



## QUARTERLY GROUNDWATER MONITORING REPORT April 14, 2005

Sheaff's Garage 5930 College Avenue Oakland, California

ACHCSA Fuel Leak Case No. RO0000377

Prepared For:

William G. Sheaff TTE Trust Dr. Brian Sheaff 1945 Parkside Drive Concord, CA 94519 Monday Son County

GGTR Project No. 7335 August 4, 2005

Reviewed By:

Mark Youngkin

Registered Geologist CEG 1380

Prepared By:

Greti Wolf Staff Geologist

## **QUARTERLY GROUNDWATER MONITORING REPORT April 14, 2004**

5930 College Avenue, Oakland, California

#### Introduction

alifornia da Count This report presents the results and findings of the April 14, 2005 groundwater monitoring and sampling activities conducted by Golden Gate Tank Removal, Inc. (GGTR) at 5930 College Avenue in Oakland, California. This was the 18th quarterly monitoring event performed at the site for the three existing monitor wells, MW1 through MW3, and the first monitoring and sampling event for the piezometer well, PW1, installed at the site in April 2005. 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 Elevation 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. performed their most recent joint/biannual monitoring and sampling of GR-MW1 & GR-MW2 on April 14, 2004. 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 Stoddard Automotive, for the service and repair of automobiles. No active fuel storage or distribution system currently occupies the site. 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 were 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 in soil borings B10 and B11 was predominantly clayey, sandy silt.

Depth to groundwater, as measured on a quarterly basis in the three onsite monitoring wells (October 1999 through January 2005) ranged between approximately 5.22 and 13 fbg. The average depth to groundwater as measured in MW1-MW3 and PW1, during the April 2005 monitoring event was approximately 6.37 fbg, with an associated mean groundwater elevation of 190.46 feet above Mean Sea Level. 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 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 April 14, 2005 GGTR monitored and sampled MW1 through MW3 and PW1, 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, GGTR removed the well cover and locking compression cap from each well and allowed the groundwater in each well column to stabilize for approximately 20 minutes. GGTR then measured and recorded the depth to groundwater and presence of floating product using a Keck® electronic oil/water interface probe. GGTR also measured the dissolved oxygen (DO) of the groundwater (in situ) using a YSI55® DO meter to assess the occurrence of biodegradation in shallow groundwater beneath the site. DO was measured prior to purging only. Fluid levels were measured relative to the north side of the top of each well casing to the nearest 0.01 foot.

GGTR 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, GGTR 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.

#### Water Sample Analytical Methods

On April 14, 2005, GGTR submitted the groundwater samples collected from the three monitoring wells and piezometer well under formal chain of custody command to NSL's State-certified, analytical laboratory (CA ELAP #1753) in South San Francisco, California 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; SW8021B)
- Diesel Range Hydrocarbons (EPA Method 8015B)
- Fuel Oxygenates (GC/MS Method 8260B)

NSL completed all volatile organic analyses by April 15, 2005, which is in conformance with the 14-day required time limit for analysis. GGTR 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 Sampling Data Sheets 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 and PW1 ranged between 188.58 (MW3) and 190.77 (PW1) feet above Mean Sea Level.

To assess the historically fluctuating groundwater flow directions at the site, GGTR calculated the groundwater gradient for the April 2005 event using groundwater elevation data from both 1) MW1 through MW3 and 2) MW1, MW3, and PW1, to help determine whether groundwater in MW2 had presumably not stabilized prior to final monitoring, having caused erroneous water level readings. Also, both sets of data will be calculated for the next two monitoring events and compared to regional groundwater flow direction data (west-southwest) to assess potential consistency over a period of three to four consecutive quarters. The gradient and flow direction for the two sets of data measured during the April 2005 event were approximately 0.016 ft/ft, directed 76° east of south, and 0.11 ft/ft 13° east of south, respectively. The associated groundwater gradient data calculated for the

April 14, 2005 monitoring event is shown in Figure 3, Groundwater Elevation Potentiometric Map.

The table shown on the following page lists the historical data for MW1 through MW3, for mean groundwater elevation, flow direction, and groundwater slope for the site. The groundwater elevations prior to April 14, 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. Figure 4 presents a *Rose Diagram* showing the historical hydraulic gradients (magnitude and direction) to date across the site. The current gradient data, incorporating that of PW1, is shown in bold type.

