling

10-12-93 #1

ADDRESS: 791 Hamilton Ave

PHONE #: (415) 363-2181

TYPE OF WORK: GAS ELECTRIC WATER

SEWER OTHER (Specify)

NATURE OF WORK: Monitoring Well

APPL 40.00  
EXCV 190.00  
SUST 230.00  
CHECK 230.00

INSPECTION COSTS FOR UTILITY COMPANIES & ADDITIONAL INSPECTION HOURS WILL BE CHARGED IN CONFORMANCE WITH THE MASTER FEE SCHEDULE.

OFFICIAL USE ONLY UTILITY COMPANY REPORT

I hereby affirm that I am exempt from the Contractor's License Law for the fol (Sec. 7031.5. Business and Professions Code: Any city or county which req to construct, alter, improve, demolish, or repair any structure, prior to it's issi requires the applicant for such permit to file a signed statement that he is lice to the provisions of the Contractor's License Law Chapter 9 (commencing v of Division 3 of the Business and Professions Code, or that he is exempt the basis for the alleged exemption. Any violation of Section 7031.5 by an permit subjects the applicant to a civil penalty of not more than \$500):

FROM DATE OF ISSUE UNLESS EXTENSION GRANTED LIC WORKS.

ITEM 2  
20L 1940 14:03T

DATE 8-19-93

Supervisor  
Completion Date APPL 40.00

CITY INSPECTOR'S REPORT 0.00

BACKFILL 230 PAVING

Initials CHECK 230.00

Hours ITEM 2

Date #1 20L 1940 14:03T

Concrete

Asphalt

Sidewalk

Size of Cut: Sq. Ft. Inches

Paved by Type

Bill No.

Charges Backfill

Paving

Paving Insp.

Traffic Striping Replaced Date

APPROVED JWO 10-12-93

Engineering Services Date

Planning Date

Field Services Date

Construction Date

Traffic Engineering Date

Electrical Engineering Date

DIRECTOR OF PUBLIC WORKS

APPROVED BY: JWO 10-12-93

DATE: 10-12-93

EXTENSION GRANTED BY:

DATE:

OWNER/BUILDER

I, as owner of the property, or my employees with wages as their sole compensation, will do the work, and the structure is not intended or offered for sale (Sec. 70044, Business and Professions Code: The Contractor's License Law does not apply to an owner of property who builds or improves thereon, and who does such work himself or through his own employees, provided that such improvements are not intended or offered for sale. If, however, the building or improvement is sold within one year of completion, the owner-builder will have the burden of proving that he did not build or improve for the purpose of sale).

LIMITED OPERATION AREA (7AM - 9AM/4PM - 6PM)

DATE STREET LAST RESURFACED

SPECIAL PAVING DETAIL REQUIRED

24-HOUR EMERGENCY PHONE NUMBER

PERMIT NOT VALID WITHOUT 24 HOUR NUMBER.

Telephone 238-3651 Forty-eight (48) HOURS BEFORE ACTUAL CONSTRUCTION.

ATTENTION \*

State law requires that contractor/owner call Underground Service Alert two working days before excavating to have below-ground utilities located. This permit is not valid unless applicant has secured an inquiry identification number issued by Underground Service Alert.

Call Toll Free: 800-642-2444 USA ID Number 315003

WORKER'S COMPENSATION

I hereby affirm that I have a certificate of consent to self-insure, or a certificate of Workers' Compensation Insurance, or a certified copy thereof (Sec. 3800, Lab C).

Policy # 1172920-93 Company Name SEG Drilling

Certified copy is hereby furnished.

Certified copy is filed with the city building inspection dept.

Signature Date 10/12/93

(This section need not be completed if the permit is for one hundred dollars (\$100) or less.)

I certify that in the performance of the work for which this permit is issued, I shall not employ any person in any manner so as to become subject to the Workers' Compensation Laws of California.

Signature Date

This permit issued pursuant to all provisions of Chapter 6, Article 2 of the Oakland Municipal Code.

This permit is granted upon the express condition that the permittee shall be responsible for all claims and liabilities arising out of work performed under the permit or arising out of permittee's failure to perform the obligations with respect to street maintenance. The permittee shall, and by acceptance of the permit agrees to defend, indemnify, save and hold harmless the City, its officers and employees, from and against any and all suits, claims or actions brought by any person for or on account of any bodily injuries, disease or illness or damage to persons and/or property sustained or arising in the construction of the work performed under the permit or in consequence of permittee's failure to perform the obligations with respect to street maintenance.

CONTRACTOR

I hereby affirm that I am licensed under provisions of Chapter 9 (commencing with Section 7000) of Division 3 of the Business and Professions Code, and my license is in full force and effect.

LICENSE # AND CLASS CITY BUSINESS TAX #

Xo Signature of Contractor, Owner or Agent Date 10/12/93

Agent for Contractor Owner

NOTICE TO APPLICANT. If, after making this Certificate of Exemption, you should become subject to the Workers' Compensation provisions of the Labor Code, you must forthwith comply with such provisions or this permit shall be deemed revoked.

DUPLICATE  
RETAIN THIS COPY

No. 252717

NOTICE OF INTENT

DEPARTMENT OF WATER RESOURCES: \_\_\_\_\_, 19 \_\_\_\_

On or about \_\_\_\_\_, 19 \_\_\_\_, I plan to commence drilling  deepening   
reconditioning  or destruction of  a cable  rotary  or other \_\_\_\_\_ type  
well, for \_\_\_\_\_ purposes. The work will be done for  
(Proposed use of well)

\_\_\_\_\_  
(Name of client and address)  
Approximate location of well is \_\_\_\_\_

\_\_\_\_\_  
(Legal subdivision or by reference to some landmark)  
\_\_\_\_\_, in \_\_\_\_\_ County.

