

RO 377



Alameda County  
NOV 10 2003  
Environmental Health

**QUARTERLY GROUNDWATER MONITORING REPORT  
October 15, 2003**

**Sheaff's Garage  
5930 College Avenue  
Oakland, California**

**ACHCSA Fuel Leak Case No. RO0000377**

Prepared For:

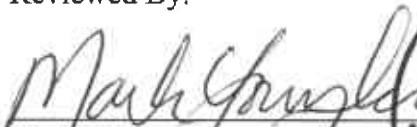
**William G. Sheaff TTE Trust  
Mr. Brian Sheaff  
1945 Parkside Drive  
Concord, CA 94519**

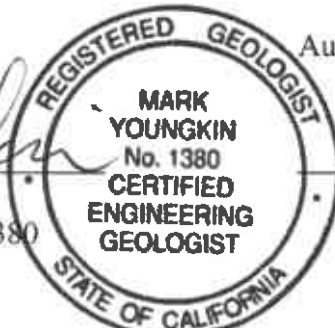
Prepared By:

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

GGTR Project No. 7335  
October 31, 2003

Reviewed By:

  
Mark Youngkin  
Registered Geologist CEG 1380



Authored By:

  
Brent A. Wheeler  
Project Engineer

RO 377

Alameda County  
NOV 10 2003  
Environmental Health

**QUARTERLY GROUNDWATER MONITORING REPORT**  
**October 15, 2003**

**5930 College Avenue, Oakland, California**

**Introduction**

This report presents the results and findings of the October 15, 2003 groundwater monitoring and sampling activities conducted by Golden Gate Tank Removal, Inc. (GGTR) at 5930 College Avenue in Oakland, California. This was the 12th quarterly monitoring event performed at the site for the three existing monitor wells, MW1 through MW3. Additional soil and groundwater investigation activities were conducted at the site between August 30 and November 1, 2002, under the direction of the Alameda County Health Care Services Agency (ACHCSA), Environmental Protection Division (Local Oversight Program). During this period, quarterly groundwater monitoring activities were performed on October 23, 2003. The ACHCSA has designated the site as Fuel Leak Case No. RO000377. Figure 1, *Site Location Map*, shows the general location of the subject property in Oakland, California. The site, adjacent properties, and associated features are shown on the revised Figure 2, *Site Plan*. The groundwater elevation isocontour lines and associated gradient is shown on Figure 3, *Groundwater Potentiometric Map*. Table 1, *Historical Results of Groundwater Sample Analysis & Fluid-Level Data*, provides a tabulated summary of the laboratory results of historical groundwater sample analyses and fluid-level monitoring data at the site.

Gettler-Ryan, Inc. of Dublin, California is currently conducting a separate groundwater investigation for the former Chevron Station #20-9339 located adjacent to the north side of the subject property at 5940 College Avenue. Two groundwater monitoring wells (GR-MW1 & GR-MW2) are used to evaluate the hydrocarbon concentrations in groundwater at this site.

GGTR and Gettler-Ryan, Inc. has conducted joint monitoring and sampling activities at the associated sites on a quarterly basis since October 2000. As of the April 8, 2002 monitoring event, Gettler-Ryan has decreased their monitoring schedule to a biannual basis. Gettler-Ryan, Inc. was scheduled to perform monitoring and sampling of GR-MW1

& GR-MW2 on October 15, 2003; however, they had to re-schedule activities for a later date in October 2003. Figures 2 and 3 show the location of each Gettler-Ryan well relative to the subject wells at 5930 College Avenue.

### **Site Location and Description**

The subject commercial property is located at 5930 College Avenue, along the east side of College Avenue between Harwood Street and Chabot Road in Oakland, California. The site lies approximately 0.2 mile (1,000 feet) north of Highway 24 and approximately 2.5 miles east of Interstate 80 and the San Francisco Bay. The general location of the site is shown on the attached Figure 1, *Site Location Map*.

The property is currently occupied by Sheaff's Garage for the service and repair of automobiles, with no active fuel storage or distribution systems. The site is approximately 5,500 square feet in area with about 75% utilized by a covered warehouse/garage and 25% used as an exterior (uncovered) storage yard. The ground surface of the entire property is paved with concrete. The elevation of the site is approximately 195 feet above Mean Sea Level (Figure 1). Figure 2 presents a *Site Plan* showing pertinent site structures and adjacent properties.

The property is relatively flat lying with the topographic relief in the immediate vicinity of the site generally directed toward the southwest (Figure 1). Regional topographic relief appears to be directed toward the west-southwest in the general direction of the San Francisco Bay. One 675-gallon, gasoline UST and one 340-gallon waste oil UST was located beneath the sidewalk at the southwest corner of the site (Figure 2). The tanks were removed by GGTR in August 1996. A brief discussion of the tank removal activities is presented herein.

### **Site Geology and Hydrogeology**

According to a Geologic Map of the San Francisco-San Jose Quadrangle published by the California Department of Conservation, the site is underlain by up to 500 feet of dissected Quaternary alluvium deposited on marine sandstone, shale and conglomerate of the Mesozoic Franciscan Complex and possibly Mesozoic, cretaceous marine sedimentary rocks of the Great Valley Sequence (thicknesses not established). Native subsurface soil encountered at the site during the additional soil and groundwater investigation activities was predominantly a moist, dark yellowish brown, clayey silt up to approximately 7 fbg, overlying a dark yellowish brown and dark greenish gray, silty clay up to approximately 15 fbg. Moist to wet, clayey silt/sand and silty clay lenses extend up to a total explored sample depth of 20 fbg. Soil observed throughout B10 and B11 was predominantly a clayey, sandy silt.

Depth to groundwater, as measured on a quarterly basis in the three onsite monitoring wells (October 1999 through October 2002) ranged between approximately 5.5 and 13 fbg. The average depth to groundwater reported during the current monitoring event was

approximately 11 fbg, with an associated mean groundwater elevation of 185.14 feet. The associated groundwater gradient across the site historically has ranged between 0.005 (July 2001) and 0.032 (October 2002) foot per foot and the flow direction has fluctuated between 11° west of south (October 1999) to 71° east of north (October 2002). The regional groundwater flow in the vicinity of the site is assumed to be towards the west-southwest, in the direction of the San Francisco Bay, and generally following the natural topographic relief of the area. *At this time, with no domestic receptor well survey conducted in the vicinity of the site and no risk-based corrective action study performed to date at the site, shallow groundwater beneath the site is considered a potential drinking water source.*

The nearest surface water body is Claremont Creek, flowing southwest, with surface water flow ending approximately 0.9 mile northeast of the site. Creek flow then appears to continue southwest via an intermittent underground culvert and an open surface channel, and generally parallels Claremont Avenue towards its intersection with College Avenue, located approximately 0.1 mile (525 feet) north of the site (Figure 1). Lake Temescal, situated at an elevation approximately 200 feet higher than the site, is located approximately 1.1 miles east of the subject property, with effluent flow directed generally southeast.

### **Groundwater Sampling Field Procedures**

On October 15, 2003, GGTR contracted North State Labs (NSL) of South San Francisco, California to monitor and sample MW1 through MW3, in accordance with the requirements and procedures of the California Regional Water Quality Control Board, San Francisco Bay Region (RWQCB) and the ACHCSA. Prior to purging and sampling, NSL removed the well cover and locking compression cap from each well and allowed the groundwater in each well column to stabilize for approximately 25 minutes. NSL then measured and recorded the depth to groundwater and presence of floating product using a Keck® electronic oil/water interface probe. NSL also measured the dissolved oxygen (DO) of the groundwater using a YSI55® DO meter and measured the oxidation-reduction potential in each well to assess the occurrence of biodegradation in shallow groundwater beneath the site. Fluid levels were measured relative to the north side of the top of each well casing to the nearest 0.01 foot.

NSL then purged a minimum of three casing volumes from each well using a direct current, centrifugal purge pump, and simultaneously monitored and recorded the pH, temperature, and specific conductivity of the purged well water. Well purge water was transferred directly to a 55-gallon, D.O.T.-approved steel drum. After the groundwater in each well recharged to approximately 80% of its original level, NSL collected a groundwater sample by lowering a disposable, bottom-fill, polyvinyl chloride (PVC) bailer to just below the well's air-water interface. The bailer was immediately removed from the well and the groundwater was carefully decanted from the bailer into pre-cleaned, laboratory-provided sample containers. All volatile organic analysis (VOA) vials were inverted and checked to insure that no entrapped air was present. The samples were sealed

with Teflon caps, properly labeled, and stored in a cooler chilled to approximately 4°C. GGTR then submitted the samples under chain-of-custody protocol to NSL's State-certified, analytical laboratory (CA ELAP #1753) in South San Francisco, California.

### **Water Sample Analytical Methods**

On October 15, 2003, NSL submitted the groundwater samples collected from the three monitoring wells under formal chain of custody command for laboratory analysis of the following fuel constituents:

- Gasoline Range Organics (TPH-G; SW8020F)
- Benzene, Toluene, Ethylbenzene and total Xylenes (BTEX; SW8020F)
- Methyl Tertiary-Butyl Ether (MTBE; SW8020F)
- Volatile Organic Compounds (EPA Method 8260), including lead scavengers 1,2-dibromoethane (EDB) and 1,2-dichloroethane (EDC)
- Fuel Oxygenates (EPA Method 8260)

NSL completed all volatile organic analyses by October 17, 2003, which is in conformance with the 14-day required time limit for analysis. NSL submitted all analytical data in electronic deliverable format in accordance with the State Water Resources Control Board Assembly Bill 2886 for submission to the State's GeoTracker database system. The analytical results for this event as well as those reported during historical monitoring events at the site are presented in Table 1. A copy of the Laboratory Certificates of Analysis, associated Chain of Custody Record, and Fluid-Level Monitoring and Well Purge/Sampling Data Sheets and s are included in the Appendix.

