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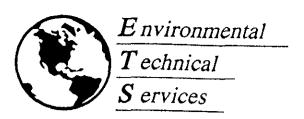
A REPORT DOCUMENTING THE PURGING AND SAMPLING OF THREE GROUNDWATER MONITORING WELLS ON FOUR CONSECUTIVE QUARTERS AND THE DETERMINATION OF GROUNDWATER GRADIENT FOR TWELVE CONSECUTIVE MONTHS

AT:

ALAMEDA GOLF COURSE ONE MEMORIAL CLUBHOUSE DRIVE ALAMEDA, CALIFORNIA

SEPTEMBER 8, 1993

1548 Jacob Avenue San Jose, CA 95118 Phone/Fax (408) 267-6427 - Pager (415) 578-5947



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ALAMEDA GOLF COURSE ONE MEMORIAL CLUBHOUSE DRIVE ALAMEDA, CALIFORNIA

prepared by:

ENVIRONMENTAL TECHNICAL SERVICES

Helen A. Mawhinney

Senior Environmental Specialist

9/9/93 Date

and

GREENSFELDER & ASSOCIATES

Roger Greensfelder PhD

CA. Registered Geologist #3011

AUGUST 8, 1993

9-9-93

Date

A W CRUENSFELD IS

1548 Jacob Avenue San Jose, CA 95118 Phone/Fax (408) 267-6427 - Pager (415) 578-5947

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Appendix C

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Appendix D

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Appendix E

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Appendix F

Groundwater Development Reports

1.0 INTRODUCTION

The following report documents the sampling of three groundwater monitoring wells and the determination of groundwater gradient at the Alameda Golf Course, One Memorial Clubhouse Drive, Alameda, California.

Refer to Appendix A, Figure 1, Site Location Map.

Groundwater was sampled on four consecutive quarters and groundwater gradient determined for twelve consecutive months.

The work was performed in response to the discovery of petroleum hydrocarbons beneath the site and has been requested by the Alameda County Office of Environmental Health Department, Hazardous Materials Division.

2.0 PREVIOUS ENVIRONMENTAL INVESTIGATIONS

2.1 Tank Removal

On July 10, 1991 two underground storage tanks (USTs) were removed from the above referenced site. These were one 500-gallon gasoline and one 125-gallon gasoline UST. Groundwater was encountered at 5 feet within the tank pit excavation. Soil samples were collected from the tank pit wall vadose saturated capillary zone and were analyzed for total petroleum hydrocarbons as gasoline with benzene, toluene, ethylbenzene, and total xylenes (TPH-G, BTEX, EPA Method 5030/8020).

2.2 EXCAVATION OF CONTAMINATED SOIL

The excavation and stockpiling of contaminated soils was performed the same day by Zaccor Corporation. Confirmatory soil samples were collected subsequent to the excavation and were found to be without detectable concentrations of previously noted contaminants, with the exception of sample no. 6. The excavation of soil within this area was limited by the presence of an existing monitoring well.

Results of these analysis are located in Table 1A, 1B, and 1C.

2.3 ORIGINAL TANK REMOVAL, ANALYTICAL RESULTS

TABLE IA

SOIL ANALYTICAL RESULTS, ORIGINAL TANK REMOVAL Total Petroleum Hydrocarbons as Gasoline with Benzene, Toluene, Ethylbenzene, and Xylenes July 10, 1991

TPHg and BTEX results reported in ppm

Sample #	TPH-G	В	T	E	x
2	960	3.5	0.10	3.0	13
4	ND	0.011	ND	ND	0.005
5	ND	ND	ND	ND	ND
6	3.0	0.030	0.006	0.023	0.059
7	ND	ND	ND	ND	ND
8	ND	ND	ND	ND	ND

TABLE 1B STOCKPILE ANALYTICAL RESULTS JULY 10, 1991

TPHg and BTEX results reported in ppm

Composite Sample#	TPH-G mg/kg	≞ ug∕kg	<u>T</u> ug/kg	E ug∕kg	X ug/kg
1A, 1B, 1C	2000	1.2	2.8	2.6	26
3A-3C	250	0.52	0.45	0.65	5.4
9 A- 9D	ND	ND	ND	ND	ND
10A-10D	11	0.13	0.48	0.29	1.9

[·] ND = not detected at the lower detection limit

TABLE 1C GROUNDWATER ANALYTICAL RESULTS JULY 10, 1991

Results in ug/L

Sample#	TPH-G	В	T	E	x
TPW-1	8,200	210	ND	270	1,200

ND = not detected at the lower detection limit

3.0 SCOPE OF SERVICES

3.1 Groundwater Purging & Sampling

The three existing groundwater monitoring wells were purged and sampled on September 5, 1992, January 11, 1993, May 4, 1993, and July 29, 1993. The wells were purged using a clean stainless steel bailer (1.5" diameter by 3.0' length). Subsequent to purging each well was sampled using a clean stainless steel bailer. A separate bailer was dedicated to each well for the sampling event. At consistent intervals throughout sampling, groundwater parameters (pH and temperature) were monitored to evaluate stabilization of the wells.

A water sample was decanted from the sampling bailer into three one-liter amber bottles and three 40-ml volatile organics analysis vials (VOAs) eliminating headspace to a positive meniscus.

The samples were transported to a certified hazardous waste analytical laboratory under chain of custody for analysis.

3.2 GROUNDWATER ANALYSIS

The groundwater sample collected was analyzed for total petroleum hydrocarbons as gasoline with benzene, toluene, ethylbenzene, and total xylenes (TPHg & BTEX using EPA Method 5030/602).