\_\_\_\_\_  
(Well driller) Lic. No. \_\_\_\_\_

\_\_\_\_\_  
(Address)  
Need log forms  Need notice cards

ORIGINAL  
FILE WITH DEPARTMENT OF WATER RESOURCES

No. 252717

NOTICE OF INTENT

DEPARTMENT OF WATER RESOURCES: Nov. 11, 19 93

On or about Nov. 19, 19 93, I plan to commence drilling  deepening   
reconditioning  or destruction of  a cable  rotary  or other \_\_\_\_\_ type  
well, for GROUNDWATER MONITORING purposes. The work will be done for  
(Proposed use of well)

PREISBACH ASSOCIATES, 36-D BLUFF RD, WATSONVILLE, CA, 95076  
(Name of client and address)  
Approximate location of well is 8410 AMELIA STREET, OAKLAND

\_\_\_\_\_  
(Legal subdivision or by reference to some landmark)  
\_\_\_\_\_, in ALAMEDA County.

SFB DRILLING Lic. No. 589237

791 AMELIA, MENLO PARK  
(Address) 94025-1512

Need log forms  Need notice cards

CITY OF OAKLAND



OFFICE OF PLANNING & BUILDING • 1330 BROADWAY • OAKLAND, CALIFORNIA 94612  
July 20, 1993

Building Services Department

(510) 238-3102  
TDD 839-6451  
FAX 238 3586

Mr. Timothy M. Babcock  
Environmental Bio-systems, Inc.  
c/o Dreisbach Family Trust  
30028 Industrial Parkway, S.W., Suite C  
Hayward, CA 94544

Dear Mr. Babcock:

Re: Minor Encroachment Permit for 8410 Amelia Street

Enclosed are the Minor Encroachment Permit and Agreement and the Conditions For Granting a Minor Encroachment Permit allowing you to place two monitoring wells within the public right-of-way of Amelia Street.

Before the permit will become effective, however, it must be signed by the person(s) having the legal authority to do so, properly notarized with notary acknowledgement attached, and returned to this office to the attention of Roger Tam for recordation.

You must also obtain a street excavation permit from the Engineering Information Counter, 2nd Floor, 1330 Broadway, prior to the start of the proposed work in the City right-of-way.

If you have any questions, please call Roger Tam at 238-2110.

Very truly yours,

KAY WINER  
Director of Planning & Building

By   
PHILIP A. GRUBSTICK  
Engineering Services Manager

Enclosures

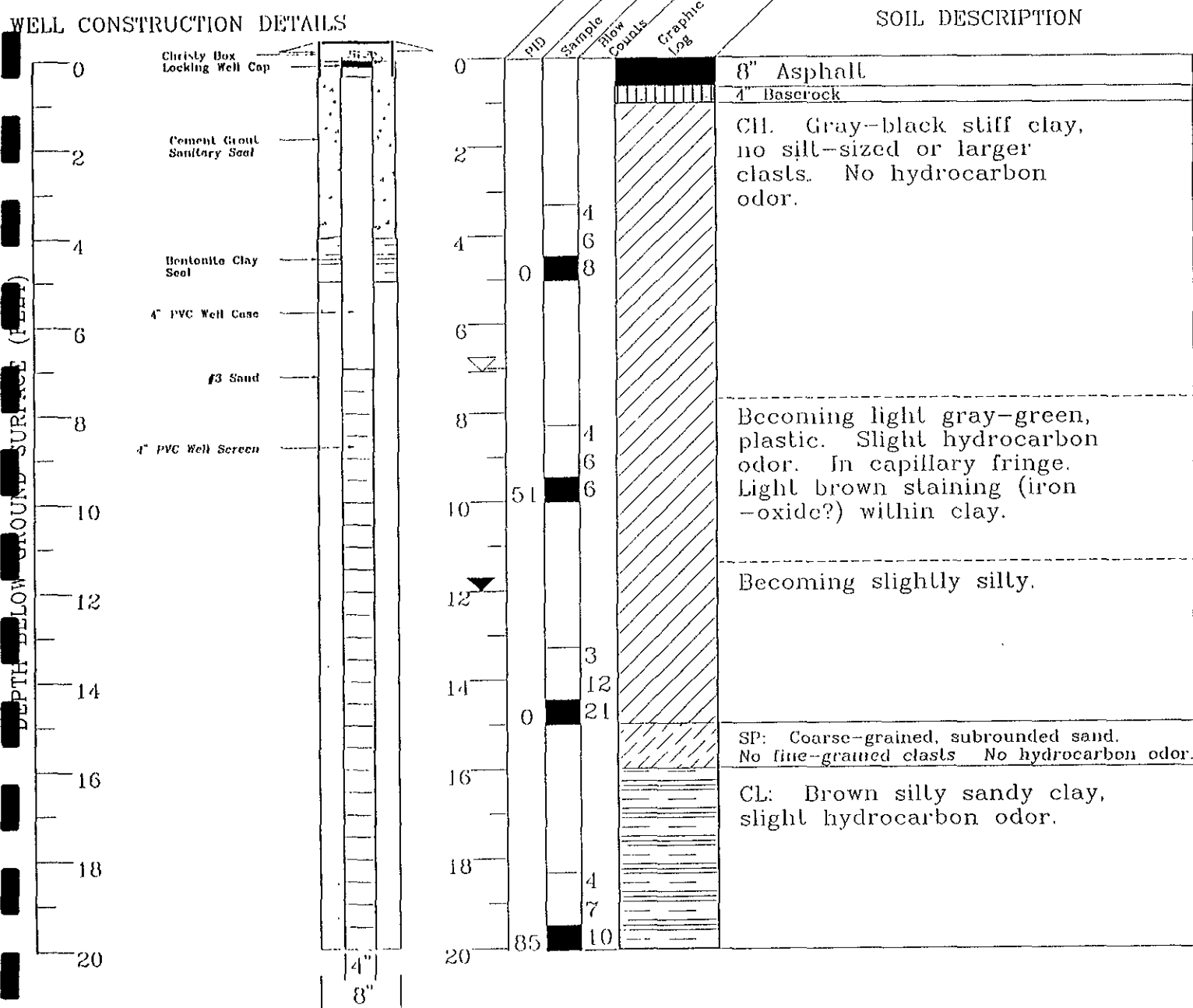
RT:rt

FILE: AMELIA.MWCOVER-LET

APPENDIX B:  
SOIL BORING  
LITHOLOGIC LOGS



# LOG OF SOIL BORING MW2 WITH WELL CONSTRUCTION DETAILS



Logged by: D. Sadoff      Drilling Contractor: Hazmat West      Sanitary Seal/Backfill: Cement  
 Inspector: Barney Chan      Drilling Method: Hollow Stem Auger      Sampler Type: Split Spoon  
 Date(s): 12/2/93      Driller: Jeff, Darrell      Total Boring Depth: 25-Feet



