

92 JUL 10 July 8, 1992  
517-19, MV070604

**TULLOCH CONSTRUCTION COMPANY**  
3428 Ettie Street  
Oakland, California 94608

**RE: GROUND WATER QUALITY  
RECONNAISSANCE REPORT  
TULLOCH CONSTRUCTION YARD,  
OAKLAND, CALIFORNIA**

Attention: Mr. Brian Tulloch

STID  
3699

Gentlemen:

**1.0 INTRODUCTION**

In accordance with your request, we are pleased to provide this report presenting the results of our ground water quality investigation at the referenced site. The project site, as shown on Figures 1 and 2, is located at 3428 Ettie Street in Oakland, California. The purpose of the investigation was to evaluate ground water quality down-gradient of the former location of two underground gasoline storage tanks, as requested by the Alameda County Department of Environmental Health.

Two 500-gallon gasoline storage tanks were removed from the locations shown on Figure 2. The tanks were reportedly in good condition at the time of removal. Laboratory analysis of soil samples collected below the tanks after removal reportedly did not detect petroleum hydrocarbons. However, total petroleum hydrocarbons as gasoline (TPHg) were detected in soil removed from around the tanks at concentrations up to 1,300 parts per million (ppm). The soils were evidently impacted by tank over-fills. The impacted soils were reportedly removed and appropriately disposed of.

**1.1 Site Background**

This investigation was performed in accordance with our agreement with you dated May 12, 1992. The scope of work included the following.

## 1.2 Scope of Work

- Supervising and logging the drilling of an exploratory boring and construction of a ground water monitoring well within 10 feet down-gradient of the former tank location. The ground water flow direction of the site was characterized as being toward the east, based on an investigation of an adjacent property.
- Well development and collection of ground water samples.
- Laboratory analysis of the samples for TPHg with a scan to distinguish benzene, toluene, ethylbenzene, and xylenes (BTEX) (EPA Test Method 5030/8015/8020).
- Preparation of this report.

## 2.0 SITE INVESTIGATION

On June 5, 1992 an exploratory boring was advanced to a depth of approximately 35 feet at the location shown on Figure 2. Ground water was encountered at a depth of approximately 17 feet. The exploratory boring was converted to a "permanent" ground water monitoring well in accordance with Alameda County Flood Control and Water Conservation District (ACFCWCD) guidelines. During drilling, soil samples collected at 5 foot depth intervals were monitored with an organic vapor meter. As presented on the attached boring log, no readings above 1.0 ppm

## 2.1 Subsurface Exploration

were recorded. The boring log and details regarding our field investigation are included in Appendix A. Well construction and sampling details are included in Appendix B.

A ground water sample collected from the monitoring well was analyzed for TPHg with additional scans to detect BTEX. As shown in Table 1, only a trace level of toluene was detected. No free product or petroleum odors were noted during well installation or sampling. A copy of the laboratory report is attached in Appendix C.

## 2.2 Ground Water Quality

TABLE 1. Laboratory Analysis of Ground Water  
Tulloch Construction Yard  
Oakland, California  
 (concentration in ppb)

<u>Well</u>	<u>Date</u>	<u>Gasoline</u>	<u>Benzene</u>	<u>Toluene</u>	<u>Ethylbenzene</u>	<u>Xylene</u>
MW-1	June 11, 1992	<50	<0.5	██████████	<0.5	<0.5
Laboratory Detection Limit		<50	<0.5	<0.5	<0.5	<0.5
Primary Drinking Water Standard <sup>1</sup>		NE	1.0	██████████	██████████	1,750
State Action Level <sup>2</sup>		NE	0.7	██████████	NE	NE

1. Taken from Column 1 "Organic Constituents, Water Quality Goals - Human Health and Welfare" in A Compilation of Water Quality Goals, RWQCB, May 1989.

2. Taken from Column 4 "Organic Constituents, Water Quality Goals - Human Health and Welfare" In A Compilation of Water Quality Goals, RWQCB, May 1989.

\* Proposed Goal

NE Not Established

### **3.0 CONCLUSIONS AND RECOMMENDATIONS**

Laboratory analysis of ground water at the site did not detect TPHg, benzene, ethylbenzene, or xylenes.

Toluene was detected at a concentration of 0.6 parts per billion ppb, which is just slightly above the laboratory detection limit of 0.5 ppb and well below applicable drinking water standards and action levels.

In our opinion, this data indicates that the former gasoline storage tanks did not significantly impact ground water quality at the site.

