SUMMIT ENGINEERING

- House Inspection
- Soils Report
- Surveying
- Design
- Hazardous Waste Studies

6045 Shirley Drive
Oakland, CA 94511
Tel: (510) 531-6655
Fax:(510) 482-5848

Henry Alders
HYDRAULIC ELECTRO SERVICE CORP.
5812 Hollis Street
Emeryville, CA 94608

July 23, 1993

Re : Soil and Groundwater Sampling at 5812 Hollis Street, Emeryville, California.

Dear Mr. Alders :

The attached environmental report documents work performed in response to County of Alameda's requirement to install a monitoring well for groundwater sampling and verification analysis at the subject site.

The well was installed to a depth of 20 feet, and consists of 5 feet of blank casing and 15 feet of slotted casing. Groundwater was found at a depth of about 12 feet during drilling and stabilized at a depth of 4.6 feet below top of casing 48 hours after drilling. The results of laboratory analysis of soil and groundwater samples are also included. Results show soil to contain small amounts of diesel and gasoline but no BTEX compounds. Groundwater, however was found to contain no such contaminants.

Please, feel free to contact us if there are questions about this report, or we might be of further service.

Sincerely,

AlMasso

Al G. Masso
RCE-30442

SOIL AND GROUNDWATER SAMPLING FOR THE PROPERTY LOCATED AT 5812 HOLLIS STREET EMERYVILLE, CALIFORNIA

FOR

HENRY ALDERS
HYDRAULIC ELECTRO SERVICE
5128 HOLLIS STREET
EMERYVILLE CA 94608

SUMMIT ENGINEERING
6045 SHIRLEY DRIVE
OAKLAND, CALIFORNIA 94611

JULY 23, 1993

INTRODUCTION

The subject site consists of a paved storage yard for forklifts, and similar industrial equipment for the ongoing electro-hydraulic business located at 5812 Hollis Street between Powell and 59th Streets in the city of Emeryville (Figure 1). A 10,000-gal gasoline tank and a 3000-gal diesel tank were removed from the subject site on December 5th, 1989. Several soil samples were analyzed showing minor amounts of TPH-d and non-detectable amounts of BTEX. A water sample from the tank pit had a surface sheen and showed 90 ppm TPH-d, and minor amounts of TPH-g and BTEX (Ref. 1). In view of this results, the County of Alameda is now requiring a groundwater investigation (Ref. 2). No information related to leaks or spills at the site exist to our knowledge. The tanks were disposed and the excavation backfilled with clean soil and the pavement restored.

WELL INSTALLATION

At Mr. Alders' request, a letter-work plan was prepared (Ref. 5) for the County of Alameda. Upon the County's acceptance, the work was carried out.

A monitoring well was installed west-southwest, downstream of the former excavation area in a downgradient location, and about 8 feet from the edge of the excavation of previously existing underground tanks (Figure 2). There is abundant information in RWQCB files showing that in the Emeryville area the groundwater travels generally towards the San Francisco Bay along west-to-southwest directions. Some of the files reviewed have the following numbers :

01-0558, 01-0559, 01-0697, 01-0753, 01-0773

The well was drilled using a truck-mounted drill rig and an 8-inch hollow stem auger. The soil was sampled in 2-in x 6-in brass tubes every 5 feet as shown in the boring log attached in the Appendix. Because groundwater was first found at a depth of 12 feet below the ground surface, the well was extended to a depth of 20 feet. The well consists of a 2-inch diameter PVC casing with the top 5 feet of blank pipe, and the remaining 15 feet of 0.020-inch screen. The lower end of the well was capped and converted to a silt catcher. The well was be completed with No. 3 Monterey sand backfill, a 2-foot thick bentonite seal, and a Christy box in cement grout as well as a lock-cover for the top end of the well (Figure 3).

A point of reference on the top of the well casing (TOC) was marked, and tied to a city benchmark for groundwater level control. The rim elevation of the sanitary sewer manhole at the intersection of Hollis and 59th Streets, which had been recently surveyed at 21.00 with respect to the mean sea level (MSL), was used as benchmark. The TOC elevation was calculated to be 21.25 (MSL).

