

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 3956 - 111 98th Avenue, Oakland, CA
(1-2,000 gallon gasoline tank removed in Oct 14, 1993)

July 28, 1997

Mr. David Flett
Douglas Parking Co.
111 98th Ave
Oakland, CA 94603

Dear Mr. Flett:

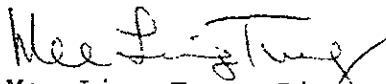
This letter confirms the completion of site investigation and remedial action for the underground storage tank formerly located at the above-described location. Thank you for your cooperation throughout this investigation. Your willingness and promptness in responding to our inquiries concerning the former underground storage tank 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: Chief, Division of Environmental Protection
Kevin Graves, RWQCB
Dave Deaner, SWRCB (with attachment-case closure summary)
Leroy Griffin, OFD
files-ec (airpark9)

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StID 3956

July 28, 1997

Mr. David Flett
Douglas Parking Co.
111 98th Ave
Oakland, CA 94603

Re: Fuel Leak Site Case Closure for Air Park at 111 98th Ave,
Oakland, CA 94603

Dear Mr. Flett:

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:

- o residual soil contamination (at 520ppm TPHg and 6.4ppm benzene) remain in the vicinity of the former tank, and
- o residual groundwater contamination at ~180ppb benzene was detected in February 1997 from the former well MW-1.

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

eva chu
Hazardous Materials Specialist

enclosure:

1. Case Closure Letter
2. Case Closure Summary

c: Frank Kliwer, City of Oakland-Planning, 1330 Broadway, 2nd
Floor, Oakland, CA 94612
files (airpark.10)

CASE CLOSURE SUMMARY
Leaking Underground Fuel Storage Tank Program

I. AGENCY INFORMATION

Date: May 8, 1997

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: Air Park
Site facility address: 111 98th Ave, Oakland, CA 94603
RB LUSTIS Case No: N/A Local Case No./LOP Case No.: 3956
URF filing date: 5/1/97 SWEEPS No: N/A

Responsible Parties: Addresses: Phone Numbers:
David Flett 111 98th Ave
Douglas Parking Co Oakland, CA 94603

<u>Tank No:</u>	<u>Size in gal.:</u>	<u>Contents:</u>	<u>Closed in-place or removed?:</u>	<u>Date:</u>
1	2,000	Gasoline	Removed	10/14/93

III. RELEASE AND SITE CHARACTERIZATION INFORMATION

Cause and type of release: Unknown
Site characterization complete? YES
Date approved by oversight agency: 4/7/97
Monitoring Wells installed? Yes Number: 1
Proper screened interval? Yes
Highest GW depth below ground surface: 2.63' Lowest depth: 6.05'
Flow direction: SW
Most sensitive current use: Commercial
Are drinking water wells affected? No Aquifer name: Unknown
Is surface water affected? No Nearest affected SW name: NA
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

21 JUN 22 1997
ALAMEDA COUNTY
HAZARDOUS MATERIALS

Treatment and Disposal of Affected Material:

<u>Material</u>	<u>Amount</u> <u>(include units)</u>	<u>Action (Treatment</u> <u>or Disposal w/destination)</u>	<u>Date</u>
Tank	1 UST	Disposed by Erickson, in Richmond	10/14/93
Piping			
Soil	~120 cy	TriCity Disposal in Fremont	8/15/94

Maximum Documented Contaminant Concentrations - - Before and After Cleanup

<u>Contaminant</u>	<u>Soil (ppm)</u>		<u>Water (ppb)</u>	
	<u>Before¹</u>	<u>After²</u>	<u>Before³</u>	<u>After⁴</u>
TPH (Gas)	180	520	14,000	520
TPH (Diesel)				
Benzene	0.47	6.4	3,700	180
Toluene	2.8	8.6	1,100	1.3
Ethylbenzene	1.7	9.4	460	5.7
Xylenes	9.6	32	1,300	4.3
MTBE	NA	NA	NA	100

Heavy metals **Lead** ND
Other

- NOTE: 1 soil sample collected from tank pit at time of UST removal, 10/93
 2 soil sample collected from soil borings advanced around tank excavation, 12/95
 3 "grab" water sample from soil borings advanced around tank excavation, 12/95
 4 recent groundwater sample from well MW-1, 2/97

Comments (Depth of Remediation, etc.):

See Section VII, Additional Comments, etc...

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 is required if there will be trenching or excavation in the vicinity of the former UST.**
 Should corrective action be reviewed if land use changes? **YES**
 Monitoring wells Decommissioned: **No, pending site closure**
 Number Decommissioned: **0** Number Retained: **1**
 List enforcement actions taken: **None**
 List enforcement actions rescinded: **NA**

V. LOCAL AGENCY REPRESENTATIVE DATA

Name: Eva Chu Title: Haz Mat Specialist

Signature: *Eva Chu* Date: 5/8/97

Reviewed by

Name: Amy Leech Title: Haz Mat Specialist

Signature: *A Leech* Date: 4/30/97

Name: Thomas Peacock Title: Supervisor

Signature: *Thomas Peacock* Date: 5-5-97

VI. RWQCB NOTIFICATION

Date Submitted to RB: 5/9/97 RB Response: *Approved*

RWQCB Staff Name: Kevin Graves Title: AWRCE

Signature: *Kevin Graves* Date: 5/16/97

VII. ADDITIONAL COMMENTS, DATA, ETC.

The site is currently a paved parking lot, serving airline passengers requiring long term parking.