3.3 GROUNDWATER ANALYTICAL RESULTS

TABLE II

GROUNDWATER ANALYTICAL RESULTS TOTAL PETROLEUM HYDROCARBONS AS GASOLINE WITH BENZENE, TOLUENE, ETHYLBENZENE, AND TOTAL XYLENES SEPTEMBER 5, 1992

Results reported in ug/L

Sample#	TPHg	В	T	E	X
MW-1	ND	ND	ND	ND	ND
MW-2	ND	ND	ND	ND	ND
MW-3	ND	ND	ND	ND	ND

ND - not detected at lower detection limit

TABLE III

GROUNDWATER ANALYTICAL RESULTS

TOTAL PETROLEUM HYDROCARBONS AS GASOLINE

WITH BENZENE, TOLUENE, ETHYLBENZENE, AND TOTAL XYLENES SECOND QUARTER

JANUARY 11, 1993

Results reported in ug/L

Sample#	TPHg	<u>B</u>	Ţ	E	<u>x</u>
MW-1	ND	ND	ND	ND	ND
MW-2	ND	ND	ND	ND	ND
MW-3	ND	ND	ND	ND	ND

ND - not detected at lower detection limit

TABLE IV GROUNDWATER ANALYTICAL RESULTS TOTAL PETROLEUM HYDROCARBONS AS GASOLINE WITH BENZENE, TOLUENE, ETHYLBENZENE, AND TOTAL XYLENES THIRD QUARTER

MAY 4, 1992 3

Results reported in ug/L

Sample#	ТРНд	В	T	E	<u>x</u>
MW-1	ND	ND	ND	ND	ND
MW-2	ND	ND	ND	ND	ND
MW-3	ND	ND	ND	ND	ND

ND - not detected at lower detection limit

TABLE V

GROUNDWATER ANALYTICAL RESULTS

TOTAL PETROLEUM HYDROCARBONS AS GASOLINE

WITH BENZENE, TOLUENE, ETHYLBENZENE, AND TOTAL XYLENES

FOURTH QUARTER JULY 29, 19924

Results reported in ug/L

Sample#	ТРНд	В	Ţ	E	<u>x</u>
MW-1	ND	ND	ND	ND	ND
MW-2	ND	ND	ND	ND	ND
MW-3	ND	ND	ND	ND	ND

ND - not detected at lower detection limit

3.4 GROUND WATER GRADIENT

Flow Direction Maintenance Building (Constructed in 1992) drain trough Original Tank Excavation gate scale.

OROUNDWATER GRADIENT DATA

MAP NO.	DATE	E1(1)	FLOW(2)	GRAD(3)
1	10/14/92	_	181	.080
2	11/10/92	92.18	107	.015
3	12/11/92	92.17	164	.016
4	01/11/93	92.18	184	.004
5	05/04/93	93.07	226	.056
6	07/29/93	93.77	280	.043

NOTES

- (1) Water elev. in MW1
- (2) Flow azimuth (E of N)
 (3) Gradient (ft/ft)

page 6

4.0 CONCLUSIONS AND RECOMMENDATIONS

The three monitoring wells located on this site have been developed and sampled for four consecutive quarters and found no detectable amounts of TPH-G and BTEX.

Therefore it is our recommendation that this site be considered for closure and no further monitoring be required.

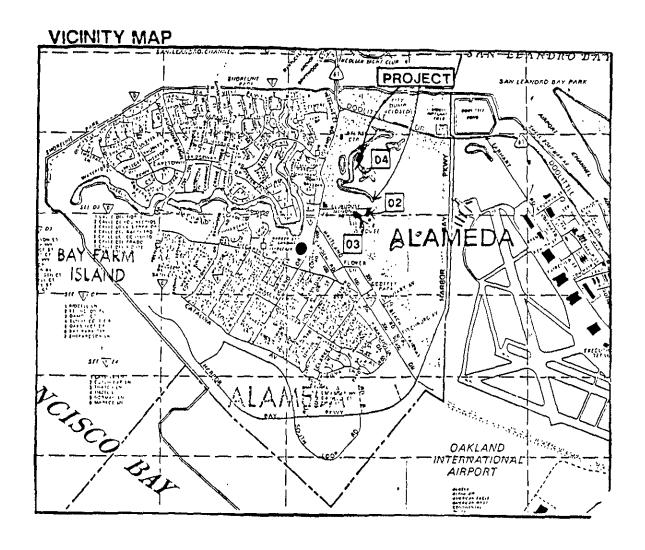
5.0 REPORT

Please forward copies of this report, chain of custody documentation, and laboratory analytical reports to the San Francisco Regional Water Quality Control Board, and the Alameda County Department of Environmental Health Department Hazardous Materials Division.

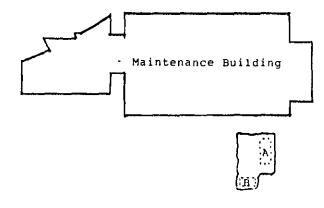
Alameda County
Department of Environmental Health
Hazardous Materials Division
80 Swan Way,
Room 200
Oakland, CA 94621

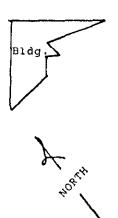
San Francisco Regional Water Quality Control Board 2101 Webster Street, Rm 500 Oakland, CA 94621 APPENDIX A

MAPS



Environmental	ALAMEDA GOLF COURSE	Figure	1	
Technical	1 MEMORIAL CLUBHOUSE	SITE	LOCATION	MAP
S ervices	ALAMEDA, CALIF			