### **Quality Assurance / Quality Control**

Quality Assurance and Quality Control 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.

### **Groundwater Monitoring Results**

The groundwater elevations measured relative to the top of well casing in MW1 through MW3 ranged between 184.90 (MW2) and 185.42 (MW3) feet above Mean Sea Level. The associated groundwater gradient calculated for the October 15, 2003 monitoring event was 1.0 foot / 100 feet (0.01 ft/ft) directed approximately 28° east of north. The groundwater gradient and associated elevation isocontour lines are shown on Figure 3.

The table shown below lists the historical data for MW1 through MW3 on mean groundwater elevation, flow direction, and groundwater slope for the site. The groundwater elevations prior to April 25, 2001 are referenced to an arbitrary site-specific

datum point (MW1; north side of top of well casing) with an assumed elevation of 50 feet. This arbitrary datum point is not referenced to Mean Sea Level.

**Table - Mean Groundwater Elevation, Flow Direction, and Gradient**

Measurement Date	Mean Groundwater Elevation (feet)	Groundwater Flow Direction	Gradient (feet / 100 feet)
10/07/99	39.87	11° west of south	0.67 foot / 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 foot / 100 feet
04/25/01	188.6	55° west of north	0.69 foot / 100 feet
07/10/01	186.26	4° east of north	0.5 foot / 100 feet
10/08/01	184.99	48° east of north	1.6 feet / 100 feet
01/07/02	191.63	52° west of south	2.3 feet / 100 feet
04/08/02	188.94	43° east of south	0.6 foot / 100 feet
07/09/02	186.63	51° west of north	0.7 foot / 100 feet
10/23/02	184.50	71° east of north	3.2 foot / 100 feet
<b>10/15/03</b>	<b>185.14</b>	<b>28° east of north</b>	<b>1.0 foot / 100 feet</b>

**Discussion of Monitoring Results**

The mean groundwater elevation measured at the site during this event was approximately 0.64 feet lower than that measured during the monitoring event in October 2002 and comparable to the mean groundwater elevation reported in October 2001 (184.99 feet). Based on the relative groundwater elevation data recorded for this event, the groundwater flow direction was directed approximately 28° east of north, presenting a counterclockwise shift of approximately 43° toward the north, as compared to the previous monitoring event. This groundwater flow direction has fluctuated significantly since the installation of the monitor wells in October 2001, however, the current northeast flow direction is generally similar to those previously recorded during the months of October since 2000. The calculated gradient slope for this event (0.01 foot/foot) has decreased slightly since the previous monitoring event (0.032 foot/foot) and but remains relatively steep as compared to the previous associated events in October 2000 through 2002.

Shallow, unconfined groundwater in the vicinity of the former UST cavity and monitored area (October 2003) was characterized by moderate dissolved oxygen concentrations ranging between 16.6% (1.24 milligrams per liter, mg/L) in MW1 and 24.4% (2.31 mg/L) in MW3, signifying that aerobic biodegradation is potentially occurring beneath the site. Although not measured insitu as was performed previously (October 2002), the most current DO concentrations initially measured in each well have significantly increased since the October 2002 event. The groundwater in each well was also initially monitored for Oxidation-Reduction Potential (ORP), which ranged between -081 millivolts in MW3

to -039 millivolts in MW2. This ORP range of values signifies that anaerobic biodegradation (iron reduction range) may potentially occurring within the shallow groundwater once the dissolved oxygen is depleted. The groundwater was also characterized by an average pH, specific conductivity, and temperature of 7.01, 716 micromhos per centimeter ( $\mu\text{mhos/cm}$ ), and 66.1 Fahrenheit degrees, respectively.

Neither free product nor surface sheen was present in the purge water or groundwater samples in MW1 through MW3 during the October 2003 monitoring event; however, gasoline-like hydrocarbon odors were observed in the purge water removed from MW2 only.

### Results of Groundwater Sampling and Laboratory Analysis

The table shown below summarizes the laboratory analytical results of groundwater samples collected during the October 15, 2003 monitoring event. A copy of the associated Laboratory Certificate of Analysis and the Chain-of-Custody Record is in the Appendix. Documentation of the well purging and sampling activities is contained in the Field Data Sheets of the Appendix.

#### October 15, 2003 Groundwater Sampling Results

Well ID	Sample ID	TPH-G (ug/L)	BTEX (ug/L)	MTBE (ug/L)	VOC/OXY (ug/L)
MW1	7335-MW1	90,700	17,800 / 4,740 / 3,150 / 13,900	534 (724*)	47,837 / 724*
MW2	7335-MW2	11,300	2,660 / 51 / 1,180 / 1,220	264 (322*)	6,642 / 322*
MW3	7335-MW3	3,040	91.3 / 8.4 / 69.9 / 148	ND (ND*)	436 / ND*
GR-MW1	MW-1-W	NA	NA	NA	NA
GR-MW2	MW-2-W	NA	NA	NA	NA

Notes: TPH-G - Total Petroleum Hydrocarbons as Gasoline (EPA Methods 5030/8020F)  
 BTEX - Benzene / Toluene / Ethylbenzene / Xylenes (EPA Methods 5030/8020F)  
 MTBE - Methyl Tertiary Butyl Ether (EPA Method 5030/8020F)  
 VOC - Volatile Organic Compounds (EPA Method 8260; Total Concentration)  
 OXY - Fuel Oxygenates (EPA Method 8260)

ug/L - micrograms per liter (equivalent to parts per billion - ppb)  
 ND - not detected above laboratory reporting limit (See QC/QA, Lab Report)  
 NA - not analyzed during this event  
 \* - MTBE concentration as confirmed by VOC & Fuel Oxygenate analysis

Total Petroleum Hydrocarbons as gasoline (TPH-G) increased in monitor well MW1 from 54,100 to 90,700 micrograms per liter (ug/L), as compared to the October 2002 monitoring event. The concentration of TPH-G reported in MW2 decreased from 13,300 to 11,300 ug/L as compared to the last monitoring event and continues to demonstrate a general decreasing trend since the April 2002 event (59,600 ug/l). The concentration of

TPH-G measured in MW3 remained relatively the same since the July 2002 monitoring event, only increasing slightly from 2,320 to 3,040 ug/L. The current TPH-G concentration reported in each well continues to exceed the California Regional Water Quality Control Board's (CRWQCB) July 2003 Tier 1 Environmental Screening Level (ESL) listed for this constituent, where shallow groundwater  $\leq 10$  feet below grade (fbg) beneath the site potentially is a domestic source of drinking water (100 ug/L). No CRWQCB – Municipal Supply Water Quality Objective (MSWQO) or Maximum Contaminant Level (MCL) currently exists for this constituent.

The concentration of methyl tertiary-butyl ether (MTBE) decreased in MW1 from 1,010 to 534 ug/L (724 ug/L, as confirmed by EPA Method 8260), and in MW2, from 322 to 264 ug/L (322 ug/L; EPA Method 8260) as compared to the October 2002 event. The MTBE concentrations measured in MW2 since January 2002 appear to be relatively stable, fluctuating only slightly between 264 ug/l (October 2003) to 583 ug/l (April 2002). The highest reported concentration during this period occurred when the depth to groundwater was approximately 8.5 feet below grade. The MTBE concentration measured in MW3 has remained below the laboratory reporting limit ( $<0.5$  ug/L) since October 2002, and continues to demonstrate a general decreasing trend. The MTBE concentrations measured in both MW1 and MW2 continue to exceed the CRWQCB's July 2003 Tier 1 ESL and MCL listed for this chemical constituent (5 ug/L).

The benzene concentration measured in the groundwater sample collected in MW1 through MW3 increased from 10,800 to 17,800 ug/L, from 2,420 to 2,660 ug/L, and from 46.8 to 91.3 ug/l respectively, as compared with the October 2002 event. The concentrations of toluene, ethylbenzene, and total xylenes measured in MW1 have also increased slightly since the October 2002. The concentrations of toluene, ethylbenzene, and total xylenes measured in MW2 and MW3 have remained relatively stable since the July 2002 event. The groundwater BTEX concentrations measured in MW1 through MW3 have generally shown a decreasing trend since the January and/or April 2002.

The total concentration of Volatile Organic Compounds (VOCs) measured in MW1 slightly increased since the October 2002 event, due to the significant increase in benzene and total xylene concentrations (EPA Method 8260) measured in this well during the current event (See Table 1 Notes). The concentrations of 1,2-Dichloroethane (EDC) and 1,2-dibromoethane (EDB), reported in MW1 through MW3 were below the respective laboratory reporting limit for each VOC constituent ( $\leq 100$  ug/L for EDC and  $<50$  ug/L for EDB). The groundwater samples collected in MW1 and MW2 contained 724 and 322 ug/L MTBE, as confirmed by both VOC and fuel oxygenate analyses. All other fuel oxygenate concentrations in MW1 through MW3, were below the respective laboratory reporting limit ( $\leq 10,000$  ug/L).

As requested by the ACHCSA in their most recent letter dated September 8, 2003, groundwater monitoring should continue at the site on a quarterly basis. All quarterly



groundwater samples should be analyzed for TPH-G, BTEX, and MTBE by SW8020F, and VOCs by EPA Method 8260. Based on the results of Fuel Oxygenates analyses reported in well groundwater samples collected in October 2003, such constituents do not appear to be chemicals of concern at the site, and do not need to be incorporated into the quarterly well monitoring/sampling schedule at this time. Monitoring of DO and ORP should be continued to further evaluate the biodegradation potential in the shallow groundwater beneath the site.

### **GeoTracker AB2886 EDF Upload**

In general accordance with State Assembly Bill 2886, GGTR uploaded the fluid-level monitoring data associated with the October 15, 2003 event in electronic deliverable format to the State Water Resources Control Board's GeoTracker Database System. The GeoTracker Upload Confirmation Number is 7621800065. An AB2886 Electronic Delivery confirmation report copy (GEO\_Well) corresponding to submittal title Fluid-Level Monitoring Data (MW1-MW3) is included in the Appendix.