A 2,000 gallon gasoline UST was removed in October 1993. The tar wrapping from the upper half of the UST had dissolved. Otherwise, the tank appeared in good condition, without corrosion or holes. Two sidewall soil samples (1 from the pit bottom, 1 from beneath the former dispenser) were collected and analyzed for TPHg and BTEX. A maximum of 180 ppm TPHg, and 0.47, 2.8, 1.7, and 9.6ppm BTEX, respectively, were identified. (See Figs 1, 2, and Table 1)

The pit was overexcavated, removing an additional 80cy of impacted soil. One soil sample (01) was collected from the pit bottom at ~13'bgs, and a soil sample (02) was collected from the sidewall beneath the former pump dispenser at ~10'bgs. The soil samples did not contain TPHg or BTEX above the detection limit. (See Fig 3, Table 2)

Based on groundwater flow direction from an adjoining site (at 121 98th Ave), one groundwater monitoring well (MW-1) was installed southeast of the former tank pit (see Fig 4). A soil sample was collected at 3.5'bgs from the boring. The soil contained 98ppm TPHg, and 0.56, 0.95, 1.5, and 6.7ppm BTEX, respectively. Total lead was not detected. The water sample contained 710ppb TPHg, and 70, 72, ND, and 77ppb BTEX, respectively. (See Table 3 and 4)

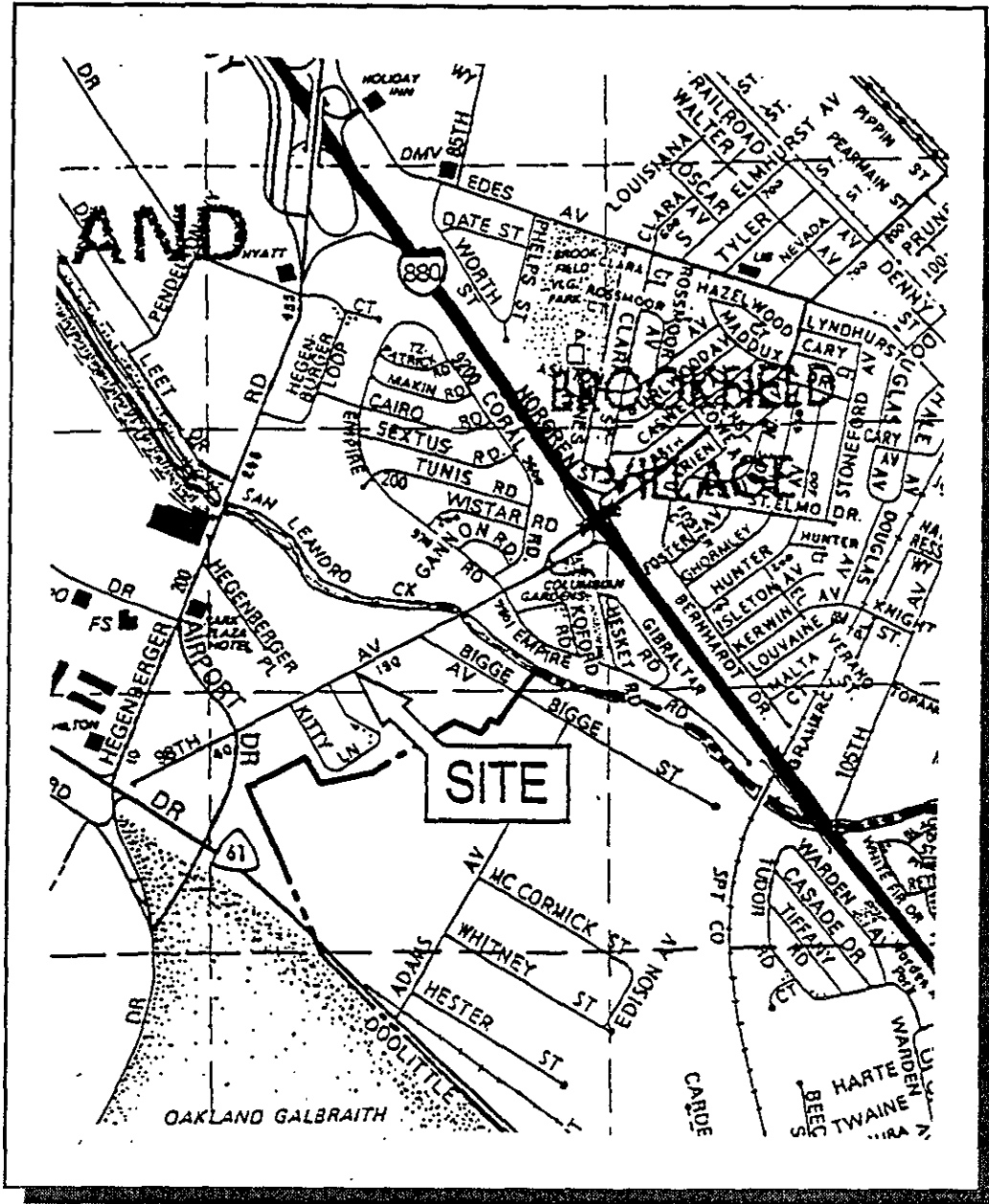
After five consecutive quarters of groundwater sampling (8/94 to 10/95), elevated TPHg and BTEX were still detected in well MW-1. A total of ten soil borings (SB-A through SB-J) were advanced in December 1995 and February 1996 to further delineate the extent of soil and groundwater contamination at the site. Contamination was only identified in soil and groundwater from boring SB-B at 5' bgs and 6' bgs, respectively. Trace levels of TPHg and benzene were also found in groundwater from boring SB-A. (See Fig 5, Table 5 and 6)