To monitor ground water quality on an on-going basis, we recommend that quarterly sampling of the well be performed.

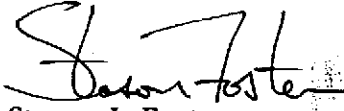
### **4.0 LIMITATIONS**

This report was prepared for the use of Tulloch Construction Company in evaluating the ground water quality at the referenced site at the time of this study. We make no warranty, expressed or implied, except that our services have been performed in accordance with hydrogeological and environmental engineering principles generally accepted at this time and location. The hydrochemical and other data presented in this report can change over time and are applicable only to the time this study was performed.

If you have any questions, please call.

Very truly yours,

**LOWNEY ASSOCIATES**



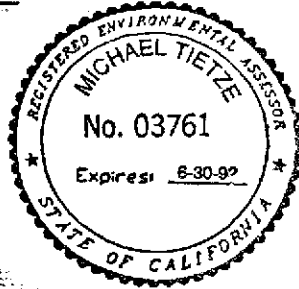
Stason I. Foster



Michael Tietze

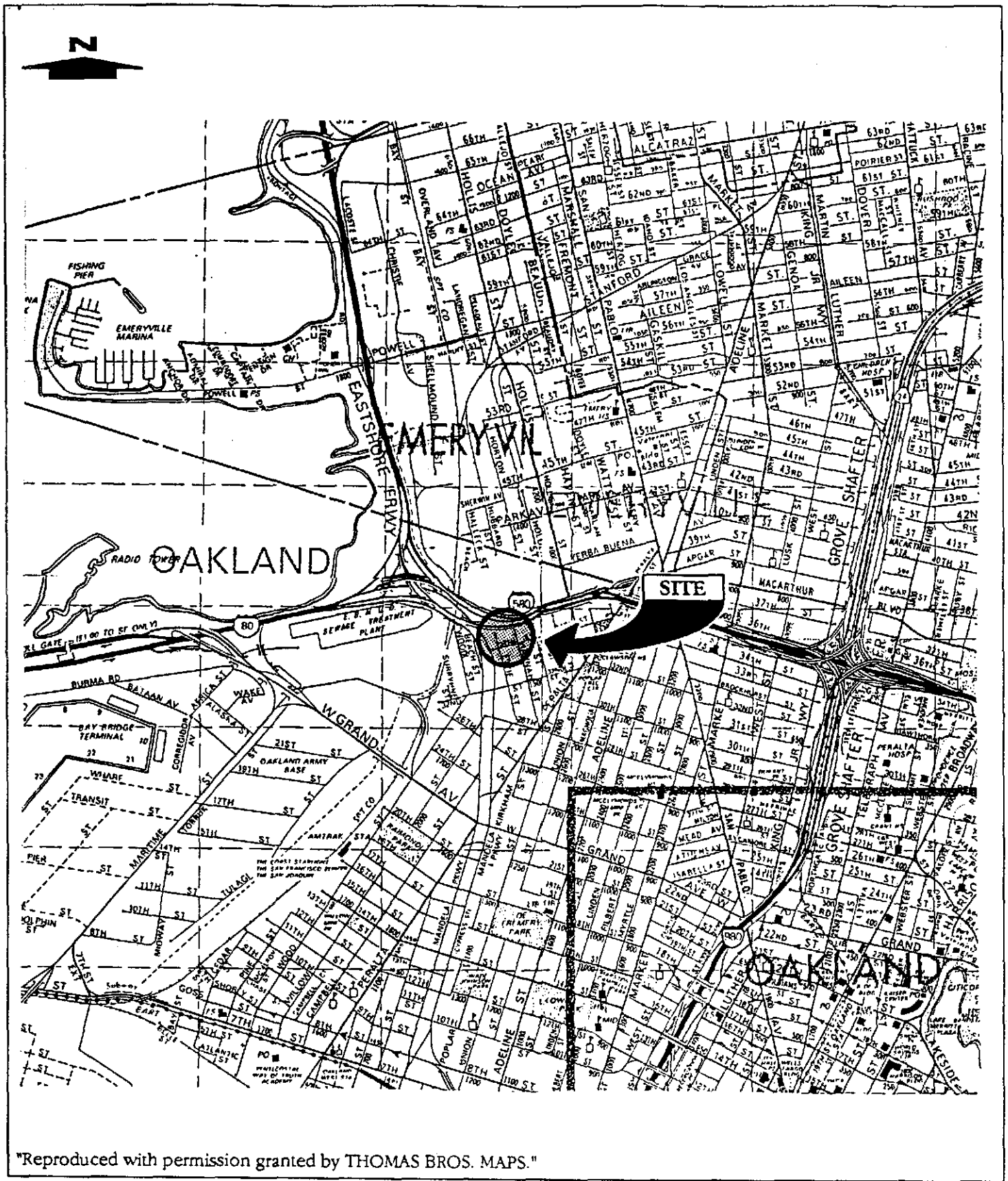
GAR:MT:SIF

Copies: Addressee (2)  
Alameda County Department of Environmental Health (1)  
Attn: Ms. Susan Hugo  
Regional Water Quality Control Board (1)  
Attn: Mr. Richard Hiatt