GGTR also uploaded all groundwater sample analytical results associated with the October 15, 2003 event in electronic deliverable format to the State GeoTracker Database System. The GeoTracker Upload Confirmation Number is 1141819119. A confirmation report copy corresponding to Lab Number/Submittal Title 03-1426: 10/15/03 GW Analytical Data (MW1-MW3) is included in the Appendix.

### **Waste Management**

The drummed well purge and equipment wash and rinse water (@ 15 to 20 gallons) generated during the October 2003 monitoring event was transferred directly to a D.O.T.-approved, 55-gallon drum. The drum was appropriately labeled and stored onsite in a secure area. To date, the drum remains onsite for storage use with future quarterly monitoring events and/or additional investigation activities. Upon transport and disposal of the drummed waste liquid to a State-licensed recycling facility, proper waste manifest documentation will be submitted to the ACHCSA.

### Environmental Site History & Chronology

In August 1996, GGTR removed two underground storage tanks (USTs) and associated fuel dispenser from the site at the locations shown in Figure 2. The following table presents a summary of the tank designations, size, type of construction and contents:

Designation	Construction	Diameter (Feet)	Length (Feet)	Volume (Gallons)	Contents
TANK 1	Steel	4	7	675	Gasoline
TANK 2	Steel	4	3.5	340	Waste Oil

GGTR removed the residual fuel from the subsurface product piping (left in place), thoroughly flushed and drained the piping, and capped both ends. GGTR over-excavated the gasoline-contaminated soil surrounding the former UST location. Analytical results of soil samples collected during the UST removal and over-excavation activities at the site are summarized in the attached Table 1. The tank removal and over-excavation activities are documented in GGTR's *Tank Removal Report*, dated October 11, 1996.

Between May 1998 and October 1999, as requested by the ACHCSA, GGTR performed a preliminary subsurface soil boring investigation at the subject property and subsequently installed three groundwater monitor wells in the vicinity of the former UST cavity. Soil borings B1 through B3 were advanced immediately south, east, and west, respectively, of the former UST cavity at the locations shown in Figure 2. Following review and interpretation of all field and soil sample analytical data collected during these activities, additional soil borings (B4 through B6) were then advanced at the site to further assess the extent of contamination in soil and the potential impact to groundwater. These borings were converted to 2-inch-diameter groundwater monitoring wells, MW1 through MW3. The locations of the soil borings/monitor wells are shown in Figure 2.

In collaboration with Gettler-Ryan, Inc. of Dublin, California, which is conducting a separate groundwater investigation adjacent to the subject property (5940 College Avenue; Former Chevron Station), GGTR has jointly monitored and sampled each well on a quarterly basis between January 2000 and October 2002. The locations of the subject monitor wells as well as Gettler-Ryan's monitoring wells are shown on Figure 2.

Based on the residual elevated concentrations of gasoline-range hydrocarbons measured in the groundwater samples collected during the April 2001 quarterly monitoring activities, the ACHCSA, in a letter dated July 9, 2001, requested a work plan to assess whether any additional contaminant sources may potentially exist onsite that may be contributing to the elevated hydrocarbon concentration in groundwater. GGTR submitted the work plan on December 19, 2001, which was subsequently approved by the ACHCSA in a letter dated January 3, 2002. In August, October, and November 2002, GGTR implemented the approved work plan activities, details of which are presented in GGTR's June 10, 2003 *Report of Additional Soil and Groundwater Investigation*.

The following chronological list of activities shows the significant UST removal and investigative activities performed at the site to date:

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 B1 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 and Gettler-Ryan, Inc. perform joint groundwater monitoring activities; GGTR measures, purges and samples monitoring wells MW1, MW2 and MW3 then submits a groundwater monitoring report  
04/25/01      GGTR and Gettler-Ryan, Inc. perform joint groundwater monitoring activities; GGTR surveys, measures and samples monitoring wells MW1, MW2 and MW3 then submits a groundwater monitoring report  
07/10/01      GGTR and Gettler-Ryan, Inc. perform joint groundwater monitoring activities; GGTR measures and samples monitoring wells MW1, MW2 and MW3 then submits a groundwater monitoring report  
10/08/01      GGTR and Gettler-Ryan, Inc. perform joint groundwater monitoring activities; GGTR monitors and samples MW1, MW2 and MW3.  
11/28/01      GGTR submits October 2001 Groundwater Monitoring Report to the ACHCSA  
12/19/01      GGTR submits Work Plan for Additional Soil & Groundwater Investigation to the ACHCSA

01/03/02 ACHCSA submits work plan implementation request letter.  
01/07/02 GGTR monitors and samples MW1, MW2 and MW3.  
01/13/02 Gettler-Ryan, Inc. monitors and samples GR-MW1 & GR-MW2.  
02/11/02 GGTR submits January 7, 2001 Groundwater Monitoring Report to the ACHCSA  
04/08/02 GGTR monitors and samples MW1, MW2 and MW3.  
04/08/02 Gettler-Ryan, Inc. monitors and samples GR-MW1 & GR-MW2.  
05/15/02 GGTR submits April 8, 2002 Groundwater Monitoring Report to the ACHCSA  
07/09/02 GGTR monitors and samples MW1, MW2 and MW3; Gettler-Ryan, Inc. currently  
on bi-annual sampling basis  
08/19/02 GGTR submits July 9, 2002 Groundwater Monitoring Report to the ACHCSA  
08/24/02-  
08/30/02 GGTR conducts December 2001 work plan subsurface fuel piping removal and site  
restoration activities.  
10/15/02 Gettler-Ryan, Inc. monitors and samples GR-MW1 & GR-MW2.  
10/23/02 GGTR monitors and samples MW1, MW2 and MW3.  
10/30/02 &  
11/01/02 GGTR conducts December 2001 work plan additional soil boring activities  
12/30/02 GGTR submits October 23, 2002 Groundwater Monitoring Report to the ACHCSA  
06/10/03 GGTR submits Report of Additional Soil and Groundwater Investigation to the  
ACHCSA  
09/08/03 ACHCSA submits Report Review Letter  
10/15/03 **GGTR conducts 3<sup>rd</sup> Quarter 2003 Monitoring & Sampling (MW1-MW3)**  
10/31/03 **GGTR submits October 15, 2003 Groundwater Monitoring Report to the  
ACHCSA**

### Report Distribution

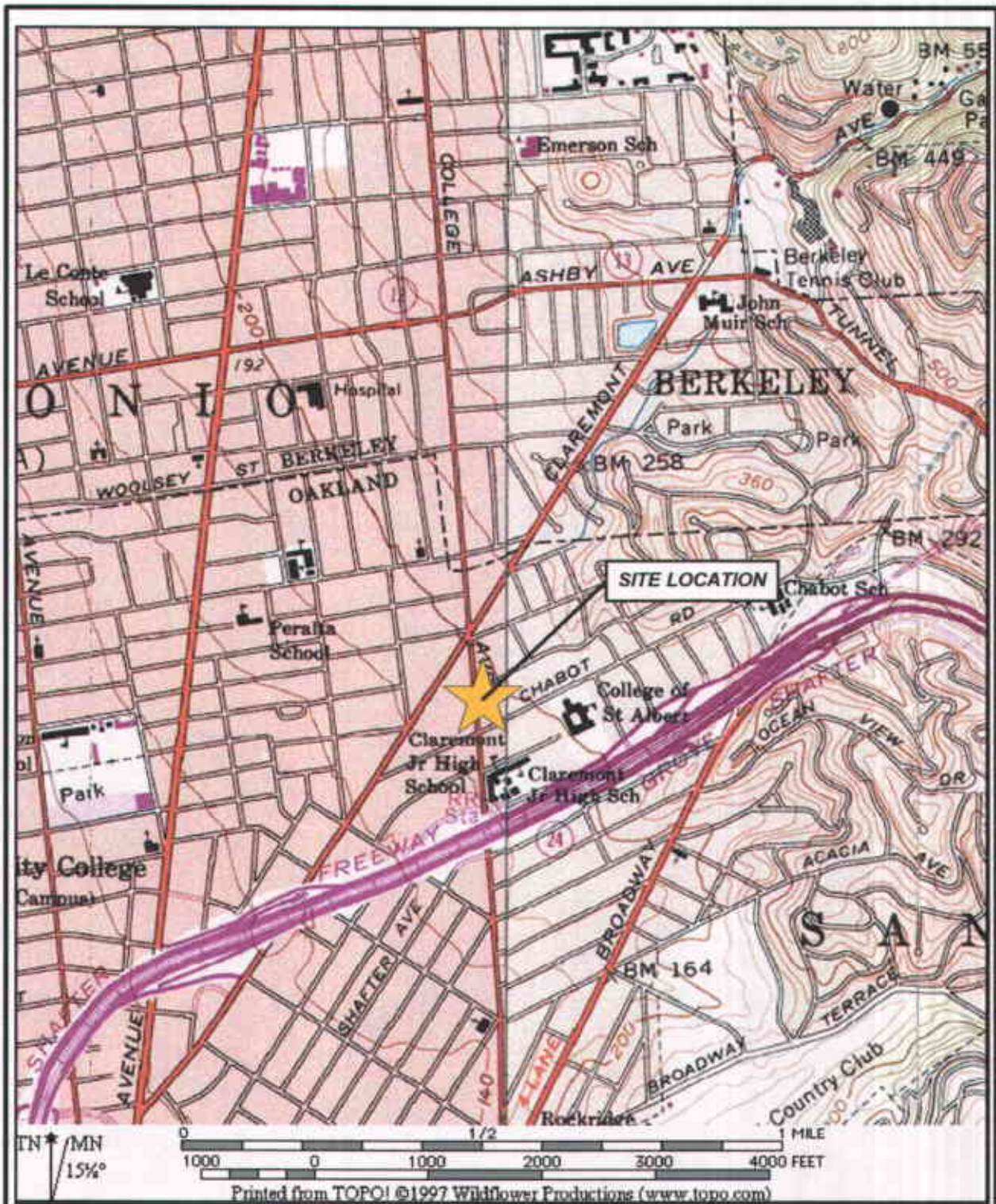
A copy of this quarterly groundwater monitoring report be submitted to the following site  
representatives:

Alameda County Health Care Services Agency  
Environmental Health Services  
Environmental Protection  
1131 Harbor Bay Parkway, Suite 250  
Alameda, CA 94502-6577  
*Attention: Mr. Don Hwang*

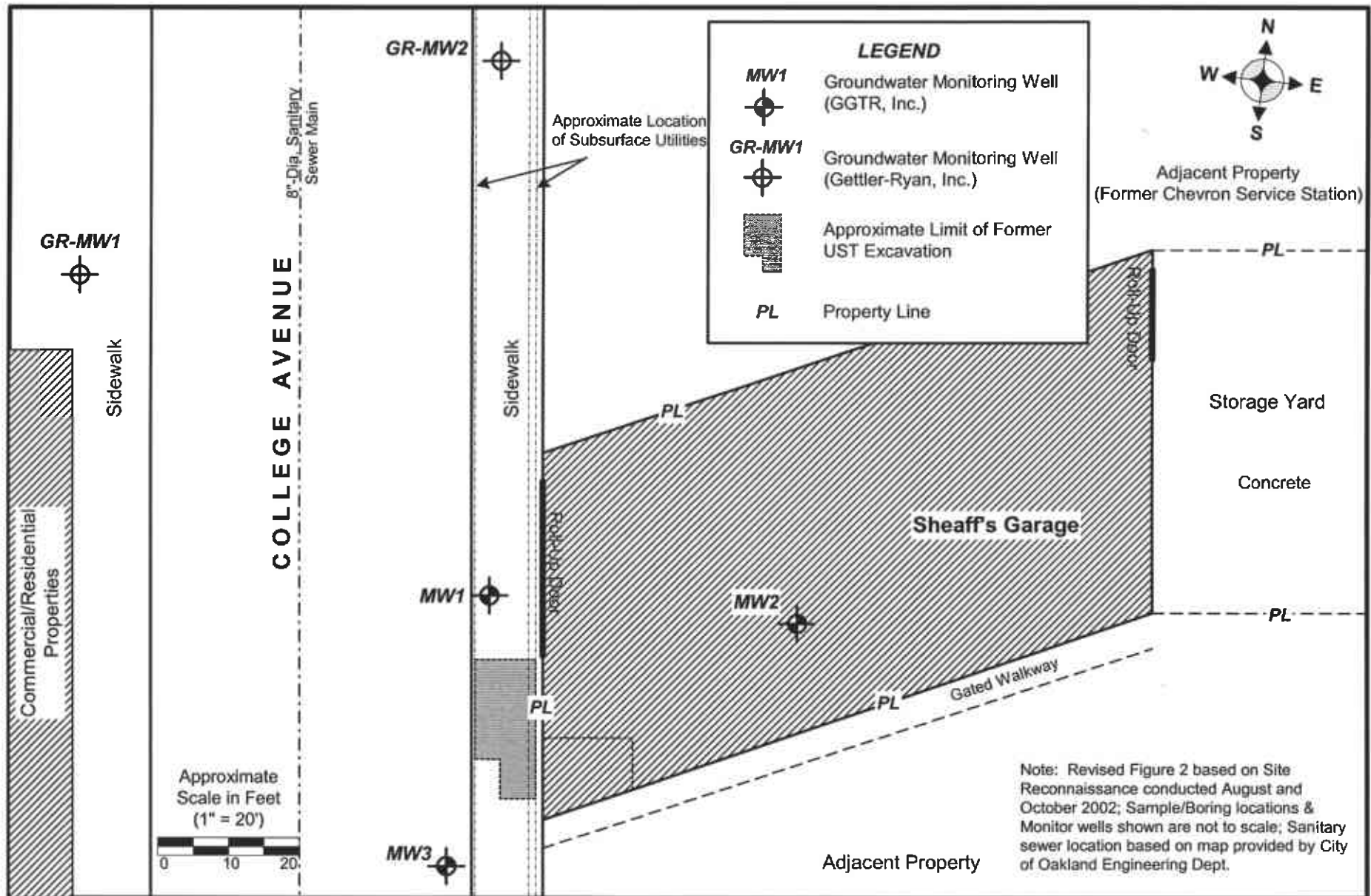
*(1 Copy; Unbound)*

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

*(3 Copies; Bound)*



<p><b>GOLDEN GATE TANK REMOVAL, INC.</b>          255 Shipley Street          San Francisco, California 94107          Ph (415) 512-1555 Fx (415) 512-0964</p>	<p><b>SITE LOCATION MAP</b>          Sheaff's Garage          5930 College Avenue          Oakland, California</p>		
<p>GGTR Project No. 7335</p>	<p>Dwg: baw/11.01</p>	<p>December 2001</p>	<p>Figure 1</p>



**GOLDEN GATE TANK REMOVAL**  
 255 Shipley Street  
 San Francisco, California 94107  
 Phone (415) 512-1555 Fax (415) 512-1555

**SITE PLAN**  
 Sheaff's Garage  
 5930 College Avenue, Oakland, California

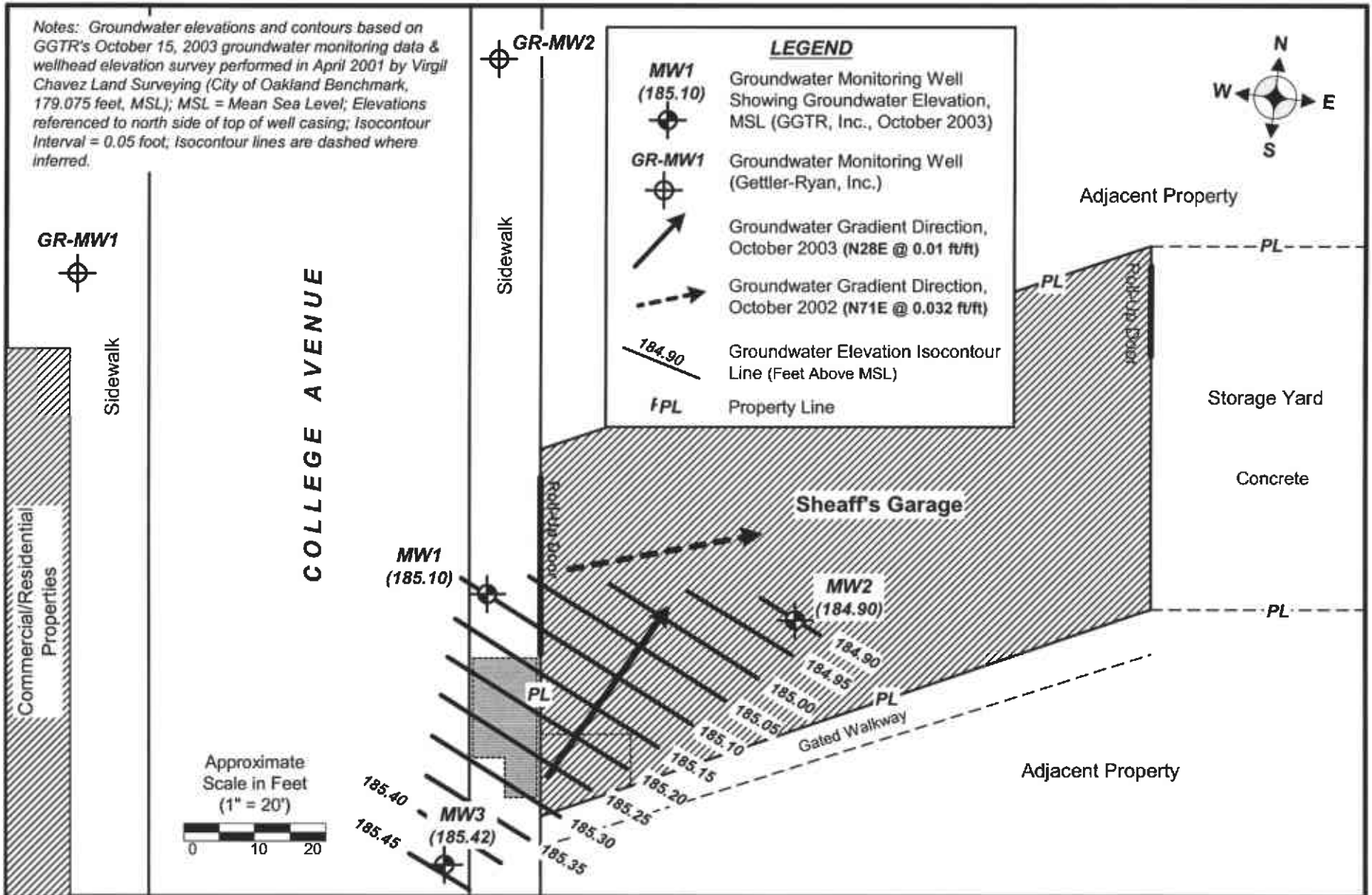
GGTR Project No. 7335

Fn: 7335.GWM.F2.10.03

Revision By: baw/10.03

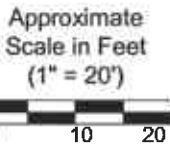
**FIGURE 2**

Notes: Groundwater elevations and contours based on GGTR's October 15, 2003 groundwater monitoring data & wellhead elevation survey performed in April 2001 by Virgil Chavez Land Surveying (City of Oakland Benchmark, 179.075 feet, MSL); MSL = Mean Sea Level; Elevations referenced to north side of top of well casing; Isocontour Interval = 0.05 foot; Isocontour lines are dashed where inferred.



