ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY
DAVID J. KEARS, *Agency Director*

ENVIRONMENTAL HEALTH SERVICES
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577
(510) 567-6700
(510) 337-9335 (FAX)

REMEDIAL ACTION COMPLETION CERTIFICATION

StID 1742 - 2964 Fruitvale Ave, Oakland, CA
(3-550 gallon and 2-1,000 gallon gasoline tanks removed in June 6, 1989)

July 22, 1998

Ms. Frances Beddig
5609 Glencrest Lane
Orangevale, CA 95662

Dear Ms. Beddig:

This letter confirms the completion of site investigation and remedial action for the underground storage tanks formerly located at the above-described location. Thank you for your cooperation throughout this investigation. Your willingness and promptness in responding to our inquiries concerning the former underground storage tanks are greatly appreciated.

Based on information in the above-referenced file and with the provision that the information provided to this agency was accurate and representative of site conditions, no further action related to the underground tank release is required.

This notice is issued pursuant to a regulation contained in Title 23, Section 2721(e) of the California Code of Regulations.

Please contact our office if you have any questions regarding this matter.

Sincerely,

Mee Ling Tung, Director

cc: Richard Pantages, Chief of Division of Environmental Protection
Chuck Headlee, RWQCB
Dave Deaner, SWRCB
Leroy Griffin, OFD
Stephen Southern, ACC, 7977 Capwell Dr, #100, Oakland, CA 94621
files-ec (savegas-3)

ALAMEDA COUNTY
HEALTH CARE SERVICES
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DAVID J. KEARS, Agency Director

ENVIRONMENTAL HEALTH SERVICES
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577
(510) 567-6700
(510) 337-9335 (FAX)

StID 1742

July 22, 1998

Ms. Frances Beddig
5609 Glencrest Lane
Orangevale, CA 95662

Re: Fuel Leak Site Case Closure for 2964 Fruitvale Ave, Oakland, CA 94602

Dear Ms. Beddig:

This letter transmits the enclosed underground storage tank (UST) case closure letter in accordance with Chapter 6.75 (Article 4, Section 25299.37[h]). The State Water Resources Control Board adopted this letter on February 20, 1997. As of March 1, 1997, the Alameda County Environmental Protection Division is required to use this case closure letter for all UST leak sites. We are also transmitting to you the enclosed case closure summary. These documents confirm the completion of the investigation and cleanup of the reported release at the subject site. The subject fuel leak case is closed.

SITE INVESTIGATION AND CLEANUP SUMMARY

Please be advised that the following conditions exist at the site:

- up to 1,700 ppm TPH as gasoline and 21 ppm benzene exists in soil beneath the site;
- up to 850 ppb TPHg, 5,300 TPHd, and 39 ppb benzene exists in groundwater beneath the site; and,
- a site health and safety plan is required for construction workers in the event excavation/trenching is proposed in the vicinity of residual soil and groundwater contamination at the site.

If you have any questions, please contact me at (510) 567-6762.

eva chu
Hazardous Materials Specialist

enlosures:

1. Case Closure Letter
2. Case Closure Summary

c: Frank Kliewer, City of Oakland-Planning, 1330 Broadway, 2nd Fl, Oakland, CA 94612
files (savegas-4)

RO file # 01-0177

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
ENVIRONMENTAL PROTECTION
APR 20 1998
98 APR 20 AM 8:39

CH

CASE CLOSURE SUMMARY
Leaking Underground Fuel Storage Tank Program

I. AGENCY INFORMATION

Date: March 16, 1998

Agency name: **Alameda County-HazMat** Address: **1131 Harbor Bay Pkwy**
City/State/Zip: **Alameda, CA 94502** Phone: **(510) 567-6700**
Responsible staff person: **Eva Chu** Title: **Hazardous Materials Spec.**

II. CASE INFORMATION

Site facility name: **Save On Gas**
Site facility address: **2964 Fruitvale Ave, Oakland, CA 94602**
RB LUSTIS Case No: **N/A** Local Case No./LOP Case No.: **1742**
URF filing date: **6/17/92** SWEEPS No: **N/A**

Responsible Parties:	Addresses:	Phone Numbers:
Frances Beddig	**1408 San Clemente Wy**	
Beddig Properties	**Sacramento, CA 95831**	

Tank No:	Size in gal.:	Contents:	Closed in-place or removed?:	Date:
1	550	Gasoline	Removed	6/6/89
2	550	"	"	"
3	550	"	"	"
4	1,000	"	"	"
5	1,000	"	"	"
6	~4,500 cf concrete vault w/ 2 drums removed			2/2/94

III. RELEASE AND SITE CHARACTERIZATION INFORMATION

Cause and type of release: **Unknown**
Site characterization complete? **YES**
Date approved by oversight agency: **3/3/98**
Monitoring Wells installed? **Yes** Number: **4**
Proper screened interval? **Yes**
Highest GW depth below ground surface: **6.67'** Lowest depth: **9.44' in MW-1**
Flow direction: **SSW to SSE, but predominantly to the South**
Most sensitive current use: **Commercial**
Are drinking water wells affected? **No** Aquifer name: **Unknown**
Is surface water affected? **No** Nearest affected SW name: **None**
Off-site beneficial use impacts (addresses/locations): **None**
Report(s) on file? **YES** Where is report(s) filed? **Alameda County**
1131 Harbor Bay Pkwy
Alameda, CA 94502

Treatment and Disposal of Affected Material:

Material	Amount (include units)	Action (Treatment or Disposal w/destination)	Date
Tank	5 USTs		6/6/89
Piping			
Free Product			
Soil	440 cy	To B & J Landfill, Vacaville	Feb 1994
	14.41 tons	To Laidlaw Environmental, Westmorland	2/94
Groundwater	1,941 gal.	Recycled by Gibson Environmental	

Maximum Documented Contaminant Concentrations - - Before and After Cleanup

Contaminant	Soil (ppm)		Water (ppb)	
	Before[1]	After[2]	Before[3]	After[4]
TPH (Gas)	1,700	NA	11,000	850
TPH (Diesel)	NA	NA	10,000[5]	5,300
Benzene	21	NA	2,600	39
Toluene	83	NA	240	2.4
Ethylbenzene	32	NA	190	1.5
Xylenes	150	NA	400	11
Oil & Grease/Motor Oil	2,449	2,300	16,000[5]	16,000

NOTE: 1 soil collected from tank pit along Fruitvale Ave at time of removal, 6/89. Oil and grease from boring MW-3 at 10'bgs
2 no overexcavation performed at gasoline tank pit. Motor oil concentration is from hydraulic lift/waste oil tank pit after overexcavation, 12/93
3 maximum concentration detected in well MW-1
4 most recent groundwater data, 10/97
5 maximum concentration from well MW-2

IV. CLOSURE

Does completed corrective action protect existing beneficial uses per the Regional Board Basin Plan? _____

Does completed corrective action protect potential beneficial uses per the Regional Board Basin Plan? _____

Does corrective action protect public health for current land use? **YES**

Site management requirements: **A site safety plan must be prepared for construction workers in the event excavation/trenching is proposed in the vicinity of residual soil and groundwater contamination.**

Should corrective action be reviewed if land use changes? **YES**

Monitoring wells Decommissioned: **Yes**

Number Decommissioned: **1** Number Retained: **3**

V. LOCAL AGENCY REPRESENTATIVE DATA

Name: **Eva Chu** Title: **Haz Mat Specialist**

Signature: [signature] Date: 4/17/98

Reviewed by

Name: **Madhulla Logan** Title: **Haz Mat Specialist**

Signature: Madhulla Logan Date: April 16, 1998

Name: **Thomas Peacock** Title: **Supervisor**

Signature: Thomas Peacock Date: 4-17-98

VI. RWQCB NOTIFICATION

Date Submitted to RB: RB Response:

RWQCB Staff Name: **Chuck Headlee** Title: **AEG**

Signature: Chuck Headlee Date: 4/22/98

VII. ADDITIONAL COMMENTS, DATA, ETC.

The site was formerly a gasoline service station. On June 6, 1989 five USTs were removed from two locations on the property (3-550 gallon USTs along Fruitvale Ave, and 2-1K gallon USTs along Nicol Ave). Soil samples collected identified up to 1,700ppm TPHg, and 21, 83, 32, and 150ppm BTEX, respectively, from the tank pit along Fruitvale Ave. Hydrocarbon concentrations detected from the pit along Nicol Ave were not remarkable. No overexcavation was performed at the gasoline tank pits. (See Figs 1, 2, and Table 1)

In September 1989 four soil borings (MW1, SB2 through SB4) were drilled, out of which one (MW-1) was converted into a groundwater monitoring well. Soil samples were collected from various depths. Groundwater was encountered at ~15'bgs and stabilized at ~10'bgs. Hydrocarbon odor was noted in all the samples collected. Soil from 6.5' bgs contained up to 570 ppm TPHg and 3 ppm benzene. Groundwater contained up to 1,800 ppb benzene. (See Fig 3, Table 2)

In January 1993 eight borings (B-1 through B-8) and two monitoring wells (MW-2 and MW-3) were drilled on- and off-site to delineate the extent of soil and groundwater contamination. A maximum of 54.6ppm TPHg and 11ppm benzene were identified in soil. Soil from boring B-2, collected adjacent to the hydraulic lift, contained 3,425 ppm TOG. (See Fig 4, Table 3)

The hydraulic lifts were removed in August 1993. A soil sample (S1) was collected at ~9'bgs and analyzed for TPHg, BTEX, and TEPH. Up to 780ppm TPH as motor oil was identified (see Table 4). Groundwater samples from well MW-3 contained ~0.32' of floating product, which was identified mostly as hydraulic oil (along with lower concentrations of what appears to be degraded gasoline and motor oil).

In December 1993 well MW-3 was destroyed. Overexcavation of impacted soil around the former hydraulic lifts began in February 1994. During the soil removal activities an abandoned underground storage tank (a 5'-sided concrete structure which held two 55-gallon drums, oil and sludge) was uncovered. Hydrocarbon-impacted soil, sludge, debris, and the tank were removed. The excavation was extended to the southern and eastern property line and on the north side of the property to within 5' of monitoring well MW-2. Confirmatory soil samples (E-1 through E-4) were collected. Based on analytical results, low levels of soil contamination remain in the vicinity of the former abandoned waste oil tank. (See Fig 5, Table 5)

In September 1994 monitoring well MW-4 was installed downgradient of the waste oil tank excavation, in the neighboring property. Soil collected at 11.5' bgs contained low levels of TPHg, BTEX, and TPH as motor oil. Groundwater did not contain petroleum hydrocarbons. It appears groundwater contamination has not migrated offsite to the south of the site. (See Fig 6)

In March 1997 six borings (S1 through S6) were advanced using direct push methods around the former gasoline tank pit along Fruitvale Ave (see Fig 6). Soil samples were collected from each boring for specific soil parameters, including porosity, organic carbon content, dry bulk density, and water content. ORC was used to fill the borings. In addition, ORC socks were installed in well MW-1. Shortly after the ORC socks were installed, gasoline constituents decreased in concentration by one to two orders of magnitude (see Table 6). It appears the increase in dissolved oxygen in groundwater enhanced the rate of natural biodegradation at the site.

A risk assessment was performed to evaluate potential human health and environmental risk of residual soil and groundwater contamination. It was determined that there was no added health risk to commercial workers from volatilization of contaminants from soil and groundwater to indoor and outdoor air. (See Table 7)

In summary, case closure is recommended because:

- the leak and ongoing sources have been removed;
- the site has been adequately characterized;
- the dissolved plume is not migrating;
- no water wells, surface water, or other sensitive receptors are likely to be impacted; and,
- the site presents no significant risk to human health or the environment.