Glenn A. Romig





"Reproduced with permission granted by THOMAS BROS. MAPS."

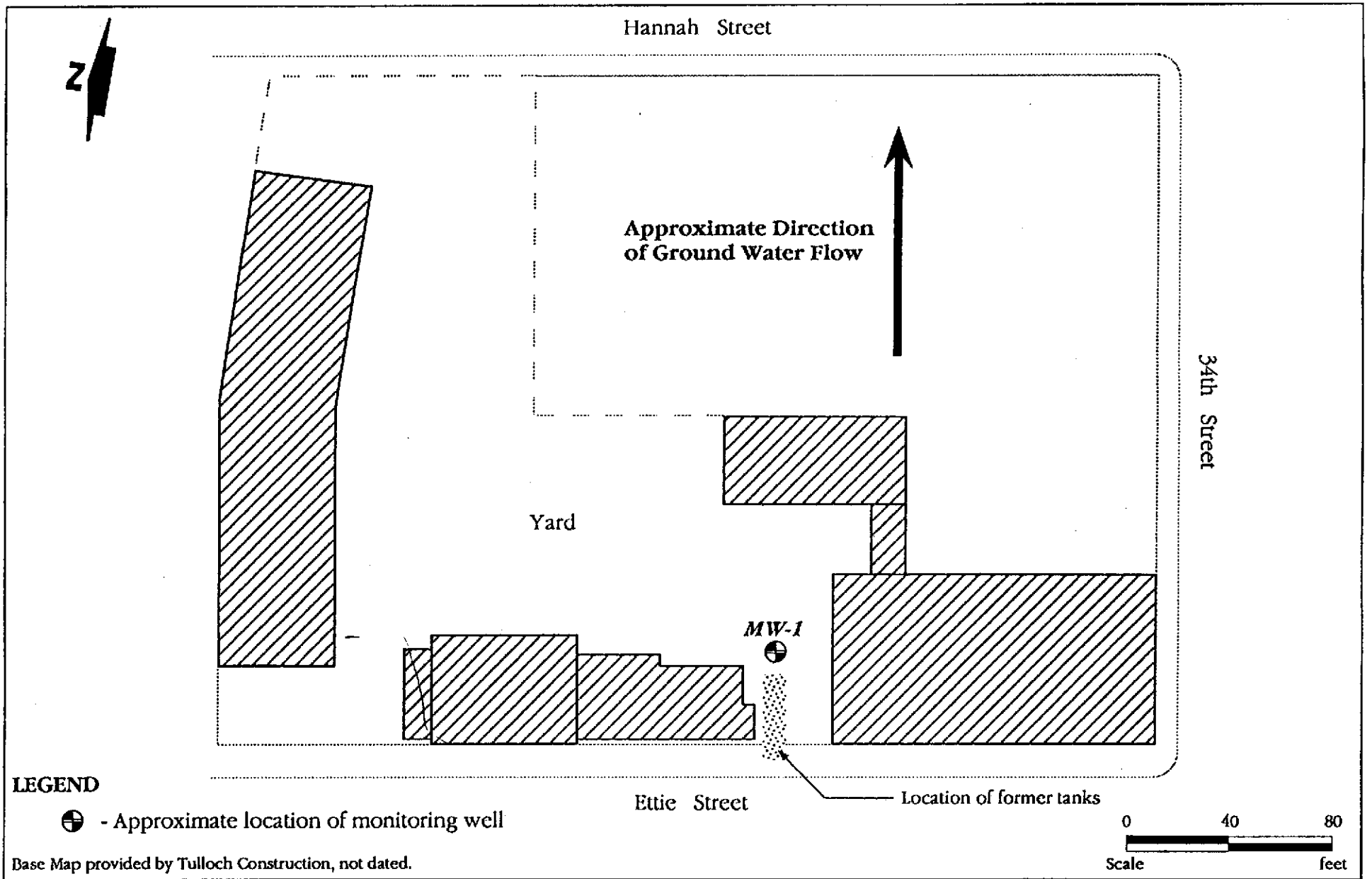
517-19,69 SF'JC

VICINITY MAP

TULLOCH CONSTRUCTION YARD  
Oakland, California

**LOWNEY ASSOCIATES**  
Environmental/Geotechnical/Engineering Services

FIGURE 1  
517-19, June 1992



517-19.6/9 SF\*JC

**SITE PLAN**

**TULLOCH CONSTRUCTION YARD**  
Oakland, California

## APPENDIX A - SUBSURFACE INVESTIGATION

The subsurface investigation was performed using a ~~1.5-inch~~ drill rig equipped with 8-inch hollow-stem augers. The exploratory boring was advanced into the uppermost water-bearing sediments to a depth of ~~25.5~~ feet. Soil ~~samples~~ were collected at 5 foot intervals to the bottom of the boring, which was completed as a ~~9-inch diameter~~ monitoring well. The soils encountered in the boring were logged using the Unified Soil Classification System (ASTM D-2487). The log, as well as a key to the classification of the soil (Figure A-1), are included as part of this appendix.

All sampling equipment was thoroughly cleaned with a tri-sodium phosphate and distilled water solution or steam cleaned. Soil samples were collected using a 2.5-inch O.D. California Modified drive sampler. Upon collection from the sampler, the ends of the brass liner were covered with aluminum foil and then sealed with a plastic cap at each end. The caps were taped airtight and labeled appropriately. These samples were then immediately placed in an ice-cooled chest for storage.

The standard penetration resistance blow counts were obtained by dropping a ~~140-pound hammer~~ through a 30-inch free fall. The blows per foot recorded on the boring logs represent the accumulated number of blows required to drive the sampler the last 12 inches of the interval indicated.