**LEGEND**

- MW1 (185.10) Groundwater Monitoring Well Showing Groundwater Elevation, MSL (GGTR, Inc., October 2003)
- GR-MW1 Groundwater Monitoring Well (Gettler-Ryan, Inc.)
- Groundwater Gradient Direction, October 2003 (N28E @ 0.01 ft/ft)
- Groundwater Gradient Direction, October 2002 (N71E @ 0.032 ft/ft)
- Groundwater Elevation Isocontour Line (Feet Above MSL)
- FPL Property Line



**GOLDEN GATE TANK REMOVAL**  
 255 Shipley Street  
 San Francisco, California 94107  
 Phone (415) 512-1555 Fax (415) 512-0964

**GROUNDWATER ELEVATION POTENTIOMETRIC MAP**  
 Sheaff's Garage  
 5930 College Avenue, Oakland, California

GGTR Project No. 7335

Fn: 7335.GWM.F3.10.03

Revision By: baw/10.03

**FIGURE 3**

**TABLE 1**  
**Historical Results of Groundwater Sample Analysis & Fluid-Level Data**  
**5930 College Avenue, Oakland, CA**

Well ID	Sample Date	Casing Elevation (Feet/MSL)	DTW (Feet/TOC)	Water Elevation (Feet/MSL)	Product/Odor/ Sheen	TPH-G (ug/L)	TEPH (ug/L)	Total VOCs (ug/L)	MTBE (ug/L)	B/T/E/X (ug/L)
MW1	06/01/98	50.00 <sup>1</sup>	4.81	45.19	slight sheen	160,000	ND	--	1,900	28,000 / 21,000 / 3,800 / 21,000
	09/10/98	50.00 <sup>1</sup>	7.50	42.50	odor	290,000	ND	--	440	<50 / 25,000 / 7,100 / 32,000
	10/07/99	50.00 <sup>1</sup>	10.04	39.96	odor	85,000	ND	--	1,100	20,000 / 13,000 / 3,800 / 17,000
	01/26/00	50.00 <sup>1</sup>	8.26	41.74	slight sheen	130,000	--	--	470	25,000 / 18,000 / 4,500 / 22,000
	10/25/00	50.00 <sup>1</sup>	10.10	39.90	odor	130,000	--	ND	1,300	23,000 / 12,000 / 3,900 / 18,000
	02/02/01	50.00 <sup>1</sup>	9.61	40.39	odor	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
	10/08/01	195.90	10.88	185.02	sheen/odor	112,000	--	--	374	25,300 / 11,800 / 4,280 / 20,600
	01/07/02	195.90	4.34	191.56	odor	96,100	--	--	596 <sup>3</sup>	21,100 / 13,500 / 4,160 / 21,900
	04/08/02	195.90	6.84	189.06	slight odor	111,000	--	1,040 <sup>2</sup>	814 (679 <sup>3</sup> )	21,200 / 13,400 / 4,230 / 21,000
	07/09/02	195.90	9.40	186.50	slight odor	110,000	--	573 <sup>4</sup>	746 (570 <sup>3</sup> )	20,300 / 13,300 / 4,060 / 19,800
10/23/02	195.90	11.04	184.86	none	54,100	--	41,482 <sup>5</sup>	1,010 (1,080 <sup>3</sup> )	10,800 / 3,870 / 2,320 / 9,440	
10/15/03	195.90	10.80	185.10	none	90,700	--	47,837 <sup>8</sup>	534 (724 <sup>3</sup> )	17,800 / 4,740 / 3,150 / 13,900	
MW2	10/07/99	51.42 <sup>1</sup>	11.49	39.93	slight/odor	18,000	ND	--	490	3,000 / 1,700 / 1,000 / 3,900
	01/26/00	51.42 <sup>1</sup>	7.85	43.57	none	42,000	--	--	560	9,300 / 2,200 / 2,300 / 7,700
	10/25/00	51.42 <sup>1</sup>	11.57	39.85	slight/odor	31,000	--	ND	500	5,500 / 370 / 1,700 / 2,600
	02/02/01	51.42 <sup>1</sup>	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
	10/08/01	197.28	12.79	184.49	sheen/odor	40,700	--	--	6,460	6,310 / 399 / 2,100 / 5,320
	01/07/02	197.28	4.92	192.36	odor	59,600	--	--	366 <sup>3</sup>	10,300 / 3,250 / 4,180 / 14,400
	04/08/02	197.28	8.40	188.88	slight odor	66,700	--	--	583 <sup>3</sup>	10,200 / 2,670 / 3,840 / 13,200
	07/09/02	197.28	10.55	186.73	slight odor	37,100	--	298	303 (298 <sup>3</sup> )	5,340 / 890 / 2,110 / 6,920
10/23/02	197.28	13.85	183.43	none	13,300	--	8,686 <sup>6</sup>	322 (360 <sup>3</sup> )	2,420 / 216 / 922 / 1,470	
10/15/03	197.28	12.38	184.90	none	11,300	--	6,642 <sup>9</sup>	264 (322 <sup>3</sup> )	2,660 / 51 / 1,180 / 1,220	
Laboratory Reporting Limit						50	5,000	<50	0.5 (1)	0.5 / 0.5 / 0.5 / 1.0

Table Notes Following



**TABLE 1 (Cont'd)**  
**Historical Results of Groundwater Sample Analysis & Fluid-Level Data**  
**5930 College Avenue, Oakland, CA**

Well ID	Sample Date	TOC Elevation (Feet/MSL)	DTW (Feet/TOC)	Water Elevation (Feet/MSL)	Product/Odor/Sheen	TPH-G (ug/L)	TEPH (ug/L)	Total VOCs (ug/L)	MTBE (ug/L)	B/T/E/X (ug/L)
MW3	10/07/99	49.39 <sup>1</sup>	9.67	39.72	none	6,600	ND	--	390	310 / 110 / 430 / 1,000
	01/26/00	49.39 <sup>1</sup>	5.40	43.99	none	3,300	--	--	40	110 / 8 / 100 / 32
	10/25/00	49.39 <sup>1</sup>	9.24	40.15	slight odor	4,500	--	ND	ND	100 / 2 / 120 / 130
	02/02/01	49.39 <sup>1</sup>	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
	10/08/01	195.22	9.75	185.47	sheen/odor	4,913	--	--	52	108 / 4 / 99 / 133
	01/07/02	195.22	4.25	190.97	sheen/odor	7,260	--	--	81.7 <sup>3</sup>	723 / 138 / 492 / 887
	04/08/02	195.22	6.33	188.89	odor	11,700	--	--	ND <sup>3</sup>	540 / 108 / 706 / 1,710
	07/09/02	195.22	8.56	186.66	odor	2,320	--	20 (MTBE)	28.3 (20 <sup>3</sup> )	37.1 / 4.7 / 98.5 / 187
	10/23/02	195.22	10.02	185.20	Sheen/odor	2,830	--	865 <sup>7</sup>	ND (ND <sup>3</sup> )	46.8 / 4.7 / 43.6 / 65.5
10/15/03	195.22	9.80	185.42	Sheen/odor	3,040	--	436 <sup>10</sup>	ND (ND <sup>3</sup> )	91.3 / 8.4 / 69.9 / 148	
Laboratory Reporting Limit						50	5,000	<50	0.5 (1)	0.5 / 0.5 / 0.5 / 1.0
CRWQCB MSWQO (MCL)						NC	NC	Varies	5 <sup>11</sup>	1 / 150 / 700 / 1,750
CRWQCB December 2001 RBSL						100/500	100/640	Varies	5/1,800	1.0 (46) / 40 (130) / 30 (290) / 13 (13)

**TABLE 1 NOTES:** TOC - top of well casing (north side)  
 DTW - depth to water relative to TOC  
 ug/L - micrograms per liter (equivalent to parts per billion)  
 TPH-G - Total Petroleum Hydrocarbons as Gasoline (SW8020F)  
 TEPH - Total Extractable Petroleum Hydrocarbons [EPA Methods 5030/8015M & EPA 1664 (B10 Only)]  
 Total VOCs - Total Volatile Organic Compounds by EPA Method 8260  
 MTBE - Methyl Tertiary Butyl Ether (EPA Method 8260)  
 BTEX - Benzene / Toluene / Ethylbenzene / Total Xylenes (SW8020F)  
 MSL - Mean Sea Level  
 ND - not detected above laboratory reporting limit  
 NC - no criteria established  
 -- - not analyzed for this constituent  
 fbg - feet below grade surface

**TABLE 1 (Cont'd)**  
**Historical Results of Groundwater Sample Analysis & Fluid-Level Data**  
**5930 College Avenue, Oakland, CA**