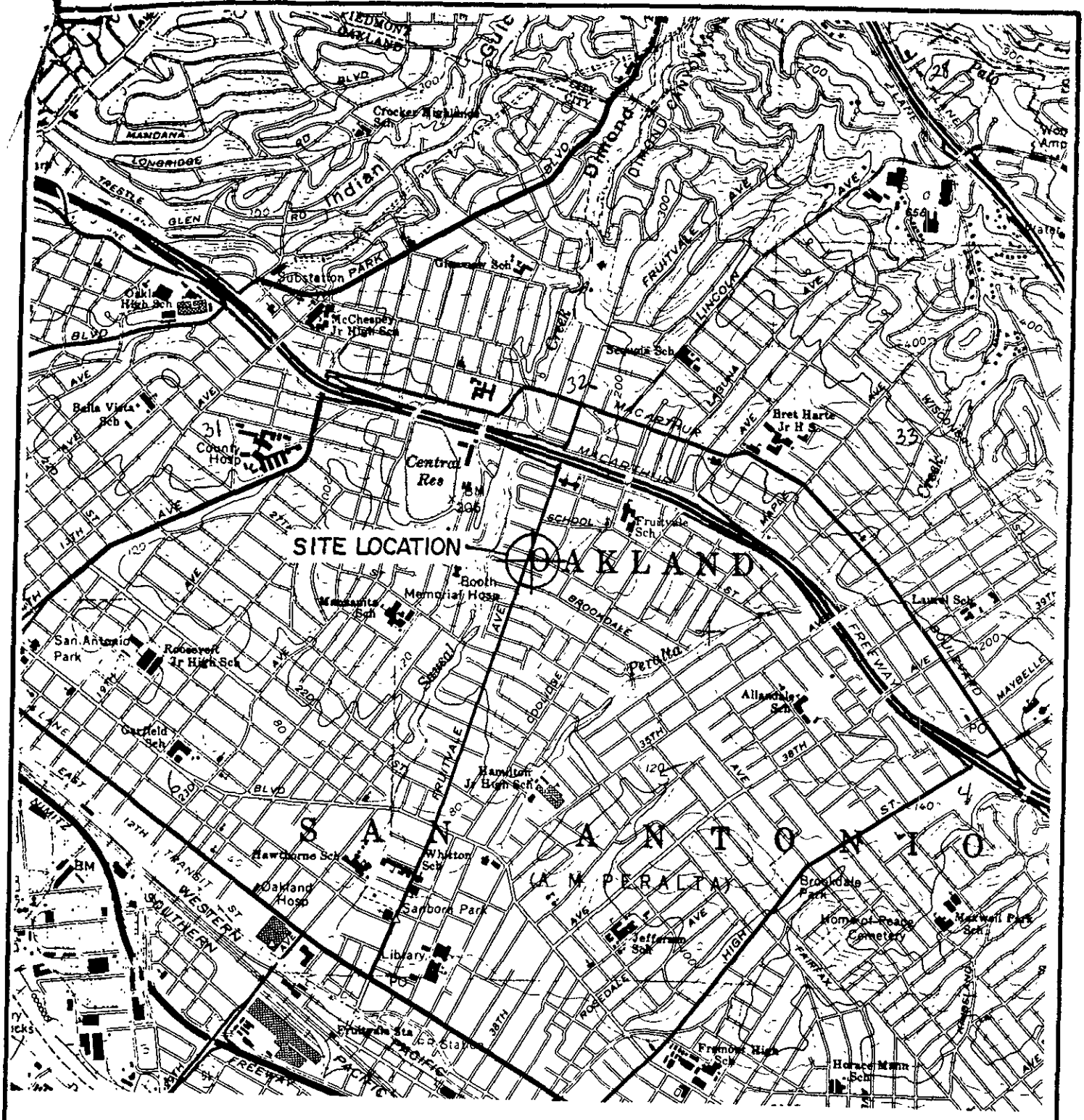
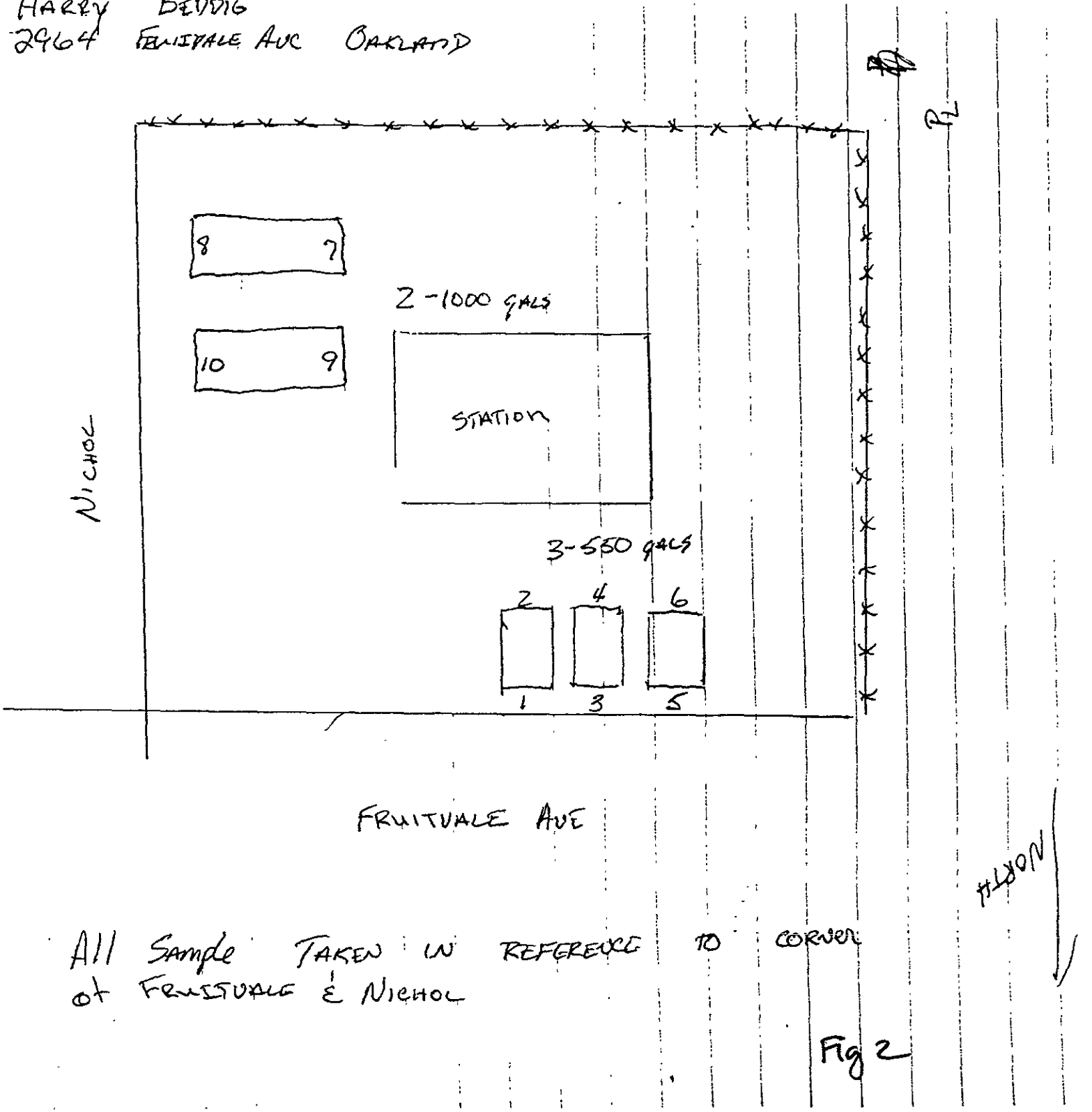


Figure 1. Site Location Map

BEDDIG PROPERTY
2950 FRUITVALE AVE.
OAKLAND, CALIFORNIA

GROUNDWATER TECHNOLOGY, INC.

HARRY BEDDIG
2964 FELIPALE AVE OAKLAND



All Sample Taken in Refference to corner
at Fruitvale & Nichol

Fig 2

County

7/6/89

GTEL ENVIRONMENTAL LABORATORIES, INC.

Northwest Region
4080 Pike Lane
Concord. CA 94520
(415) 685-7852
(800) 544-3422 *from inside California*
(800) 423-7143 *from outside California*

06/28/89 mh Page 1 of 2

ALAMEDA COUNTY
DEPT. OF ENVIRONMENTAL HEALTH
HAZARDOUS MATERIALS

WORK ORD#: C906284
CLIENT: PAT MCSHANE
DIABLO TANK & EQUIPMENT
4030 PACHECO BLVD. #5
MARTINEZ, CA 94553
PROJECT#: SFB-176-0085.72-113 Bedding
LOCATION: 2964 FRUITVALE, OAKLAND 94602

SAMPLED: 06/14/89 BY: A. PEASE
RECEIVED: 06/15/89
ANALYZED: 06/20/89 BY: K. PATTON

MATRIX: Soil
UNITS: mg/Kg (ppm)

PARAMETER	MDL	SAMPLE # I.D.	01 1 WEST	02 2 WEST	03 3 WEST	04 4 WEST	05 5 WEST
Benzene	0.5		13	8	15	4	15
Toluene	0.5		67	42	65	7	70
Ethylbenzene	0.5		29	13	32	2	29
Xylenes	0.5		140	78	150	10	160
Total BTEX	0.5		250	140	260	23	270
Misc. Hydrocarbons (C4-C12)	1		1000	540	1400	87	1100
Total Petroleum Hydrocarbons as Gasoline	1		1300	680	1700	110	1400

Table 1

MDL = Method Detection Limit; compound below this level would not be detected.
Results rounded to two significant figures.

METHOD: Modified EPA 5030/8020/8015

GTEL
ENVIRONMENTAL
LABORATORIES, INC.