The attached boring logs and related information depict subsurface conditions only at the location indicated and at the particular date designated on the logs. Subsurface conditions at other locations may differ from conditions occurring at the boring location. The passage of time may result in a change in the subsurface conditions due to environmental changes. In addition, any stratification lines on the logs represent the approximate boundary between soil types and the transition may be gradual.

PRIMARY DIVISIONS			SOIL TYPE	LEGEND	SECONDARY DIVISIONS
COARSE GRAINED SOILS MORE THAN HALF OF MATERIAL IS LARGER THAN NO. 200 SIEVE SIZE	GRAVELS MORE THAN HALF OF COARSE FRACTION IS LARGER THAN NO. 4 SIEVE	CLEAN GRAVELS (LESS THAN 5% FINES)	GW		Well graded gravels, gravel-sand mixtures, little or no fines.
			GP		Poorly graded gravels or gravel-sand mixtures, little or no fines.
		GRAVEL WITH FINES	GM		Silty gravels, gravel-sand-silt mixtures, non-plastic fines.
			GC		Clayey gravels, gravel-sand-clay mixtures, plastic fines.
	SANDS MORE THAN HALF OF COARSE FRACTION IS SMALLER THAN NO. 4 SIEVE	CLEAN SANDS (LESS THAN 5% FINES)	SW		Well graded sands, gravelly sands, little or no fines.
			SP		Poorly graded sands or gravelly sands, little or no fines.
		SANDS WITH FINES	SM		Silty sands, sand-silt mixtures, non-plastic fines.
			SC		Clayey sands, sand-clay mixtures, plastic fines.
FINE GRAINED SOILS MORE THAN HALF OF MATERIAL IS SMALLER THAN NO. 200 SIEVE SIZE	SILTS AND CLAYS LIQUID LIMIT IS LESS THAN 50%		ML		Inorganic silts and very fine sands, rock flour, silty or clayey fine sands or clayey silts with slight plasticity.
			CL		Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, silty clays, lean clays.
			OL		Organic silts and organic silty clays of low plasticity.
	SILTS AND CLAYS LIQUID LIMIT IS GREATER THAN 50%		MH		Inorganic silts, micaceous or diatomaceous fine sandy or silty soils, elastic silts.
			CH		Inorganic clays of high plasticity, fat clays.
			OH		Organic clays of medium to high plasticity, organic silts.
HIGHLY ORGANIC SOILS			Pt		Peat and other highly organic soils.