**ENVIRONMENTAL  
BIO-SYSTEMS, INC.**

## EXPLANATION

- water level during drilling
- potentiometric water level
- drill sample
- chemical analysis sample
- sieve sample
- grab sample
- gradational
- NR no recovery
- CONTACTS:**
- certain
- approximate
- uncertain

**DREISBACH ENTERPRISES, INC.**  
 8410 AMELIA STREET  
 OAKLAND, CALIFORNIA  


---

 PROJECT #079-237-02A  

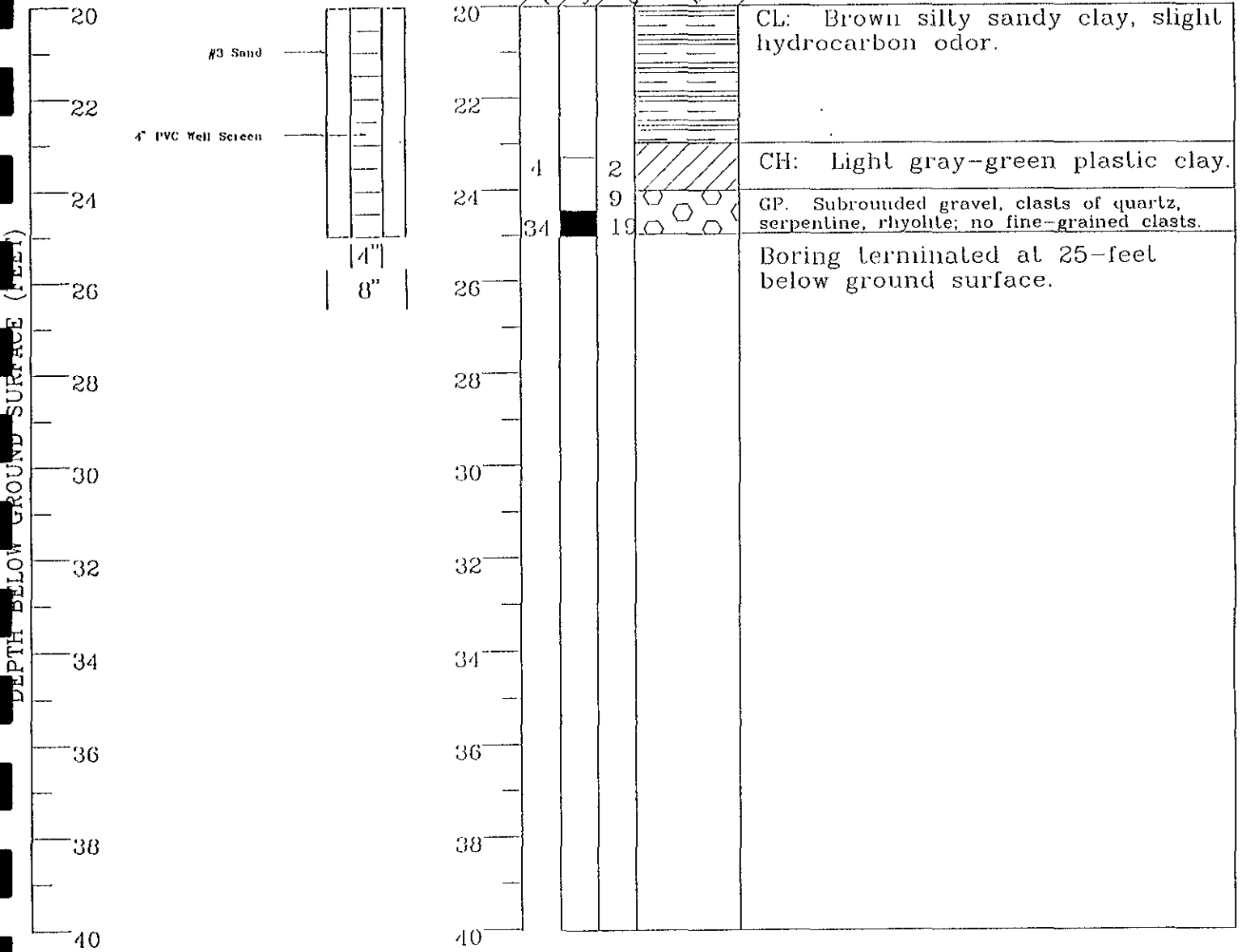

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**DREISBACH ENTERPRISES, INC.**  
 36D BLUFF ROAD  
 WATSONVILLE, CALIFORNIA

# LOG OF SOIL BORING MW2 WITH WELL CONSTRUCTION DETAILS

## WELL CONSTRUCTION DETAILS

## SOIL DESCRIPTION



Logged by: D. Sadoff  
 Inspector: Barney Chan  
 Date(s): 12/2/93

Drilling Contractor: Hazmat West  
 Drilling Method: Hollow Stem Auger  
 Driller: Jeff, Darrell

Sanitary Seal/Backfill: Cement  
 Sampler Type: Split Spoon  
 Total Boring Depth: 25-Feet