Northwest Region
4080 Pike Lane
Concord, CA 94520
(415) 685-7852
(800) 544-3422 *from inside California*
(800) 423-7143 *from outside California*

WORK ORD#: C906284

CLIENT: PAT MCSHANE
PROJECT#: SFB-176-0085.72-113
LOCATION: 2964 FRUITVALE, OAKLAND

MATRIX: Soil
UNITS: mg/Kg (ppm)

PARAMETER	MDL	SAMPLE # I.D.	06 6 WEST	07 7 SOUTH	08 8 SOUTH	09 9 SOUTH	10 10 SOUTH
Benzene	0.5		21	<0.5	<0.5	<0.5	<0.5
Toluene	0.5		83	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	0.5		27	<0.5	<0.5	4	<0.5
Xylenes	0.5		130	<0.5	<0.5	12	<0.5
Total BTEX	0.5		260	<0.5	<0.5	16	<0.5
Misc. Hydrocarbons (C4-C12)	1		1100	7	16	140	2
Total Petroleum Hydrocarbons as Gasoline	1		1400	7	16	160	2

cont. Tabla 1

MDL = Method Detection Limit; compound below this level would not be detected.
Results rounded to two significant figures.
METHOD: Modified EPA 5030/8020/8015

Emma P. Popek/Emf
EMMA P. POPEK, Director

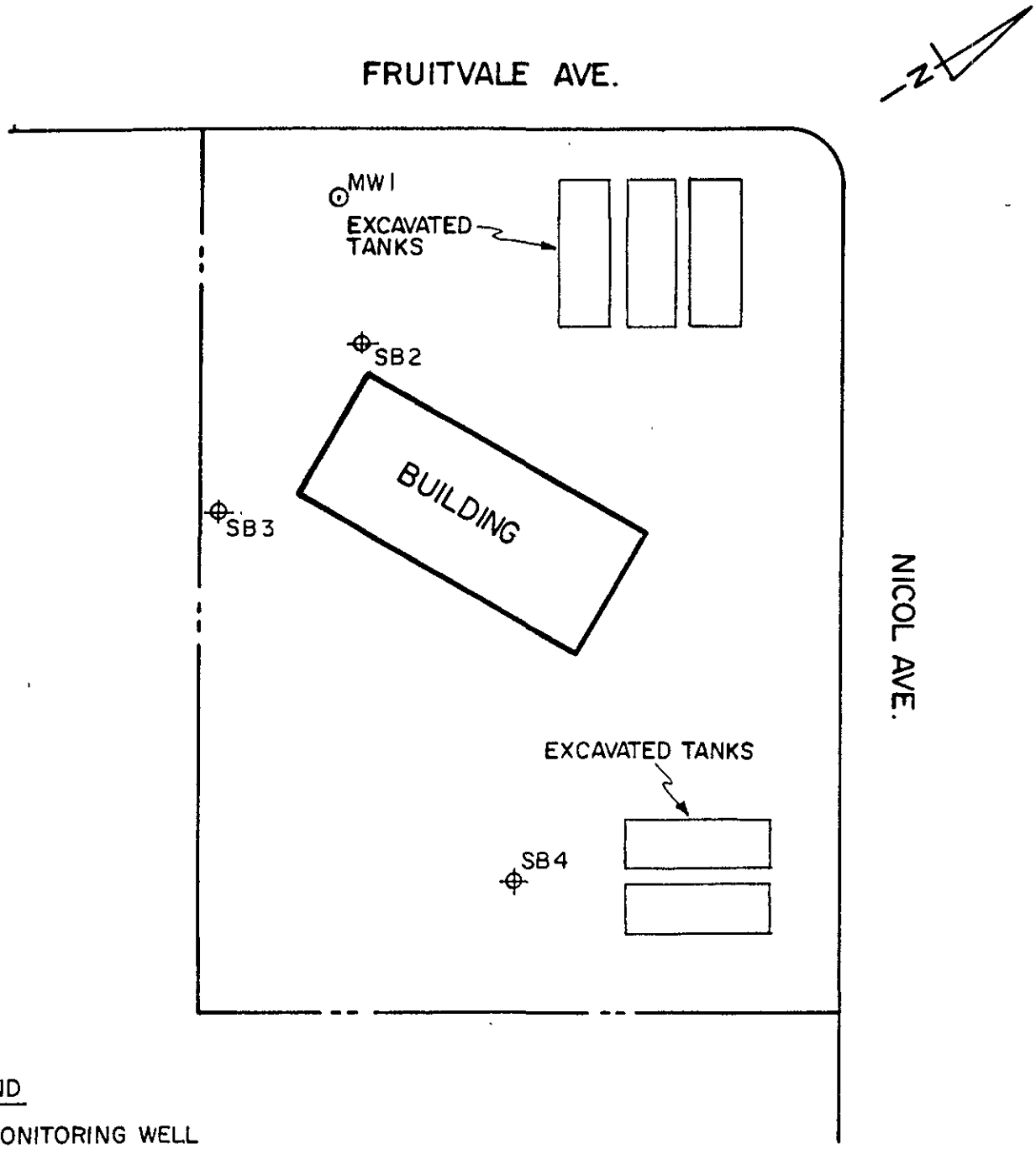


Figure 3. Site Plan

NO SCALE

BEDDIG PROPERTY
~~2950~~ FRUITVALE AVE.
OAKLAND, CALIFORNIA

M. 8/89

GROUNDWATER TECHNOLOGY, INC.

912-89

TABLE 2

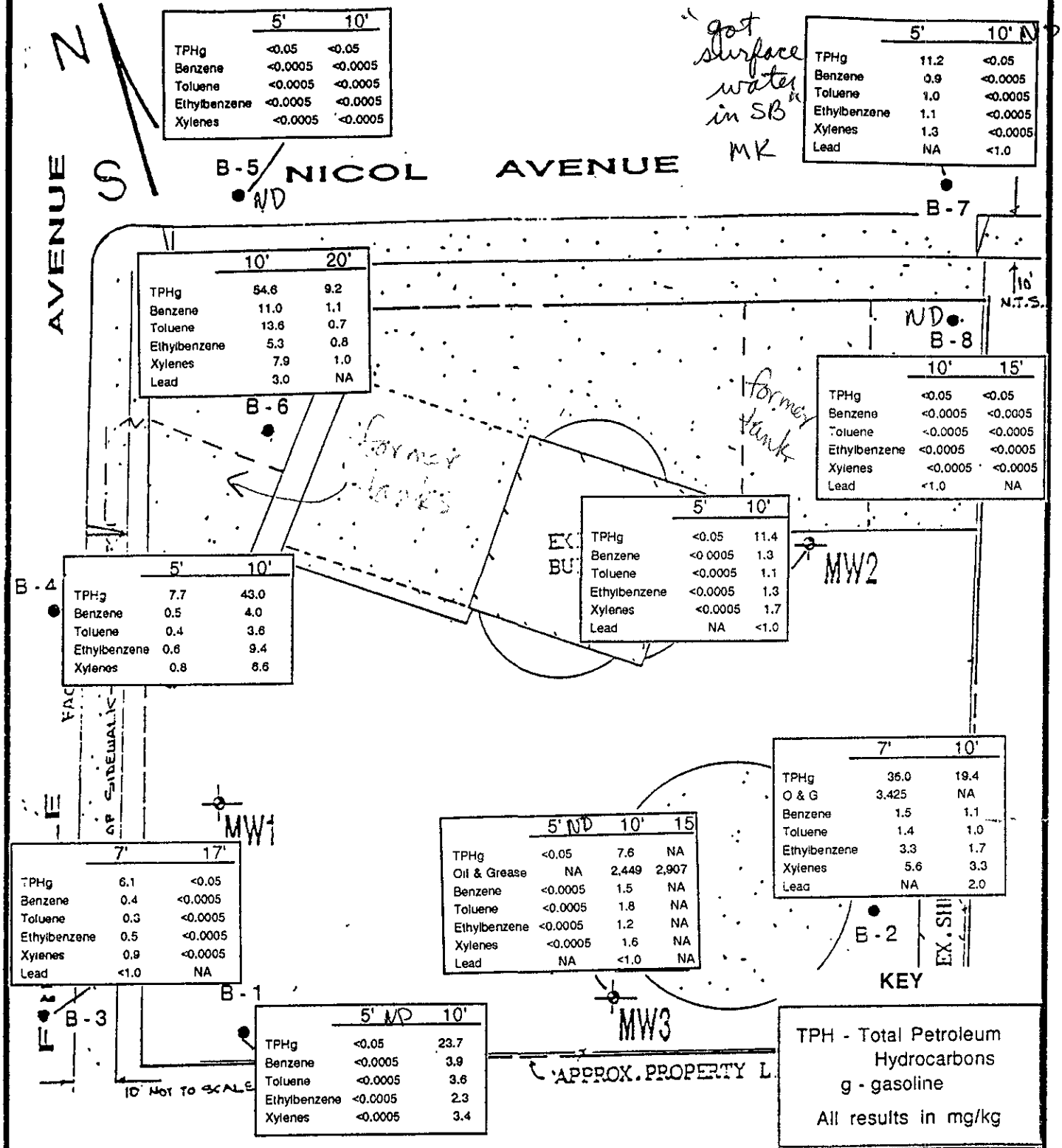
SOIL ANALYSES RESULTS
(parts per million [ppm])

~~WELL~~ SAMPLE	SAMPLE DEPTH (ft.)	BENZENE	TOLUENE	ETHYL-BENZENE	XYLENES	TPH-AS-GASOLINE
MW-1A	5.5	ND	ND	ND	ND	1
MW-1B	11	3	10	4	15	210
MW-1C	15	ND	ND	ND	ND	2
SB-2 SURF	1.5	ND	ND	ND	ND	4
SB-2A	6	3	8	7	32	320
SB-2B	11	2	1	3	5	450
SB-3A	6.5	ND	ND	ND	ND	ND
SB-3B	11	3	16	13	49	610
SB-4A	6.5	ND	ND	ND	8	570
SB-4B	11	ND	ND	ND	5	380

ND = Compound not detected at Method Detection Limit

Analyses of the water sample collected from MW-1 showed 1,800 parts per billion (ppb) benzene, 350 ppb toluene, 140 ppb ethylbenzene, 320 ppb xylenes, and 6,100 ppb TPH-as-gasoline.

In summary, the gathered data indicates that the soils and groundwater beneath this site have been impacted by hydrocarbons and the levels found are above state action levels. The make-up of the observed hydrocarbons indicate that the probable source material is degraded gasoline.



ACC Environmental Consultants, Inc. 1000 Atlantic Avenue, Suite 110 Alameda, California 94501		Soil Analysis Results - 1/13/93 2964 Fruitvale Avenue Oakland, California	
JOB NO: 6068-2	Date: 2/16/93	Dn by: MCK	Figure 3

4.0 FINDINGS

4.1 Subsurface Conditions

During drilling and sampling activities, the site was observed to be covered with a baserock/asphalt cap. Below the cap, the subsurface soils consisted of dark brown clay to approximately 15 feet below the surface. Within the boring drilled in the street (B-3, B-4, B-5 and B-7), below the asphalt cap, gravelly clay (fill) was encountered to five feet below the ground surface. Below the fill, brown clay was encountered to approximately 15 feet below the surface. Between approximately 15 and 24 feet below present grade the soil is dark brown sandy clay with gravel. At approximately 24 feet the soils became clayier to the depth explored of 25 feet below the surface.

Groundwater was encountered between 5 and 9 feet below ground surface (bgs) during drilling. During drilling in Fruitvale Avenue, shallow groundwater was initially encountered at approximately 3 feet bgs in boring B-4. After collecting samples in boring B-4, artesian conditions of the shallow aquifer were encountered. Similar conditions were observed in borings B-5 and B-7 at 3 feet bgs. Artesian conditions occur when the aquifer is confined by the surrounding soil and the potentiometric surface (top of the water in the aquifer) is actually above the ground surface.

During drilling and sampling field evidence of volatile organics (i.e. discoloration and odor) were detected in some of the borings. Table 2 below summarized the intervals in each boring of which volatile organics were observed.

TABLE # 3
Field Evidence of Volatile Organics

Boring No.	Total Depth Feet (bgs)	Odor	Discoloration	Depth Observed
B-1	11	none	no	Not observed
B-2	11	strong	yes	5 to 11 feet bgs
B-3	17	moderate	no	7 to 17 feet bgs
B-4	11	strong	yes	5 to 11 feet bgs
B-5	16	none	no	Not observed
B-6	20	moderate	yes	5 to 20 feet bgs
B-7	16	none	no	Not observed
B-8	16	none	no	Not observed
MW-2	22	strong	yes	7 to 14 feet bgs
MW-3	25	strong	yes	5 to 19 feet bgs

Note: bgs = below ground surface

4.2 Analytical Results - Soil

A minimum of two soil samples were selected from each boring and submitted to Geochem Environmental for analysis according to the "Tri-Regional Board

CHROMALAB, INC.

