QUARTERLY GROUNDWATER MONITORING REPORT

5930 College Avenue
Oakland, California
STID # 514

July 10, 2001

prepared for

William G, Sheaff TTE Trust
Mr. Brian Sheaff
1945 Parkside Drive
Concord, CA 94519

prepared by

Golden Gate Tank Removal
255 Shipley Street
San Francisco, CA 94107

GGTR Job No. 7335

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QUARTERLY GROUNDWATER MONITORING REPORT
July 10, 2001

5930 College Avenue, Oakland, California
STID # 514

Introduction

This report presents the results and findings of the July 10, 2001 groundwater monitoring conducted by GOLDEN GATE TANK REMOVAL (GGTR) at 5930 College Avenue in Oakland, California. This monitoring episode was the 6th monitoring event of all three wells at the site. Well MW-1 been monitored a total of 8 times now. The Alameda County Health Services Agency (ACHSA) designated the site as case STID #514. A vicinity map showing the general area of the site is presented on Figure 1, *Vicinity Map*. Features of the site are shown on Figure 2, *Site Plan*. The groundwater gradient is graphically shown on Figure 3, *Groundwater Gradient*. Figure 4, *Groundwater Monitoring Results at 5930 College Avenue*, summarizes the results of historical groundwater monitoring at the site.

Results of Groundwater Sampling and Laboratory Analysis

Copies of the official laboratory Certificates of Analysis and the Chain-of-Custody Form are included in the Appendix. Documentation of the purging and sampling is contained in the Field Data Sheets of the Appendix.

Table - July 10, 2001 Groundwater Sampling Results

Well Label	TPH-G (ug/L)	MTBE (ug/L)	BTEX (ug/L)
MW1	**79,000**	**660**	**15,000 / 7,800 / 3000 / 15,000**
MW2	**39,000**	**180**	**6,200 / 730 / 2,300 / 6,100**
MW3	**12,000**	**35**	**39 / 10 / 690 / 1600**

NOTES: TPH-G - Total Petroleum Hydrocarbons as Gasoline,
BTEX - Benzene / Toluene / Ethylbenzene / Xylenes,
MTBE - Methyl Tertiary Butyl Ether
ug/L - micrograms per liter (equivalent to parts per billion - ppb)
ND - not detected above laboratory reporting limit

In general, TPH-g, BTEX and MTBE have demonstrated fluctuating concentrations in all three monitoring wells at the site. Total Petroleum Hydrocarbons as gasoline (TPH-g) decreased in well MW-1 to 79,000 ug/L, a historically low concentration. TPH-g decreased in well MW2 to 39,000 ug/L this quarter. TPH-g increased in well MW-3 to 12,000 ug/L and the increase exceeds the maximum historical value of 8,400 ug/L from the last monitoring episode. MTBE concentrations decreased in all wells from the last monitoring episode. Benzene concentration decreased in all three wells.

No floating free product or noticeable sheen occurred in any of the groundwater wells during this monitoring episode. Gasoline-like odors were noted in purge water from all three monitoring wells.

Total Extractable Petroleum Hydrocarbons (TEPH) and oxygenates were not detected in prior sampling episodes and by agreement with the regulatory agency, TEPH and oxygenates were not included in this groundwater sampling.

Results of Groundwater Elevation Measurements

On April 26, 2001, GGTR arranged for Virgil Chavez Land Surveying to survey the casing elevations on all three monitoring wells at the site. The top-of-casing elevations are now show in relation to mean sea level. The groundwater gradient for the July 10, 2001 monitoring event was measured at 0.5 ft / 100 feet (0.005 ft/ft) in a direction of 4° east of north. The groundwater gradient is graphically shown on figure 3, Groundwater Gradient.

The table shown below lists the historical data on mean groundwater elevation, flow direction and groundwater slope for the site.

Groundwater Elevation, Flow Direction and Slope

Date	Mean Groundwater Elevation in feet	Direction of Flow	Slope in ft / 100 ft
10/07/99	39.87	11° west of south (169° west of north)	0.67 feet / 100 feet
01/26/00	43.1	23° west of north	9.12 feet / 100 feet
10/25/00	39.96	40° east of north	0.64 feet / 100 feet
04/25/01	188.6	55° west of north	0.69 feet / 100 feet
07/10/01	**186.26**	**4° east of north**	**0.5 feet / 100 feet**

Note that the groundwater elevations prior to April 25, 2001 are referenced to a site-specific datum of 50 feet at well MW1 (no relation to sea level).