**ENVIRONMENTAL  
BIO-SYSTEMS, INC.**

### EXPLANATION

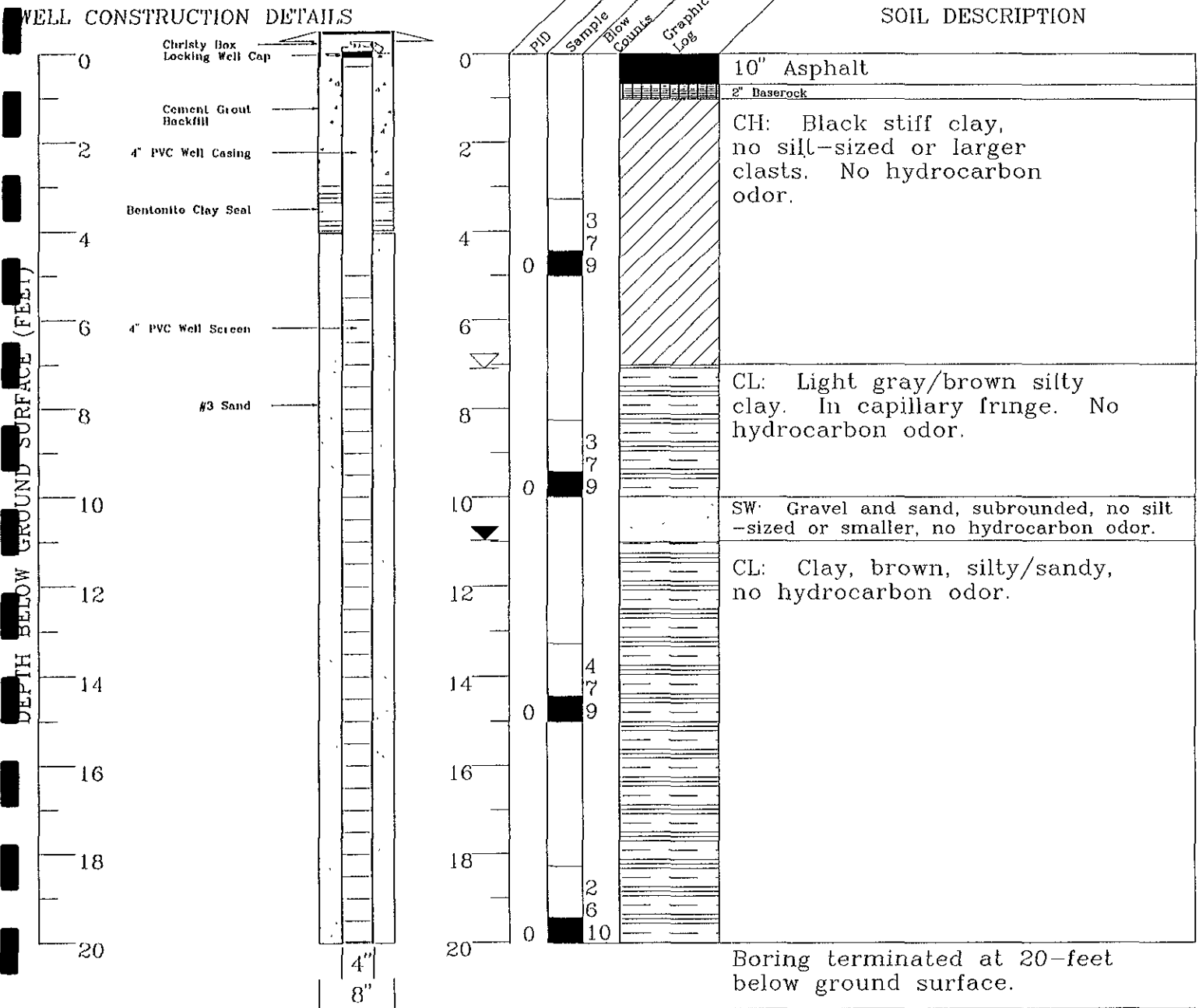
- |                               |                   |
|-------------------------------|-------------------|
| ▼ water level during drilling | ▨ gradational     |
| ⊗ potentiometric water level  | NR no recovery    |
| □ drill sample                | CONTACTS          |
| ■ chemical analysis sample    | — certain         |
| ⊠ sieve sample                | - - - approximate |
| ⊡ grab sample                 | · · · uncertain   |

DREISBACH ENTERPRISES, INC.  
 8410 AMELIA STREET  
 OAKLAND, CALIFORNIA

PROJECT #079-237-02A

DREISBACH ENTERPRISES, INC.  
 36D BLUFF ROAD  
 WATSONVILLE, CALIFORNIA

# LOG OF SOIL BORING MW3 WITH WELL CONSTRUCTION DETAILS



Logged by: D. Sadoff  
Inspector: Barney Chan  
Date(s): 12/2/93

Drilling Contractor: Hazmat West  
Drilling Method: Hollow Stem Auger  
Driller: Jeff, Darrell

Sanitary Seal/Backfill: Cement  
Sampler Type: Split Spoon  
Total Boring Depth: 20-Feet



**ENVIRONMENTAL  
BIO-SYSTEMS, INC.**

### EXPLANATION

- |  |   |
|--|---|
| <ul style="list-style-type: none"> <li> water level during drilling</li> <li> potentiometric water level</li> <li> drill sample</li> <li> chemical analysis sample</li> <li> sieve sample</li> <li> grab sample</li> </ul> | <ul style="list-style-type: none"> <li> gradational</li> <li>NR no recovery</li> <li><b>CONTACTS</b></li> <li> certain</li> <li> approximate</li> <li> uncertain</li> </ul> |
|--|---|

DREISBACH ENTERPRISES, INC.  
8410 AMELIA STREET  
OAKLAND, CALIFORNIA

PROJECT #079-237-02A

DREISBACH ENTERPRISES, INC.  
36D BLUFF ROAD  
WATSONVILLE, CALIFORNIA

APPENDIX C:  
**GROUND WATER SAMPLING**  
**FIELD LOGS**



GROUND WATER SAMPLE COLLECTION LOG FOR WELL No. MW1

Project Name: Dreisbach Enterprises  
 Project No.: 079-237-02A  
 Date and Time Collected: 12/8/93  
 Sample No.: MW1

Sample Collected by: \_\_\_\_\_  
 Weather: rainy, cool

EQUIPMENT

Purging Method/Equipment: bailer  
 Sampling Method/ Equipment: bailer

PURGING INFORMATION

Casing Diameter (A): 4" Unit Casing Volume ( Gal/Linear Ft. ) (B): \_\_\_\_\_  
 Total Depth to Well Bottom (C): 23.60 Depth to Water (D): 6.84  
 Length of Water Column in Casing (E) = (C) - (D) = \_\_\_\_\_ - \_\_\_\_\_ = 21.76  
 Casing Water Volume (F) = (B) × (E) = \_\_\_\_\_ × \_\_\_\_\_ = \_\_\_\_\_  
 Purged Well Volume (G) = (F) × 4 = 58  
 2"= 0.17 (Gal/Lin.Ft.); 3"= 0.38 (Gal/Lin.Ft.); 4"= 0.66 (Gal/Lin.Ft.); 6"= 1.50 (Gal/Lin.Ft.)