Environmental Laboratory (1094)

5 DAYS TURNAROUND

August 10, 1993 ChromaLab File No.: 9308120

ACC ENVIRONMENTAL CONSULTANTS

Attn: MISTY KALTREIDER

RE: One soil sample for TEPH analysis

Project Name: FRUITVALE
Project Number: 6068-3
Date Sampled: August 9, 1993 Date Submitted: August 10, 1993
Date Extracted: August 10, 1993 Date Analyzed: August 10, 1993

RESULTS:

Sample I.D.	Kerosene (mg/Kg)	Diesel (mg/Kg)	Motor Oil (mg/Kg)
LIFT, S1	52	N.D.	780
BLANK	N.D.	N.D.	N.D.
SPIKE RECOVERY	----	91%	-----
DUP SPIKE RECOVERY	----	86%	----
DETECTION LIMIT	10	10	100
METHOD OF ANALYSIS	3550/8015	3550/8015	3550/8015

ChromaLab, Inc.

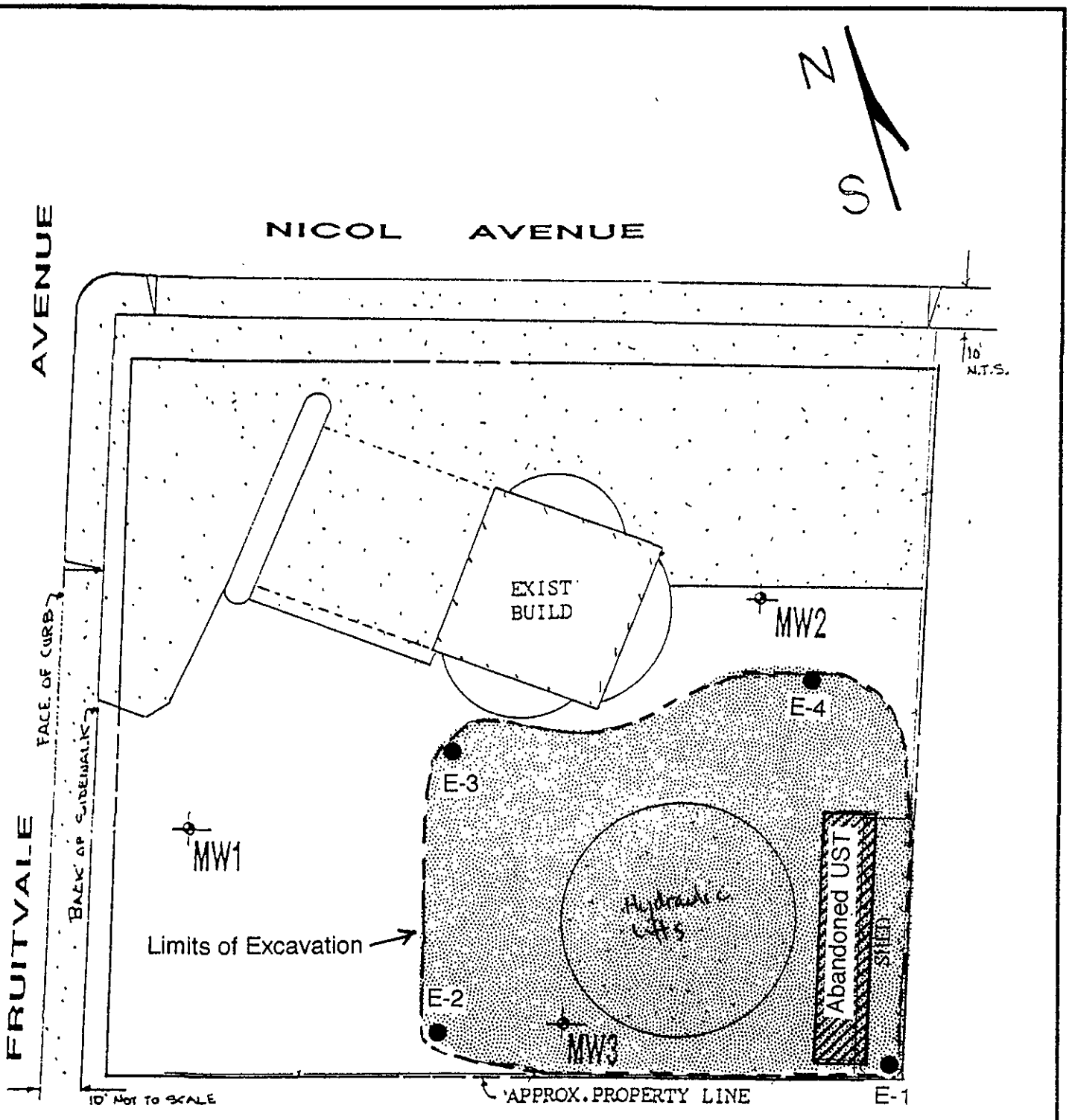
Alex Tam
Analytical Chemist

Eric Tam
Laboratory Director

cc

Table 6 of 4

2239 Omega Road,#1 • San Ramon, California 94583
(510) 831-1788 • Facsimile (510) 831-8798
Federal ID #68-0140157



Site Plan
2964 Fruitvale Avenue
Oakland, California

4/24/1994	Drawn By: MCK	Project: 6068-5	Figure 2

ACC Environmental Consultants • 1000 Atlantic Avenue, Suite 110 • Alameda, CA 94501• (510) 522–8188 Fax: (510) 865–5731

During excavation, the impacted soil extended under a small shed on-site. The shed was removed on February 2, 1994 (Photograph 4). Soil removal continued on February 3, 1994. The excavation was extended vertically to the capillary fringe (11 feet below ground surface) and laterally to the fence line on the south and west ends of the property (Photographs 4, 6, 7, and 8).

A total of 440 cubic yards of impacted soil was removed from the excavation and disposed at B & J Landfill in Vacaville, California between February 1 through 4, 1994 (Photographs 9 and 10). Non-hazardous waste transport forms and acceptance receipts are attached in Appendix B. Groundwater was not encountered during soil removal.

3.3 Sample Collection

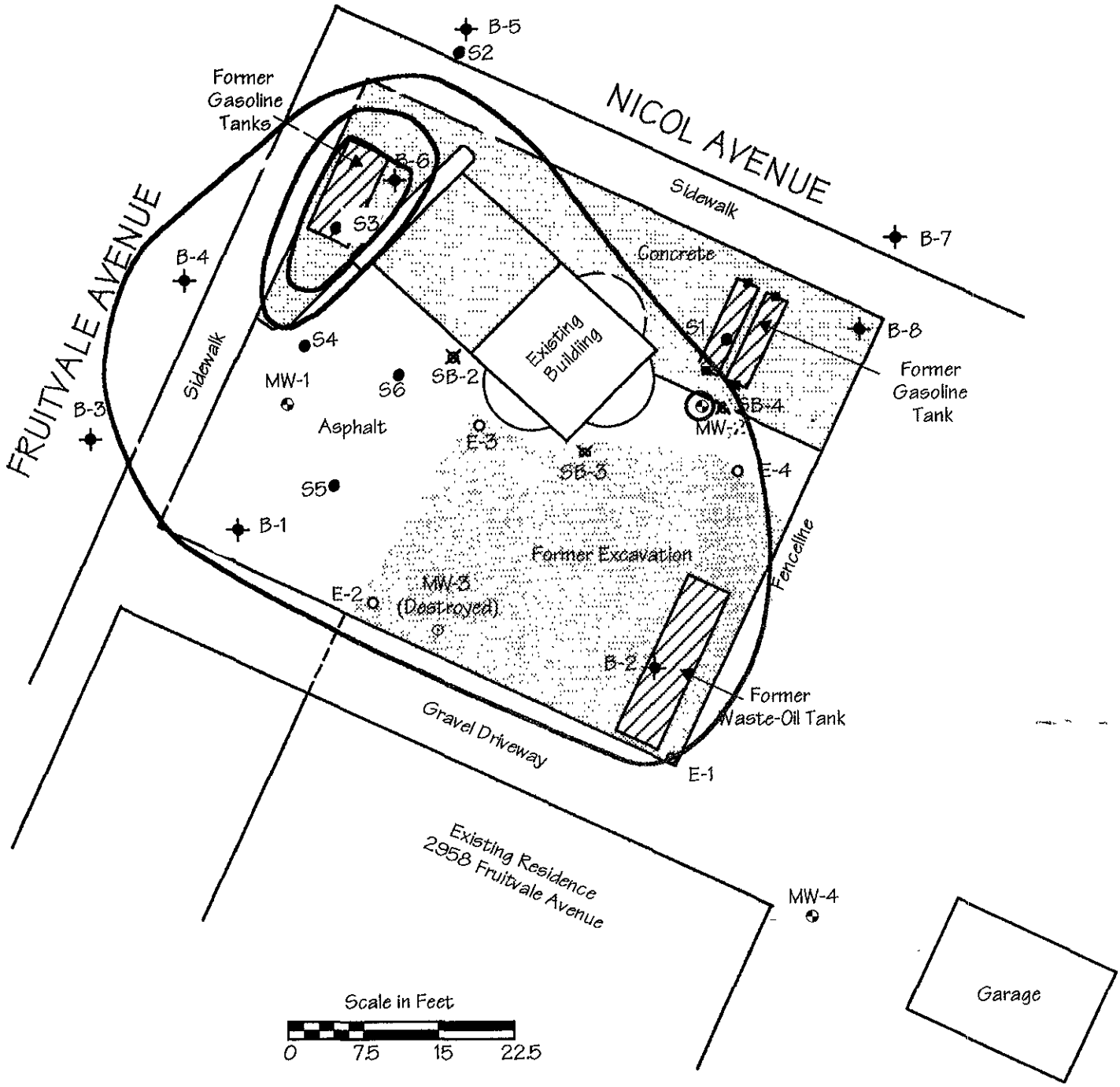
Soil samples were collected from the excavation on February 2 and 3, 1994. Mr. Barney Chan and Ms. Jennifer Eberle, Inspectors for Alameda County - Department of Environmental Health witnessed the sampling. Four soil samples (E-1, E-2, E-3, and E-4), were collected at each corner of the pit and were submitted to ChromaLab, an EPA accredited laboratory for analysis of Total Extractable Petroleum Hydrocarbons (TEPH) as diesel, kerosene, and motor oil and Total Petroleum Hydrocarbons (TPH) as gasoline with Benzene, Toluene, ethylbenzene, and Total Xylenes (BTEX).

Results of the sample analysis are summarized in Table 1.

Table 5 - Soil Sample Results

	Sample Number			
Analyte	**E-1**	**E-2**	**E-3**	**E-4**
TPH-Gas (ppm)	**46**	**<1.0**	**2.2**	**20**
TPH-Diesel (ppm)	**<1.0**	**<1.0**	**<1.0**	**<1.0**
Kerosene (ppm)	**170**	**<1.0**	**<1.0**	**4.4**
Motor Oil (ppm)	**2,300**	**<10**	**<10**	**83**
Benzene (ppb)	**37**	**<5.0**	**12**	**22**
Toluene (ppb)	**65**	**<5.0**	**<5.0**	**65**
E. Benzene (ppb)	**190**	**<5.0**	**120**	**170**
Xylenes (ppb)	**1,900**	**<5.0**	**11**	**350**

Notes: TPH = Total Petroleum Hydrocarbons
ppm = parts per million
ppb = parts per billion
E. Benzene = Ethylbenzene
All samples collected 10 feet below ground surface



Legend

- Monitoring Well Location
- Soil Sample Location (8-89)
- Soil Boring Location (10-89)
- Soil Boring Location (1-93)
- Excavation Sample Location (4-94)
- Soil Boring Location (3-97)

Benzene Concentrations in Soil Between 7 and 10 Feet Below Ground Surface (parts per million, ppm)

- 10
- 5
- 1
- Not Detected

Title	**Benzene Concentrations in Soil** **2964 Fruitvale Avenue** **Oakland, California**
Figure No: 6	Date: 4/30/97
Drawn By: MCK	Scale: 1" = 15'
Project No: 6068-006.00	

ACC Environmental Consultants
7977 Capwell Drive, Suite 100
Oakland, California 94621
(510)638-8400 Fax: (510)638-8404

N
W
E
S

3.3 Groundwater Sampling

Groundwater samples were collected from monitoring wells on October 3, 1997. After water level measurements were taken, each well was purged by hand using a designated disposable polyethylene bailer. Groundwater pH, temperature, and electrical conductivity were monitored during well purging. Each well was considered to be purged when these parameters stabilized. A minimum of four well volumes was removed to purge each well. The worksheet of groundwater conditions monitored during purging is included in Appendix 1.