Discussion of Monitoring Results

We reviewed the results of the July 10, 2001 sampling episode in comparison with the results of the previous monitoring episodes. The groundwater gradient is similar to previous measurements. The flow direction of North 4 East is between the last two measurements. The range of the last three groundwater flow directions is 95 degrees. The last three groundwater measurements have a shallow slope (0.5-0.6 ft/100 ft) but differ in flow direction. Previous measurements suggest that the shallow groundwater changes in response to rainfall. Utility trenches occur along the western margin of the site.

Benzene concentrations decreased in all three wells. TPH as gasoline decreased in wells MW1 and MW2. TPH as gasoline increased in well MW1. MTBE decreased in all three wells.

GGTR recommends that the monitoring of the three groundwater wells be continued on a quarterly basis as required by the LUFT manual and the HSA. The three samples obtained at that time should be analyzed for TPH-G, BTEX and MTBE.

Water Sample Analytical Methods

The groundwater samples collected from the three monitoring wells on July 10, 2001 were analyzed for the following fuel constituents:

- Total Petroleum Hydrocarbons as Gasoline (TPH-G)
- Benzene, Toluene, Ethylbenzene and total Xylenes (BTEX)
- Methyl Tertiary Butyl Ether (MTBE)

North State Environmental Laboratory of South San Francisco, California analyzed the groundwater samples on July 10-12, 2001. All analytical results are tabulated on figure 4, *Groundwater Monitoring Results at 5930 College Avenue*. Copies of the Laboratory Certificates of Analysis, Field Data Sheets and Chain of Custody Forms are included in the Appendix.

Field Procedures

The GGTR monitoring of three groundwater wells was performed on July 10, 2001, in accordance with the requirements and procedures of the California Regional Water Quality

sampling each well, the well casing elevations were surveyed and the depth to groundwater in the well was measured from the top of casing to the nearest 0.01 foot using an electronic sounding probe. A preliminary groundwater sample was also collected at this time and checked for the presence of liquid-phase hydrocarbons or sheen with a clear bailer.

After measuring, each well was purged a minimum of five casing volumes. Groundwater samples for analyses were collected by lowering a disposable, bottom-fill, polyvinyl chloride (PVC) bailer to just below the air-water interface in each well. The sample was then carefully decanted from the bailer into the appropriate containers. All volatile organic analysis (VOA) vials were inverted and checked to insure that no entrapped air was present. The samples were then properly labeled with the sample number, well number, sample date, and the sampler's initials. The samples were then stored in an iced cooler for delivery to a California certified laboratory following proper preservation and chain-of-custody procedures.

Quality Assurance / Quality Control

Quality Assurance and Quality Control (QA/QC) details are shown on the laboratory Certificates of Analysis in the Appendix. The laboratory reported no quality assurance or quality control problems during the laboratory analysis procedures. All samples were analyzed within specified laboratory holding times.

Project History and Chronology

During 1996, GGTR removed two underground storage tanks (UST) and fuel dispenser from a common location at the site. The following table shows a summary of the tank designations, size, type of construction and contents:

Designation	Construction	diameter	length	size	contents
		(feet)	(feet)	(gallons)	
TANK 1	steel	4	7	675	gasoline
TANK 2	steel	4	3.5	340	waste oil

The ages of the tanks are unknown but are believed to be between 40 and 60 years old. During the UST removal there was evidence of a gasoline leak in surrounding soils and GGTR over-excavated gasoline-contaminated soil from surrounding the former UST location. The removal and over-excavation was documented in the GGTR report dated October 11, 1996.