**TABLE 1 NOTES (Cont'd):**

- <sup>1</sup> - Arbitrary datum point with assumed elevation of 50 feet used prior to MSL survey on April 26, 2001
- <sup>2</sup> - Fuel oxygenate concentrations reported as 1,2-Dichloroethane (361 ug/l) and MTBE (679 ug/l)
- <sup>3</sup> - Concentration confirmed by EPA Method 8260 (analysis of VOCs of Fuel Oxygenates)
- <sup>4</sup> - Fuel oxygenate concentrations reported as 1,2-Dichloroethane (3 ug/l) and MTBE (570 ug/l)
- <sup>5</sup> - VOC concentrations reported as 1,080 ug/l MTBE, 14,500 ug/l benzene, 5,370 ug/l toluene, 3,360 ug/l ethylbenzene, 13,700 ug/l total xylenes, 96 ug/l isopropylbenzene, 292 ug/l n-propylbenzene, 1,730 ug/l 1,3,5-trimethylbenzene, 500 ug/l 1,2,4-trimethylbenzene, 15 ug/l sec-butylbenzene, 61 ug/l n-butylbenzene, and 778 ug/l naphthalene
- <sup>6</sup> - VOC concentrations reported as 360 ug/l MTBE, 3,430 ug/l benzene, 319 ug/l toluene, 1,210 ug/l ethylbenzene, 1,960 ug/l total xylenes, 59 ug/l isopropylbenzene, 148 ug/l n-propylbenzene, 631 ug/l 1,3,5-trimethylbenzene, 153 ug/l 1,2,4-trimethylbenzene, 14 ug/l sec-butylbenzene, 43 ug/l n-butylbenzene, and 359 ug/l naphthalene
- <sup>7</sup> - VOC concentrations reported as 9 ug/l chloroform, 74 ug/l benzene, 9 ug/l toluene, 72 ug/l ethylbenzene, 109 ug/l total xylenes, 42 ug/l isopropylbenzene, 112 ug/l n-propylbenzene, 216 ug/l 1,3,5-trimethylbenzene, 100 ug/l 1,2,4-trimethylbenzene, 20 ug/l sec-butylbenzene, 59 ug/l n-butylbenzene, and 43 ug/l naphthalene
- <sup>8</sup> - VOC concentrations reported as 724 ug/l MTBE, 19,300 ug/l benzene, 5,070 ug/l toluene, 3,230 ug/l ethylbenzene, 15,470 ug/l total xylenes, 288 ug/l n-propylbenzene, 565 ug/l 1,3,5-trimethylbenzene, 2,150 ug/l 1,2,4-trimethylbenzene, 1,040 ug/l naphthalene, and ND<50 ug/L 1,2-dibromoethane (EDB) & ND<100 ug/L 1,2-dichloroethane (EDC)
- <sup>9</sup> - VOC concentrations reported as 322 ug/l MTBE, 2,580 ug/l benzene, 53 ug/l toluene, 1,190 ug/l ethylbenzene, 1,045 ug/l total xylenes, 75 ug/l isopropylbenzene, 210 ug/l n-propylbenzene, 140 ug/l 1,3,5-trimethylbenzene, 529 ug/l 1,2,4-trimethylbenzene, 56 ug/l n-butylbenzene, 442 ug/l naphthalene, and ND<5 ug/L 1,2-dibromoethane (EDB) & ND<10 ug/L 1,2-dichloroethane (EDC)
- <sup>10</sup> - VOC concentrations reported as 79 ug/l benzene, 8.3 ug/l toluene, 65 ug/l ethylbenzene, 118.6 ug/l total xylenes, 21 ug/l isopropylbenzene, 62 ug/l n-propylbenzene, 11 ug/l 1,3,5-trimethylbenzene, 30 ug/l 1,2,4-trimethylbenzene, 13 ug/l n-butylbenzene, 28 ug/l naphthalene, and ND<0.5 ug/L 1,2-dibromoethane (EDB) & ND<1 ug/L 1,2-dichloroethane (EDC)
- <sup>11</sup> - Secondary Maximum Contaminant Level established by CRWQCB

CRWQCB MSWQO (Primary MCL) = California Regional Water Quality Control Board, Municipal Supply Water Quality Objective;  
Primary Maximum Contaminant Level

CRWQCB/BSL = California Regional Water Quality Control Board's Tier 1 Environmental (Risk-Based) Screening Level; Levels shown are  
for **Groundwater < 10 fbg (3 meters)**, which IS / IS NOT a threatened drinking water resource.

## **APPENDIX**

**LABORATORY CERTIFICATES OF ANALYSIS,  
CHAIN OF CUSTODY FORMS,  
FLUID-LEVEL MONITORING DATA SHEET  
WELL PURGING/SAMPLING DATA SHEET  
GEOTRACKER AB2886 UPLOAD CONFIRMATION FORMS**

**QUARTERLY GROUNDWATER MONITORING REPORT  
October 15, 2003**

Sheaff's Garage  
5930 College Avenue  
Oakland, California  
STID # 514

GGTR Project No. 7335  
October 31, 2003



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

Lab Number: 03-1462
Client: Golden Gate Tank
Project: 5930 COLLEGE AVE, OAKLAND

Date Reported: 10/17/2003

Gasoline, BTEX and MTBE by Methods 8015M/8021B

Table with 6 columns: Analyte, Method, Result, Unit, Date Sampled, Date Analyzed. Contains three sample analysis sections for Client ID 7335-MW1-W, 7335-MW2-W, and 7335-MW3-W.

\*Confirmed by GC/MS method 8260B.



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: 03-1462
Client: Golden Gate Tank
Project: 5930 COLLEGE AVE, OAKLAND

Date Reported: 10/17/2003
Gasoline, BTEX and MTBE by Methods 8015M/8021B

Table with 7 columns: Analyte, Method, Reporting Unit Limit, Blank, Avg MS/MSD Recovery, RPD. Rows include Gasoline Range Organics, Benzene, Toluene, Ethylbenzene, Xylenes, and Methyl-tert-butyl ether.

ELAP Certificate NO:1753

Reviewed and Approved

Handwritten signature of John A. Murphy

John A. Murphy, Laboratory Director



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

Job Number: 03-1462  
Client : Golden Gate Tank  
Project : 5930 COLLEGE AVE, OAKLAND

Date Sampled : 10/15/2003  
Date Analyzed: 10/17/2003  
Date Reported: 10/17/2003

## Volatile Organics by GC/MS Method 8260

Laboratory Number	03-1462-01	03-1462-02	03-1462-03
Client ID	7335-MW1-W	7335-MW2-W	7335-MW3-W
Matrix	W	W	W
Analyte	UG/L	UG/L	UG/L
Bromochloromethane	ND<100	ND<10	ND<1
Dichlorodifluoromethane	ND<100	ND<10	ND<1
Chloromethane	ND<100	ND<10	ND<1
Vinyl chloride	ND<50	ND<5	ND<0.5
Bromomethane	ND<100	ND<10	ND<1
Chloroethane	ND<100	ND<10	ND<1
Trichlorofluoromethane	ND<100	ND<10	ND<1
1,1-Dichloroethene	ND<50	ND<5	ND<0.5
Acetone	ND<1000	ND<100	ND<10
Methylene chloride	ND<500	ND<50	ND<5
trans-1,2-Dichloroethene	ND<100	ND<10	ND<1
Methyl-tert-butyl ether	724	322	ND<0.5
1,1-Dichloroethane	ND<50	ND<5	ND<0.5
2,2-Dichloropropane	ND<100	ND<10	ND<1
cis-1,2-Dichloroethene	ND<100	ND<10	ND<1
2-Butanone	ND<500	ND<50	ND<5
Chloroform	ND<50	ND<5	ND<0.5
Carbon tetrachloride	ND<50	ND<5	ND<0.5
1,1-Dichloropropene	ND<100	ND<10	ND<1
Benzene	19300	2580	79
1,2-Dichloroethane	ND<100	ND<10	ND<1
Trichloroethene	ND<50	ND<5	ND<0.5
1,2-Dichloropropane	ND<100	ND<10	ND<1
Dibromomethane	ND<100	ND<10	ND<1
Bromodichloromethane	ND<100	ND<10	ND<1
trans-1,3-Dichloropropene	ND<100	ND<10	ND<1
4-Methyl-2-pentanone	ND<100	ND<10	ND<1
Toluene	5070	53	8.3
cis-1,3-Dichloropropene	ND<100	ND<10	ND<1
1,1,2-Trichloroethane	ND<100	ND<10	ND<1
Tetrachloroethene	ND<50	ND<5	ND<0.5
1,3-Dichloropropane	ND<100	ND<10	ND<1
2-Hexanone	ND<100	ND<10	ND<1
Dibromochloromethane	ND<100	ND<10	ND<1
1,2-Dibromoethane	ND<50	ND<5	ND<0.5

Comments:



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

Job Number: 03-1462  
Client : Golden Gate Tank  
Project : 5930 COLLEGE AVE, OAKLAND

Date Sampled : 10/15/2003  
Date Analyzed: 10/17/2003  
Date Reported: 10/17/2003

## Volatile Organics by GC/MS Method 8260

Laboratory Number	03-1462-01	03-1462-02	03-1462-03
Client ID	7335-MW1-W	7335-MW2-W	7335-MW3-W
Matrix	W	W	W
Analyte	UG/L	UG/L	UG/L
Chlorobenzene	ND<100	ND<10	ND<1
1,1,1,2-Tetrachloroethane	ND<100	ND<10	ND<1
Ethylbenzene	3230	1190	65
Xylene, Isomers m & p	10400	1020	116
o-Xylene	5070	25	2.6
Styrene	ND<100	ND<10	ND<1
Bromoform	ND<100	ND<10	ND<1
Isopropylbenzene	ND<100	75	21
Bromobenzene	ND<100	ND<10	ND<1
1,1,2,2-Tetrachloroethane	ND<100	ND<10	ND<1
n-Propylbenzene	288	210	62
2-Chlorotoluene	ND<100	ND<10	ND<1
4-Chlorotoluene	ND<100	ND<10	ND<1
1,3,5-Trimethylbenzene	565	140	11
tert-Butylbenzene	ND<100	ND<10	ND<1
1,2,4-Trimethylbenzene	2150	529	30
1,3-Dichlorobenzene	ND<100	ND<10	ND<1
1,4-Dichlorobenzene	ND<100	ND<10	ND<1
sec-Butylbenzene	ND<100	ND<10	ND<1
1,2-Dichlorobenzene	ND<100	ND<10	ND<1
n-Butylbenzene	ND<100	56	13
Naphthalene	1040	442	28
1,2,4-Trichlorobenzene	ND<100	ND<10	ND<1
Hexachlorobutadiene	ND<100	ND<10	ND<1
1,2,3-Trichlorobenzene	ND<100	ND<10	ND<1
1,2,3-Trichloropropane	ND<100	ND<10	ND<1
Acetonitrile	ND<500	ND<50	ND<5
Acrylonitrile	ND<100	ND<10	ND<1
Isobutanol	ND<500	ND<50	ND<5
1,1,1-Trichloroethane	ND<100	ND<10	ND<1
SUR-Dibromofluoromethane	109	105	116
SUR-Toluene-d8	99	100	115
SUR-4-Bromofluorobenzene	104	104	110