### DEFINITION OF TERMS

SILTS AND CLAY	U.S. STANDARD SERIES SIEVE			CLEAR SQUARE SIEVE OPENINGS			COBBLES	BOULDERS
	200	40	10	4	3/4"	3"		
	SAND			GRAVEL				
	FINE	MEDIUM	COARSE	FINE	COARSE			

### GRAIN SIZES



### SAMPLERS

SAND AND GRAVEL	BLOWS/FOOT*
VERY LOOSE	0 - 4
LOOSE	4 - 10
MEDIUM DENSE	10 - 30
DENSE	30 - 50
VERY DENSE	OVER 50

### RELATIVE DENSITY

SILTS AND CLAYS	STRENGTH†	BLOWS/FOOT*
VERY SOFT	0 - 1/4	0 - 2
SOFT	1/4 - 1/2	2 - 4
FIRM	1/2 - 1	4 - 8
STIFF	1 - 2	8 - 16
VERY STIFF	2 - 4	16 - 32
HARD	OVER 4	OVER 32

### CONSISTENCY

- \* Number of blows of 140 pound hammer falling 30 inches to drive a 2 inch O.D. (1-3/8 inch I.D.) split spoon (ASTM D-1586).
- † Unconfined compressive strength in tons/sq. ft. as determined by laboratory testing or approximated by the standard penetration test (ASTM D-1586), pocket penetrometer, torvane, or visual observation.

### KEY TO EXPLORATORY BORING LOGS Unified Soil Classification System (ASTM D - 2487)

TULLOCH CONSTRUCTION YARD  
Oakland, California

DRILL RIG: CME-75

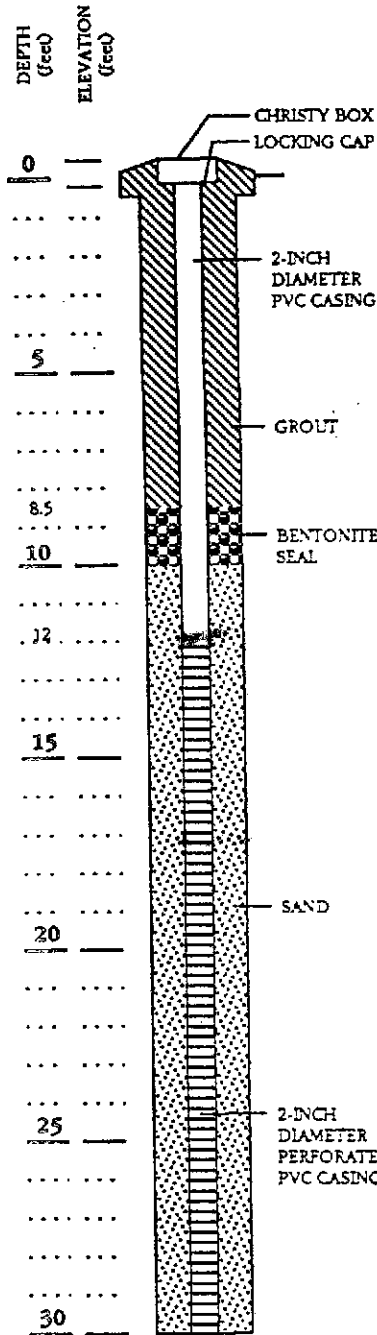
SURFACE ELEVATION: --

LOGGED BY: SF

DEPTH TO GROUNDWATER: 12.0 feet  
(From Surface Elevation)

BORING DIAMETER: 8 inch

DATE DRILLED: 6/5/92



DEPTH (feet)	ELEVATION (feet)	DESCRIPTION	SYMBOL	CONSISTENCY	SOIL TYPE	LEGEND	DEPTH (feet)	SAMPLER	WATER CONTENT (%)	PENETRATION RESISTANCE (BL/WS/FT)	ORGANIC VAPORS (ppm)
0		5 inches concrete slab.									
0 - 5		Dark gray silty clay, high plasticity, slightly moist.	A	Very stiff	CH	[Hatched Pattern]	5		26	< 1.0	
5 - 10		Light brown silty clay, low to moderate plasticity, slightly moist, gray and black molted areas, trace fine to coarse grained sand.	B	Very stiff	CL	[Hatched Pattern]	10		24	< 1.0	- final
10 - 15		Increased fine to coarse sand and fine gravel, wet.					15		28	< 1.0	- initial
15 - 20		Gray silty clay, low plasticity, trace fine to medium grained sand, small saturated lenses.	B	Very stiff	CL	[Hatched Pattern]	20		22	< 1.0	
20 - 25		Decreased sand content, moderate plasticity, saturated.		Very stiff to hard			25		36	< 1.0	
25 - 30		Moist at 30.0 feet.					30		33	< 1.0	