It appears soil and groundwater contamination is limited to the immediate vicinity of, and north and east of the former UST excavation. The site is underlain with silty clay to a depth of 14' bgs (see boring log). The low permeability soils at the site appears to be limiting plume migration.

After 8 sampling events (8/94 to 2/97) contaminant concentrations in well MW-1 appear to be decreasing and/or have stabilized (see Table 7). A maximum of 1,300ppb benzene detected in groundwater and 0.56ppm detected in soil from well MW-1 should not pose a health risk via groundwater/soil vapor intrusion from groundwater/soil to buildings in excess 10^{-4} for a commercial scenario (from ASTM RBCA Tier 1 Look Up Table). Values for the risk analysis were selected from well MW-1 rather than SB-B (where higher residual contaminants were identified) because of the proximity of well MW-1 to the office building. Boring SB-B is ~35' from the office building. There are no municipal or domestic wells within a quarter mile of the site. The nearest surface water is ~one-half mile away.

In summary, case closure is recommended because:

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



CAMBRIA
Environmental Technology, Inc.

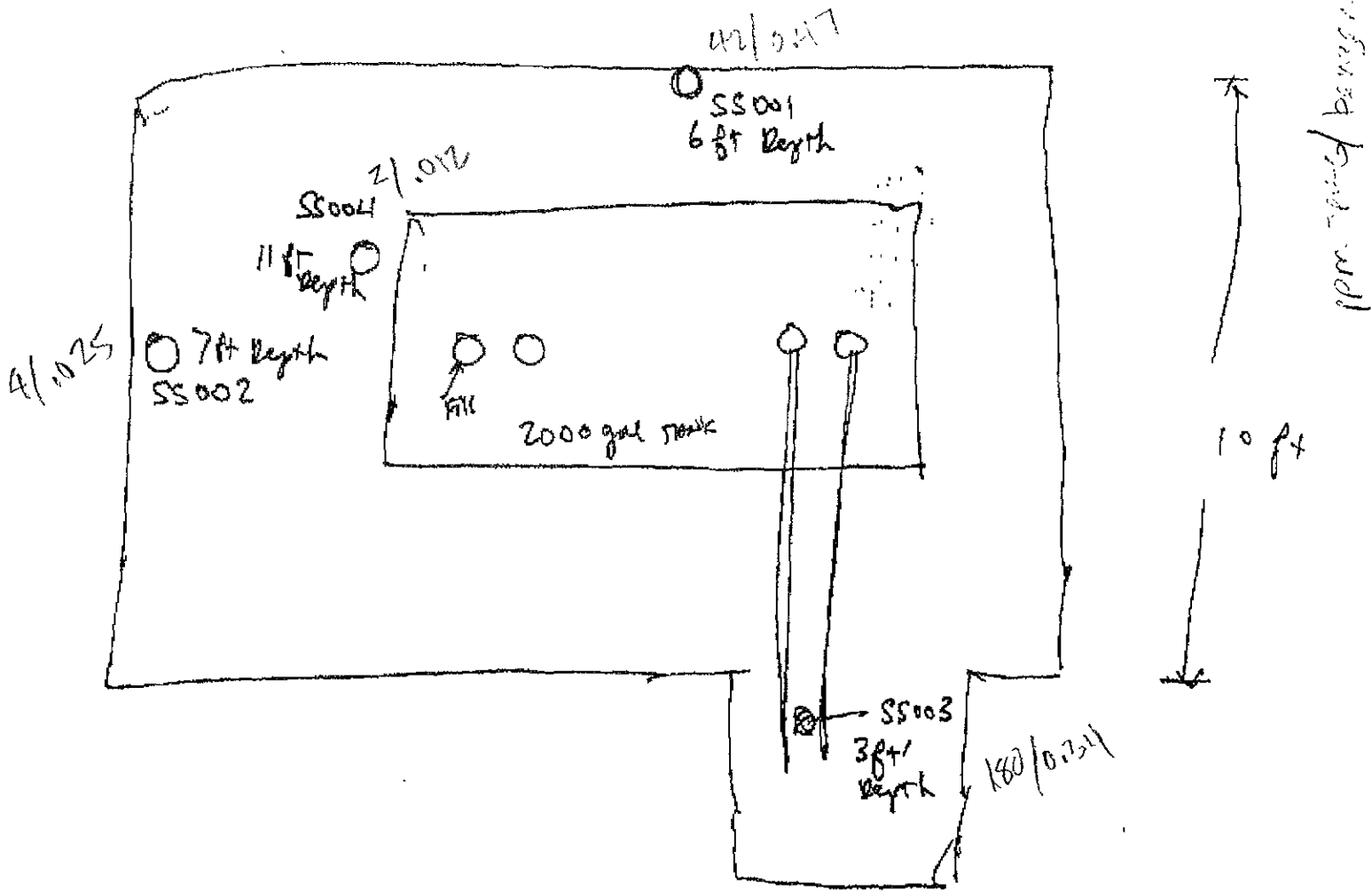
Site Location Map
Douglas Air Park
111 98th Avenue
Oakland, California