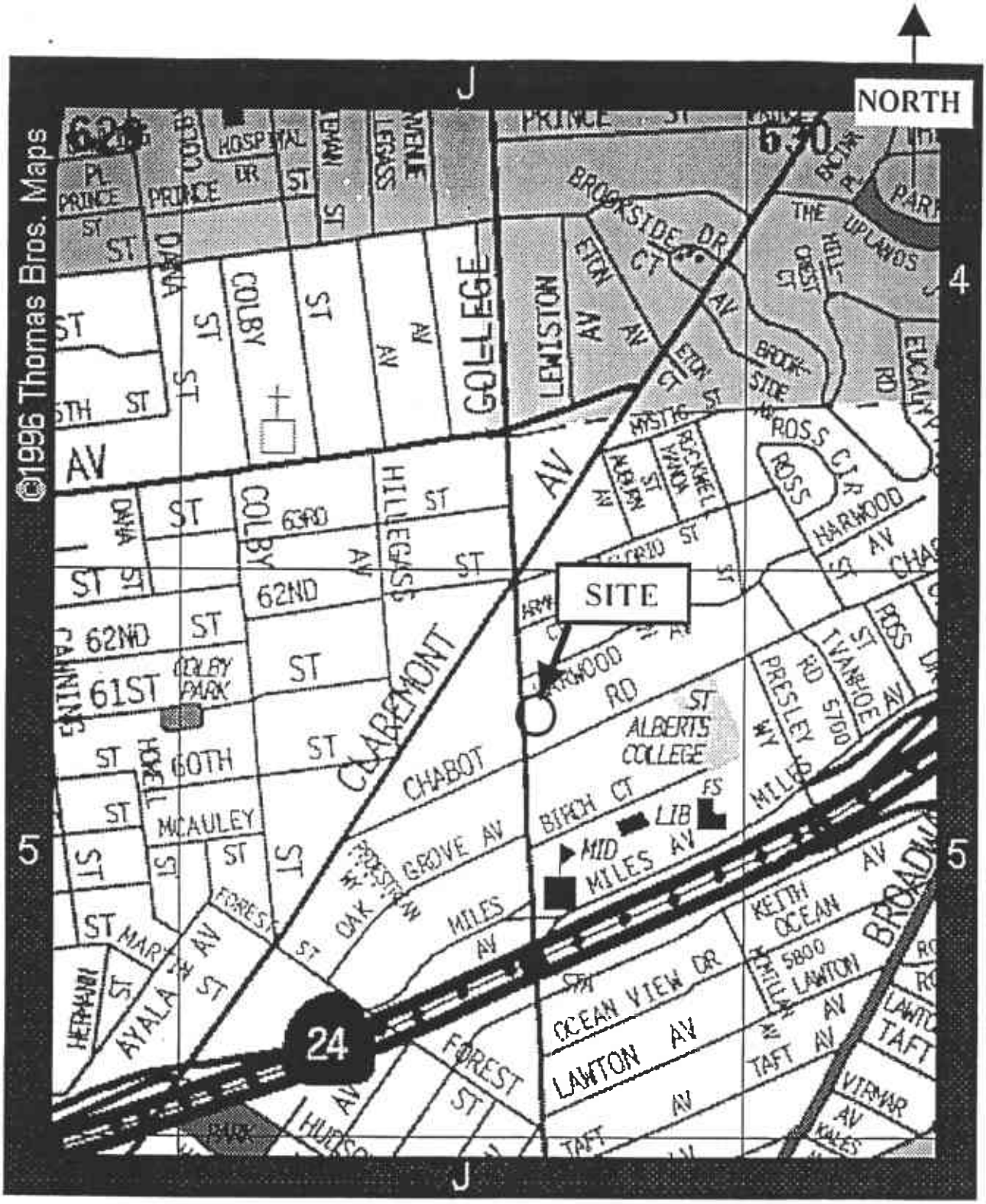
The following list of activities shows the significant investigation and remedial action performed at the site:

08/06/96	Underground storage tanks 1 and 2 were removed and samples recovered
08/15/96	A work plan was submitted by GGTR for over excavation and disposal of gasoline-contaminated soil surrounding the UST
09/30/96	Over-excavation of gasoline-contaminated soil performed
10/01/96	Last of additional excavation soil disposed of at a Class II facility
10/11/96	TANK REMOVAL REPORT published by GGTR
12/30/96	ACHSA submitted letter requiring soil and groundwater investigation
03/10/97	GGTR authorized to prepare a work plan for additional investigation
04/01/97	GGTR submitted work plan for a Soil and Groundwater Investigation
04/21/97	ACHSA submitted letter authorizing work plan
05/06/98	GGTR drills borings B! through B3
05/20/98	GGTR drills borings B4 (Monitoring Well MW1)
05/27/98	GGTR develops monitoring well MW1
06/01/98	GGTR measures, purges and samples monitoring well MW1
06/17/98	GGTR submitted Soil and Groundwater Investigation Report
07/21/98	GGTR submitted Work Plan Addendum for installation of two additional groundwater monitoring wells
09/10/98	GGTR measures, purges and samples monitoring well MW1 then submits a groundwater monitoring report
10/02/99	GGTR drills two borings (B5 and B6) and converts them to groundwater monitoring Wells (MW2 and MW3)
10/04/99	GGTR develops monitoring wells MW2 and MW3
10/07/99	GGTR surveys monitoring wells MW2 / MW3; measures, purges and samples monitoring wells MW1, MW2 and MW3 then submits a groundwater monitoring report
10/22/99	GGTR submitted Summary Report
11/24/99	HCS submitted letter requiring quarterly monitoring and setting parameters for January 2000 analyses
01/26/00	GGTR measures, purges and samples monitoring wells MW1, MW2 and MW3 then submits a groundwater monitoring report
10/25/00	GGTR measures, purges and samples monitoring wells MW1, MW2 and MW3 then submits a groundwater monitoring report
04/25/01	GGTR surveys, measures and samples monitoring wells MW1, MW2 and MW3 then submits a groundwater monitoring report
07/10/01	**GGTR surveys, measures and samples monitoring wells MW1, MW2 and MW3 then submits a groundwater monitoring report**