Volume	Temperature	Conductance (×1000)	pH	Water Description	Time
5	64.2	1.11	6.52	cloudy	9:56
10	64.5	1.08	6.48	cloudy	10:00
20	63.7	1.06	6.51	cloudy	10:04
30	63.5	1.03	6.47	cloudy	10:09
40	63.5	1.03	6.47	cloudy	10:15
50	63.4	1.02	6.45	cloudy	10:24

COMMENTS:

Orangish sediment/product(?) on top of H2O. Did not dewater  
well-quick recharge  
 \_\_\_\_\_  
 \_\_\_\_\_

GROUND WATER SAMPLE COLLECTION LOG FOR WELL No. MW2

Project Name: Dreisbach Enterprises Sample Collected by: \_\_\_\_\_  
 Project No.: 079-237-02A Weather: rainy, cool  
 Date and Time Collected: 12/8/93 \_\_\_\_\_  
 Sample No.: MW2

**EQUIPMENT**

Purging Method/Equipment: bailer  
 Sampling Method/ Equipment: bailer

**PURGING INFORMATION**

Casing Diameter (A): 4" Unit Casing Volume ( Gal/Linear Ft. ) (B): \_\_\_\_\_  
 Total Depth to Well Bottom (C): 23.6 Depth to Water (D): 7.13  
 Length of Water Column in Casing (E) = (C) - (D) = \_\_\_\_\_ - \_\_\_\_\_ = \_\_\_\_\_  
 Casing Water Volume (F) = (B) × (E) = \_\_\_\_\_ × \_\_\_\_\_ = \_\_\_\_\_  
 Purged Well Volume (G) = (F) × 4 = 44  
 2"= 0.17 (Gal/Lin.Ft.); 3"= 0.38 (Gal/Lin.Ft.); 4"= 0.66 (Gal/Lin.Ft.); 6"= 1.50 (Gal/Lin.Ft.)

Volume	Temperature	Conductance (×1000)	pH	Water Description	Time
5	62.3	1.32	7.30	silty	9:09
10	63.2	1.26	7.20	"	9:15
20	62.7	1.31	7.19	"	9:22
30	62.6	1.37	7.12	"	9:44
40	63.0	1.21	6.89	"	9:50

**COMMENTS:**

Dewatered well @ 22 gallons @ 9:24. Slow recharge  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

GROUND WATER SAMPLE COLLECTION LOG FOR WELL No. MW3

Project Name: Dreisbach Enterprises Sample Collected by: \_\_\_\_\_  
 Project No.: 079-237-02A Weather: rainy, cool  
 Date and Time Collected: 12/8/93  
 Sample No.: MW3

**EQUIPMENT**

Purging Method/Equipment: bailer  
 Sampling Method/ Equipment: bailer

**PURGING INFORMATION**

Casing Diameter (A): 4" Unit Casing Volume ( Gal/Linear Ft. ) (B): \_\_\_\_\_  
 Total Depth to Well Bottom (C): 19.10 Depth to Water (D): 7.12  
 Length of Water Column in Casing (E) = (C) - (D) = \_\_\_\_\_ = \_\_\_\_\_  
 Casing Water Volume (F) = (B) × (E) = \_\_\_\_\_ × \_\_\_\_\_ = \_\_\_\_\_  
 Purged Well Volume (G) = (F) × 4 = 32  
 2"= 0.17 (Gal/Lin.Ft.); 3"= 0.38 (Gal/Lin.Ft.); 4"= 0.66 (Gal/Lin.Ft.); 6"= 1.50 (Gal/Lin.Ft.)

Volume	Temperature	Conductance (×1000)	pH	Water Description	Time
5	63.9	1.25	8.35	cloudy	8:44
10	62.3	1.14	8.20	"	8:50
20	63.7	1.11	8.15	"	8:55
30	61.5	1.06	7.91	"	8:59

**COMMENTS:**

Dewatered well @ 8:57, 27 gallons. Moderate recharge  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

APPENDIX D:  
LABORATORY ANALYTICAL REPORTS  
AND CHAIN OF CUSTODY DOCUMENTATION



# American Environmental Network

## Certificate of Analysis

DOHS Certification: 1172

AIIA Accreditation: 94523-001

PAGE 1

ENVIRONMENTAL BIO-SYSTEMS, INC.  
30028 INDUSTRIAL PKWY., S.W., STE. C  
HAYWARD, CA 94544

ATTN: DAVE SADOFF

CLIENT PROJ. ID: 079-237-02A  
PROJ. NAME: DREISBACH

REPORT DATE: 12/20/93

DATE SAMPLED: 12/02/93

DATE RECEIVED: 12/03/93

AEN JOB NO: 9312045

### PROJECT SUMMARY:

On December 3, 1993, this laboratory received four (4) soil samples.

Client requested samples be analyzed for Purgeable Hydrocarbons as Gasoline, Benzene, Toluene, Ethylbenzene and Total Xylenes by EPA Methods 8020, 5030 GCFID. Sample identification, results, and dates analyzed are summarized on the following pages.

All laboratory quality control parameters were found to be within established limits. Batch QC data is included at the end of this report.

If you have any questions, please contact Client Services at (510) 930-9090.



Larry Klein  
General Manager

Results FAXed 12/14/93

## ENVIRONMENTAL BIO-SYSTEMS

SAMPLE ID: MW2-5'  
AEN LAB NO: 9312045-01  
AEN WORK ORDER: 9312045  
CLIENT PROJ. ID: 079-237-02A

DATE SAMPLED: 12/02/93  
DATE RECEIVED: 12/03/93  
REPORT DATE: 12/20/93

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
BTEX & Gasoline HCs (Soil)	EPA 8020				
Benzene	71-43-2	42 *	5	ug/Kg	12/13/93
Toluene	108-88-3	ND	5	ug/Kg	12/13/93
Ethylbenzene	100-41-4	ND	5	ug/Kg	12/13/93
Xylenes, Total	1330-20-7	ND	5	ug/Kg	12/13/93
Purgeable HCs as Gasoline	5030/GCFID	1.1 *	0.2	mg/Kg	12/13/93