FIGURE

1



AIR PARK



Sample Locations

FIG 2


Superior Precision Analytical, Inc.

1555 Burke, Unit I • San Francisco, California 94124 • (415) 647-2081 / fax (415) 821-7123

Table 1

 Decon Environmental Services
 Attn: Wayne Gathright

 Project AIR PARK 1110
 Reported 10/22/93

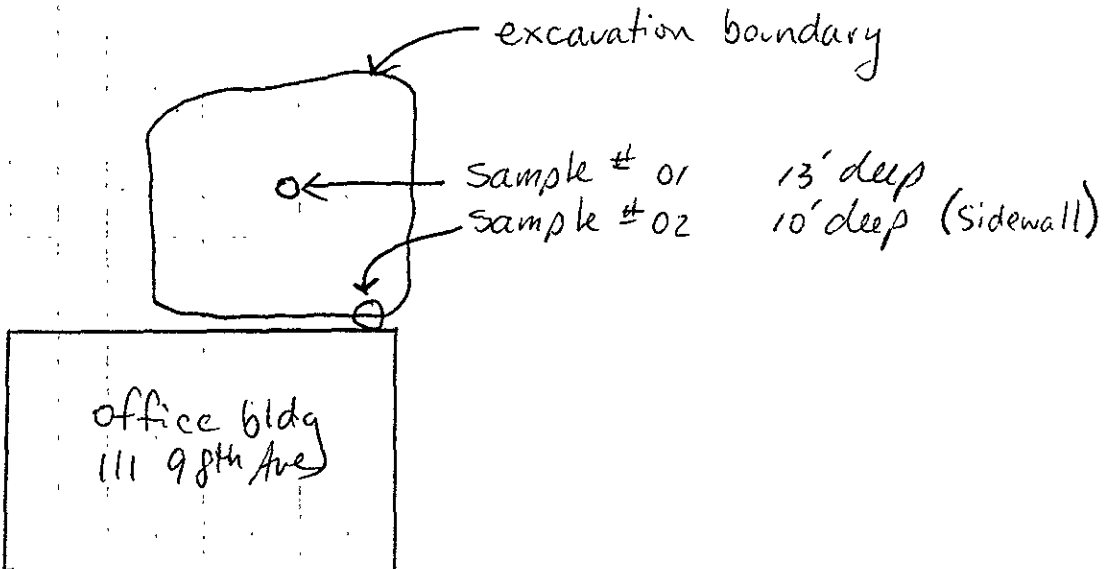
TOTAL PETROLEUM HYDROCARBONS

Lab #	Sample Identification	Sampled	Analyzed Matrix
90291- 1	SS001	10/14/93	10/21/93 Soil
90291- 2	SS002	10/14/93	10/20/93 Soil
90291- 3	SS003	10/14/93	10/21/93 Soil
90291- 4	SS004	10/14/93	10/20/93 Soil

RESULTS OF ANALYSIS

Laboratory Number: 90291- 1 90291- 2 90291- 3 90291- 4

Gasoline:	42	4	180	2
Benzene:	0.47	0.025	0.34	0.012
Toluene:	0.52	0.081	2.8	0.078
Ethyl Benzene:	0.83	0.11	1.7	0.054
Total Xylenes:	4.0	0.60	9.6	0.38
4-BFB % Recovery:	78	72	72	100
Concentration:	mg/kg	mg/kg	mg/kg	mg/kg



Stockpile
Samples
($\approx 100 \text{ yds}^3$)

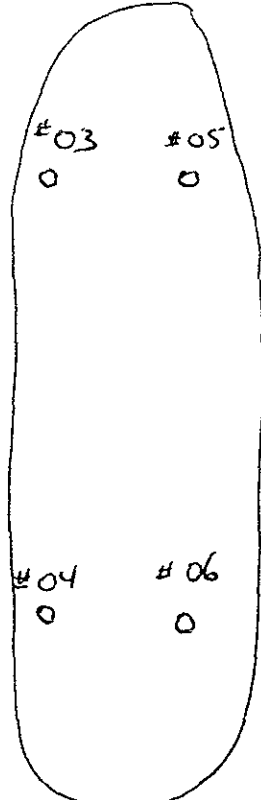


FIG 3



SEQUOIA ANALYTICAL

680 Chesapeake Drive • Redwood City, CA 94063
(415) 364-9600 • FAX (415) 364-9233

Table 2

DECON Environmental Services 23490 Connecticut Street Hayward, CA 94545 Attention: Tom Reese	Client Project ID: Airpark Sample Matrix: Soil Analysis Method: EPA 5030/8015/8020 First Sample #: 3K95301	Sampled: Nov 11, 1993 Received: Nov 11, 1993 Reported: Dec 1, 1993
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TOTAL PURGEABLE PETROLEUM HYDROCARBONS with BTEX DISTINCTION