Comments:



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

Job Number: 03-1462  
 Client : Golden Gate Tank  
 Project : 5930 COLLEGE AVE, OAKLAND

Date Sampled : 10/15/2003  
 Date Analyzed: 10/17/2003  
 Date Reported: 10/17/2003

Volatile Organics by GC/MS Method 8260  
 Quality Control/Quality Assurance Summary

Laboratory Number	03-1462	MS/MSD	RPD	Recovery	RPD
Client ID	Blank	Recovery		Limit	Limit
Matrix	W	W			
Analyte	Results UG/L	%Recoveries			
Bromochloromethane	ND<1				
Dichlorodifluoromethane	ND<1				
Chloromethane	ND<1				
Vinyl chloride	ND<0.5				
Bromomethane	ND<1				
Chloroethane	ND<1				
Trichlorofluoromethane	ND<1				
1,1-Dichloroethene	ND<0.5	76/72	5	61-128	25
Acetone	ND<10				
Methylene chloride	ND<5				
trans-1,2-Dichloroethene	ND<1				
Methyl-tert-butyl ether	ND<0.5				
1,1-Dichloroethane	ND<0.5				
2,2-Dichloropropane	ND<1				
cis-1,2-Dichloroethene	ND<1				
2-Butanone	ND<5				
Chloroform	ND<0.5				
Carbon tetrachloride	ND<0.5				
1,1-Dichloropropene	ND<1				
Benzene	ND<0.5	109/107	2	74-135	21
1,2-Dichloroethane	ND<1				
Trichloroethene	ND<0.5	97/95	2	69-129	20
1,2-Dichloropropane	ND<1				
Dibromomethane	ND<1				
Bromodichloromethane	ND<1				
trans-1,3-Dichloropropene	ND<1				
4-Methyl-2-pentanone	ND<1				
Toluene	ND<0.5	120/114	5	61-141	19
cis-1,3-Dichloropropene	ND<1				
1,1,2-Trichloroethane	ND<1				
Tetrachloroethene	ND<0.5				
1,3-Dichloropropane	ND<1				
2-Hexanone	ND<1				
Dibromochloromethane	ND<1				
1,2-Dibromoethane	ND<0.5				
Chlorobenzene	ND<1	115/115	0	70-139	19
1,1,1,2-Tetrachloroethane	ND<1				
Ethylbenzene	ND<0.5				
Xylene, Isomers m & p	ND<1				
o-Xylene	ND<0.5				
Styrene	ND<1				





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

Job Number: 03-1462
Client : Golden Gate Tank
Project : 5930 COLLEGE AVE, OAKLAND

Date Sampled : 10/15/2003
Date Analyzed: 10/17/2003
Date Reported: 10/17/2003

Volatile Organics by GC/MS Method 8260
Quality Control/Quality Assurance Summary

Table with columns: Laboratory Number, Client ID, Matrix, Analyte, Results, %Recoveries, MS/MSD Recovery, RPD, Recovery Limit, RPD Limit. Lists various analytes like Bromoform, Isopropylbenzene, etc., and their corresponding results and recovery percentages.

Reviewed and Approved

Handwritten signature of John A. Murphy
John A. Murphy
Laboratory Director



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

Job Number: 03-1462  
Client : Golden Gate Tank  
Project : 5930 COLLEGE AVE, OAKLAND

Date Sampled : 10/15/2003  
Date Analyzed: 10/17/2003  
Date Reported: 10/17/2003

Fuel Oxygenates by Method 8260B

Laboratory Number	03-1462-01	03-1462-02	03-1462-03
Client ID	7335-MW1-W	7335-MW2-W	7335-MW3-W
Matrix	W	W	W
Analyte	UG/L	UG/L	UG/L
Methyl-tert-butyl ether	724	322	ND<0.5
Ethyl tert-butyl ether	ND<100	ND<10	ND<1
tert-Amyl methyl ether	ND<100	ND<10	ND<1
Di-isopropyl ether (DIPE)	ND<50	ND<5	ND<0.5
tert-Butyl alcohol	ND<1000	ND<100	ND<10
1,2-Dichloroethane	ND<100	ND<10	ND<1
1,2-Dibromoethane	ND<50	ND<5	ND<0.5
Ethanol	ND<10000	ND<1000	ND<100
SUR-Dibromofluoromethane	109	105	116
SUR-Toluene-d8	99	100	115
SUR-4-Bromofluorobenzene	104	104	110



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

Job Number: 03-1462
Client : Golden Gate Tank
Project : 5930 COLLEGE AVE, OAKLAND

Date Sampled : 10/15/2003
Date Analyzed: 10/17/2003
Date Reported: 10/17/2003

Fuel Oxygenates by Method 8260B
Quality Control/Quality Assurance Summary

Table with columns: Laboratory Number, Client ID, Matrix, Analyte, Results, %Recoveries, RPD, Recovery Limit, RPD Limit. Lists various analytes like Ethanol, Methyl-tert-butyl ether, etc., with their respective results and recovery percentages.

Reviewed and Approved

John A. Murphy
Laboratory Director



### North State Labs

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

03-1462

Chain of Custody / Request for Analysis  
Lab Job No.: \_\_\_\_\_ Page \_\_\_\_\_ of \_\_\_\_\_

Client: <b>GATR</b>		Report to: <b>BRENT WHEELER</b>		Phone: <b>415-512-1555</b>		Turnaround Time: <b>A.S.A.P</b>						
Mailing Address: <b>GATR</b> <b>255 SHIPLEY ST</b> <b>SF CA 94107</b>		Billing to: <b>SAME</b>		Fax: <b>415-512-0964</b>		Date: <b>10/15/03</b>						
Project / Site Address / Global ID: <b>TD600102112</b>				email: <b>GATRDATA@AOL.COM</b>		Sampler: <b>KIAN A.</b>						
Project / Site Address / Global ID: <b>TD600102112</b>				Analysis Requested		EDF <input checked="" type="checkbox"/>						
<b>STEARNS GARAGE, 5930 COLLEGE AVE OAKLAND CA</b>						Field Point ID						
Sample ID	Sample Type	Container No. / Type	Pres.	Sampling Date / Time	PH-S	(SODAE) BTEX/MPPE	(SODAE) VOCs	(S2600) FUEL OXYGENATES	EDS	DOC		
1 <b>7335-MW1-W</b>	<b>GROUND H2O</b>	<b>4/100AS</b>	<b>HE1</b>	<b>10/15/03 / 1215</b>	X	X	X	X	X			<b>7335-MW1</b>
2 <b>7335-MW2-W</b>	↓	↓	↓	↓ / 1205	X	X	X	X	X			<b>7335-MW2</b>
3 <b>7335-MW3-W</b>	↓	↓	↓	↓ / 1125	X	X	X	X	X			<b>7335-MW3</b>
Relinquished by: <b>KIAN ATKINSON</b>		Date: <b>10-15-03</b>		Time: <b>1405</b>		Received by: <b>CHE M OHILL</b>		Lab Comments/ Hazards				
Relinquished by:		Date:		Time:		Received by:						
Relinquished by:		Date:		Time:		Received by:						

Oct 16 03 10:37a North State Environmental 6502664560

# NORTH STATE ENVIRONMENTAL

## FLUID-LEVEL MONITORING DATA

Project No: 7335 Date: OCT 15 2003

Project/Site Location: SITEAFFS GARAGE 5930 COLWEESE AVE OAKLAND CA

Technician: KAN ATKINSON Method: ELECTRONIC

Boring/ Well	Depth to Water (feet)	Depth to Product (feet)	Product Thickness (feet)	Total Well Depth (feet)	Comments
MW-1	10.80			14.45	@ 1054
MW-2	12.38			19.60	@ 1050
MW-3	9.80			18.70	@ 1048

Measurements referenced to top of well casing.

# NORTH STATE ENVIRONMENTAL

## WELL PURGING/SAMPLING DATA

Project Number: 7335 Date: OCT 15 2003

Project / Site Location: SITEAFFS GARAGE  
5930 COVEGE AVE OAKLAND CA

Sampler/Technician: KIM ATKINSON

Casing/Borehole Diameter (inches)	0.75/1.75	2/8	4/8	4/10	6/10	6/12
Casing/Borehole Volumes (gallons/foot)	0.02/0.13	0.3/0.9	0.7/1.2	0.7/1.6	1.5/2.2	1.5/3.1

Well No. MW-1

A. Total Well Depth 1445 Ft.(toc)  
 B. Depth To Water 10.80 Ft.  
 C. Water Height (A-B) 365 Ft.  
 D. Well Casing Diameter 2 In.  
 E. Casing Volume Constant (from above table) .2  
 F. Three (3) Casing or Borehole Volumes (CxEx3) 2.19 Gals. <sup>.73</sup>  
 G. 80% Recharge Level [B+(ExC)] 11.53 Ft.