After the groundwater had recovered to a minimum of approximately 80 percent of its static level, water samples were obtained. Groundwater samples were collected from the monitoring wells using designated disposable polyethylene bailers to fill two 40-milliliter VOA vials, without headspace, and one 1-liter glass jar per well. The sample vials were labeled with information regarding the well number and date and time of collection, and were preserved in a pre-chilled insulated container during transport to Chromalab, Inc., a state-certified laboratory, following chain of custody protocol.

Water purged during the development and sampling of the monitoring wells was temporarily stored on site in Department of Transportation approved 55-gallon drums pending laboratory analysis and proper disposal.

4.0 RESULTS OF GROUNDWATER SAMPLING

Groundwater samples collected were submitted to Chromalab, Inc., for analysis of TPHg, BTEX, MTBE, and TEPH as diesel, motor oil, and kerosene. Sample results indicated 7.8 µg/L MTBE in MW-1. No concentration of MTBE were detected above laboratory reporting limits in wells MW-2 and MW-4. A copy of the chain of custody record and the laboratory analytical results is included in Appendix 2. Water sample analytical results and are summarized in Table 4.

TABLE 4 - GROUNDWATER SAMPLE ANALYTICAL RESULTS

Well No.	Date Sampled	TPHg (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	TEPH (k, m, d) (µg/L)
MW-1	01/26/93	<50	<0.5	<0.5	<0.5	<0.5	-----
	05/04/93	5,400	1,400	130	<0.5	180	-----
	07/28/93	2,000	22	<0.5	3.6	26	-----
	11/02/93	1,600	170	6.2	2.0	24	-----
	09/27/94	7,700	1,300	18	11	21	170(k)
	12/27/94	8,300	2,000	230	190	400	750(k)
	03/29/95	7,900	2,100	240	61	130	480(k)
	07/17/95	6,900	1,700	55	65	67	-----
	07/20/95	----	----	----	----	----	5,700(m)

Well No.	Date Sampled	TPHg (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	TEPH (k, m, d) (µg/L)
	01/19/96	6,800	2,100	67	83	79	<50
	03/07/96	----	----	----	----	----	----
	08/13/96	11,000	2,600	56	95	78	<50
	02/21/97	8,500	1,600	6.5	54	47	---
	10/03/97	850	39	2.4	1.5	11	ND
MW-2	01/26/93	<50	<0.5	<0.5	<0.5	<0.5	----
	05/04/93	<50	<0.5	<0.5	<0.5	<0.5	----
	07/28/93	<50	<0.5	<0.5	<0.5	<0.5	----
	11/02/93	230	0.8	<0.5	<0.5	<0.5	----
	09/27/94	<50	<0.5	<0.5	<0.5	<0.5	5.9(m)
	12/27/94	190	5.9	<0.5	<0.5	<0.5	20(m)/600(k)
	03/29/95	130	1.7	<0.5	<0.5	<0.5	7,900(m)
	07/17/95	78	1.4	<0.5	<0.5	<0.5	----
	07/20/95	----	----	----	----	----	6,500(m)
	01/19/96	----	----	----	----	----	----
	03/07/96	<50	<0.5	<0.5	<0.5	<0.5	16,000(m)*
	08/13/96	<50	<0.5	<0.5	<0.5	<0.5	1,800(m)/490(d)
	02/21/97	160	1.1	<0.5	<0.5	<0.5	10,000(m)/10,000(d)
	10/03/97	<50	<0.5	<0.5	<0.5	<0.5	16,000(m)/5,300(d)**
MW-3	01/26/93	1,800	83.2	95.5	169.2	318.7	----
	05/04/93	1,100	83.0	5.0	<1.0	26.0	----
	07/38/93	920	40.0	3.0	1.4	9.3	2,200(k)
	11/02/93	1,100	31.0	1.6	0.5	5.7	2,400(k)
	Destroyed	----	----	----	----	----	----
MW-4	09/27/94	<50	<0.5	<0.5	<0.5	<0.5	<50
	12/27/94	<50	<0.5	<0.5	<0.5	<0.5	<50
	03/29/95	<50	<0.5	<0.5	<0.5	<0.5	<50
	07/18/95	<50	<0.5	<0.5	<0.5	<0.5	----
	01/19/96	<50	<0.5	<0.5	<0.5	<0.5	<50
	03/07/96	----	----	----	----	----	----
	08/13/96	<50	<0.5	<0.5	<0.5	<0.5	<50
	10/03/97	<50	<0.5	<0.5	<0.5	0.6	170(d)

Notes: *µg/L = micrograms per liter = ppb*
(m) = Detected concentration of motor oil
(k) = Detected concentration of kerosene
(d) = Detected concentration of diesel
**Hydrocarbons in the diesel range do not match any of Chromalab's petroleum hydrocarbon standard profiles compared to Chromalab's Diesel standard.*
***Hydrocarbon reported as diesel is in the late diesel range and does not match laboratory diesel standard*
ND = No concentrations were detected above laboratory detection limits

Table 7

RBCA SITE ASSESSMENT — **Tier 2 Worksheet 9.2**

Site Name: 0
Site Location: 2964 Fruitvale Avenue

Completed By: Martha Rindfleisch
Revised: 1/7/1998

SUBSURFACE SOIL SSTL VALUES (> 3 FT BGS)

Target Risk (Class A & B) 1.0E-5
Target Risk (Class C) 1.0E-5
Target Hazard Quotient 1.0E+0

☐ MCL exposure limit?
☐ PEL exposure limit?

Calculation Option 1

SSTL Results For Complete Exposure Pathways ("x" if Complete)

CONSTITUENTS OF CONCERN		Representative Concentration		Soil Leaching to Groundwater			X	Soil Volatilization to Indoor Air		X	Soil Volatilization to Outdoor Air		Applicable SSTL	SSTL Exceeded ?	Required CRF
CAS No.	Name	(mg/kg)		Residential: (on-site)	Commercial (on-site)	Regulatory(MCL): (on-site)		Residential: (on-site)	Commercial (on-site)		Residential: (on-site)	Commercial (on-site)	(mg/kg)	"■" If yes	Only if "yes" left
71-43-2	Benzene	7.6E-1		NA	NA	NA		NA	1.6E+0		NA	6.6E+2	1.6E+0	☐	<1
50-32-8	Benzo(a)Pyrene	0.0E+0		NA	NA	NA		NA	>Res		NA	>Res	>Res	☐	<1
91-20-3	Naphthalene	0.0E+0		NA	NA	NA		NA	NA		NA	NA	>Res	☐	<1

>Res indicates risk-based target concentration greater than constituent residual saturation value

Software: GSI RBCA Spreadsheet Serial: G-297-MCX-380
Version: 1.0.1

Drilling Log

GROUNDWATER TECHNOLOGY, INC.

Monitoring Well 1

Project Beddig Properties Owner Mr. & Mrs. Beddig
Location Oakland, CA Project Number 203 899 1012
Date Drilled 9/12/89 Total Depth of Hole 30' Diameter 7.5"
Surface Elevation ____ Water Level Initial 15.5' 24-hour ____
Screen: Dia. 2" Length 20' Slot Size .020"
Casing: Dia. 2" Length 10' Type PVC Sch. 40
Drilling Company Sierra Pac. Drilling Method Hollow Stem Auger
Driller Anthony Schonberger Log by Neal Farrar
Geologist/Engineer ____ License No. ____

Sketch Map

Notes

Depth (Feet)	Well Construction	PID (ppm)	Sample Number	Graphic Log	Description/Soil Classification (Color, Texture, Structure)
0					Asphalt 3 inches
2				CL	Black, silty clay (medium stiff, dry, strong product odor).
					(grades slight odor)
					(grades less clay)
4			A 3 4 9	CL	
6					Mottled gray and tan clay with some silt (medium stiff, dry, slight product odor).
					Tan silty clay (stiff, dry, slight product odor).
8				CL	(grades sandy)
10			B 5 7 9		Poor recovery
12				CL	Tan, fine, sandy clay (stiff, dry, strong product odor).
					(grades less sandy)
14			C 3 4 7		Blue-gray, sandy clay (loose, dry, slight product odor).
					▼ Encountered water 9/12/89 (09:45 hrs.)
16				CL	(grades sandy and gravelly with some cobbles)
18					Rig refusal, got through, may be a cobble
20					Tan, sandy clay with rock fragments (soft, wet, no product odor).
22				CL	

MARCH 21st, 1989 - REV. G

GROUNDWATER TECHNOLOGY, INC.

Monitoring Well 1

Drilling Log

Depth (Feet)	Well Construction	PID (ppm)	Sample Number	Graphic Log	Description/Soil Classification (Color, Texture, Structures)
26				CL	(grades sandier)
28					
30					Total depth 1000 hours 9/12/89 Product odor from hole.
32					
34					
36					
38					
40					
42					
44					
46					
48					
50					
52					
54					

Drilling Log

GROUNDWATER TECHNOLOGY, INC.

Soil Boring 2

Sketch Map

Project Beddig Properties Owner Mr. & Mrs. Beddig
Location Oakland, CA Project Number 203 899 1012
Date Drilled 9/12/89 Total Depth of Hole 15' Diameter 7.5"
Surface Elevation ____ Water Level Initial 15' 24-hour ____
Screen: Dia. ____ Length ____ Slot Size ____
Casing: Dia. ____ Length ____ Type ____
Drilling Company Sierra Pac. Drilling Method Hollow Stem Auger
Driller Anthony Schonberger Log by Neal Farrar
Geologist/Engineer ____ License No. ____

Notes

Depth (Feet)	Well Construction	PID (ppm)	Sample Number	Graphic Log	Description/Soil Classification (Color, Texture, Structure)
0					Asphalt 3 inches
					Black, silty clay (medium stiff, dry, slight product odor).
2				CL	
4			A		
			6		
			7		
6			12		
8					Tan, silty clay (stiff, dry, slight product odor).
				CL	
10			B		
			8		
			9		
12			14		Bluish/gray-green, silty clay with fine sand (soft, moist, slight product odor).
				CL	
14					▼ Encountered water 11:30 9/12/89 TD
16					
18					
20					
22					

MARCH 21st, 1989 - REV. G

Drilling Log

GROUNDWATER TECHNOLOGY, INC.

Soil Boring 3

Sketch Map

Project Beddig Properties Owner Mr. & Mrs. Beddig
Location Oakland, CA Project Number 203 899 1012
Date Drilled 9/12/89 Total Depth of Hole 13' Diameter 7.5"
Surface Elevation ____ Water Level Initial ____ 24-hour ____
Screen: Dia. ____ Length ____ Slot Size ____
Casing: Dia. ____ Length ____ Type ____
Drilling Company Sierra Pac. Drilling Method Hollow Stem Auger
Driller Anthony Schonberger Log by Neal Farrar
Geologist/Engineer ____ License No. ____

Notes

Depth (Feet)	Well Construction	PID (ppm)	Sample Number	Graphic Log	Description/Soil Classification (Color, Texture, Structure)
0					8 inches asphalt
2				CL	Reddish/tan, silty clay with minor rock fragments (loose, dry, no product odor).
4			A		Dark brown, silty clay with some fine sands (loose, dry, slight product odor).
6			3 4 5	CL	(grades less sandy with trace organics)
8					
10			B 6 8		Tan, silty clay with some fine sand and rock fragments (small) (medium stiff, dry, slight product odor).
12			10	CL	Grey, sandy clay with many rock fragments (stiff, dry, strong product odor).
14					Total depth
16					
18					
20					
22					

MARCH 21st, 1989 - REV. G

GROUNDWATER TECHNOLOGY, INC.