The well was developed 48 hrs after drilling. A surface suction pump was used to pump 100 gallons of groundwater until a clear liquid was obtained. Groundwater stabilized with the following parameters :

Temperature = 25° C

Acidity pH = 6

Resistivity = 2,400 $\mu\Omega$

Groundwater pumped during this process was stored in 55-gallon drums on-site awaiting disposal.

SOIL SAMPLING AND ANALYSIS

During drilling, soil cuttings were continuously screened with using a Thermo Environmental model 580 B organic vapor analyzer (OVA) for volatile hydrocarbons. This OVA has a detection accuracy of 0.10 ppm in a 0-200 scale and was calibrated with a 100 ppm isobuthelene solution.

Samples were collected in 2-in x 6-in brass tubes and screened every five feet. OVA readings were 1.5 ppm below the asphalt cover at the ground surface, 0 ppm at 5 feet, and 2.3 ppm at 10 feet (See boring log in Appendix). This last soil sample was submitted under chain of custody to Precision Analytical Laboratory of Richmond, California, a state-licensed facility.

The laboratory conducted analysis of TPH-g, TPH-d, and BTEX using EPA methods 5030, 8015m (DHS Extraction Method), and 8020 respectively; results of analysis are shown on Table 1 below.

Table - 1

RESULTS OF SOIL ANALYSIS
(Sample S-2 at 10 ft)

Compound	Concentration (ppm)	Detect. Limit (ppm)
Benz	ND	0.005
Tol	"	"
EBenz	"	"
Xyl	"	"
TPH-g (a)	14	1
TPH-d (b)	40	1

Notes -
(a) Heavy hydrocarbon in the gasoline range.
(b) Heavy hydrocarbon in the diesel range.

Soil cuttings were stored in drums on site and are awaiting disposal.

WATER SAMPLING AND ANALYSIS

Forty eight hours after development, the well was sampled. A clear bailer was used to collect and examine the standing water; no sheen or floaters were observed. Using an interface probe, groundwater was detected 4 feet 7 inches below TOC, i.e. groundwater elevation was determined to be at 16.67 feet (MSL).

The well was purged by pumping 5 gallons of water. A set of water samples was collected in chemically clean bottles and vials, placed in ice, and transported under chain of custody to the laboratory for analysis of TPH-g, TPH-d, and BTEX using EPA methods 5030, 8015m (DHS Extraction Method), and 8020 respectively. Results of analysis are shown below :

Table - 2

RESULTS OF GROUNDWATER ANALYSIS

Compound	Concentration (µg/l)	Detect. Limit (µg/l)
Benz	ND	0.3
Tol	"	"
EBenz	"	"
Xyl	"	0.6
TPH-g	"	50
TPH-d	"	"

Water used during development and sampling processes is being kept on site pending results of analysis for disposal.

CONCLUSIONS

Laboratory results on Tables 1 and 2 show minor soil contamination and no groundwater contamination. Therefore, we hereby request that Alameda County **allow this site to be closured.** We also request the County allow discharge of the stored groundwater directly into the city storm sewer, and disposal of the soil cuttings as ordinary construction soil to a municipal landfill.