517-19,6/9 SF\*JC

MONITORING WELL LOG - MW-1  
TULLOCH CONSTRUCTION YARD  
Oakland, California

DRILL RIG: CME-75

SURFACE ELEVATION: --

LOGGED BY: SF

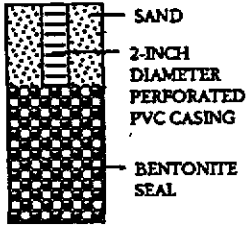
DEPTH TO GROUNDWATER: Not encountered

BORING DIAMETER: 8 inch

DATE DRILLED: 6/5/92

DEPTH (feet)  
ELEVATION (feet)

30  
32  
34  
35  
35.5  
40  
45  
50  
55  
60



DESCRIPTION	SYMBOL	CONSISTENCY	SOIL TYPE	LEGEND	DEPTH (feet)	SAMPLER	WATER CONTENT (%)	PENETRATION RESISTANCE (BLOWS/FT.)	ORGANIC VAPORS (ppm)
Gray silty clay (continued)	B	Very stiff to hard	CL	[Hatched Pattern]				33 < 1.0	
Moist at 35.0 feet.		Very stiff			35			25 < 1.0	
Bottom of Boring = 35.5 feet Completed Well Depth = 32.0 feet					40				
					45				
					50				
					55				
					60				

NOTE: The stratification lines represent the approximate boundary between the soil types. The transition may be gradual.

517-19,69 SF JC

MONITORING WELL LOG - MW-1  
TULLOCH CONSTRUCTION YARD  
Oakland, California

**APPENDIX B - MONITORING WELL INSTALLATION  
DEVELOPMENT AND SAMPLING PROCEDURES**

The boring advanced into the uppermost water-bearing sediments was converted to a "permanent" monitoring well with the installation of 2-inch diameter PVC casing. All casing was threaded, flush-jointed, Schedule 40 PVC with sections containing perforated 0.02-inch slots installed in the lower portion of the well. After the casing was installed, a filter pack composed of Lone Star number 3 sand was placed in the annulus to approximately 2 feet above the slotted casing. A 1.5 foot seal composed of bentonite pellets, topped by 8.5 feet of cement was placed in the annulus above the sandpack to the surface. The well was completed with a secured christy box fitted over the PVC casing, slightly above adjacent grade. In addition, the PVC well casing was fitted with a watertight, locking cap at the surface. Well construction details are shown on the boring log.

Approximately 48-hours after installation, the well was developed by pumping several well volumes of water so that a representative ground water sample could be obtained and fine-grained material was flushed from the well and surrounding soil.

Approximately 48-hours after well development, the ground water was sampled. A submersible pump was used to purge a minimum of three well casing volumes of water from the well. After each well volume, pH, conductivity, and temperature measurements were recorded. These measurements generally stabilize after three to four

well volumes. Samples were collected in appropriate sample bottles, labeled, and immediately placed into an ice-cooled chest for delivery to an analytical laboratory certified by the State for the requested analyses. Chain of custody documentation was maintained for all samples.

All well developing and sampling equipment was cleaned with an aqueous tri-sodium phosphate solution and distilled water or steam cleaned prior to use.

A well sampling/development record for the well was maintained by Lowney Associates. A Copy of this form is attached.

Project Number 517-19 Date 6/11/92

Project Name Tullach Well

Field Geologist/Engineer RT H

Well Number MW-1 Perforated Interval 12-32 (feet)

Well Total Depth (completed) 5 (feet) Casing Diameter 2 (inches)

Ground Elevation \_\_\_\_\_ (feet) Boring Diameter 8 (inches)

Well Location DOWN-GRADE OF FURROW TANKS

Static Water Level Prior to Developing Well 11.75 (depth to water) Static Water Level After Recovery \_\_\_\_\_ (depth to water)

Water Level Measured From Top of Casing  Top of Box

Height of Datum Above (Below) Ground \_\_\_\_\_ (feet) Water Elevation \_\_\_\_\_ (feet MSL)

Three Well Volumes 33 (liter/gal) Well Volume 11 (liter/gal)

Total Volume Produced 33 (liter/gal) Number of Well Volumes 3

Production Rate \_\_\_\_\_ ( /min) Production Time \_\_\_\_\_ (min)

Drawdown Rate \_\_\_\_\_ (feet)

Development Method/Volume \_\_\_\_\_

Sampling Method \_\_\_\_\_

Sample Description \_\_\_\_\_

Sample Deliver  Pick-Up  When \_\_\_\_\_  
Where AMERICAN INC.