KEY

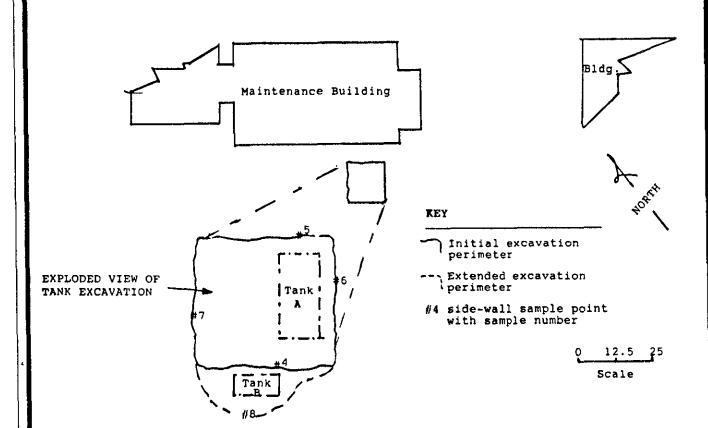
A) 500 gal gasoline tank

(B) 125 gal gasoline tank

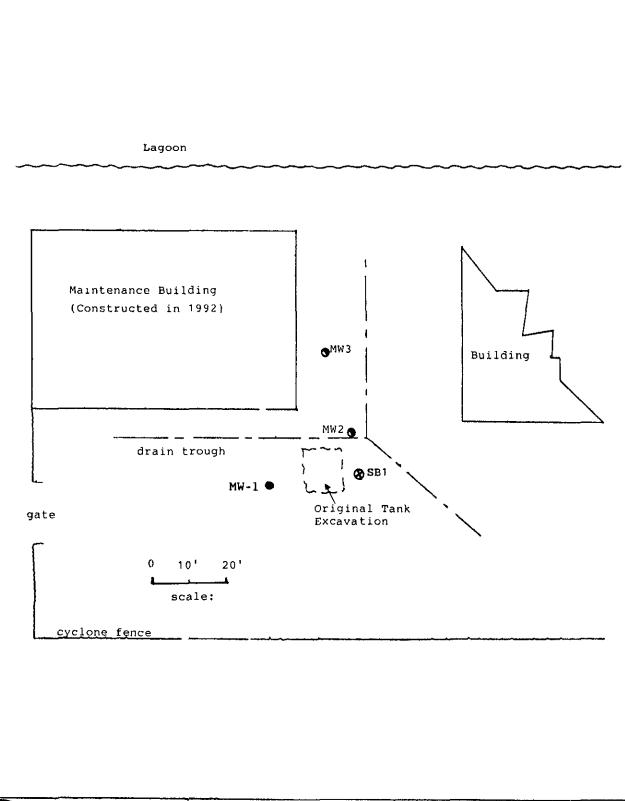
12.5 25 Scale

	E nvironmental
1 5	Technical
	S ervices

ALAMEDA GOLF COURSE	Figure 2
1 MEMORIAL CLUBHOUSE	FORMER TANK LOCATION
ALAMDEA, CALIF.	



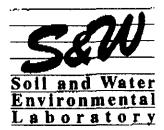
Environmental	ALAMEDA GOLF COURSE	Figure 3
T echnical	1 MEMORIAL CLUBHOUSE	EXCAVATION AND
	ALAMEDA, CALIF	SAMPLING MAP



(En)	Environmental	ALAMEDA GOLF COURSE	Figure 4
1 7	Technical	1 MEMORIAL CLUBHOUSE	MONITORING WELL
	S ervices	ALAMEDA, CALIF	LOCATION MAP

APPENDIX B

GROUNDWATER ANALYTICAL RESULTS FIRST QUARTER



Drinking Water Waste Water Asbestos Hazardous Waste — Soil Calderon Testing — Air

14072 W. Park Avenue Boulder Creek, CA 95006 (408) 338-3053 Laboratory Report

Client Environmental Tech. Services

Report Date

09/29/92

1548 Jacob Ave.

San Jose CA

95118

Sample Site

Alemeda Golf Course

Date Received 09/05/92

Alameda, CA

MH ALAM Golf

Analysis Requested

Total Hydrocarbons - Gas BTEX Procedure

EPA 5030

Date Analyzed
03/05/32

S&W Ref. #	Client Ref. #	Matrix/Analysis	Concentration	Detection Limit
2492-ET2-C	MU-1	Water/TPH-0	*	50 ppb
2492-ET2-C	MW-1	Water/RTEX		
F- (D		Berizerie	*	0.5 ppb
		Toluene	#	0.5 ppb
		Ethy1berizene	#	0,5 ppb
		Xylenes	**	0.5 ppb
MAIN SURE STANDARD COMPANY COM	Make to street out to	A S A		#0
2492-ET2-D	MM-5	Water/TPH-G	•	50 ppb
2492-ET2~D	MMS	Water/BTEX	*	0.5 ppb
		Berizene	*	0.5 ppb
		Toluene	*	
		Ethyl benzene		0.5 ppb
		Xylenes	*	0.5 ppb
2492-ET2-E	 MW-3	Water/TPH-G	*	50 ppb
2492-ET2-E	E-MM	Water/BTEX		• •
4436E16-F	1.444 m	Benzene	*	0.5 ppb
		Toluene	#	0.5 ppb
		Ethylbenzene	*	0.5 ppb
		Xylenes	*	0.5 ppb