ND = Not detected

\* = Indicates value above reporting limit

## ENVIRONMENTAL BIO-SYSTEMS

SAMPLE ID: MW2-10'  
AEN LAB NO: 9312045-02  
AEN WORK ORDER: 9312045  
CLIENT PROJ. ID: 079-237-02A

DATE SAMPLED: 12/02/93  
DATE RECEIVED: 12/03/93  
REPORT DATE: 12/20/93

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
BTEX & Gasoline HCs (Soil)	EPA 8020				
Benzene	71-43-2	270 *	5	ug/Kg	12/14/93
Toluene	108-88-3	20 *	5	ug/Kg	12/14/93
Ethylbenzene	100-41-4	100 *	5	ug/Kg	12/14/93
Xylenes, Total	1330-20-7	10 *	5	ug/Kg	12/14/93
Purgeable HCs as Gasoline	5030/GCFID	5.6 *	0.2	mg/Kg	12/14/93

ND = Not detected

\* = Indicates value above reporting limit

## ENVIRONMENTAL BIO-SYSTEMS

SAMPLE ID: MW3-5'  
AEN LAB NO: 9312045-03  
AEN WORK ORDER: 9312045  
CLIENT PROJ. ID: 079-237-02A

DATE SAMPLED: 12/02/93  
DATE RECEIVED: 12/03/93  
REPORT DATE: 12/20/93

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
BTEX & Gasoline HCs (Soil)	EPA 8020				
Benzene	71-43-2	ND	5	ug/Kg	12/14/93
Toluene	108-88-3	ND	5	ug/Kg	12/14/93
Ethylbenzene	100-41-4	ND	5	ug/Kg	12/14/93
Xylenes, Total	1330-20-7	ND	5	ug/Kg	12/14/93
Purgeable HCs as Gasoline	5030/GCFID	ND	0.2	mg/Kg	12/14/93

ND = Not detected

\* = Indicates value above reporting limit

## ENVIRONMENTAL BIO-SYSTEMS

SAMPLE ID: MW3-10'  
AEN LAB NO: 9312045-04  
AEN WORK ORDER: 9312045  
CLIENT PROJ. ID: 079-237-02A

DATE SAMPLED: 12/02/93  
DATE RECEIVED: 12/03/93  
REPORT DATE: 12/20/93

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
BTEX & Gasoline HCs (Soil)	EPA 8020				
Benzene	71-43-2	ND	5	ug/Kg	12/14/93
Toluene	108-88-3	ND	5	ug/Kg	12/14/93
Ethylbenzene	100-41-4	ND	5	ug/Kg	12/14/93
Xylenes, Total	1330-20-7	ND	5	ug/Kg	12/14/93
Purgeable HCs as Gasoline	5030/GCFID	ND	0.2	mg/Kg	12/14/93

ND = Not detected

\* = Indicates value above reporting limit

## QUALITY CONTROL DATA

CLIENT PROJ. ID: 079-237-02A

AEN JOB NO: 9312045

INSTRUMENT: H

SURROGATE STANDARD RECOVERY SUMMARY  
METHOD: EPA 8020, 5030 GCFID  
(SOIL MATRIX)

Date Analyzed	SAMPLE IDENTIFICATION		SURROGATE RECOVERY (PERCENT)
	Client Id.	Lab Id.	Fluorobenzene
12/13/93	MW2-5'	01	100
12/14/93	MW2-10'	02	99
12/14/93	MW3-5'	03	97
12/14/93	MW3-10'	04	98

## CURRENT QC LIMITS

<u>ANALYTE</u>	<u>PERCENT RECOVERY</u>
Fluorobenzene	(70-115)

## QUALITY CONTROL DATA

DATE ANALYZED: 12/12/93  
 SAMPLE SPIKED: 9312056-11  
 CLIENT PROJ. ID: 079-237-02A

AEN JOB NO: 9312045  
 INSTRUMENT: H

MATRIX SPIKE RECOVERY SUMMARY  
 METHOD: EPA 5030 GCFID  
 (SOIL MATRIX)

ANALYTE	Spike Conc. (ug/kg)	Average Percent Recovery	RPD
Benzene	16.6	103	1
Toluene	65.7	101	<1
Hydrocarbons as Gasoline	1000	79	5

## CURRENT QC LIMITS (Revised 05/14/92)

<u>Analyte</u>	<u>Percent Recovery</u>	<u>RPD</u>
Benzene	(79-125)	10
Toluene	(84-117)	10
Gasoline	(54-124)	15

RPD = Relative Percent Difference

Daily method blanks for all associated analytical runs showed no contamination over the reporting limit.

\*\*\* END OF REPORT \*\*\*



**ENVIRONMENTAL BIO-SYSTEMS, INC.**  
 Innovative Solutions for a Better Environment  
 30028 Industrial Pkwy., S.W.  
 Suite C  
 Hayward, CA 94544

**CHAIN OF CUSTODY**

931207298

PROJECT NUMBER  
079-237-02A

CLIENT  
DREIBACH

SITE  
8540 AMELIA  
OAKLAND, CA

COMPOSITE	ANALYSIS					
TPHg + BTEX						

ALL SAMPLES TO BE ANALYZED USING METHODS AND DETECTION LIMITS ESTABLISHED BY REGION \_\_\_\_\_ OF THE STATE WATER RESOURCES CONTROL BOARD.

INSTRUCTIONS:

SAMPLE I.D.	MATRIX	NUMBER OF CONTAINERS	TURNAROUND	SAMPLE CONDITION	LAB SAMPLE #
01A MW2-5'	SOIL	1	STANDARD		
02A MW2-10'		1			
03A MW3-5'		1			
04A MW3-10'		1			

SAMPLING COMPLETED DATE 12/2/93 TIME 2:59 PM SAMPLING PERFORMED BY DAVE SADOFF

RELEASED BY Dave Sadoff	DATE 12/3/93	TIME 1:17	RECEIVED BY Ron Stallcup	DATE 12/3/93	TIME 117
RELEASED BY Ron Stallcup	DATE 12/3/93	TIME 200	RECEIVED BY Liz L. Pruitt	DATE 12-3-93	TIME 200
RELEASED BY	DATE	TIME	RECEIVED BY	DATE	TIME

SHIPPED VIA DATE SENT TIME SENT COOLER #



# American Environmental Network

## Certificate of Analysis

DOHS Certification: 1172

AHHA Accreditation: 94523-001

PAGE 1

ENVIRONMENTAL BIO-SYSTEMS, INC.  
30028 INDUSTRIAL PKWY., S.W., STE. C  
HAYWARD, CA 94544

ATTN: DAVE SADOFF

CLIENT PROJ. ID: 079-237-02A  
PROJ. NAME: DREISBACH

REPORT DATE: 12/20/93

DATE SAMPLED: 12/08/93

DATE RECEIVED: 12/08/93

AEN JOB NO: 9312101

### PROJECT SUMMARY:

On December 8, 1993, this laboratory received three (3) water samples.