need 4 days — we don't get discharge limits —

REFERENCES

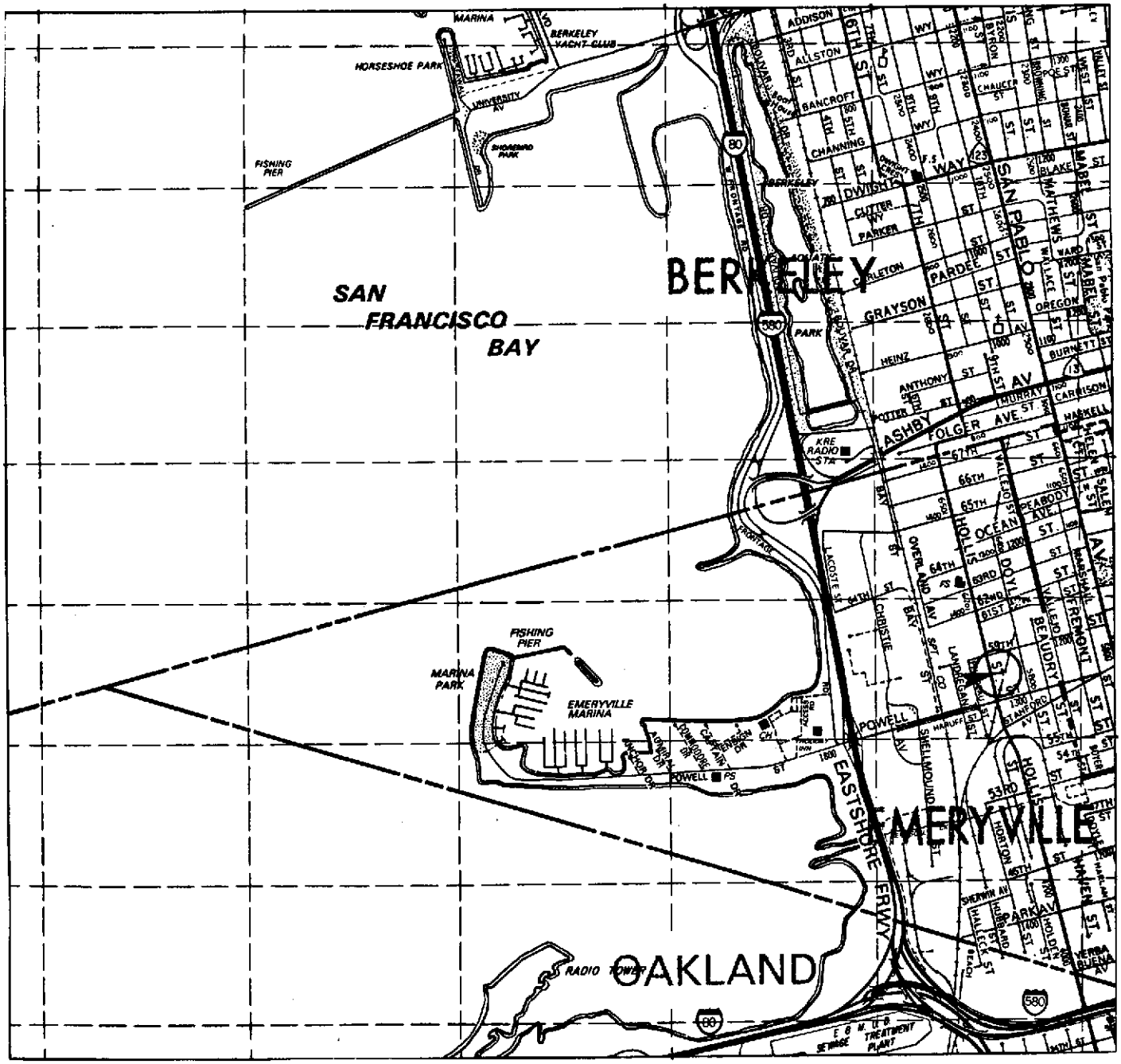
1. CHIPS Environmental Consultants, Letter to Jack Quarle and Associates, Document No. DSK6 Q707.DOC, December 13, 1989.

2. Alameda County Health Care Services, Hazardous Materials Division, Letters Dated 3/23/92 and 12/29/92.

3. State of California, Leaking Underground Fuel Tank Field Manual, December 1987.

4. State of California, California Code of Regulations (CCR), Section 66699, Title 22.

5. SUMMIT ENGINEERING, Letter to Alameda County Department of Environmental Health, June 6, 1993.



Ref: Thomas Brothers Map
Alameda County.