Report Submittal to Regulatory Agencies

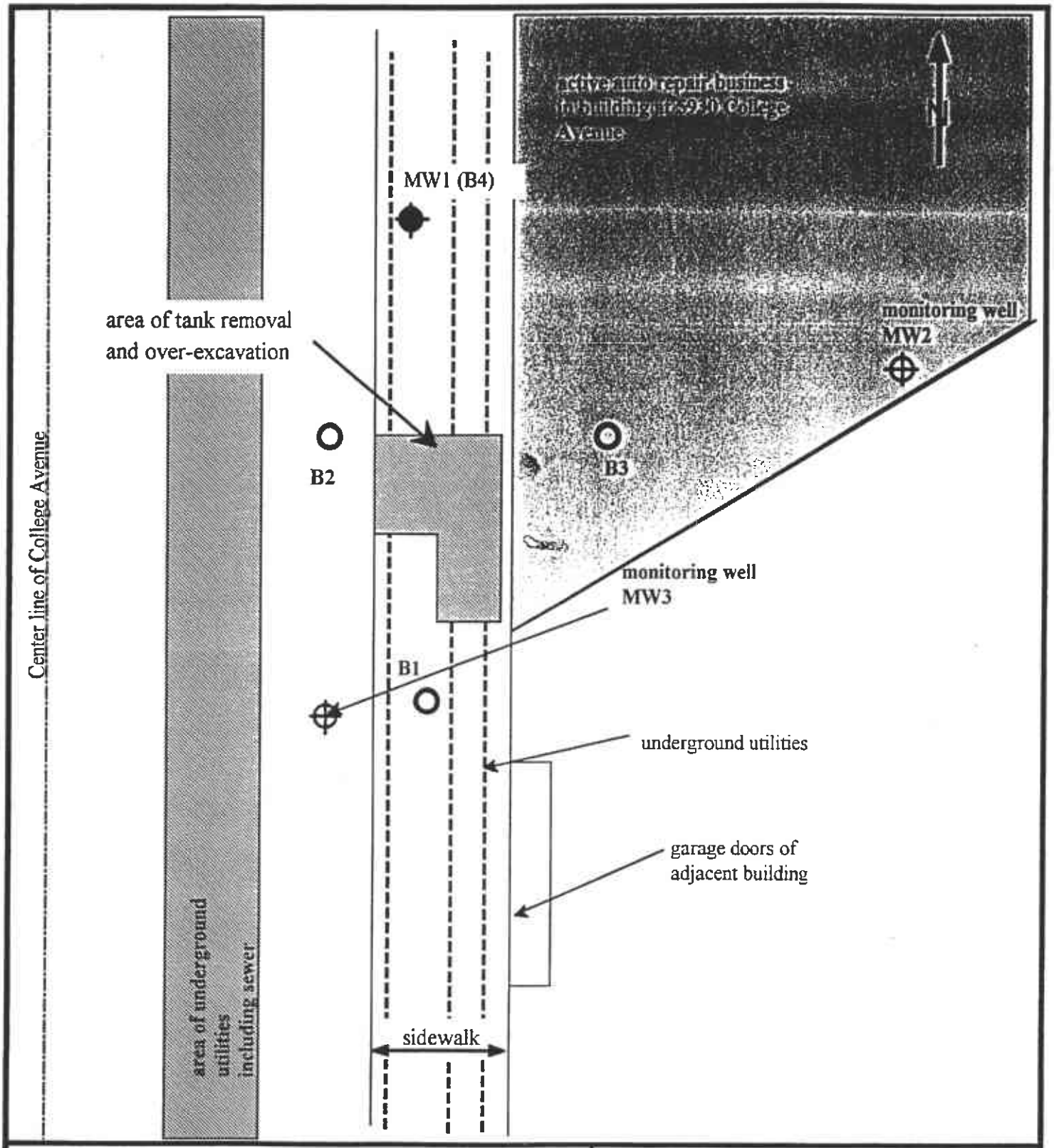
As per local environmental guidelines, GGTR recommends that a copy of this quarterly groundwater monitoring report be submitted to the local regulatory agency as soon as possible:

Alameda County Health Care Services
Environmental Health Services
Environmental Protection (LOP)
1131 Harbor Bay Parkway Suite 250
Alameda, CA 94502
Attention: Eva Chu



GOLDEN GATE TANK REMOVAL	VICINITY MAP
255 Shipley Street San Francisco, California 94107 Telephone (415) 512 1555 Fax (415) 512 0964	5930 College Avenue Oakland, California

Project 7335	By: jnc	Not to scale	January, 2000	Figure 1

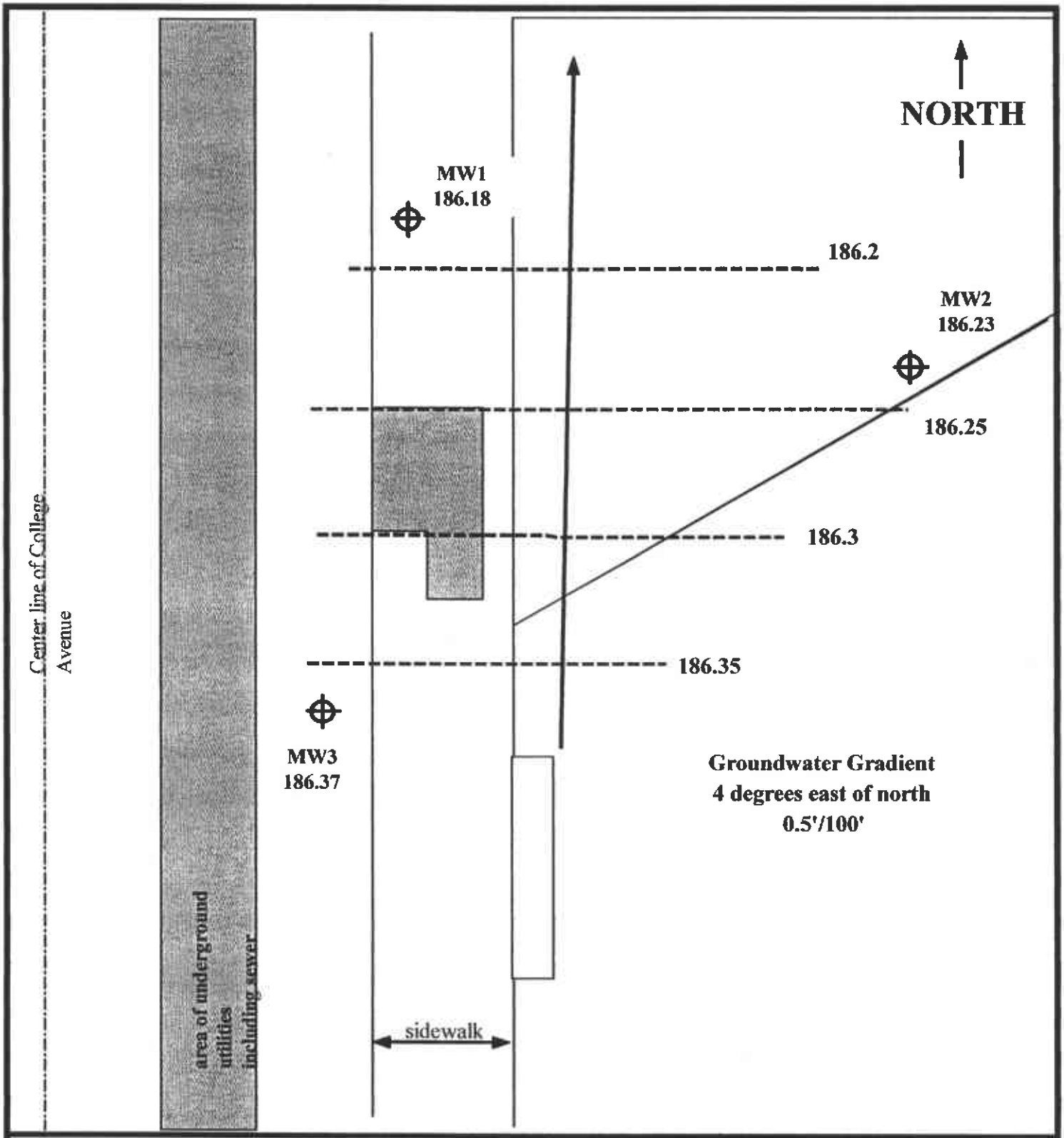


GOLDEN GATE TANK REMOVAL

255 Shipley Street
San Francisco, CA 94107
Telephone (415) 512 1555 Fax (415) 512 0964

SITE PLAN
5930 College Avenue
Oakland, California

Project 7335	By: my	1" = 10'	February 2001	Figure 2



GOLDEN GATE TANK REMOVAL

255 Shipley Street
San Francisco, CA 94107
Telephone (415) 512 1555 Fax (415) 512 0964

GROUNDWATER GRADIENT
Monitoring Wells MW1-MW3
5930 College Avenue
Oakland, California

Project 7335	By: my	1" = 10'	July 10, 2001	Figure 3

Figure 4 - Groundwater Monitoring Results at 5930 College Avenue

Well Label	Date of Sampling	Casing Elevation (feet)	Depth to Water (feet)	Water Elevation (feet)	Free Product, Odor or Sheen	TPH-G (ug/L)	TEPH (ug/L)	VO (ug/L)	MTBE (ug/L)	BTEX (ug/L)
MW1	06/01/98	50.00*	4.81	45.19	slight sheen	160,000	ND	--	1,900	28,000 / 21,000 / 3,800 / 21,000
	09/10/98	50.00*	7.50	42.50	odor	290,000	ND	--	440	<50 / 25,000 / 7,100 / 32,000
	10/07/99	50.00*	10.04	39.96	odor	85,000	ND	--	1,100	20,000 / 13,000 / 3,800 / 17,000