Comments  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Well Volumes	pH	Conductivity $\mu S \times 10$	Temp °F
1	6.85	0160	65
2	6.85	0170	65
3	6.90	0170	65
4			
5			
6			
7			
8			
9			
10			

**APPENDIX C - ANALYTICAL RESULTS**

The refrigerated ground water samples and chain of custody documentation were delivered to Anametrix Incorporated of San Jose, California. Attached is a copy of the results and the chain of custody form. Anametrix is certified by the State of California as a Hazardous Waste Testing Laboratory and as an Approved Water and Wastewater Laboratory.





# ZONE 7 WATER AGENCY

5997 PARKSIDE DRIVE

PLEASANTON, CALIFORNIA 94588

VOICE (510) 484-2600

FAX (510) 462-3914

## DRILLING PERMIT APPLICATION

FOR APPLICANT TO COMPLETE

FOR OFFICE USE

LOCATION OF PROJECT 3428 Ethic Street  
Oakland, CA 94608

PERMIT NUMBER 92262

LOCATION NUMBER \_\_\_\_\_

### CLIENT

Name Tulloch Construction  
Address 3428 Ethic St. Phone 510-655-3400  
City Oakland CA Zip 94608

### PERMIT CONDITIONS

Circled Permit Requirements Apply

### APPLICANT

Name Lowmy Associates  
Address 405 Clyde Ave. Phone 415-967-2365  
City Mountain View CA Zip 94043

### TYPE OF PROJECT

Well Construction \_\_\_\_\_ Geotechnical Investigation \_\_\_\_\_  
Cathodic Protection \_\_\_\_\_ General \_\_\_\_\_  
Water Supply \_\_\_\_\_ Contamination \_\_\_\_\_  
Monitoring  Well Destruction \_\_\_\_\_

### PROPOSED WATER SUPPLY WELL USE

Domestic \_\_\_\_\_ Industrial \_\_\_\_\_ Other \_\_\_\_\_  
Municipal \_\_\_\_\_ Irrigation \_\_\_\_\_

### DRILLING METHOD:

Mud Rotary \_\_\_\_\_ Air Rotary \_\_\_\_\_ Auger   
Cable \_\_\_\_\_ Other \_\_\_\_\_

DRILLER'S LICENSE NO. CS7 484288

### WELL PROJECTS

Drill Hole Diameter 8 in. Maximum \_\_\_\_\_  
Casing Diameter 2 in. Depth 30 ft.  
Surface Seal Depth 5-10 ft. Number 1

### GEOTECHNICAL PROJECTS

Number of Borings \_\_\_\_\_ Maximum \_\_\_\_\_  
Hole Diameter \_\_\_\_\_ in. Depth \_\_\_\_\_ ft.

ESTIMATED STARTING DATE June 1  
ESTIMATED COMPLETION DATE June 1

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

### A. GENERAL

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

### B. WATER 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 well or 20 feet for domestic and irrigation wells unless a lesser depth is specially approved. Minimum seal depth for monitoring wells is the maximum depth practicable or 20 feet.

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.

Approved

Wyman Hong  
Wyman Hong

Date 26 May

APPLICANT'S SIGNATURE

[Signature] Date 5/17/92

P172

**ANAMETRIX INC**

Environmental & Analytical Chemistry  
1961 Concourse Drive, Suite E, San Jose, CA 95131  
(408) 432-8192 • Fax (408) 432-8198

LOWNEY ASSOC.



**REPORT**

JUN 26 1992

RECEIVED

MR. PETER LANGTRY  
LOWNEY ASSOCIATES  
405 CLYDE AVENUE  
MOUNTAIN VIEW, CA 94043

Workorder # : 9206226  
Date Received : 06/12/92  
Project ID : 517-19  
Purchase Order: N/A

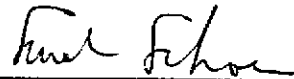
The following samples were received at Anamatrix, Inc. for analysis :

ANAMETRIX ID	CLIENT SAMPLE ID
9206226- 1	MW-1

This report consists of 3 pages not including the cover letter, and is organized in sections according to the specific Anamatrix laboratory group or section which performed the analysis(es) and generated the data. The Report Summary that precedes each section will help you determine which Anamatrix group is responsible for those test results, and will bear the signatures of the department supervisor and the chemist who have reviewed the analytical data. Please refer all questions to the department supervisor who signed the form.