Scale : 1" = 2,200'

FIGURE 1 - SITE LOCATION

SUMMIT ENGINEERING

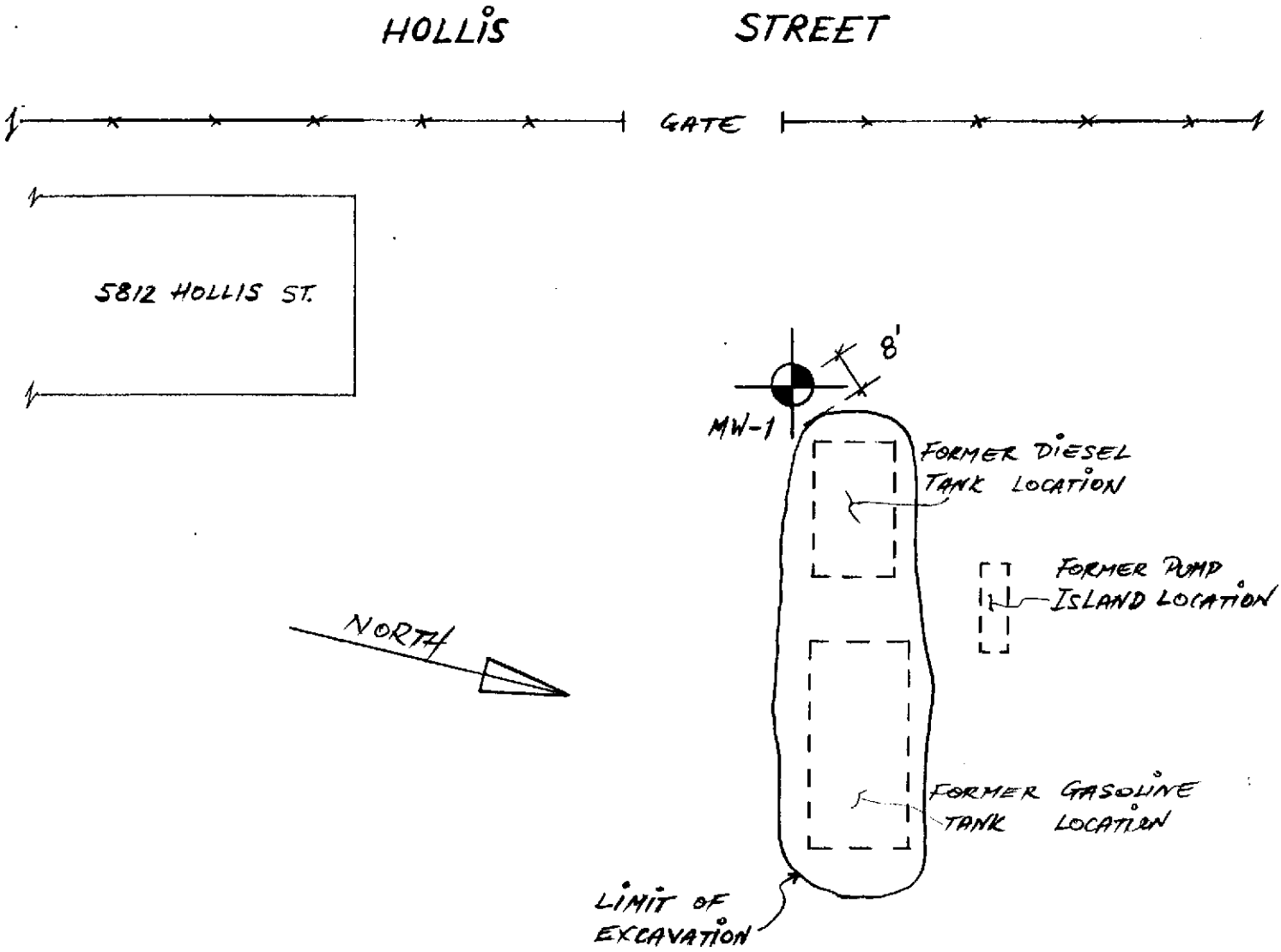


FIGURE 2 - SITE PLAN AND WELL LOCATION

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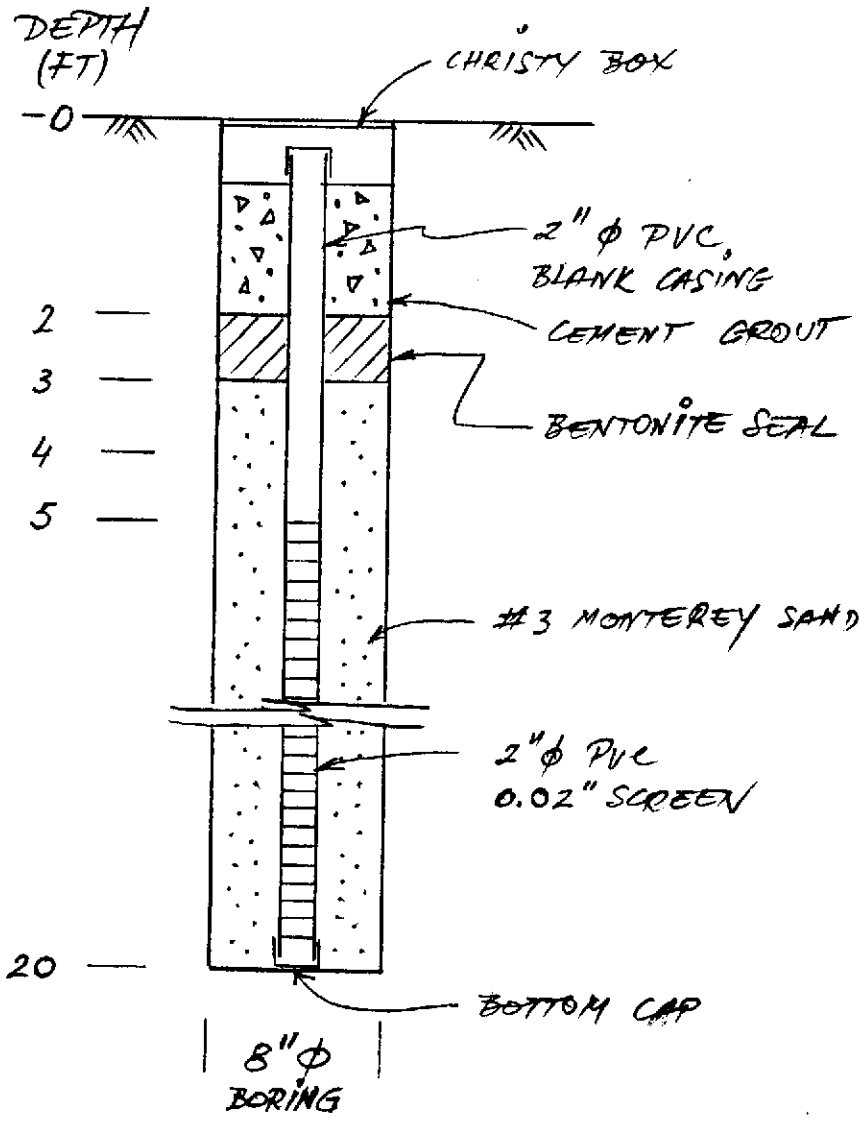


FIGURE 3 - WELL DIAGRAM

SUMMIT ENGINEERING

PROJECT No.: E930701 BORING No.: B-1

PROJECT NAME: Monitoring Well at Hydraulic Electro S.

LOCATION: 5812 Hollis Street, Emeryville

DRILL METHOD: 8 - in Auger, 140-lb Hammer

DRILL CONTRACTOR: Holt Drilling Co.