Analyte	Reporting Limit mg/kg	Sample I.D. 3K95301 01	Sample I.D. 3K95302 02	Sample I.D. 3K95303 03,04(Comp)	Sample I.D. 3K95304 05,06(Comp)
Purgeable Hydrocarbons	1.0	N.D.	N.D.	40	120
Benzene	0.0050	N.D.	N.D.	N.D.	N.D.
Toluene	0.0050	N.D.	N.D.	N.D.	0.14
Ethyl Benzene	0.0050	N.D.	N.D.	0.12	0.64
Total Xylenes	0.0050	N.D.	N.D.	0.21	7.2
Chromatogram Pattern:		--	--	Gas	Gas

Quality Control Data

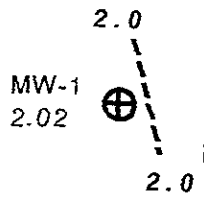
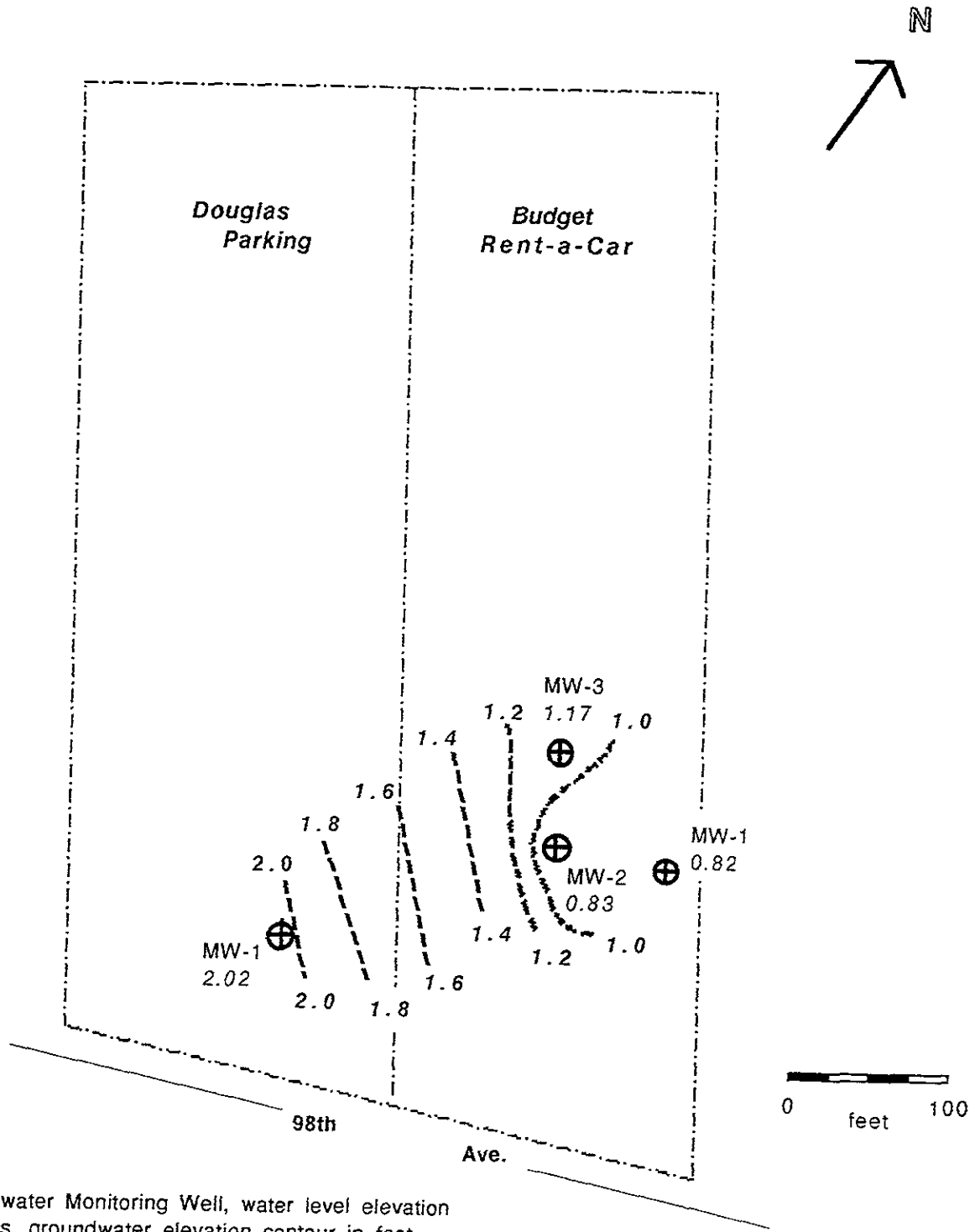
* Coelution confirmed

Report Limit	1.0	1.0	10	10
Multiplication Factor:				
Date Analyzed:	11/29/93	11/29/93	11/29/93	11/30/93
Instrument Identification:	GCHP-18	GCHP-18	GCHP-18	GCHP-6
Surrogate Recovery, %: (QC Limits = 70-130%)	87	87	117	*141

Purgeable Hydrocarbons are quantitated against a fresh gasoline standard.
Analytes reported as N.D. were not detected above the stated reporting limit.