Purge Event #1  
 Start Time: 1240  
 Finish Time: 1240  
 Purge Volume: 2.5

Recharge #1  
 Depth to Water:  
 Time Measured:

Purge Event #2  
 Start Time:  
 Finish Time:  
 Purge Volume:

Recharge #2  
 Depth to Water:  
 Time Measured:

Well Fluid Parameters:  
 (Casing or Borehole Volumes)

	0	1	1.5	2	2.5	3
pH	7.16	7.08		7.00		6.97
T (°F)	71.8	70.4		69.5		68.3
Cond.	866	800		778		752
DO	1.24	1.66				
Turbidity						
ORP	-073					

Summary Data:  
 Total Gallons Purged: 2.5 GALS  
 Purge device: DL-60  
 Sampling Device: DISP. BAUER  
 Sample Collection Time: 1245  
 Sample Appearance:

Well No. MW-2

A. Total Well Depth 1960 Ft.(toc)  
 B. Depth To Water 12.36 Ft.  
 C. Water Height (A-B) 722 Ft.  
 D. Well Casing Diameter 2 In.  
 E. Casing Volume Constant (from above table) .2  
 F. Three (3) Casing or Borehole Volumes (CxEx3) 4.33 Gals. <sup>1.44</sup>  
 G. 80% Recharge Level [B+(ExC)] 13.82 Ft.

Purge Event #1  
 Start Time: 1145  
 Finish Time: 1200  
 Purge Volume: 4.5

Recharge #1  
 Depth to Water:  
 Time Measured:

Purge Event #2  
 Start Time:  
 Finish Time:  
 Purge Volume:

Recharge #2  
 Depth to Water:  
 Time Measured:

Well Fluid Parameters:  
 (Casing or Borehole Volumes)

	0	1	1.5	2	2.5	3
pH	6.90	6.83		6.81		6.85
T (°F)	62.1	64.4		65.3		65.7
Cond.	925	855		838		831
DO	1.94	2.61				
Turbidity						
ORP	-039					

Summary Data:  
 Total Gallons Purged: 4.5  
 Purge device: DL-60  
 Sampling Device: DISP. BAUER  
 Sample Collection Time: 1205  
 Sample Appearance: OPR

Drums Remaining Onsite: \_\_\_\_\_ Total Volume: \_\_\_\_\_ Gals. (Show Location on Site Plan)

# NORTH STATE ENVIRONMENTAL

## WELL PURGING/SAMPLING DATA

Project Number: 7335

Date: 09 15 2003

Project / Site Location: SITEAFFS GARAGE 5930 COLLEGE AVE OAKLAND CA

Sampler/Technician: KIM ATKINSON

Casing/Borehole Diameter (inches)	0.75/1.75	<u>2/8</u>	4/8	4/10	6/10	6/12
Casing/Borehole Volumes (gallons/foot)	0.02/0.13	<u>0.2/0.9</u>	0.7/1.2	0.7/1.6	1.5/2.2	1.5/3.1

<p>Well No. <u>MW-3</u></p> <p>A. Total Well Depth <u>18.70</u> Ft.(toc)</p> <p>B. Depth To Water <u>9.50</u> Ft</p> <p>C. Water Height (A-B) <u>8.90</u> Ft</p> <p>D. Well Casing Diameter <u>2</u> In.</p> <p>E. Casing Volume Constant (from above table) <u>12</u></p> <p>F. Three (3) Casing or Borehole Volumes (CxEx3) <u>5.34</u> Gals. <span style="float: right;">1.78</span></p> <p>G. 80% Recharge Level [B+(ExC)] <u>11.96</u> Ft.</p> <p><u>Purge Event #1</u>                  Start Time: <u>11:5</u>                  Finish Time: <u>11:20</u>                  Purge Volume: <u>6.5</u></p> <p><u>Recharge #1</u>                  Depth to Water:                  Time Measured:</p> <p><u>Purge Event #2</u>                  Start Time:                  Finish Time:                  Purge Volume:</p> <p><u>Recharge #2</u>                  Depth to Water:                  Time Measured:</p> <p>Well Fluid Parameters:                  (Casing or Borehole Volumes)</p> <table style="width: 100%; border-collapse: collapse;"> <tr> <td></td> <td style="text-align: center;"><u>0</u></td> <td style="text-align: center;"><u>1</u></td> <td style="text-align: center;"><u>1.5</u></td> <td style="text-align: center;"><u>2</u></td> <td style="text-align: center;"><u>2.5</u></td> <td style="text-align: center;"><u>3</u></td> </tr> <tr> <td>pH</td> <td><u>7.53</u></td> <td><u>7.34</u></td> <td></td> <td><u>7.24</u></td> <td></td> <td><u>7.21</u></td> </tr> <tr> <td>T (°F)</td> <td><u>63.2</u></td> <td><u>64.5</u></td> <td></td> <td><u>64.5</u></td> <td></td> <td><u>64.2</u></td> </tr> <tr> <td>Cond.</td> <td><u>669</u></td> <td><u>639</u></td> <td></td> <td><u>613</u></td> <td></td> <td><u>565</u></td> </tr> <tr> <td>DO</td> <td colspan="6"><u>2.31/24.41</u></td> </tr> <tr> <td>Turbidity</td> <td colspan="6"></td> </tr> <tr> <td>ORP</td> <td colspan="6"><u>-091</u></td> </tr> </table> <p>Summary Data:                  Total Gallons Purged: <u>6.5</u>                  Purge device: <u>DL-60</u>                  Sampling Device: <u>DL-60 BAWEL</u>                  Sample Collection Time: <u>11:5</u>                  Sample Appearance:</p>		<u>0</u>	<u>1</u>	<u>1.5</u>	<u>2</u>	<u>2.5</u>	<u>3</u>	pH	<u>7.53</u>	<u>7.34</u>		<u>7.24</u>		<u>7.21</u>	T (°F)	<u>63.2</u>	<u>64.5</u>		<u>64.5</u>		<u>64.2</u>	Cond.	<u>669</u>	<u>639</u>		<u>613</u>		<u>565</u>	DO	<u>2.31/24.41</u>						Turbidity							ORP	<u>-091</u>						<p>Well No. _____</p> <p>A. Total Well Depth _____ Ft.(toc)</p> <p>B. Depth To Water _____ Ft</p> <p>C. Water Height (A-B) _____ Ft</p> <p>D. Well Casing Diameter _____ In.</p> <p>E. Casing Volume Constant (from above table) _____</p> <p>F. Three (3) Casing or Borehole Volumes (CxEx3) _____ Gals.</p> <p>G. 80% Recharge Level [B+(ExC)] _____ Ft.</p> <p><u>Purge Event #1</u>                  Start Time:                  Finish Time:                  Purge Volume:</p> <p><u>Recharge #1</u>                  Depth to Water:                  Time Measured:</p> <p><u>Purge Event #2</u>                  Start Time:                  Finish Time:                  Purge Volume:</p> <p><u>Recharge #2</u>                  Depth to Water:                  Time Measured:</p> <p>Well Fluid Parameters:                  (Casing or Borehole Volumes)</p> <table style="width: 100%; border-collapse: collapse;"> <tr> <td></td> <td style="text-align: center;"><u>0</u></td> <td style="text-align: center;"><u>1</u></td> <td style="text-align: center;"><u>1.5</u></td> <td style="text-align: center;"><u>2</u></td> <td style="text-align: center;"><u>2.5</u></td> <td style="text-align: center;"><u>3</u></td> </tr> <tr> <td>pH</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>T (°F)</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Cond.</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>DO</td> <td colspan="6"></td> </tr> <tr> <td>Turbidity</td> <td colspan="6"></td> </tr> <tr> <td>ORP</td> <td colspan="6"></td> </tr> </table> <p>Summary Data:                  Total Gallons Purged:                  Purge device:                  Sampling Device:                  Sample Collection Time:                  Sample Appearance:</p>		<u>0</u>	<u>1</u>	<u>1.5</u>	<u>2</u>	<u>2.5</u>	<u>3</u>	pH							T (°F)							Cond.							DO							Turbidity							ORP						
	<u>0</u>	<u>1</u>	<u>1.5</u>	<u>2</u>	<u>2.5</u>	<u>3</u>																																																																																													
pH	<u>7.53</u>	<u>7.34</u>		<u>7.24</u>		<u>7.21</u>																																																																																													
T (°F)	<u>63.2</u>	<u>64.5</u>		<u>64.5</u>		<u>64.2</u>																																																																																													
Cond.	<u>669</u>	<u>639</u>		<u>613</u>		<u>565</u>																																																																																													
DO	<u>2.31/24.41</u>																																																																																																		
Turbidity																																																																																																			
ORP	<u>-091</u>																																																																																																		
	<u>0</u>	<u>1</u>	<u>1.5</u>	<u>2</u>	<u>2.5</u>	<u>3</u>																																																																																													
pH																																																																																																			
T (°F)																																																																																																			
Cond.																																																																																																			
DO																																																																																																			
Turbidity																																																																																																			
ORP																																																																																																			

Drums Remaining Onsite: \_\_\_\_\_ Total Volume: \_\_\_\_\_ Gals. (Show Location on Site Plan)

## AB2886 Electronic Delivery

[Main Menu](#) | [View/Add Facilities](#) | [Upload EDD](#) | [Check EDD](#)

Your EDF file has been successfully uploaded!

**Confirmation Number:** 1141819119

**Date/Time of Submittal:** 10/29/2003 8:15:20 AM

**Facility Global ID:** T0600102112

**Facility Name:** SHEAFFS SERVICE GARAGE

**Submittal Title:** 03-1462: 10/15/03 GW Analytical Data (MW1-MW3)

**Submittal Type:** GW Monitoring Report

Logged in as GGTR (AUTH\_RP)

[CONTACT SITE ADMINISTRATOR.](#)



## AB2886 Electronic Delivery

[Main Menu](#) | [View/Add Facilities](#) | [Upload EDD](#) | [Check EDD](#)

### UPLOADING A GEO\_WELL FILE

Processing is complete. No errors were found!  
Your file has been successfully submitted!

**Submittal Title:** Fluid-Level Monitoring Data MW1-MW3  
(10/15/03)

**Submittal Date/Time:** 10/29/2003 8:18:34 AM

**Confirmation**  
**Number:** 7621800065

[Back to Main Menu](#)

Logged in as GGTR (AUTH\_RP)

[CONTACT SITE ADMINISTRATOR.](#)