No detectable amount @ detection limit

Analyst Signature

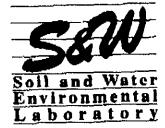
G. A. Canoy

Soil and Water Environmental Laboratory

14072 West Park Avenue Boulder Creek, CA 95006 (408) 338-3053/4466

CHAIN - OF - CUSTODY

Witnessing Agency/Inspector Name and Date Witnessing Agency/Inspector Name and Date Containers Agency/Inspector Name and Date Condition of Samples 1-Good 2-See Reverse Water Sample ID Date Time Matrix Sample Location Sample Location Matrix M	Project Number		Site Nai	me and Ad	Idress Club H	ausepk	Type and Number of	A	maly:	sis Re	quired		Laboratory ID		Comments
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Drinking Water Waste Water o Ashestos Hazardous Waste - Soil Calderon Testing - Air

14072 W. Park Avenue Boulder Creek, CA 95006 (408) 338-3053

Laboratory Report

Cilent Erwierymental Tech. Services 1548 Jacob Ave.e. Rd. San Jose, CA 95118

10-01-92

Report Date

Sample Site

Date Received

Alameda Golf Course

9 17 90

Alameda, CA

Date Analyzed 9-21-92

Analysis Requested Heavy Metals

Procedure EPA-6010/7000

S&W Ref. #	Ci	lent Ref. #	Matrix/Analysis	Concentratio	n		Detection Limit
2492-ET2	c	MW1	Yotal Lee	nd .	<	5.0	ppb
	D	MM-E	Total Le	ad		6.3	ppb
	Œ	MU-3	Total Le	ad	<	5.0	ppb

MDL- 5,00 ppb

This analysis performed for 5 & H Laboratory by West Laboratory Davis, California

Analyst Signature

Soil and Water Environmental Laboratory

14072 West Park Avenue Boulder Creek, CA 95006

CHAIN - OF - CUSTODY

408) 338-305 Project Number			me and Ad	idress ! Minus	cat Club	Type and Number of		Analy	sis Re	equirec	d	Laboratory	ID	Comments
Mitnessing Ag	OIF (ency/Insp	Lange ector Nair	e and Date	Dept 1	Hamed yful	Containers	TPH-G + BTEX	TPH-D + BTEX		3		Condition of Samples		
Sample ID	Date	1 mile	<i>Yearty</i> Matrix	Sample Location	then.	ĺ	TPH-G	THE	၌	79/4/		1 - Good 2 - See Reve	erse	
MW1	9/17/92		H20	2 Liters	s And	per				/				additional water
mu-z	9/17/92	1						'	<u> </u>					Additional water In lead array (9-5-92)
mw-3	9/17/92							'	<u> </u>	$\boxed{\bigvee}$				(9.5-92)
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APPENDIX C

GROUNDWATER ANALYTICAL RESULTS SECOND QUARTER

Soil and Water Environmental Laboratory

Drinking Water Waste Water o Asbestos Hazardous Waste - Soil Calderon Testing - Air

14072 W. Park Avenue Boulder Creek, CA 95006 (408) 338-3053

Laboratory Report

Client Report Date 01/15/93 Ervierymental Tech. Services 1548 Jacob Ave. 95118 San Jose

Sample Site Pate Received 01/12/93 Alameda Golf Cource 1 Club House Memorial Dr.

MMHALGLE

_	earbons — Bas arbons — Diesel Gresse	Procedure EPA 5030 EPA 3510 EPA 503e EPA 602			ite Analyzed Di/i4/分语
S&W Aer #	Client Ref. #	Mutrix/Analysis	Concentration	De	tection Limit
0123-ET3-A	MH-1 1	Water/TPH-0	*	50	dag
0125 ET3-A	MW-1	Water/TPH-D	#		ppb
123-ET3-A	MH-1	Water/TOG	★		ppm
0123-ET3-A	MW-1	村命も個外ノ数工匠メ			
		於erszerse	#	0,5	dqq
		Tolluerie	*	0. 5	ppb
		Ethylberizerie	**	0.5	ppb
		Xylenes	*	O. 5	ppb
	MW-2	Water/TPH-G	*	50	ppb
0123-ET3-B	MM-2	Water/TPH-D	*	50	ppb
123-ET3-R	MM-S	Water/TOG	#	5	ppis
0123-ET3-B	MM2	Water/DTEX			
-		总会 时正常对电	*	O, 5	ppb
		Toluene	#	0.5	dqq
		Ethy! benzene	*		ppb
		Xyleries	*	0.5	bbp
0123-ET3-C	 MW-3	Water/TPH-6	*	50	ppb
0123-ET3-C	MW-3	Wat mr/TPH-D	#	50	ppb
123-ET3-C	MM-3	Water/TOG	#	5	ppm
0123-ET3-C	MW-3	Water/プロTEX			
	_	Berzene	*	0.5	ppb
		Toluerie	*	0.5	ppb
		Ethy1bevizeve	↔	0.5	ppb
		Xylenes	*	0,5	ppb

No detectable amount @ detection limit

Arialyst Signature

Environmental Technical Services

(408) 267-6427

CHAIN - OF - CUSTODY

Project Number	215	Site Na:	me and Ad	idress All	ameda	Type and Number of	A	nalys	is Rec	quired			Laboratory ID 0:23-E	[-3	Comments
Witnessing Agend Olant O Sample ID	icy/Insp	ector Nam	neand Date	off Course Ala memoring Dre by July W. Sample Location	hen	Containers	TPH-G+BIEX	TPH-D - BTEX	100				Condition of Samples 1 - Good 2 - See Reverse		
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Mw.2				0										B	
mw-3	1		V		<u></u>		1	<u> </u>			-		!	c	
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APPENDIX D

GROUNDWATER ANALYTICAL RESULTS THIRD QUARTER

Soil and Water Environmental Laboratory

Drinking Water
Waste Water o Asbestos
Hazardous Waste — Soil
Calderon Testing — Air

14072 W. Park Avenue Boulder Creek, CA 95006 (408) 338-3053 Latioratory Report

Cilent

Report Date

Enviornmental Tech. Services 05/13/93 1548 Jacob Ave.