SEQUOIA ANALYTICAL

Andrea Fulcher
Andrea Fulcher
Project Manager



Groundwater Monitoring Well, water level elevation in italics, groundwater elevation contour in feet, MSL, Nov. 28, 1994

**GEN TECH
ENVIRONMENTAL, INC.
SAN JOSE, CA**

**Site Plan and Groundwater
Contour Map, Nov. 28, 1994
Douglas Parking
111 98th Avenue
Oakland, CA**

Project No. 9433
Scale: 1" = 100'
Date: Nov., 1994

FIGURE 4e B

Chemical Analysis and Results

Five soil and one groundwater samples were analyzed at AMER, a State certified analytical laboratory. The four soil stockpile samples were composited tested for the following; Total Petroleum hydrocarbons as Gasoline (TPHG), Benzene (B), Toluene (T), Ethylbenzene (E), Xylene (X), and RCI (EPA Methods 9010, 150.1, 9030 and 1010). One soil sample and one groundwater sample were analyzed for TPHG and BTEX and Total Lead using EPA Methods 3550, 3510/8015, 8020 and 6000/7000. The results are attached (see Appendix D) and listed below in Tables 1 and 2.

TABLE ~~3~~^{3A} SOIL CHEMICAL DATA

Sample No.	TPHG	B	T mg/kg	E	X	Cn mg/kg	Cor. units	Sul. mg/kg	Ign. °C
S/P#1A-D	ND	ND	ND	ND	ND	ND	8.8	ND	Neg.

Sample No.	TPHG mg/kg	B	T all	E ug/kg	X	Total Lead mg/kg
MW-1@3.5'	98	560	950	1,500	6,700	ND

TABLE ~~3B~~^{4B} GROUNDWATER CHEMICAL DATA

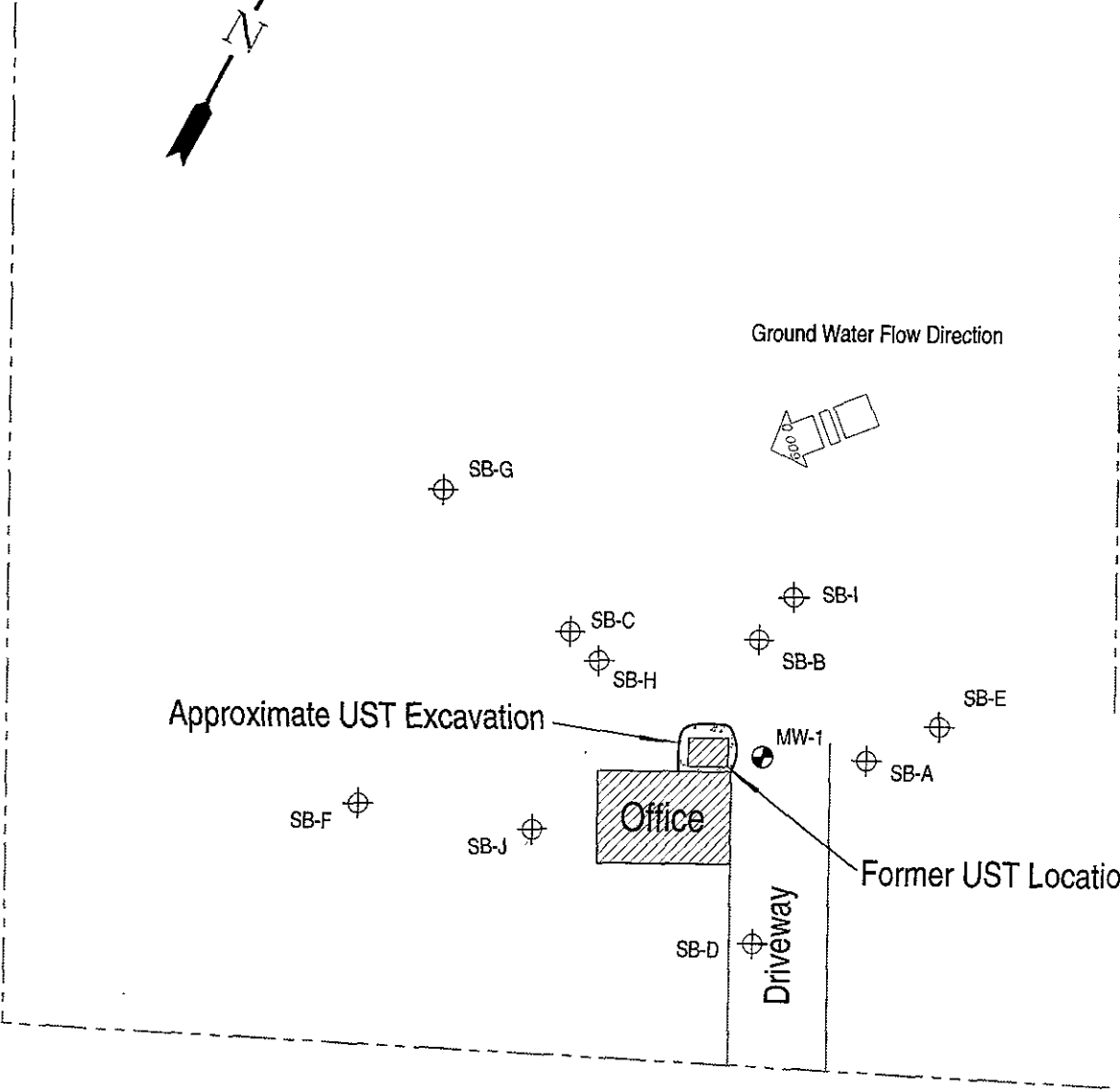
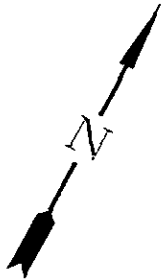
Sample No.	TPHG	B	T ug/l	E	X
MW-1	710	70	72	ND	77