Client requested samples be analyzed for Purgeable Hydrocarbons as Gasoline, Benzene, Toluene, Ethylbenzene and Total Xylenes by EPA Methods 8020, 5030 GCFID. Sample identification, results, and dates analyzed are summarized on the following pages.

All laboratory quality control parameters were found to be within established limits. Batch QC data is included at the end of this report.

If you have any questions, please contact Client Services at (510) 930-9090.

  
\_\_\_\_\_  
Larry Klein  
General Manager

Results FAXed 12/17/93

## ENVIRONMENTAL BIO-SYSTEMS

SAMPLE ID: MW1  
AEN LAB NO: 9312101-01  
AEN WORK ORDER: 9312101  
CLIENT PROJ. ID: 079-237-02A

DATE SAMPLED: 12/08/93  
DATE RECEIVED: 12/08/93  
REPORT DATE: 12/20/93

---

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
BTEX & Gasoline HCs(Water)	EPA 8020				
Benzene	71-43-2	52 *	0.5	ug/L	12/13/93
Toluene	108-88-3	ND	0.5	ug/L	12/13/93
Ethylbenzene	100-41-4	ND	0.5	ug/L	12/13/93
Xylenes, Total	1330-20-7	ND	2	ug/L	12/13/93
Purgeable HCs as Gasoline	5030/GCFID	0.2 *	0.05	mg/L	12/13/93

---

ND = Not detected

\* = Indicates value above reporting limit

## ENVIRONMENTAL BIO-SYSTEMS

SAMPLE ID: MW2  
AEN LAB NO: 9312101-02  
AEN WORK ORDER: 9312101  
CLIENT PROJ. ID: 079-237-02A

DATE SAMPLED: 12/08/93  
DATE RECEIVED: 12/08/93  
REPORT DATE: 12/20/93

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
BTEX & Gasoline HCs(Water)	EPA 8020				
Benzene	71-43-2	2100 *	0.5	ug/L	12/14/93
Toluene	108-88-3	660 *	0.5	ug/L	12/14/93
Ethylbenzene	100-41-4	400 *	0.5	ug/L	12/14/93
Xylenes, Total	1330-20-7	780 *	2	ug/L	12/14/93
Purgeable HCs as Gasoline	5030/GCFID	8.5 *	0.05	mg/L	12/14/93

ND = Not detected

\* = Indicates value above reporting limit

## ENVIRONMENTAL BIO-SYSTEMS

SAMPLE ID: MW3  
AEN LAB NO: 9312101-03  
AEN WORK ORDER: 9312101  
CLIENT PROJ. ID: 079-237-02A

DATE SAMPLED: 12/08/93  
DATE RECEIVED: 12/08/93  
REPORT DATE: 12/20/93

---

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
BTEX & Gasoline HCs(Water)	EPA 8020				
Benzene	71-43-2	ND	0.5	ug/L	12/14/93
Toluene	108-88-3	ND	0.5	ug/L	12/14/93
Ethylbenzene	100-41-4	ND	0.5	ug/L	12/14/93
Xylenes, Total	1330-20-7	ND	2	ug/L	12/14/93
Purgeable HCs as Gasoline	5030/GCFID	ND	0.05	mg/L	12/14/93

---

ND = Not detected

\* = Indicates value above reporting limit

## QUALITY CONTROL DATA

CLIENT PROJ. ID: 079-237-02A

AEN JOB NO: 9312101

INSTRUMENT: F

SURROGATE STANDARD RECOVERY SUMMARY  
METHOD: EPA 8020, 5030 GCFID  
(WATER MATRIX)

Date Analyzed	SAMPLE IDENTIFICATION		SURROGATE RECOVERY (PERCENT)
	Client Id.	Lab Id.	Fluorobenzene
12/13/93	MW1	01	99
12/14/93	MW2	02	99
12/14/93	MW3	03	97

## CURRENT QC LIMITS

<u>ANALYTE</u>	<u>PERCENT RECOVERY</u>
Fluorobenzene	(70-115)

## QUALITY CONTROL DATA

DATE ANALYZED: 12/10/93  
 SAMPLE SPIKED: 9312021-04  
 CLIENT PROJ. ID: 079-237-02A

AEN JOB NO: 9312101  
 INSTRUMENT: F

MATRIX SPIKE RECOVERY SUMMARY  
 METHOD: EPA 5030 GCFID  
 (WATER MATRIX)

ANALYTE	Spike Conc. (ug/L)	Average Percent Recovery	RPD
Benzene	9.3	102	4
Toluene	34.0	101	6
Hydrocarbons as Gasoline	500	85	6

## CURRENT QC LIMITS (Revised 05/14/92)

<u>Analyte</u>	<u>Percent Recovery</u>	<u>RPD</u>
Benzene	(81-115)	10
Toluene	(85-112)	9
Gasoline	(72-119)	12

RPD = Relative Percent Difference

Daily method blanks for all associated analytical runs showed no contamination over the reporting limit.

\*\*\* END OF REPORT \*\*\*



# American Environmental Network

DOHS Certification: 1172

PAGE 1

## CERTIFICATE OF ANALYSIS

ENVIRONMENTAL BIO-SYSTEMS, INC.  
30028 INDUSTRIAL PARKWAY, S.W.  
SUITE C  
HAYWARD, CA 94544  
ATTN: DAVE SADOFF

REPORT DATE: 12/21/93

DATE SAMPLED: 11/19/93

DATE RECEIVED: 11/24/93

CLIENT PROJ. ID: 047-271-01A  
PROJ. NAME: PENTASTAR SERVICE, INC.