	01/26/00	50.00*	8.26	41.74	slight sheen	130,000	--	--	470	25,000 / 18,000 / 4,500 / 22,000
	10/25/00	50.00*	10.10	39.90	odor	130,000	--	ND	1,300	23,000 / 12,000 / 3,900 / 18,000
	02/02/01	50.00*	9.61	40.39	0dor	128,000	--	--	780	19,000 / 11,000 / 3,800 / 18,000
	04/25/01	195.90	7.39	188.51	odor	120,000	--	--	900	21,000 / 13,000 / 390 / 18,000
	07/10/01	**195.90**	**9.72**	**186.18**	**odor**	**79,000**	**--**	**--**	**660**	**15,000 / 7,800 / 3000 / 15,000**
MW2	10/07/99	51.42*	11.49	39.93	slight odor	18,000	ND	--	490	3,000 / 1,700 / 1,000 / 3,900
	01/26/00	51.42*	7.85	43.57	none	42,000	--	--	560	9,300 / 2,200 / 2,300 / 7,700
	10/25/00	51.42*	11.57	39.85	slight odor	31,000	--	ND	500	5,500 / 370 / 1,700 / 2,600
	02/02/01	51.42*	10.77	40.65	odor	36,000	--	--	400	4,300 / 530 / 1,800 / 4,500
	04/25/01	197.28	8.52	188.76	odor	56,000	--	--	460	6,700 / 1700 / 2,600 / 8,200
	07/10/01	**197.28**	**11.05**	**186.23**	**odor**	**39,000**	**--**	**--**	**180**	**6,200 / 730 / 2,300 / 6,100**
MW3	10/07/99	49.39*	9.67	39.72	none	6,600	ND	--	390	310 / 110 / 430 / 1,000
	01/26/00	49.39*	5.40	43.99	none	3,300	--	--	40	110 / 8 / 100 / 32
	10/25/00	49.39*	9.24	40.15	slight odor	4,500	--	ND	ND	100 / 2 / 120 / 130
	02/02/01	49.39*	8.73	40.66	slight odor	2,900	--	--	35	35 / 3 / 160 / 298
	04/25/01	195.22	6.61	188.61	slight odor	8,400	--	--	56	260 / 33 / 290 / 510
	07/10/01	**195.22**	**8.85**	**186.37**	**slight odor**	**12,000**	**--**	**--**	**35**	**39 / 10 / 690 / 1600**