DATE : 6/17/93

page 1 of 1

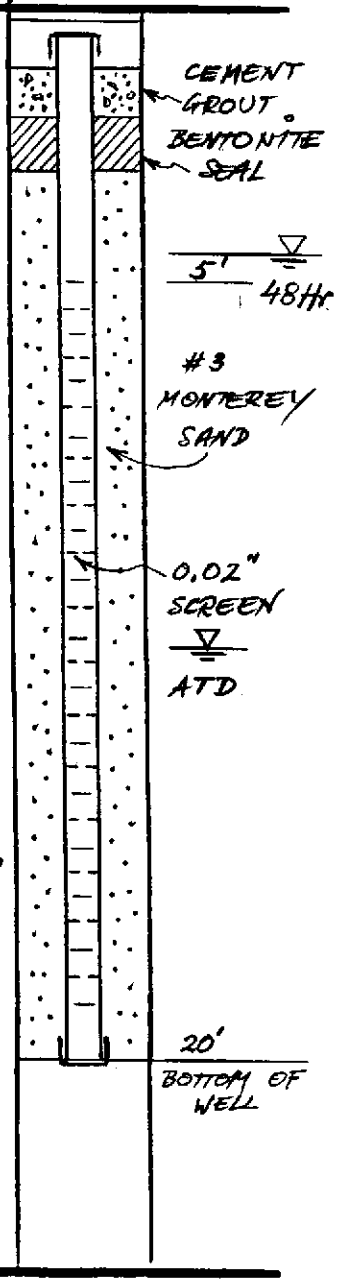
GWL DEPTH : 12' ATD

HOLE DIAMETER: 8.5 in

DRILLER : Rick

DEPTH (ft.)	SAMPLE TYPE & NUMBER	BLOW/FT.	SPT	MATERIAL DESCRIPTION	USCS SYMBOL	OVA READING (ppm)
0				4" asphalt pavement over 2" of base material (gravel)		1.5 at 6"
2						
4						0 at 3'
6	S-1	3 8 10	10	Clay fill, light to dk brown some gray-green soil also stiff, moist	CL	0 at 5'
8						0 at 8'
10	S-2	5 10 15	15	Same fill as before, more gravel, stiff to V. stiff	GC	2.3 at10'
12						
14						0 at 13'
16	S-3	14 7 7	9	Stiff, light brown to grayish-brown, silty clay	CL	0 at 15'
18						
20	S-4	28 24 17	26	V. Stiff clay, light brown to grayish-brown, silty clay.	CL	0 at 20'
22				BOH = 21.5 feet		
24						

WELL CONSTRUCTION
TOC EL 21.25 (MSL)



NOTES :

2.5" x 6" brass tube sample

SPT sample

Grab sample

SUMMIT ENGINEERING

6045 Shirley Drive
Oakland, CA 94611

Precision Analytical Laboratory, Inc.

4136 LAKESIDE DRIVE, RICHMOND, CA 94806 PHONE (510) 222-3002 FAX (510) 222-1251

CERTIFICATE OF ANALYSIS

STATE LICENSE NO. 1150

Date Received: 06/18/93
Date Extracted: 06/29/93
Date Analyzed: 06/30/93
Date Reported: 07/01/93
Job #: 74794

Attn: Al Masso
MAPCO/ Summit Environmental
6045 Shirley Drive
Oakland, CA 94611

Project: 5812 Hollis Drive
Emeryville
Matrix: Soil

Aromatic Volatile Hydrocarbon Analysis
EPA Method 8020
mg/Kg

Lab I.D.	Client I.D.	Benzene	MDL	Toluene	MDL
74794-2	S-2 @ 11'	ND<0.005	0.005	ND<0.005	0.005

Lab I.D.	Client I.D.	Ethyl-benzene	MDL	Xylenes	MDL
74794-2	S-2 @ 11'	ND<0.005	0.005	ND<0.005	0.005

QA/QC: Matrix Spike Recovery for Benzene: 96%
Matrix Spike Recovery for Toluene: 96%
Matrix Spike Recovery for o-Xylene: 94%

Matrix Spike Duplicate Recovery for Benzene: 97%
Matrix Spike Duplicate Recovery for Toluene: 98%
Matrix Spike Duplicate Recovery for o-Xylene: 96%

MDL: Method Detection Limit. Compound below this level would not be detected.

Jaime Chow
Laboratory Director

JC/vc

Precision Analytical Laboratory, Inc.