Table - Mean Groundwater Elevation, Flow Direction, and Gradient

Measurement	Mean Groundwater	Groundwater Flow	Gradient
Date	Elevation (feet)	Direction	(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
10/15/03	185.14	28° east of north	1.0 foot / 100 feet
02/02/04	188.47	18° east of south	0.5 foot / 100 feet
04/23/04	189.00	77° east of south	0.5 foot / 100 feet
07/19/04	186.97	51° west of north	0.1 foot / 100 feet
10/22/04	186.49	82° west of north	2.9 foot / 100 feet
01/21/05	190.36	16° west of south	1.25 foot / 100 feet
04/14/05	190.01	13° east of south	1.10 foot / 100 feet
		76° east of south	1.60 foot / 100 feet

### Results of Groundwater Sampling and Laboratory Analysis

The table shown on the following page summarizes the laboratory analytical results of groundwater samples collected during the April 14, 2005 monitoring event. Documentation of the well purging and sampling activities is contained in the Field Data Sheets of the Appendix.

April 14, 2005 Groundwater Sampling Results

Well	Sample	TPH-G	TPH-D	BTEX	MTBE	VOC/OXY
ID	$\mathbf{p} = \mathbf{D}_{\mathbf{p}}$	□(ug/L)	(mg/L)	(ug/L)	(ug/L)	templating the (ug/L)
MW1	7335-MW1	278,000	-	14,700 / 25,300 / 10,800 / 73,500	271*	271 ug/L n-Propylbenzene
						525 ug/ L 1,3,5-Trimethylbenzene
						662 ug/L Napthalene
MW2	7335-MW2	36,900		5,980/ 1,030 / 2,890 / 9,070	161*	239 ug/L n-Propylbenzene
					:	1,500 ug/ L 1,3,5-Trimethylbenzene
						697 ug/L Napthalene
MW3	7335-MW3	2,420		111 / 11.4 / 139 / 265	ND*	88 ug/L n-Propylbenzene
						96 ug/ L 1,3,5-Trimethylbenzene
						43 ug/L Napthalene
PW1	7335-PW-1	3360	2.12 **	62.8 / 6.7 / 79.5 / 317	ND ]	12 ug/l cis-1,2-Dichloroethene
					:	3.3 ug/l Trichloroethene
						84.9 Tetrachloroethene
					!	11 ug/l Isopropylbenzene
					1	27 ug/l n-Propylbenzene
					:	110 ug/l 1,3,5- Trimethylbenzene
						257 1,2,4-Trimethylbenzene
						22 ug/l b-Butlybenzene
						56 ug/l Napthalene

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 and/or Fuel Oxygenate analysis

\*\* - Does not match typical diesel pattern

As requested by the ACHCSA in their letter dated June 3, 2004, 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 EPA Methods 8015M/8021B, and VOCs by EPA Method 8260. Monitoring of DO and ORP should be continued to further evaluate the biodegradation potential in the shallow groundwater beneath the site. Third Quarter 2005 monitoring activities were conducted at the site on July 26, 2005.

#### GeoTracker AB2886 EDF Upload

In general accordance with State Assembly Bill 2886, GGTR uploaded the fluid-level monitoring data associated with the April 14, 2004 event in electronic deliverable format to the State Water Resources Control Board's GeoTracker Database System. The GeoTracker Upload Confirmation Number is **2514785587**. An AB2886 Electronic Delivery confirmation report copy (GEO\_Well) corresponding to submittal title Fluid-Level Monitoring Data (MW1-MW3, PW1) is included in the Appendix.

Due to the sudden closure of North State Labs, GGTR was not able to upload all groundwater sample analytical results associated with the April 14, 2004 event in electronic deliverable format to the State GeoTracker Database System. A confirmation report copy corresponding to Lab Number/Submittal Title 05-0541: 04/14/05 GW Analytical Data (MW1-MW3, PW1) is pending.

#### **Waste Management**

The well purge and equipment wash and rinse water generated during the April 2005 monitoring event (@ 29 gallons) was transferred directly to a D.O.T.-approved, 55-gallon drum, appropriately labeled and stored onsite in a secure area, to be used for future groundwater monitoring events.

#### **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. 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. 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

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 April 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.

Based on review of GGTR's June 2003 report, the ACHCSA, in their letter dated September 8, 2003 requested a work plan addressing additional source and site characterization of contaminants in soil and groundwater at the subject property. GGTR submitted their Work Plan for Additional Site Characterization on December 29, 2003, which was conditionally approved by the ACHCSA in their most recent letter dated June 3, 2004. On September 30, 2004, GGTR submitted their Additional Site Characterization Work Plan Addendum for review. Between October 15, 2003 and October 2004, GGTR conducted quarterly groundwater monitoring and sampling activities at the site and submitted their associated Groundwater Monitoring Reports to the ACHCSA.