ND - Not Detected
 mg/kg - milligram per kilogram
 ug/kg - microgram per kilogram
 ug/l - microgram per liter
 Cn - Cyanide
 Ign. - Ignitability
 Neg. - Negative
 Cor - Corrosivity
 Sul. - Sulfide

exceeded holding time

Discussion

Soil samples collected from the borehole indicate that the contaminants are localized in the capillary fringe in the vicinity of the former tank location. Excavation in the tank area has apparently removed the contaminated soil. A relatively slow groundwater movement is inferred from the groundwater measurement data. Overall site groundwater movement is northerly to northeasterly under a flat gradient. A small groundwater mound in the vicinity of Budget wells MW-1 and MW-2 is inferred to be caused by water in a former tank excavation.

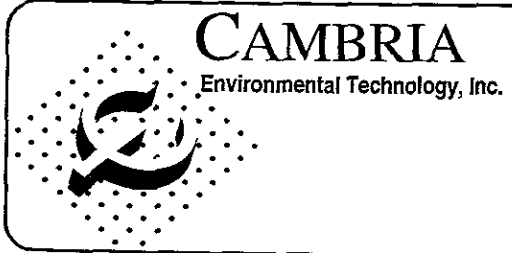


Budget Rent-A-Car

98th Avenue



Scale (ft)



EXPLANATION	
	SB-A Soil Boring Location
	Ground Water Monitoring Well
	Property Line

D:\PROJECT\MISC\AIR_PARKSITE.DWG

Soil Boring and Well Locations

Douglas AirPark
111 98th Avenue
Oakland, California

FIGURE
54

Table 15 Historic Soil Analytic Data - Douglas Air Park, 111 98th Street, Oakland, California

Well ID	Date Sampled	Sample Depth (ft)	TPHg	Benzene	Toluene	Ethylbenzene	Xylenes	Notes
Concentrations in parts per million (mg/kg)								
Decon Confirmation Samples								
SS001	10/14/93	6	42	0.47	0.52	0.83	4.0	
SS002	10/14/93	7	4	0.025	0.081	0.11	0.60	
SS003	10/14/93	3	180	0.34	2.8	1.7	9.6	
SS004	10/14/93	11	2	0.012	0.078	0.054	0.38	
#01	11/11/93	13	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	
#02	11/11/93	10	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	
Gen Tech Well Installation Sample								
MW-1	7/28/94	3.5	98	0.56	0.95	1.5	6.7	
Cambria Subsurface Investigation Samples								
SB-A	12/11/95	5.0	<1.0	<0.005	<0.005	<0.005	<0.005	
SB-B	12/11/95	5.0	520	6.4	8.6	9.4	32	a
SB-C	12/11/95	5.0	<1.0	<0.005	<0.005	<0.005	<0.005	
SB-D	12/11/95	5.0	<1.0	<0.005	<0.005	<0.005	<0.005	
SB-E	12/11/95	5.0	<1.0	<0.005	<0.005	<0.005	<0.005	
SB-F	12/11/95	6.0	<1.0	<0.005	<0.005	<0.005	<0.005	
SB-G	12/11/95	8.0	<1.0	<0.005	<0.005	<0.005	<0.005	

Abbreviations

TPHg = Total petroleum hydrocarbons as gasoline
 Decon = Decon Environmental Services, Inc.
 Gen Tech = Gen Tech Environmental

Notes

TPHg analyzed by modified EPA Method 8015
 Benzene, ethylbenzene, toluene and xylenes analyzed by EPA Method 8020
 a = unmodified or weakly modified gasoline is significant

Table 5. Grab Ground Water Analytic Data - Douglas Air Park, 111 98th Street, Oakland, California