San Jose CA 95118

Sample Site

Date Received

Alameda Golf Cource

05/05/93

One Memorial Club House Drive

Alameda

AC-C

EPA

602

Analysis Requested

Total Hydrocarbons - Gas

BTEX

Procedure EPA 5030 Date Analyzed

05/06/93

W Ref. #	Client Ref. #	Matrix/Analysis	Concentration		Detection	Limit
1253-ETZ-A	MW-1	Nater/TPH-G		#	50	ppb
1253-ET2-A	MW-1	Nater/BTEX				
		Benzene		#	0.5	ppp
		Tolumna		#	0.5	ppp
		Ethylbenzen	e	*	0.5	bbp
		Xylenes		*	0.5	abp
1253-ET2-B	MM-5	Water/TPH-G		*	50	ppb
1253-ET2-B	MM-2	はあたをケノBTEX				
1000 c.c -	=	Benzene		*		ъър
		Toluene		*		bbp
		Ethy1benzen	Q	*	0. 5	ppb
		Xylenes		#	ò. 5	bbp
		Mater/TPH-G		#	50	apb
1253-ET2-C	E-WM 3	Water/BTEX				
1253-ET2-C	LiM?	Benzene		*	0.5	वंवव
		Toluene		*		ppb
		Ethylbenzer		*		ppb
		Xylenes	-	*		ppb

^{*} No detectable amount @ detection limit

Analyst Signature

nature X.W. Lemon

Soil and Water Environmental Laboratory

14072 West Park Avenue Boulder Creek, CA 95006

CHAIN - OF - CUSTODY

(408)	338-3053	/4466

Project Number	,	Site Nai ONL /	me and Ad	Cold (0)	arcodo (CK	Type and Number of	A	nalys	sis Re	quired		La	boratory ID		Comments
<u></u>		ctor Nam	e and Date	=	U154,	Containers	TPH-G + BTEX	TPH-D + 8TEX				of	ondition Samples Good		
Sample ID	Date	Time	Matrix	Sample Location	l		H	TPH	70C				See Reverse		
MW-1	5/4/93		HD				√								
MW-1 MW-3 MW-3							/								
MW-3															
	· 														
										:				· 	
						473.									
					-										
Relinquished by	: (Signati UNIO	ire) [U]		Date/Time 5/4/93	Received by TO ETS	: (Signature) FRIDC-	k_]	Date/	Time		Ren	narks:		
Relinquished by				Date/Time	Received by	: (Signature)				Time			MPANY: DRESS:		
Relinquished by	y: (Signat	ure) <i>LJL 10</i> Y	, 	Date/Time 5/5/93624	Redeived by	Lab. (Signatur	e)	4	Date/	Time	6,76	P <u>H</u>	ONE:		FAX:

APPENDIX E

GROUNDWATER ANALYTICAL RESULTS FOURTH QUARTER



Drinking Water Waste Water = Asbestos Hazardous Waste - Soil Calderon Testing - Air

14072 W. Park Avenue Boulder Creek, CA 95006 (408) 338-3053

Client

Report Date
Des 06/15/93 Enviornmental Tech. Services 1548 Jacob Ave.

San Jose CA 95118

Sample Site

Alam Golf Cource

Club House Memorial Dr.

Alameda

AlamGc1f

Analysis Requested

Total Hydrocarbons - Gas BTEX

Frocedure

EPA 5030 EPA 602 Date Analyzed

Date Received 07/29/93

08/01/93

WRef #	Client Ref #	Matrix/Analysis	Concentration	Detection	Limit
2103-ET2-A	MW-1	Water/TPH-G			
2103-ET2-A	MW-1		•	50	ppp
	1.164 - 7	Water/BTEX			
		Benzana	*	0.5	ppb
		Tolumna	*		ppb
		Ethy1benzene	*		ррь
		Xylenes	*		ppb
2103-ET2-B	MW-2	Undang (TRU) m			
2103-ET2-B	MM-5	Water/TPH-G	*	50	ppb
## ## E.E. D	14144	Water/BTEX			
		Benzene	*	0.5	ppb
		Taluene	*	0.5	ppb
		Ethylbenzene	*		ppb
		Xylenes	*		ррь
2103-ET2-C	MW-3	Water/TPH-G			
2103-ET2-C	MW-3	Water/BTEX	*	50	ppb
		日本 加工等加量	*	0.5	dag
		Toluene	*		
		Ethyl benzene	*	0.5	ppb
		Xylenes	*		