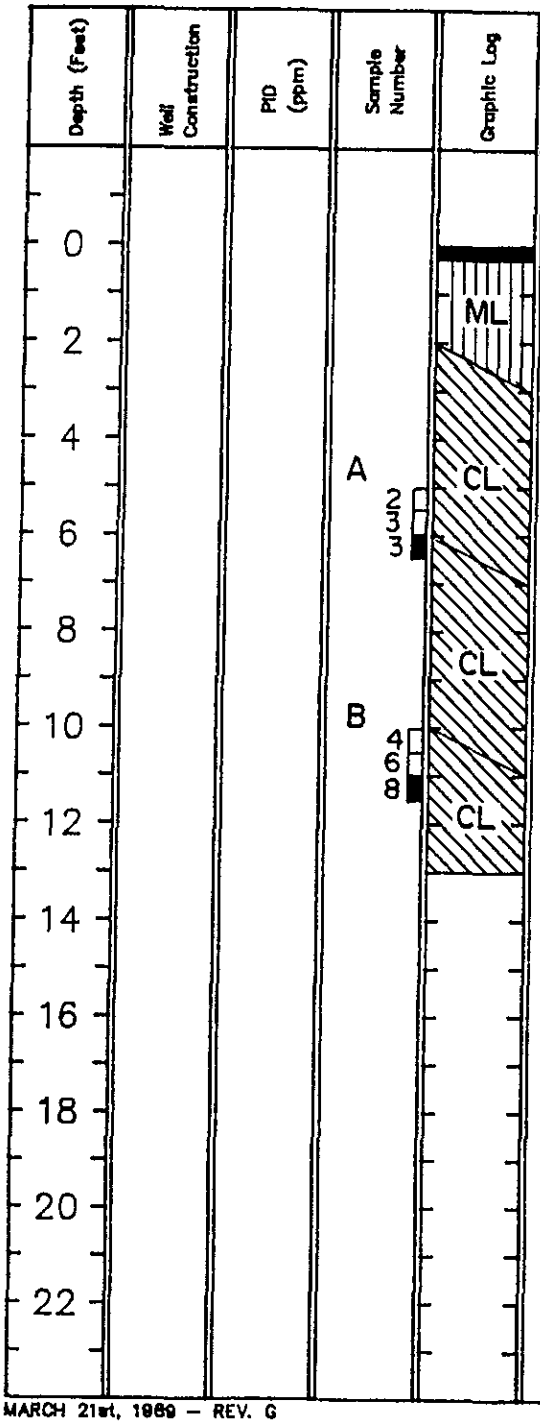
Drilling Log

Soil Boring 4

Project Beddig Properties Owner Mr. & Mrs. Beddig
Location Oakland, CA Project Number 203 899 1012
Date Drilled 9/12/89 Total Depth of Hole 13' Diameter 7.5"
Surface Elevation ____ Water Level Initial ____ 24-hour ____
Screen: Dia. ____ Length ____ Slot Size ____
Casing: Dia. ____ Length ____ Type ____
Drilling Company Sierra Pac. Drilling Method Hollow Stem Auger
Driller Anthony Schonberger Log by Neal Farrar
Geologist/Engineer ____ License No. ____

Sketch Map

Notes



Description/Soil Classification
(Color, Texture, Structure)

3 inches asphalt
Black, sandy silt (loose, dry, no product odor).

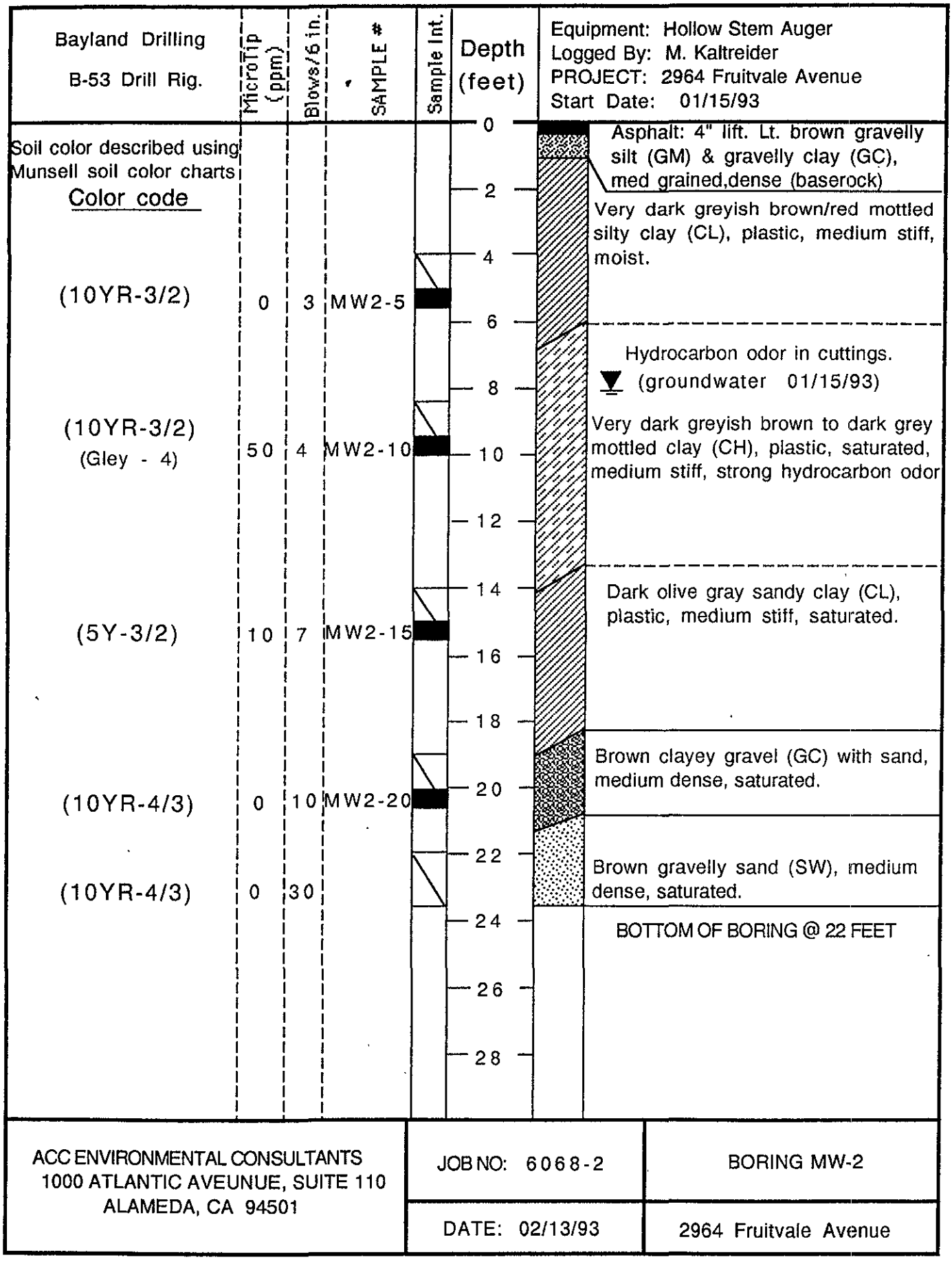
Black, silty clay (stiff, dry, strong product odor).

Grey, silty fine sand with some rock fragments (soft, dry, strong product odor).

Tan, sandy clay with some silt and rock fragments (stiff, moist, strong product odor).