Anamatrix is certified by the California Department of Health Services (DHS) to perform environmental testing under Certificate Number 1234. A detailed list of the approved fields of testing can be obtained by calling our office, or the DHS Environmental Laboratory Accreditation Program at (415)540-2800.

If you have any further questions or comments on this report, please give us a call as soon as possible. Thank you for using Anamatrix.

  
\_\_\_\_\_  
Sarah Schoen, Ph.D.  
Laboratory Director

6-25-92  
\_\_\_\_\_  
Date

REPORT SUMMARY  
ANAMETRIX, INC. (408)432-8192

MR. PETER LANGTRY  
LOWNEY ASSOCIATES  
405 CLYDE AVENUE  
MOUNTAIN VIEW, CA 94043

Workorder # : 9206226  
Date Received : 06/12/92  
Project ID : 517-19  
Purchase Order: N/A  
Department : GC  
Sub-Department: TPH

SAMPLE INFORMATION:

ANAMETRIX SAMPLE ID	CLIENT SAMPLE ID	MATRIX	DATE SAMPLED	METHOD
9206226- 1	MW-1	WATER	06/11/92	TPHg/BTEX

REPORT SUMMARY  
ANAMETRIX, INC. (408)432-8192

MR. PETER LANGTRY  
LOWNEY ASSOCIATES  
405 CLYDE AVENUE  
MOUNTAIN VIEW, CA 94043

Workorder # : 9206226  
Date Received : 06/12/92  
Project ID : 517-19  
Purchase Order: N/A  
Department : GC  
Sub-Department: TPH

QA/QC SUMMARY :

- No QA/QC problems encountered for this sample.

Cheryl Balmer      6/24/92  
Department Supervisor      Date

Stine Pona      6/24/92  
Chemist

ANALYSIS DATA SHEET - TOTAL PETROLEUM HYDROCARBONS  
(GASOLINE WITH BTEX)  
ANAMETRIX, INC. - (408) 432-8192

Anamatrix W.O.: 9206226  
Matrix : WATER  
Date Sampled : 06/11/92

Project Number : 517-1  
Date Released : 06/24

COMPOUNDS	Reporting Limit (ug/L)	Sample I.D.# MW-1	Sample I.D.# BU2201E2
Benzene	0.5	ND	ND
Toluene	0.5	ND	ND
Ethylbenzene	0.5	ND	ND
Total Xylenes	0.5	ND	ND
TPH as Gasoline	50	ND	ND
% Surrogate Recovery		104%	102%
Instrument I.D.		HP4	HP4
Date Analyzed		06/22/92	06/22/92
RLMF		1	1

- ND - Not detected at or above the practical quantitation limit for method.
- TPHg - Total Petroleum Hydrocarbons as gasoline is determined by GC/FID using modified EPA Method 8015 following sample purge and trap by EPA Method 5030.
- BTEX - Benzene, Toluene, Ethylbenzene, and Total Xylenes are determined by modified EPA Method 8020 following sample purge and trap by EPA Method 5030.
- RLMF - Reporting Limit Multiplication Factor.

Anamatrix control limits for surrogate p-Bromofluorobenzene recovery are 53-147%.

All testing procedures follow California Department of Health Services (Cal-DHS) approved methods.

Steve Power      6/24/92  
Analyst                      Date

Cheryl Balmer  
Supervisor

9206226

453 Ref. #

**LOWNEY ASSOCIATES  
CHAIN OF CUSTODY RECORD**

19

19:25

JOB NO.		PROJECT NAME/LOCATION		NO. OF CONTAINERS	ANALYSIS REQUIRED						SHIP TO:	
DATE	TIME	SAMPLE DESCRIPTION			/ / / / / / / / / /						REMARKS	
517-19		Tulloch yard well Install, Oakland		3	X TPH G3 PTEX						LOWNEY ASSOCIATES 405 Clyde Avenue Mountain View, CA 94043 415-967-2365 415-967-2785 (FAX)	
SAMPLER(S): (Signature) <i>Rolo Harvin</i>												
6/11/92	11:10 AM	MW-1 1110 AM									Normal Response	
											Samples preserved w/ HCL	
											Report to Peter Laverty	
											No sample 10's on the 100's	
											Received cold no bubbles.	
Relinquished by: (Signature) <i>R Harvin</i>		Date 6/11/92	Time 1645	Received By: (Signature) <i>Benny L. Arroyo</i>		Relinquished by: (Signature) <i>Benny L. Arroyo</i>		Date 6/12/92	Time 1730	Received By: (Signature)		
Laboratory of Record:		Date	Time	Received for Laboratory by:		Date	Time	Remarks:				