No detectable amount @ detection limit

Ana yst Signature

Environmental Technical Services

(408) 267-6427

CHAIN - OF - CUSTODY

Project Number			4 .				.,						
100		Site Na:	me and Ad	dress Club He	use Menos	Allype and	<i>A</i>	Analy	/sis Requ	ired	Laboratory ID		Comments
Man So	7K	HAM.	Holl	Course ?	Tamida	Containers	_	Į ×	7		1103-E	F 2	
Witnessing A	ency/insp	ector (Verm	ie and gati		-		FF8+	불			Condition of Samples	}	
Sample ID	Date	Time	Matrix	Sample Location	<u> </u>		TPH-G+87EX	THO . BTEX	ğ	1 1 1	1-Good		
	1	 	1			VOAS	+		 	╅╅	2 - See Reverse		
MUI	126/43		1/20			240-MC						A	
	11		įį			VOAS	17					0	
MW2						2 40-MC	V	<u> </u> _		4-1-4		B	
mw3	11		şł			11 4	1					ا ح]
	 							_	╂╾╂╌	 			
	<u> </u>												
	-				<u>.</u>		/						
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								_					
Refinauished b	WHIN	MUA		Date/Time 3 45	Received by ETS F				Date/Tim	ne	Remarks:	 .	I.
Relinquished b	ry: (Signati	ure)		Date/Time	Received by:	(Signature)			Date/Tim		COMPANY: E	TS	
Relinquished I	Signaty WWW	are)		Date/Time 7.32	Received by	Lab: (Signatur			Date/Tin	18:20	PHONE:		FAY.
· cwi /i	var 1W	my		Kr. 11.2	~ 1.7)	Willey !			12 1/		I FIUNE:	,	FM A.

APPENDIX F GROUNDWATER DEVELOPMENT REPORTS

Project	Name:			Well#
ALAMEDA (GOLF COURSE			MW-1
DATE:	July 29,	1993		
NAME:	·····		Time	Began:
Mawhinne	У		11:1	
DEPTH OF	WELL	DEPTH TO W	ATER	WELL DIAM.
10.8		1.61'		2"
Time	Gallons	Temp.	рн	Cond.
11:21	1	76.2	9.39	
11:24	3	78.4	9.13	
11:27	5	78.4	9.82	
Conductive Volume Evacuate		measured. Meter v Purging Equip.	was not ope	Sampling Equip.
	_	·		
7 gallon	S	Stainless Steel Bailer		Stainless Steel Bailer
Depth to	Water Upon	Completion of Sam	oling: not	measured
Sheen	Flo	ating Product	Sample Col	or Odor
no		no	dark grey	no
Sediment	/Foreign Mat	ter: very little	silt	
Sample I	D∯	Analysis		Laboratory
MW-1		TPH-G, BTE	X	S & W Lab
Sample C	ontainers:			
2/40ml V 2 amber	OAs one-liter bo	ttles		

DATE: Ju. BAME: Mawhinney DEPTH OF WELL 9.6' Time Gall	COURSE ly 29, 1993		P4.2 a	MW-2
NAME: Mawhinney DEPTH OF WELL 9.6'	ly 29, 1993		PR 2	
Mawhinney DEPTH OF WELL 9.6'			PI 2 = -	
9.6'				Began: 35p
Time Gall		1.7'	WATER	WELL DIAM. 2"
	ons	Temp.	рн	Cond.
11:45 1		88.8	9.81	
11:48 3		83.3	9.61	
11:52 5		81.5	9.76	
Volume Evacuated		Purging Equip.		Sampling Equip.
7 gallons	Stai	nless Stee Bailer	1	Stainless Stee Bailer
Depth to Wate	r Upon Comple	tion of Sa	mpling: not	measured
Sheen	Floating	Product	Sample Col	or Odor
no	no		dark grey	no
Sediment/Fore	ign Matter: \	ery little	silt	
Sample ID#		Analysis		Laboratory
MW-2		TPH-G, B	TEX	S & W Lab
Sample Contai	iners:		······································	
2/40ml VOAs	liter bottles			

		· · · · · · · · · · · · · · · · · · ·		Wr - 3 3 B
Project Ma	ame:			Well#
ALAMEDA G	OLF COURSE			MM-3
DATE:	July 29,	1993		
NAME:				Began:
Mawhinney			12:	:10p
DEPTH OF I	VELL	DEPTH TO	ATER	WELL DIAM.
9.71	1	2.9'		2"
Time	Gallons	Temp.	рН	Cond.
12:20	1	93.4	13.14	
12:24	3	82.8	12.70	
12:29	5	82.4	12.70	
Volume		Purging	<u>,,,,</u> ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	Sampling
Evacuated	•	Equip.		Equip.
7 gallons		Stainless Steel		Stainless Steel
3		Bailer		Bailer
Depth to	Water Upon	Completion of Sam	pling: not	measured
Sheen	Floa	ating Product	Sample Col	or Odor
no	~~~~	no	dary grey	no
Sediment/	Foreign Mat	ter: very little	silt	
Sample ID	#	Analysis		Laboratory
MW-3	-	TPH-g, BTE	ΣX	S & W Lab
Sample Co	ntainers:			
2/40ml VO	As			
2 amber o	ne-liter bo	ottles		

Project Name:	· · · · · · · · · · · · · · · · · · ·	Well#		
ALAMEDA GOLF COURSE	E		MW-1	
DATE: May 4, 1993				
NAME: Mawhinney	<u> </u>		Time Bega	n:
DEPTH OF WELL	DEPTH	TO WATER	<u> </u>	WELL DIAM.
9.8	2.3	31		2"
Time Gallons	Salinity	На	Temp.	Cond.
11:20 1	*	*	56.4 F	10.94
11:38 3	*	*	59.3 F	8.56
11:45 5	*	*	44.9 F	9.29
12:00 7	*	*	46.3 F	9.44
Volume Evacuated	<u>Purg</u> Egui			Samplin Equip.
7 gallons	Stainles Steel Bai		S	Stainless Steel Bailer
Depth to Water Upo	n Completio	n of Samp	ling:	
9.74' Slow to rec	harge			
Sheen F1	oating Prod	uct	Sample Co	olor Odo
no	no		dark gre	ey yes
Sediment/Foreign M	atter: ver	y silty		
Sample ID#	Analy	sis		Laboratory
MW-1	TPHg,	BTEX		S & W Lab
Sample Containers	······································			
2/40-ml VOAs 2 amber one liter	bottles			