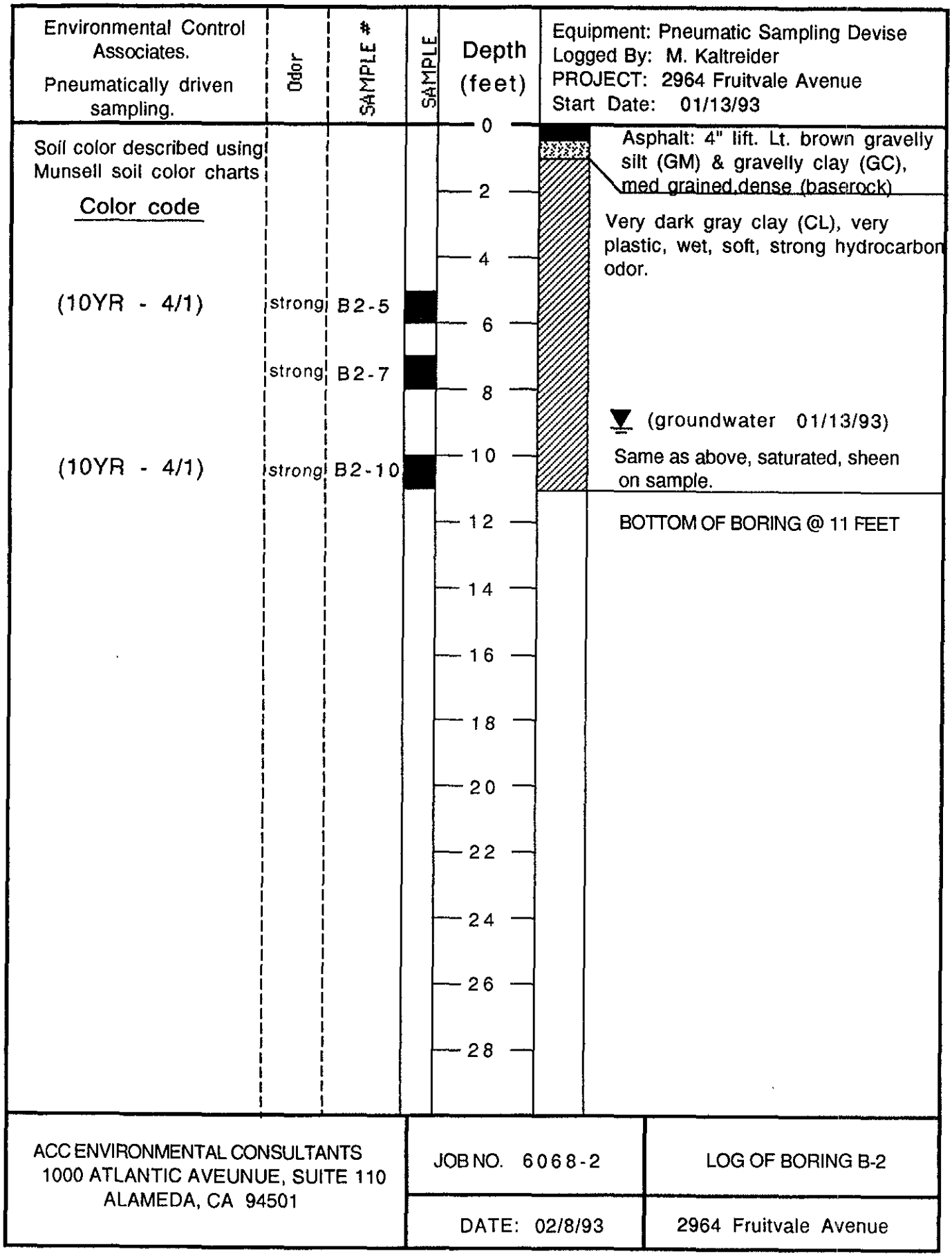
Total depth 13 feet

MARCH 21st, 1989 - REV. G


Bayland Drilling
B-53 Drill Rig.
MicroTip (ppm)
Blows/6 in.
SAMPLE #
Sample Int.
Depth (feet)
Equipment: Hollow Stem Auger
Logged By: M. Kaltreider
PROJECT: 2964 Fruitvale Avenue
Start Date: 01/15/93
Soil color described using Munsell soil color charts
Color code
(10YR-3/2)
0
3
MW2-5
(10YR-3/2)
(Gley - 4)
50
4
MW2-10
(5Y-3/2)
10
7
MW2-15
(10YR-4/3)
0
10
MW2-20
(10YR-4/3)
0
30
0
2
4
6
8
10
12
14
16
18
20
22
24
26
28
Asphalt: 4" lift. Lt. brown gravelly silt (GM) & gravelly clay (GC), med grained,dense (baserock)
Very dark greyish brown/red mottled silty clay (CL), plastic, medium stiff, moist.
Hydrocarbon odor in cuttings.
(groundwater 01/15/93)
Very dark greyish brown to dark grey mottled clay (CH), plastic, saturated, medium stiff, strong hydrocarbon odor
Dark olive gray sandy clay (CL), plastic, medium stiff, saturated.
Brown clayey gravel (GC) with sand, medium dense, saturated.
Brown gravelly sand (SW), medium dense, saturated.
BOTTOM OF BORING @ 22 FEET
ACC ENVIRONMENTAL CONSULTANTS
1000 ATLANTIC AVEUNUE, SUITE 110
ALAMEDA, CA 94501
JOB NO: 6068-2
BORING MW-2
DATE: 02/13/93
2964 Fruitvale Avenue

Environmental Control Associates. Pneumatically driven sampling.	Odor	SAMPLE #	SAMPLE	Depth (feet)	Equipment: Pneumatic Sampling Devise Logged By: M. Kaltreider PROJECT: 2964 Fruitvale Avenue Start Date: 01/13/93
Soil color described using Munsell soil color charts Color code				0	Asphalt: 4" lift. Lt. brown gravelly silt (GM) & gravelly clay (GC), med grained,dense (baserock)
				2	
				4	Very dark grayish brown clay (CL), very plastic, very moist, medium stiff
(10YR - 3/2)	0	B1-5		6	▼ (groundwater 01/13/93)
				8	
(10YR - 3/2)	0	B1-10		10	Same as above, saturated.
				12	BOTTOM OF BORING @ 11 FEET
				14	
				16	
				18	
				20	
				22	
				24	
				26	
				28	

ACC ENVIRONMENTAL CONSULTANTS 1000 ATLANTIC AVEUNUE, SUITE 110 ALAMEDA, CA 94501	JOB NO. 6068-2	LOG OF BORING B-1
	DATE: 02/8/93	2964 Fruitvale Avenue


Environmental Control Associates.
Pneumatically driven sampling.
Odor
SAMPLE #
SAMPLE
Depth (feet)
Equipment: Pneumatic Sampling Devise
Logged By: M. Kaltreider
PROJECT: 2964 Fruitvale Avenue
Start Date: 01/13/93
Soil color described using Munsell soil color charts
Color code
(10YR - 4/1)
strong
B2-5
strong
B2-7
(10YR - 4/1)
strong
B2-10
0
2
4
6
8
10
12
14
16
18
20
22
24
26
28
Asphalt: 4" lift. Lt. brown gravelly silt (GM) & gravelly clay (GC), med grained,dense (baserock)
Very dark gray clay (CL), very plastic, wet, soft, strong hydrocarbon odor.
(groundwater 01/13/93)
Same as above, saturated, sheen on sample.
BOTTOM OF BORING @ 11 FEET
ACC ENVIRONMENTAL CONSULTANTS
1000 ATLANTIC AVEUNUE, SUITE 110
ALAMEDA, CA 94501
JOB NO. 6068-2
DATE: 02/8/93
LOG OF BORING B-2
2964 Fruitvale Avenue

Environmental Control Associates.

Pneumatically driven sampling.

Equipment: Pneumatic Sampling Devise
Logged By: M. Kaltreider
PROJECT: 2964 Fruitvale Avenue
Start Date: 01/13/93

Soil color described using Munsell soil color charts

Color code

	MicroTip ppm	SAMPLE #	SAMPLE	Depth (feet)	
				0	Asphalt: 4" lift. Lt. brown gravelly silt (GM) & gravelly clay (GC), med grained,dense (baserock)
				2	Dark brown sandy clay (SC), with gravel, plastic, very moist, stiff. (Fill)
				4	
(10YR - 3/2)	0	B3-5		6	Brown clay (CH) with sand, moist, plastic, stiff.
	5.1	B3-7		8	Dark grayish brown, mottled/gray clay (CL), plastic, moist.
(10YR - 4/3)	34	B3-10		10	Same as above, slight odor.
				12	
				14	Same as above, with gravel, slight odor.
(10YR - 3/6)	9.4	B3-15		16	Mottled red/brown sandy gravelly clay (SC), slight odor.
	slight	B3-17		18	BOTTOM OF BORING @ 18 FEET (refusal)
				20	
				22	
				24	
				26	
				28	

ACC ENVIRONMENTAL CONSULTANTS
1000 ATLANTIC AVEUNUE, SUITE 110
ALAMEDA, CA 94501

JOB NO. 6068-2

LOG OF BORING B-3

DATE: 02/8/93

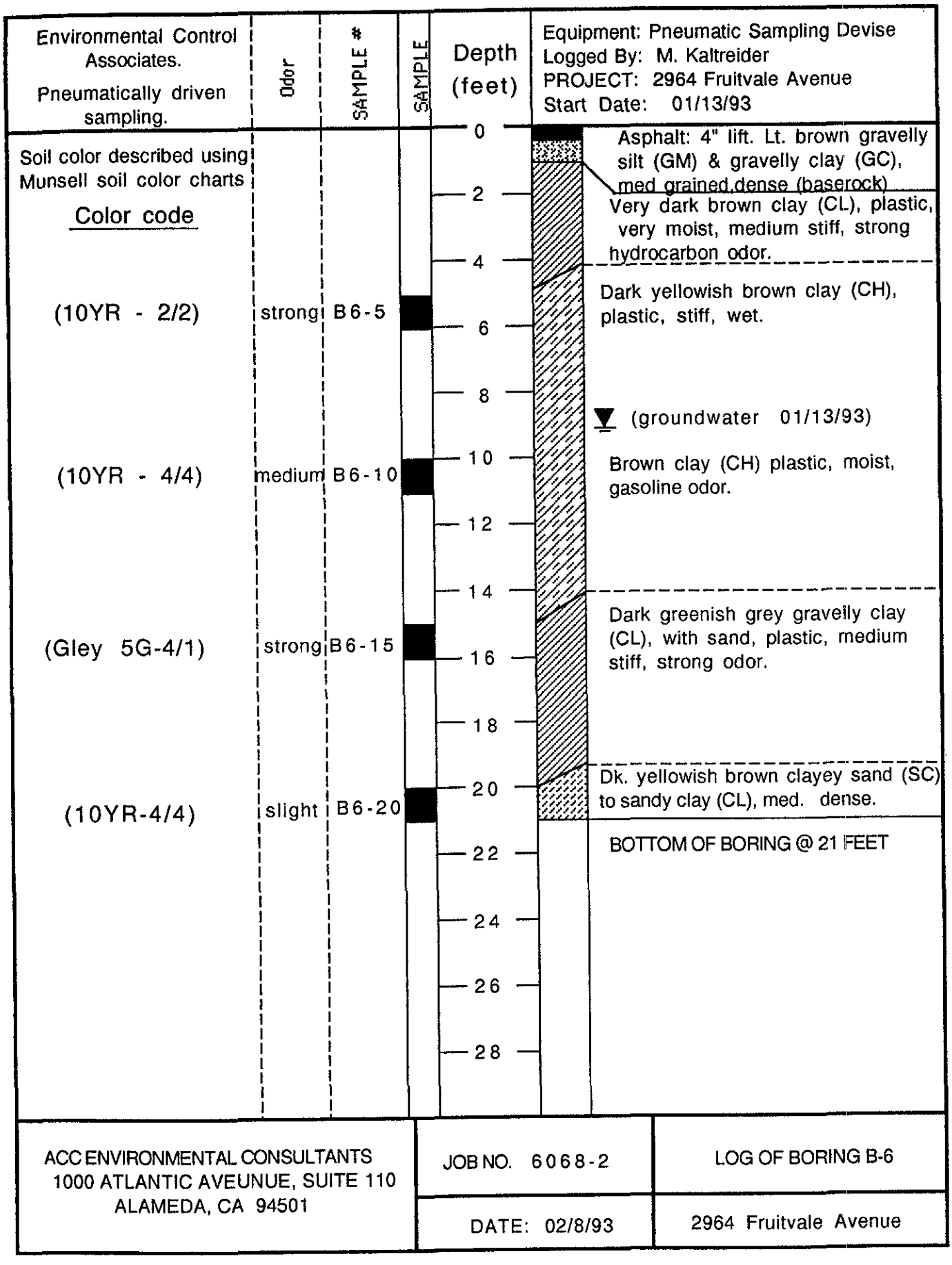
2964 Fruitvale Avenue

Environmental Control Associates. Pneumatically driven sampling.	Micro Tip ppm	SAMPLE #	SAMPLE	Depth (feet)	Equipment: Pneumatic Sampling Devise Logged By: M. Kaltreider PROJECT: 2964 Fruitvale Avenue Start Date: 01/13/93
Soil color described using Munsell soil color charts Color code				0	Asphalt: 4" lift. Lt. brown gravelly silt (GM) & gravelly clay (GC), med grained,dense (baserock/fill)
				2	
				4	▼ (groundwater 01/13/93) (under artesian conditions)
(5Y - 3/2)	24	B4-5		6	Dark olive gray clay (CH), plastic, stiff, slight odor.
				8	
(10YR - 3/2)	69	B4-10		10	Same as above, strong odor.
				12	BOTTOM OF BORING @ 11 FEET
				14	
				16	
				18	
				20	
				22	
				24	
				26	
				28	

ACC ENVIRONMENTAL CONSULTANTS 1000 ATLANTIC AVEUNUE, SUITE 110 ALAMEDA, CA 94501	JOB NO. 6068-2	LOG OF BORING B-4
	DATE: 02/8/93	2964 Fruitvale Avenue

Environmental Control Associates. Pneumatically driven sampling.	Odor	SAMPLE #	SAMPLE	Depth (feet)	Equipment: Pneumatic Sampling Devise Logged By: M. Kaltreider PROJECT: 2964 Fruitvale Avenue Start Date: 01/13/93
Soil color described using Munsell soil color charts Color code				0	Asphalt: 4" lift. Lt. brown gravelly silt (GM) & gravelly clay (GC), med grained,dense (baserock)
				2	Very dark brown sandy clay (CL), very plastic, very moist, medium stiff
				4	▼ (groundwater 01/13/93) (under artesian conditions)
(10YR - 2/2)	0	B5-5		6	Dark yellowish brown clay (CH), plastic, stiff, wet.
				8	
(10YR - 4/4)	0	B5-10		10	
				12	
				14	
(10YR - 4/4)	0	B5-15		16	Same as above, saturated.
					BOTTOM OF BORING @ 16 FEET
				18	
				20	
				22	
				24	
				26	
				28	