AEN JOB NO: 9311263

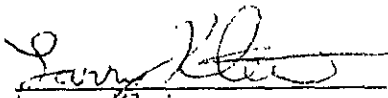
### PROJECT SUMMARY:

On November 24, 1993, this laboratory received one (1) soil sample.

Client requested the sample be analyzed for Lead by EPA Method 7420. Sample identification, result and date analyzed are summarized on the following pages.

All laboratory quality control parameters were found to be within established limits. Batch QC is included at the end of this report.

If you have any questions, please contact Client Services at (510) 930-9090.

  
Larry Klein  
General Manager

Results FAXed 12/07-16/93



## ENVIRONMENTAL BIO-SYSTEMS

SAMPLE ID: S4-BG  
AEN LAB NO: 9311263-01  
AEN WORK ORDER: 9311263  
CLIENT PROJ. ID: 047-271-01A

DATE SAMPLED: 11/19/93  
DATE RECEIVED: 11/24/93  
REPORT DATE: 12/21/93

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
Lead	EPA 7420	6 *	1	mg/kg	12/16/93
#Digestion - soil		-		Prep Date	11/29/93

ND = Not detected

\* = Indicates value above reporting limit

## QUALITY CONTROL DATA

MATRIX: SOIL

CLIENT PROJ. ID: 047-271-01A

AEN JOB NO: 9311263  
SAMPLE SPIKED: SAND  
DIGESTION DATE: 11/29/93

## METHOD BLANK AND SPIKE RECOVERY SUMMARY

COMPOUND	INST./ METHOD	SAND BLANK RESULT (mg/kg)	TRUE VALUE (mg/kg)	AVERAGE % REC.	RPD	QC CONTROL LIMITS	
						% REC. LIMIT	RPD LIMIT
Pb, Lead	V22/7420	ND	50	97	2	79-122	13

RPD = Relative Percent Difference  
ND = Not Detected

Reagent method blank showed no contamination

\*\*\* END OF REPORT \*\*\*

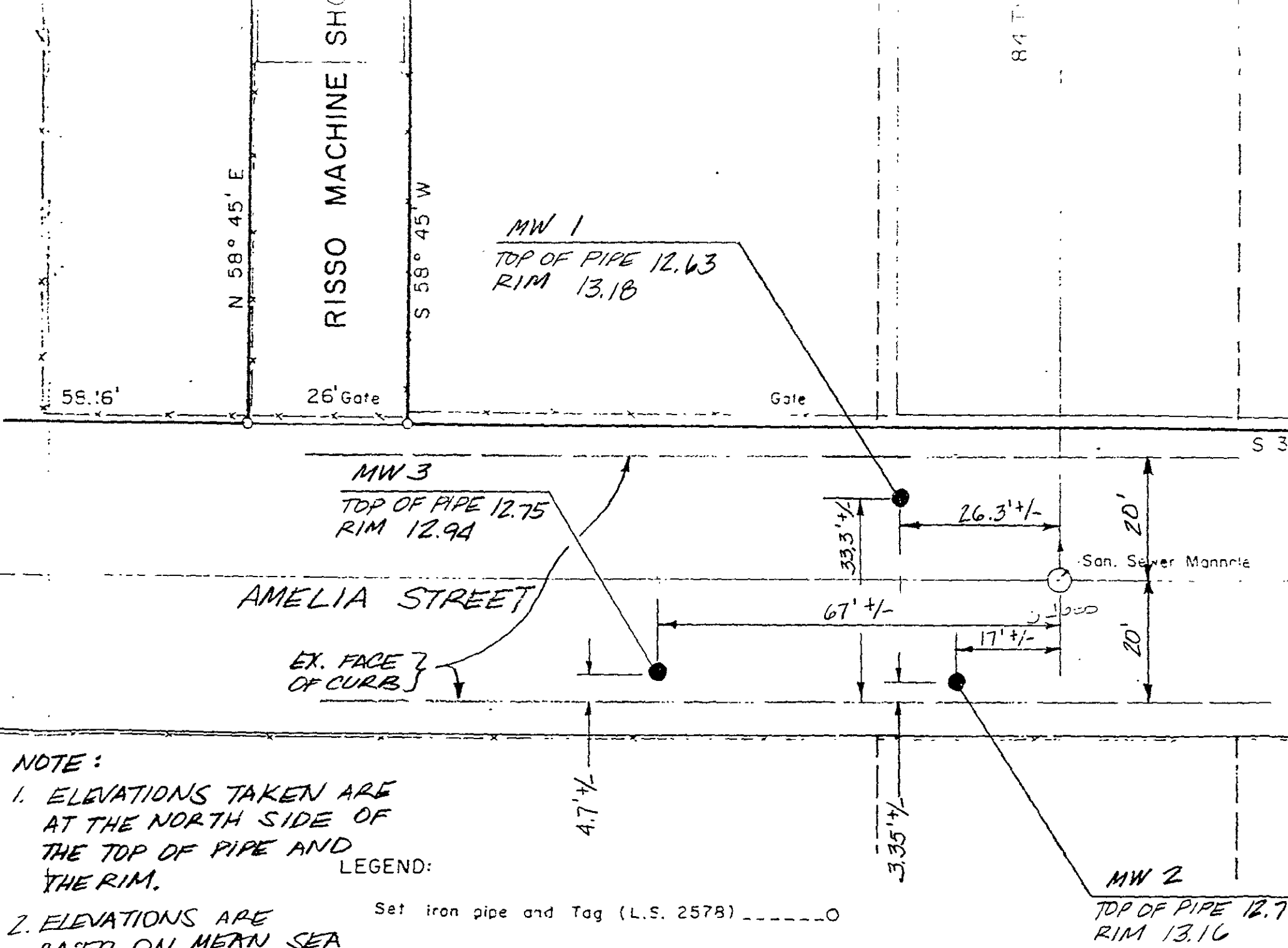


9 March 1994

Dreisbach Enterprises, Inc.  
8410 Amelia Street  
Oakland, CA

Page E

APPENDIX E:  
SURVEYOR'S MAP



NOTE:

- ELEVATIONS TAKEN ARE AT THE NORTH SIDE OF THE TOP OF PIPE AND THE RIM.
- ELEVATIONS ARE BASED ON MEAN SEA LEVEL

LEGEND:  
Set iron pipe and Tag (L.S. 2578) -----○