NOTES:

TPH-G - Total Petroleum Hydrocarbons as Gasoline & BTEX - Benzene / Toluene / Ethylbenzene / Xylenes
TEPH - Total Extractable Petroleum Hydrocarbons; Oxygenates or Volatile Organics by GC/MS Method 8260
MTBE - Methyl Tertiary Butyl Ether
ug/L - micrograms per liter (equivalent to parts per billion - ppb)
* - assumed local datum of 50 feet prior to survey on April 26, 2001
-- not analyzed
ND - not detected above laboratory detection limits

APPENDIX

LABORATORY CERTIFICATES OF ANALYSIS, FIELD DATA SHEETS & CHAIN OF CUSTODY FORMS

GROUNDWATER MONITORING

FOR

5930 College Avenue
Oakland, California
STID # 514

Project No. 7335
July 10, 2001

North State Environmental Laboratory
CA ELAP # 1753
90 South Spruce Avenue, Suite V • South San Francisco, CA 94080 • (650) 266-4563 • FAX (650) 266-4560

C E R T I F I C A T E O F A N A L Y S I S

Lab Number: 01-0985
Client: Golden Gate Tank
Project: #7335-5930 COLLEGE AVE. OAK,CA

Date Reported: 07/17/2001

Gasoline,BTEX and MTBE by Methods 8015M and 8020

Analyte	Method	Result	Unit	Date Sampled	Date Analyzed
Sample: 01-0985-01 Client ID: 7335-MW1				07/10/2001	WATER
					07/12/2001
Gasoline	8015M	79,000	ug/L		
Benzene	8020	15,000	ug/L		
Ethylbenzene	8020	3000	ug/L		
MTBE	8020	*660	ug/L		
Toluene	8020	7800	ug/L		
Xylenes	8020	15,000	ug/L		
Sample: 01-0985 02 Client ID: 7335-MW2				07/10/2001	WATER
					07/10/2001
Gasoline	8015M	39,000	ug/L		
Benzene	8020	6200	ug/L		
Ethylbenzene	8020	2300	ug/L		
MTBE	8020	180	ug/L		
Toluene	8020	730	ug/L		
Xylenes	8020	6100	ug/L		
Sample: 01-0985-03 Client ID: 7335-MW3				07/10/2001	WATER
					07/10/2001
Gasoline	8015M	12,000	ug/L		
Benzene	8020	39	ug/L		
Ethylbenzene	8020	690	ug/L		
MTBE	8020	35	ug/L		
Toluene	8020	10	ug/L		
Xylenes	8020	1600	ug/L		

* Confirmed by GC/MS

North State Environmental Laboratory
CA ELAP # 1753
90 South Spruce Avenue, Suite V • South San Francisco, CA 94080 • (650) 266-4563 • FAX (650) 266-4560

C E R T I F I C A T E O F A N A L Y S I S

Quality Control/Quality Assurance

Lab Number: 01-0985
Client: Golden Gate Tank
Project: #7335-5930 COLLEGE AVE. OAK,CA

Date Reported: 07/17/2001

Gasoline,BTEX and MTBE by Methods 8015M and 8020

Analyte	Method	Reporting Limit	Unit	Blank	Avg MS/MSD Recovery	RPD
Gasoline	8015M	50	ug/L	ND	92	11
Benzene	8020	0.5	ug/L	ND	92	16
Toluene	8020	0.5	ug/L	ND	96	17
Ethylbenzene	8020	0.5	ug/L	ND	100	19
Xylenes	8020	1.0	ug/L	ND	98	20
MTBE	8020	0.5	ug/L	ND	91	18

ELAP Certificate NO:1753
Reviewed and Approved

John A.Murphy,Laboratory Director

01-0985

North State Environmental Analytical Laboratory

90 South Spruce Avenue, Suite W, South San Francisco, CA 94080
Phone: (650) 266-4563 Fax: (650) 266-4560

Chain of Custody / Request for Analysis
Lab Job No.: _____ Page 1 of 1

Client: GOLDEN GATE TANK REMOVAL	Report to: T. WALLACE	Phone: (415) 512-1555	Turnaround Time: 24-HR
Mailing Address: 255 SHIPLEY ST. SAN FRANCISCO CA 94107	Billing to:	Fax: (415) 512-0964	Date:
		PO# / Billing Reference: 7335	Sampler:

Project / Site Address: #7335 - 5930 COLLEGE AVE, OAK, CA

Analysis Requested

Sample ID	Sample Type	Container No. / Type	Pres.	Sampling Date / Time	TPH-G	BTEX	MTBE	Comments / Hazards
7335-MW1	WATER	2 VOA / 1 AM	COOL	07-05-01 /	X	X	X	
7335-MW2	WATER	2 VOA / 1 AM	COOL	07-05-01 / 9:55	X	X	X	
7335-MW3	WATER	2 VOA / 1 AM	COOL	07-05-01 / 9:25	X	X	X	

Relinquished by: _____ Date: 7/10/01 Time: 9AM Received by: _____

Relinquished by: _____ Date: / Time: Received by: _____

Relinquished by: _____ Date: Time: Received by: _____

Lab Comments

GROUNDWATER WELL MONITORING
FIELD DATA SHEET

Project Number 7335 Site Name 5950 College Date 07-09-01
Well Number MW3 Sampler T. WALLACE

Notes, including field conditions, persons on site, methods used, weather
WELL IN GOOD CONDITION, TEMP 65°-70°, OVERCAST, USED HYDAC METER FOR TEMP, COND, PH - USED ELECTRONIC WATER METER TO GAUGE WATER LEVEL, DISPOSABLE BAILER FOR PURGING & DISPOSABLE BAILER FOR SAMPLING.

Well Depth 18.17 ft. time of sample 9:25 AM Depth to water 8.85 ft
Well Diameter 2 INCH sheen or free product SLIGHT SHEEN

Volume Height of water		Diameter (2 inch)	4 inch	Volume	Number of well volumes	total gallons to purge
Column	10.12 ft.	(0.16)	0.65	1.6 gals.	5	8 gal

Quality of purge water SLIGHT SHEEN - CLEAR - NO SEDIMENT.

TIME	VOLUME PURGED	pH	CONDUCTIVITY	TEMP	NOTES
8:55	1 gals	10.5	5.21	63.2	
9:00	3 gals	9.91	5.24	62.9	
9:10	5 gals	9.9	5.28	62.7	
9:25	7 gals	9.3	5.35	62.7	
	gals				
	gals				
	gals				
	gals				

Additional comments

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GOLDEN GATE TANK REMOVAL

GROUNDWATER WELL MONITORING
FIELD DATA SHEET

Project Number 7335 Site Name 5930 College Date 07-09-01
Well Number MW1 Sampler T. Wallace

Notes, including field conditions, persons on site, methods used, weather
-See MW3-

Well Depth 14.68 ft. time of sample ~~10:~~ 10:45 Depth to water 9.72 ft
Well Diameter _____ sheen or free product _____

Volume Height of water		Diameter 2 inch	4 inch	Volume	Number of well volumes	total gallons to purge
Column	4.96 ft.	(0.16)	0.65	.79 gals.	5	4 gal

Quality of purge water _____

TIME	VOLUME PURGED	pH	CONDUCTIVITY	TEMP	NOTES
10:15	1 gals	9.1	7.85	64.1	
10:35	3 gals	8.3	7.81	63.7	
10:45	5 gals	8.5	7.80	63.8	
	gals				
	gals				
	gals				
	gals				
	gals				

Additional comments Slow Recharge.

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General Engineering Contractors License No. 616521

GROUNDWATER WELL MONITORING
FIELD DATA SHEET

Project Number 7335 Site Name 5930 COLLEGE Date 07-09-09
Well Number MW2 Sampler T. WALLACE

Notes, including field conditions, persons on site, methods used, weather
— SEE MW3 —

Well Depth 19.7 ft. time of sample 9:55AM Depth to water 11.05 ft
Well Diameter 2 INCH sheen or free product SLIGHT SHEEN

Volume Height of water	Diameter 2 inch	4 inch	Volume	Number of well volumes	total gallons to purge
Column 8.65 ft.	(0.16)	0.65	1.3 gals.	5	7 gal

Quality of purge water CLEAR — STRONG ODOR

TIME	VOLUME PURGED	pH	CONDUCTIVITY	TEMP	NOTES
9:30	1 gals	9.7	8.04	63.6	
9:40	3 gals	9.35	7.99	64.3	
9:~~45~~	5 gals	9.0	7.75	63.~~9~~	63.7
9:50	7 gals	9.2	7.64	63.7	63.7
	gals				
	gals				
	gals				
	gals				

Additional comments

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