ACC ENVIRONMENTAL CONSULTANTS 1000 ATLANTIC AVEUNUE, SUITE 110 ALAMEDA, CA 94501	JOB NO. 6068-2	LOG OF BORING B-5
	DATE: 02/8/93	2964 Fruitvale Avenue


Environmental Control Associates.
Pneumatically driven sampling.
Odor
SAMPLE #
SAMPLE
Depth (feet)
Equipment: Pneumatic Sampling Devise
Logged By: M. Kaltreider
PROJECT: 2964 Fruitvale Avenue
Start Date: 01/13/93
Soil color described using Munsell soil color charts
Color code
(10YR - 2/2)
strong
B6-5
(10YR - 4/4)
medium
B6-10
(Gley 5G-4/1)
strong
B6-15
(10YR-4/4)
slight
B6-20
0
2
4
6
8
10
12
14
16
18
20
22
24
26
28
Asphalt: 4" lift. Lt. brown gravelly silt (GM) & gravelly clay (GC), med grained,dense (baserock)
Very dark brown clay (CL), plastic, very moist, medium stiff, strong hydrocarbon odor.
Dark yellowish brown clay (CH), plastic, stiff, wet.
(groundwater 01/13/93)
Brown clay (CH) plastic, moist, gasoline odor.
Dark greenish grey gravelly clay (CL), with sand, plastic, medium stiff, strong odor.
Dk. yellowish brown clayey sand (SC) to sandy clay (CL), med. dense.
BOTTOM OF BORING @ 21 FEET
ACC ENVIRONMENTAL CONSULTANTS
1000 ATLANTIC AVEUNUE, SUITE 110
ALAMEDA, CA 94501
JOB NO. 6068-2
DATE: 02/8/93
LOG OF BORING B-6
2964 Fruitvale Avenue

Environmental Control Associates. Pneumatically driven sampling.	Odor	SAMPLE #	SAMPLE	Depth (feet)	Equipment: Pneumatic Sampling Devise Logged By: M. Kaltreider PROJECT: 2964 Fruitvale Avenue Start Date: 01/13/93
Soil color described using Munsell soil color charts Color code				0	Asphalt: 4" lift. Lt. brown gravelly silt (GM) & gravelly clay (GC), med grained,dense (baserock/fill)
				2	
				4	▼ (groundwater 01/13/93) (under artesian conditions)
(10YR - 3/2)	0	B7-5	■	6	Very dark grayish brown clay (CH), with sand, plastic, wet, medium stiff.
				8	
(10YR - 3/4)	0	B7-10	■	10	Same as above, saturated.
				12	
				14	
(10YR-3/4)	0	B7-15	■	16	Same as above.
					BOTTOM OF BORING @ 16 FEET
				18	
				20	
				22	
				24	
				26	
				28	

ACC ENVIRONMENTAL CONSULTANTS 1000 ATLANTIC AVEUNUE, SUITE 110 ALAMEDA, CA 94501	JOB NO. 6068-2	LOG OF BORING B-7
	DATE: 02/8/93	2964 Fruitvale Avenue

Environmental Control Associates.

Pneumatically driven sampling.

Equipment: Pneumatic Sampling Devise
Logged By: M. Kaltreider
PROJECT: 2964 Fruitvale Avenue
Start Date: 01/13/93

Soil color described using Munsell soil color charts

Color code

	Odor	SAMPLE #	SAMPLE	Depth (feet)	
				0	Concrete: 4" lift. Lt. brown gravelly silt (GM) & gravelly clay (GC), med grained,dense (baserock)
				2	Dark grayish brown clay (CH), with sand, plastic, moist, medium stiff.
				4	
(10YR - 4/2)	0	B8-5		6	
				8	▼ (groundwater 01/13/93)
(10YR - 4/2)	0	B8-10		10	Same as above, saturated.
				12	
				14	
(10YR-4/2)	0	B8-15		16	Same as above.
					BOTTOM OF BORING @ 16 FEET
				18	
				20	
				22	
				24	
				26	
				28	

ACC ENVIRONMENTAL CONSULTANTS
1000 ATLANTIC AVEUNUE, SUITE 110
ALAMEDA, CA 94501

JOB NO. 6068-2

DATE: 02/8/93

LOG OF BORING B-8

2964 Fruitvale Avenue

Soil Color Color Code (Munsell Soil Color Chart)	SAMPLE ID	SAMPLE INTERVAL	depth below ground surface (ft)	EQUIPMENT: B53 Limited Access Mobile Rig OPERATED BY: Environmental Control Associates LOGGED BY: M. Kaltreider LOCATION: 2964 Fruitvale, Oakland, Ca WORK DATE: 03/26/97 BORING: S1 page 1 of 1
			0	Asphalt/Baserock (Gravel fill)
			2	Gravelly Sand (GM) with fines, light brown, mottled reddish brown, dense, slightly moist (tank backfill material).
			4	
10YR-5/3			6	Silty Clay (CL), dark brown mottled reddish brown, soft, very plastic, very moist.
	S1-7			Clay (CL), dark grey, mottled brown with trace very fine sand (<5%), soft, very plastic, moist, petroleum hydrcarbon odor.
2.5Y-5/3			8	
	S1-9			as above, sand content increases with depth
			10	
			12	TOTAL DEPTH OF BORING: 11 feet (bgs)
			14	
			16	
			18	
			20	
			22	
			24	
			26	
			28	

ACC Environmental Consultants, Inc.
7977 Capwell Drive, Suite 100
Oakland, California 94621
(510)638-8400 FAX: (510)638-8404

Project No: **6068-006.00**

Date: **05/05/97**

Title: **LOG OF BORING: S1**

2964 Fruitvale Avenue
Oakland, California

Soil Color

Color Code
(Munsell Soil Color Chart)

EQUIPMENT: B53 Limited Access Mobile Rig
OPERATED BY: Environmental Control Associates
LOGGED BY: M. Kaltreider
LOCATION: 2964 Fruitvale, Oakland, Ca
WORK DATE: 03/26/97
BORING: S2 page 1 of 1

Soil Color	SAMPLE ID	depth below ground surface (ft)	
		0	Asphalt/Baserock (Gravel fill)
		2	Clay (CL) with trace fine sand (5-10%), brown, mottled reddish brown, stiff, plastic, moist.
	S2-5	4	
10YR-5/3	S2-7	6	Clay (CL), dark grey, mottled brown with trace very fine sand (<5%), soft, very plastic, moist, petroleum hydrcarbon odor.
	S2-9	8	as above, sand content increases with depth
		10	TOTAL DEPTH OF BORING: 9 feet (bgs)
		12	
		14	
		16	
		18	
		20	
		22	
		24	
		26	
		28	

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Date: **05/05/97**

Title: **LOG OF BORING: S2**

2964 Fruitvale Avenue
Oakland, California

Soil Color Color Code (Munsell Soil Color Chart)	SAMPLE ID	SAMPLE INTERVAL	depth below ground surface (ft)	EQUIPMENT: B53 Limited Access Mobile Rig OPERATED BY: Environmental Control Associates LOGGED BY: M. Kaltreider LOCATION: 2964 Fruitvale, Oakland, Ca WORK DATE: 03/26/97 BORING: S3 page 1 of 1
			0	Concrete/Baserock (Gravel fill)
			2	Sand (SP), brown, medium grain sand with few fines, dense, very moist to saturated, (tank backfill).
			4	
			6	
10YR-5/3	S3-7 S3-8		8	Clay (CL), brown mottled greyish green, with 10% very fine sand, medium stiff, plastic, moist, roots, hydrcarbon odor.
			▽ 10	as above, sand content increases with depth
			12	TOTAL DEPTH OF BORING: 11 feet (bgs)
			14	
			16	
			18	
			20	
			22	
			24	
			26	
			28	

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Project No: **6068-006.00**

Date: **05/05/97**

Title: **LOG OF BORING: S3**

2964 Fruitvale Avenue
Oakland, California

Soil Color Color Code (Munsell Soil Color Chart)	SAMPLE ID	SAMPLE INTERVAL	depth below ground surface (ft)	EQUIPMENT: B53 Limited Access Mobile Rig OPERATED BY: Environmental Control Associates LOGGED BY: M. Kaltreider LOCATION: 2964 Fruitvale, Oakland, Ca WORK DATE: 03/26/97 BORING: S4 page 1 of 1
			0	Asphalt/Baserock (Gravel fill)
			2	
	S4-5		4	Sandy Clay (CL), brown slightly mottled reddish brown, with 10-15% very fine sand, slightly stiff, very plastic, moist, roots.
10YR-5/3	S4-7		6	Same as above, more stiff, stong hydrocarbon odor.
			8	
			▽	Sandy Clay (CL) brown, mottled greyish green, with 5-10% fines, layers (approximately 3 inches thick of sandier lenses which contain mineral deposits), very stiff, plastic, very moist.
			10	
			12	TOTAL DEPTH OF BORING: 11 feet (bgs)
			14	
			16	
			18	
			20	
			22	
			24	
			26	
			28	

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Date: **05/05/97**

Title: **LOG OF BORING: S4**

2964 Fruitvale Avenue
Oakland, California

EQUIPMENT: B53 Limited Access Mobile Rig
OPERATED BY: Environmental Control Associates
LOGGED BY: M. Kaltreider
LOCATION: 2964 Fruitvale, Oakland, Ca
WORK DATE: 03/26/97
BORING: S5 page 1 of 1

Soil Color Color Code (Munsell Soil Color Chart)	SAMPLE ID	depth below ground surface (ft)	
		0	Asphalt/Baserock (Gravel fill)
		2	
	S5-5	4	Clay (CL), very dark brown to black with trace (5-10% very fine sand), slightly stiff, plastic, moist, odor of heavy hydrocarbons, sample contains burnt carbon (wood).
10YR-5/3	S5-7	6	Same as above, more stiff, stong hydrocarbon odor.
	S5-9	8	Sandy Clay (CL) brown, mottled greyish green, with 5-10% fines, containing layers of sand lenses, stiff, plastic, very moist, strong hydrocarbon odor.
		10	Static water ~9.5 feet bgs.
		12	
		14	
		16	First encountered water ~17.5 feet bgs.
		18	
		20	TOTAL DEPTH OF BORING: 20 feet (bgs)
		22	
		24	
		26	
		28	

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Date: **05/05/97**

Title: **LOG OF BORING: S5**

2964 Fruitvale Avenue
Oakland, California

Soil Color Color Code (Munsell Soil Color Chart)	SAMPLE ID	SAMPLE INTERVAL	depth below ground surface (ft)	EQUIPMENT: B53 Limited Access Mobile Rig OPERATED BY: Environmental Control Associates LOGGED BY: M. Kaltreider LOCATION: 2964 Fruitvale, Oakland, Ca WORK DATE: 03/26/97 BORING: S6 page 1 of 1
			0	Asphalt/Baserock (Gravel fill)
			2	
			4	Clay (CL), black with trace (5%) very fine sand, stiff, plastic, moist, odor of heavy hydrocarbons.
10YR-5/3	S6-7		6	Clay (CL), brown mottled greyish green, with trace fine sand (5%), stiff, plastic, moist, slight hydrocarbon odor.
			8	Clay (CL) brown, with 5-10% very fine sand within lenses, stiff, plastic, very moist, slight hydrocarbon odor.
			10	Static water ~9.5 feet bgs.
			12	
			14	
			16	
			18	First encountered water ~17.5 feet bgs.
			20	TOTAL DEPTH OF BORING: 20 feet (bgs)
			22	
			24	
			26	
			28	

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Project No: **6068-006.00**

Date: **05/05/97**

Title: **LOG OF BORING: S6**

2964 Fruitvale Avenue
Oakland, California