Well ID	Date Sampled	Depth to Water (ft)	TPHg	Concentrations in parts per billion (µg/L)				Notes
				Benzene	Toluene	Ethylbenzene	Xylenes	
SB-A	12/11/95	~6	65	0.56	0.56	<0.5	<0.5	c,i
SB-B	12/11/95	~6	14,000	3,700	1,100	460	1,300	a,i
SB-C	12/11/95	~6	<50	0.60	<0.5	<0.5	<0.5	i
SB-D	12/11/95	~6	<50	<0.5	<0.5	<0.5	<0.5	i
SB-E	12/11/95	~6	<50	<0.5	<0.5	<0.5	<0.5	i
SB-F	12/11/95	~6	<50	<0.5	<0.5	<0.5	<0.5	i
SB-G	12/11/95	~6	<50	<0.5	<0.5	<0.5	<0.5	i
SB-H	2/14/96	~2.5	<50	<0.5	<0.5	<0.5	<0.5	i
SB-I	2/14/96	~2.5	<50	<0.5	<0.5	<0.5	<0.5	
SB-J	2/14/96	~2.5	<50	<0.5	<0.5	<0.5	<0.5	

Abbreviations

TPHg = Total petroleum hydrocarbons as gasoline
 ND = not detected
 --- = not analyzed

Notes

TPHg analyzed by modified EPA Method 8015
 Benzene, ethylbenzene, toluene and xylenes analyzed by EPA Method 8020
 a = unmodified or weakly modified gasoline is significant
 c = lighter gasoline range compounds (the most mobile fraction) are significant
 i = sample contained greater than ~ 5 vol. % sediment

Exploratory Boring Log

Borehole Completion

Well Installed: 2" dia. Sch 40 PVC
 Total Depth: 14.1' Casing Depth: 14.1'
 Screen Length: 10' 0.02" Blank Length: 4'
 Top Sand Pack: 3.5' (2/12) Top Bentonite: 2'
 Grout Seal: 2' to 0.5' vault box
 Top of Casing Elev. 4.65' MSL

Project No. 9433 Boring/Well No. MW-1
 Client: Douglas Parking Date Drilled: July 28, 1994
 Location: 11 98th Ave., Oakland, CA Logged by: EL
 Drilling Method: Hollowstem Permit: Zone 7 #94422
 Water Levels: 1st Enc: 13.12 observed Static: 9.50
 following drilling

Sample No.	Blow Han	Count	sample	Depth	Lithology Log	Well Detail/ Backfill
					Asphalt Pavement and Sub Base	
MW-3@ 3.5'	<50 ppm	7			CL - Silty CLAY, black [N](2.5/), 15% fine sand dissem., up to 30% silt, medium plasticity, stiff, damp.	
MW-3@ 5'	<100 ppm	2		5	SM - Silty SAND, dark greenish gray [N] (3/), 30% silt moderate petroleum odor, loose, very moist.	
MW-3@ 6'	<100 ppm	11			CL-CH - Silty CLAY, very dark gray [N](3/), highly plastic, root holes and fragments, product sheen in burrows, moist; silty sand interbed at 7.5' to 8.5' very fine sand, 25% silt, loose, moist to saturated.	
MW-3@ 8'	trace	8		10		
MW-3@ 10'	ND	21			contamination not observed below 10.5 feet	
MW-3@ 13'	ND	21			stiff and moist from 12'-13'; appears damp 13'-14'.	
				15	Bottom of Boring = 14.1 feet Water enters borehole very slowly	

Han - refers to the Hanby Field Analytical Chemical colormetric test for hydrocarbons

Table 1. Ground Water Elevation and Analytic Data - 111 98th Avenue, Oakland, California

Well ID	Date	Well Elevation (TOC: ft-msl)	Ground Water Depth (ft)	Ground Water Elevation (ft-msl)	TPHg	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	Notes
MW-1	8/3/94	--	4.75	--	--	--	--	--	--	--	--
	8/18/94	--	4.53	--	710	70	72	nd	77	--	--
	11/23/95	4.65	2.63	2.02	3,300	700	84	39	770	--	--
	3/3/95	4.65	3.64	1.01	1,900	400	55	180	nd	--	--
	7/11/95	4.65	4.90	-0.25	2,100	450	69	48	210	--	--
	10/27/95	4.65	--	--	1,200	470	21	15	27	--	--
	12/1/95	4.65	6.05	-1.40	--	--	--	--	--	--	--
	2/14/96	4.65	5.41	-0.76	4,000	1,300	20	140	170	--	--
	8/14/96	4.65	5.70	-1.05	170	31	5.0	4.9	9.3	--	--
	2/6/97	4.65	5.60	-0.95	520	180	1.3	5.7	4.3	100	--

Notes and Abbreviations

-- = Well not sampled or data not available.

ppb = Parts per billion which is equivalent to micrograms per liter in ground water.

TPHg = Total petroleum hydrocarbons as gasoline by Modified EPA Method 8015.

Benzene, Toluene, Ethylbenzene and Xylenes by EPA Method 8020.

MTBE = Methyl tertiary butyl ether by EPA Method 8020.