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CERTIFICATE OF ANALYSIS

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Date Received: 06/18/93
Date Extracted: 06/29/93
Date Analyzed: 06/30/93
Date Reported: 07/01/93
Job #: 74794

Project: 5812 Hollis Street
Emeryville
Matrix: Soil

Total Petroleum Hydrocarbon Analysis
EPA Method 5030
mg/Kg

Lab I.D.	Client I.D.	Gasoline Range *	MDL
74794-2	S-2 @ 11'	14.0	1.0

* Heavy hydrocarbon in the gasoline range

QA/QC: Matrix Spike Recovery for Gasoline: 92%
Matrix Spike Duplicate Recovery for Gasoline: 97%

MDL: Method Detection Limit. Compound below this level would not be detected.

Jaime Chow
Laboratory Director

JC/vc

Precision Analytical Laboratory, Inc.

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CERTIFICATE OF ANALYSIS

STATE LICENSE NO. 1150

Attn: Al Masso
MAPCO/ Summit Environmental
6045 Shirley Drive
Oakland, CA 94611

Date Received: 06/18/93
Date Extracted: 06/24/93
Date Analyzed: 06/25/93
Date Reported: 07/01/93
Job #: 74794

Project: 5812 Hollis Street
Emeryville
Matrix: **Soil**

Total Petroleum Hydrocarbon Analysis
DHS Extraction Method
mg/Kg

Lab I.D.	Client I.D.	Diesel Range	MDL
74794-2	S-2 @ 11'	40*	1.0

* TPH in the diesel range

QA/QC: Matrix Spike Recovery for Diesel: 105%
Matrix Spike Duplicate Recovery for Diesel: 97%

MDL: Method Detection Limit. Compound below this level would not be detected.

Jaime Chow
Laboratory Director

JC/vc

CHAIN OF CUSTODY

PROJECT NO.	SAMPLERS (Signature) AGMasso
PROJECT NAME AND ADDRESS:	5812 HOLLIS STREET EMERYVILLE

CROSS REFERENCE NUMBER	DATE	TIME	Soil	Water	STATION LOCATION	TPH- Gas ~~or~~ Diesel	BTX - (8020)	Halogenated (8010)	Oil & Grease	PCB - (8080)	Metals (CAM-17)	8240	REMARKS
S-1 @6'			✓										HOLD
S-2@11'			✓			✓	✓						
S-3@16'			✓										HOLD
S-4@21'			✓										HOLD

RELINQUISHED BY: (Signature)	DATE / TIME	RECEIVED BY: (Signature)	DATE / TIME
AGMasso	DATE 6/18/93 TIME 5pm	Kulwinder Sidhu	DATE 6/18/93 TIME 5pm
RELINQUISHED BY: (Signature)	DATE TIME	RECEIVED BY: (Signature)	DATE TIME
RELINQUISHED BY: (Signature)	DATE TIME	RECEIVED BY: (Signature)	DATE TIME
RELINQUISHED BY: (Signature)	DATE TIME	RECEIVED BY: (Signature)	DATE TIME

Turnaround Time: * 24 hrs ______ * 2/3 days ______ * 4/5 ______ Normal ✓ * Surcharge Applies

Special Instructions: ______

Precision Analytical Laboratory, Inc.

4136 LAKESIDE DRIVE, RICHMOND, CA 94806 PHONE (510) 222-3002 FAX (510) 222-1251

CERTIFICATE OF ANALYSIS

STATE LICENSE NO. 1150

Attn: Al Masso
MAPCO/ Summit Environmental
6045 Shirley Drive
Oakland, CA 94611

Date Received: 06/24/93
Date Analyzed: 06/25/93
Date Reported: 07/08/93
Job #: 74809

Project: 5812 Hollis Drive
Emeryville
Matrix: **Water**

Aromatic Volatile Hydrocarbon Analysis
EPA Method 8020
µg/L

Lab I.D.	Client I.D.	**Benzene**	MDL	**Toluene**	MDL
74809-1	MW - 1	ND<0.3	0.3	ND<0.3	0.3

Lab I.D.	Client I.D.	**Ethyl-benzene**	MDL	**Xylenes**	MDL
74809-1	MW - 1	ND<0.3	0.3	ND<0.6	0.6

QA/QC: Matrix Spike Recovery for Benzene: 95%
Matrix Spike Recovery for Toluene: 105%
Matrix Spike Recovery for o-Xylene: 95%

Matrix Spike Duplicate Recovery for Benzene: 93%
Matrix Spike Duplicate Recovery for Toluene: 102%
Matrix Spike Duplicate Recovery for o-Xylene: 94%

MDL: Method Detection Limit. Compound below this level would not be detected.