Project Name:			Well#	
ALAMEDA GOLF COURSE			MW- 2	
DATE: May 4, 1993				
<u>NAME:</u> Mawhinney			Time Began: 12:19p	
DEPTH OF WELL	DEPTH	TO WAT	TER W	ELL DIAM.
9.8'	1.4	1 ′		2"
Time Gallons	Salinity	Нq	Temp.	Cond.
12:27 1	*	*	66.4 F	7.92
12:35 3	*	*	67.4 F	7.94
1:45 5	*	*	65.4 F	6.47
1:50 7	*	*	62.1 F	6.48
Volume Evacuated	Purg: Eguij			Sampling Equip.
7 gallons	Stainless Steel Bail			tainless el Bailer
Depth to Water Upon	Completion	n of Sa	ampling:	
9.8' Good Recharge				
Sheen Flo	ating Produ	ıct	Sample Colo	r <u>Odor</u>
no	no		grey/gold	no
Sediment/Foreign Ma	tter: very	y silty	7	
Sample ID#	Analy	sis	Li	aboratory
MW-2	TPHg, 1	BTEX	s	& W Lab
Sample Containers		<u>-, , , , , , , , , , , , , , , , , , , </u>	· · · · · · · · · · · · · · · · · · ·	·····
2/40-ml VOAs 2 amber one liter b	ottles			

Projec	t Name:			Well#	· · · · · · · · · · · · · · · · · · ·		
	A GOLF COURS	SE.		MW-3			
	May 4 , 1993		······································				
	May 4 , 1993)		**************************************	·		
<u>NAME:</u> Mawhin	ney			Time Begar 1:15p	1:		
	OF WELL	กะอดบ	TO WAT		WELL DIAM.		
	<u>or made</u>			TER			
9.72		2.9	9′		2"		
Time	Gallons	<u>Salinity</u>	рН	Temp.	Cond.		
1:15	1	*	*	58.3 F	4.62		
1:25	3	*	*	47.3 F	4.40		
1:35	5	*	*	31.3 F	3.57		
1:42	7	*	*	31.2 F	3.37		
Volume Evacua		Purq: Equi			Sampling Equip.		
7 gallons		Stainless Steel Bail		St	Stainless eel Bailer		
Depth	to Water Upo	on Completion	n of Sa	mpling:			
9.73'	at completio	n					
Sheen	<u>F1</u>	oating Produ	ıct	Sample Col	lor Odor		
no		no		dark grey	yes yes		
Sediment/Foreign Matter: very little silt							
Sample	ID#	Analys	sis		Laboratory		
MW-3		TPHg, H	BTEX		S & W Lab		
Sample	Containers		******				
2/40-ml VOAs 2 amber one liter bottles							

MONITORING WELL SAMPLING DATA MONITORING WELL NO.1

		MONITORING W	EDE NO.1	
PROJECT	NAME:		WELL	#
ALAMEDA	GOLF COURSE		MW-	1
DATE:	JANUARY 11	., 1993		
NAME:			TIME	BEGAN:
Helen Ma	awhinney		12:4	:5
DEPTH O	F WELL(FT.)	DEPTH OF	WATER(FT.)	WELL DIAM.
9.8		3.2		2"
TIME	GALLONS	На	TEMP.	COND.
1:00	1	6.81	59.1	15.40
1:05	2	6.85	59.3	15.40
1:10	3	6.87	59.3	15.38
1:20	4	6.87	59.4	15.37
1:25	5	6.88	59.4	15.37
1:34	7	6.88	59.4	15.37
VOLUME EVACUAT	ED	PURGING EQUI	P. S2	AMPLING EQUIP.
8 gallo	ns	Stainless St Bailer		ainless Steel iler
DEPTH T	O WATER UPON	COMPLETION C	F SAMPLING	
Not mea	sured. Recha	arge very slo	w.	
SHEEN	FLOATI	NG PRODUCT	SAMPLE CO	OLOR ODOR
no	no	0	grey	no
SEDIMEN	T/FOREIGN MA	FTER: very li	ttle silt	
SAMPLE	ID#	ANALYSIS	LAB	DRATORY
MW-1		TPHg, TOG	S &	W Lab.
CAMDIE	CONTATNEDS			

SAMPLE CONTAINERS
3/ 40-ml VOAs, 2 Liters

MONITORING V	VELL	SAMPI	ING	DATA
MONITOR	RING	WELL	NO.2	}

PROJECT NAME:

WELL #

ALAMEDA GOLF COURSE

MW-2

DATE:

JANUARY 11, 1993

NAME:

TIME BEGAN:

Helen Mawhinney

1:40

DEPTH OF WELL(FT.)		DEPTH OF	WELL DIAM.		
9.8		1.7		2"	
TIME	GALLONS	На	TEMP.	COND.	
1:40	1	7.02	60.7	17.70	
1:45	2	7.02	60.7	17.70	
1:55	3	7.02	60.8	17.69	
2:00	4	7.02	60.9	17.68	
2:05	5	7.02	60.9	17.68	
2:07	7	7.02	60.9	17.68	
VOLUME EVACUATED		PURGING EQUI	SAMPLING EQUIP.		
8 gallons		Stainless Steel Bailer		Stainless Steel Bailer	

Not measured.