Jaime Chow
Laboratory Director

JC/vc

Precision Analytical Laboratory, Inc.

4136 LAKESIDE DRIVE, RICHMOND, CA 94806 PHONE (510) 222-3002 FAX (510) 222-1251

CERTIFICATE OF ANALYSIS

STATE LICENSE NO. 1150

Attn: Al Masso
MAPCO/ Summit Environmental
6045 Shirley Drive
Oakland, CA 94611

Date Received: 06/24/93
Date Analyzed: 06/30/93
Date Reported: 07/08/93
Job #: 74809

Project: 5812 Hollis Street
Emeryville
Matrix: Water

Total Petroleum Hydrocarbon Analysis
EPA Method 5030
µg/L

Lab I.D.	Client I.D.	Gasoline	MDL
74809-1	MW - 1	ND<50	50

QA/QC: Matrix Spike Recovery for Gasoline: 115%
Matrix Spike Duplicate Recovery for Gasoline: 110%

MDL: Method Detection Limit. Compound below this level would not be detected.

Jaime Chow
Laboratory Director

JC/vc

Precision Analytical Laboratory, Inc.

4136 LAKESIDE DRIVE, RICHMOND, CA 94806 PHONE (510) 222-3002 FAX (510) 222-1251

CERTIFICATE OF ANALYSIS

STATE LICENSE NO. 1150

Attn: Al Masso
MAPCO/ Summit Environmental
6045 Shirley Drive
Oakland, CA 94611

Date Received: 06/24/93
Date Extracted: 07/06/93
Date Analyzed: 07/06/93
Date Reported: 07/08/93
Job #: 74809

Project: 5812 Hollis Street
Emeryville
Matrix: **Water**

Total Petroleum Hydrocarbon Analysis
DHS Extraction Method
mg/L

Lab I.D.	Client I.D.	Diesel	MDL
74809-1	MW-1	ND<0.05	0.05

QA/QC: Matrix Spike Recovery for Diesel: 95%
Matrix Spike Duplicate Recovery for Diesel: 114%

MDL: Method Detection Limit. Compound below this level would not be detected.

Jaime Chow
Laboratory Director

JC/vc

CHAIN OF CUSTODY

PROJECT NO. | SAMPLERS (Signature): A. Massa

PROJECT NAME AND ADDRESS: 5812 Hollis St Emeryville

CROSS REFERENCE NUMBER	DATE	TIME	Soil	Water	STATION LOCATION	TPH- Gas or Diesel	BTX - (8020)	Halogenated (8010)	Oil & Grease	PCB - (8080)	Metals (CAM-17)	8240	REMARKS
MW-1	6/24/93			✓		✓	✓		■				

ANALYSIS REQUESTED

RELINQUISHED BY: (Signature) A. Massa	DATE 6/24/93 TIME 3:30 pm	RECEIVED BY: (Signature) Kurt Winden Sidhu	DATE 6/24/93 TIME 3:30 pm
RELINQUISHED BY: (Signature)	DATE TIME	RECEIVED BY: (Signature)	DATE TIME
RELINQUISHED BY: (Signature)	DATE TIME	RECEIVED BY: (Signature)	DATE TIME
RELINQUISHED BY: (Signature)	DATE TIME	RECEIVED BY: (Signature)	DATE TIME

Turnaround Time: * 24 hrs _____ * 2/3 days _____ * 4/5 _____ Normal ✓ * Surcharge Applies

Special Instructions: _____

Possible Sample Hazards: _____