SHEEN	FLOATING PRODUCT	SAMPLE COLOR	ODOR
no	no	grey	no

SEDIMENT/FOREIGN MATTER: very little silt

SAMPLE ID# **LABORATORY** <u>ANALYSIS</u> MW-2TPHg, TOG S & W Lab

SAMPLE CONTAINERS

3/ 40-ml VOAs, 2 Liters

MONITORING WELL SAMPLING DATA MONITORING WELL NO.3

	1	MONITORING WE	LL NO.3	
PROJECT	NAME:		WELL	#
ALAMEDA	GOLF COURSE		MW-	3
DATE:	JANUARY 11	, 1993		
NAME:			TIME	BEGAN:
Helen Ma	awhinney		2:10	р
DEPTH O	F WELL(FT.)	DEPTH OF V	WATER (FT.)	WELL DIAM.
9.7		2.4		2"
TIME	GALLONS	На	TEMP.	COND.
2:10	1	7.26	55.3	12.10
2:20	2	7.25	55.3	12.09
2:25	3	7.24	55.3	12.09
2:35	4	7.23	55.3	12.09
3:00	5	7.22	55.3	12.08
3:05	7	7.22	55.3	12.08
VOLUME EVACUAT		PURGING EQUI	P. SA	AMPLING EQUIP.
8 gallo		Stainless St Bailer		ainless Steel iler
DEPTH T	O WATER UPON	COMPLETION O	F SAMPLING	
Not mea	sured. Recha	rge very slo	W	
SHEEN	FLOATIN	G PRODUCT	SAMPLE CO	OLOR ODOR
no	no)	grey	no
SEDIMEN	T/FOREIGN MAT	TER:		
SAMPLE	ID#	ANALYSIS	LABO	ORATORY
MW-3		TPHg, BTEX	S &	W Lab.

SAMPLE CONTAINERS
3/ 40-ml VOAs, 2 Liters

Project 1	Name:		Well#				
ALAMEDA (OLF COURS	E	MW-1				
Date:	Septem	ber 18, 1992		<u> </u>			
Name:	me: Time Began:						
Mawhinney	7		11:27				
DEPTH OF	WELL(ft.)	DEPTH TO W	WATER(ft.)	WELL I	DIAM.		
9.77		5.36		2"			
Time	Gallons	Salinity	Нq	Temp.	Cond.		
11:27	1	1.2	5.6	20 C	21.0		
11:40	3	1.2	*	19 C	21.0		
11:52	5	1.2	*	19 C	23.0		
12:07	7	1.2	*	19 C	21.0		
Volume Evacuated	Purgir	ng Equip.	Samp	ling Equi	р.		
10 gallon	s Stainl	ess Steel Bai	ler Stai	nless Ste	el Bailer		
Depth to	Water Upon	Completion o	f Sampling				
Not measu	red. Slo	w Recharge					
Sheen	Floatin	g Product	Sample	Color	<u>Odor</u>		
no	no	•	grey		no		
Sediment/	Foreign Ma	tter: very li	ttle silt				
Sample ID	<u>Analysis</u>			Laboratory			
MW-1	TP	ig, BTEX, Total Lead S & W Lab.					
Sample Con 3/ 40-ml	ntainers VOAs, 2 Li	ters					

Project Name:			Well#				
alameda G	OLF COURSE			MW-2			
Date:	Septemb	er 18, 1992					
Name:			Time Beg	an:	<u></u>		
Mawhinney		12:19					
DEPTH OF	WELL(ft.)	DEPTH TO W	ATER(ft.)	WELL DI	AM.		
9.77		1.89	1.89		2"		
Time	Gallons	Salinity	рH	Temp.	Cond.		
12:25	1	1.8		21 C	31.0		
12:36	3	1.7		21 C	29.0		
12:49	5	2.0		20 C	34.0		
1:03	7	2.2		19 C	36.0		
1:15	10	2.2		19 C	36.0		
Volume Evacuated	•	g Equip.	Sam	pling Equi	p.		
10 gallon	s Stain	less Steel Bai	ler Sta	inless Ste	el Baile		
Depth to	Water Upon	Completion of	of Samplin	g			
Not measu	re. Slov	v Recharge					
Sheen	Floati	ng Product	Sample	Color	Odor		
no	no	•	grey		no		
Sediment	/Foreign Ma	atter: silt		<u></u>			
Sample II	D ∄ À i	nalysis Labora		atory			
MW-2	T	PHG, BTEX & To	Ig, BTEX & Total Lead S & W Lab.				
Sample Co	ontainers VOAs, 2 L	iters					

Project Name	<u> </u>		Well#					
ALAMEDA GOLF	COURSE		MM-3					
Date:	Septembe	er 18, 1992		•				
Yame:	Time Began:							
Mawhinney			1:29					
DEPTH OF WELL	L(ft.)	DEPTH TO	WATER (ft.) MELT D	IAM.			
9.71		2.28	2.28		2"			
Time Gal	lons	Salinity	Нg	Temp.	Cond.			
1:29	1	1.8		21 C	31.0			
1:37	3	1.7		21 C	27.0			
1:48	5	1.7		19C	29.0			
1:59	7	2.0		20 C	30.0			
2.15	10	2.2		19 C	30.0			
Volume Evacuated	Purgin	g Equip.	Se	ampling Equi	ip.			
10 gallons	Stainl	ess Steel B	ailer S	tainless Ste	eel Bailer			
Depth to Wat	er Upor	Completion	of Sampl	ing				
Not measure	Slov	Recharge						
Sheen	Floating Product		Samp	Odor				
no	no	•	grey		no			
Sediment/For	reign M	atter: silt	<u> </u>					
Sample ID#	D# Analysis			ratory				
MM-3	T	PHg, BTEX,	COTAL LEAD	S &	W Lab.			
Sample Cont 3/40-ml VO					· · · ·			