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

Underground storage tanks 1 and 2 were removed and samples recovered
A work plan was submitted by GGTR for over excavation and disposal of gasoline-
contaminated soil surrounding the UST
Over-excavation of gasoline-contaminated soil performed
Last of additional excavation soil disposed of at a Class II facility
TANK REMOVAL REPORT published by GGTR
ACHSA submitted letter requiring soil and groundwater investigation
GGTR authorized to prepare a work plan for additional investigation
GGTR submitted work plan for a Soil and Groundwater Investigation
ACHSA submitted letter authorizing work plan
GGTR drills borings B1 through B3
GGTR drills borings B4 (Monitoring Well MW1)

0.5 (0.5) (0.0)	COMP 1 1 1 11 MIN
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
11/24/77	January 2000 analyses
01/26/00	GGTR measures, purges and samples monitoring wells MW1, MW2 and MW3
01/20/00	then submits a groundwater monitoring report
10/25/00	<u> </u>
10/25/00	GGTR and Gettler-Ryan, Inc. perform joint groundwater monitoring activities;
	GGTR measures, purges and samples monitoring wells MW1, MW2 and MW3
0.4/0.5 (0.4	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 submits April 6, 2002 Groundwater Worldowning Report to the Actional GGTR monitors and samples MW1, MW2 and MW3; Gettler-Ryan, Inc. currently
07709702	on bi-annual sampling basis
08/19/02	. •
	GGTR submits July 9, 2002 Groundwater Monitoring Report to the ACHCSA
08/24/02-	CCTD
08/30/02	GGTR conducts December 2001 work plan subsurface fuel piping removal and site
10/15/03	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
12/29/03	GGTR submits Work Plan for Additional Site Characterization to the ACHCSA
02/02/04	GGTR conducts 1 <sup>st</sup> Quarter 2004 Monitoring & Sampling (MW1-MW3)
03/29/04	GGTR submits February 2, 2004 Groundwater Monitoring Report to the ACHCSA
04/23/04	GGTR conducts 2 <sup>nd</sup> Quarter 2004 Monitoring & Sampling (MW1-MW3)
08/19/04	GGTR submits April 23, 2004 Groundwater Monitoring Report to the ACHCSA
07/19/04	GGTR conducts 3 <sup>rd</sup> Quarter 2004 Monitoring and Sampling (MW1-MW3)
09/30/04	GGTR submits Additional Site Characterization Work Plan Addendum to
	the ACHCSA
10/22/04	GGTR conducts 4 <sup>th</sup> Quarter 2004 Monitoring and Sampling (MW1-MW3)
11/11/04	GGTR submits July 19, 2004 Groundwater Monitoring Report to the ACHCSA
01/20/05	GGTR submits October 22, 2004 Groundwater Monitoring Report to the ACHCSA
01/21/05	GGTR conducts 1st Quarter 2005 Groundwater Monitoring and Sampling (MW1-
	MW3)
03/17/05	GGTR submits April 14 2005 Groundwater Monitoring Report to the ACHCSA
3/26/05	GGTR submits Additional Site Characterization Work Plan Addendum
	to the ACHCSA
04/05	GGTR conducts Additional Site Characterization Activities
04/14/05	GGTR conducts 2 <sup>nd</sup> Quarter 2005 Groundwater Monitoring and Sampling
	(MW1-MW3, and PW1))
07/24/05	GGTR submits April 14 2005 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)

(1Electronic Copy via GEOTRACKER)

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

(2 Copies; Bound)

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)
	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		1	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
MW1	07/10/01	195.90	9.72	186.18	odor	79,000			660	15,000 / 7,800 / 3000 / 15,000
TAT AA T	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 5	$1,010 (1,080^3)$	10,800 / 3,870 / 2,320 / 9,440
	10/15/03	195.90	10.80	185.10	none	90,700		47,837 8	534 (724 <sup>3</sup> )	17,800 / 4,740 / 3,150 / 13,900
	02/02/04	195.90	7.35	188.55	none	108,000		50,118 12	216 (194 <sup>3</sup> )	14,200 / 7,420 / 3,450 / 19,800
	04/23/04	195.90	6.83	189.07	slight odor	49,200		28,750 <sup>15</sup>	85 (114 <sup>3</sup> )	7,910 / 1,480 / 1,810 / 10,100
	07/19/04	195.90	8.95	186.95	odor	63,900		32,739 <sup>18</sup>	373 (303 <sup>3)</sup>	7,260 /2,270 / 2,510 / 10,100
	10/22/04	195.90	10.15	185.75	None	80,700		34,550 <sup>21</sup>	493 (296³)	13,900 / 1,670 / 3,550 / 15,200
	01/21/05	195.90	5.45	190.45	odor	278,000		46,142 <sup>24</sup>	271 (174 <sup>3</sup> )	14,700 / 25,300 / 10,800 /
							<u> </u>			73,500
	04/14/05	195.90	5.3	190.60	Odor and sheen	116,000	-	63,650 <sup>27</sup>	366 (410 <sup>3</sup> )	15,100 / 7,080 / 4,220 / 20,700
		Laboratory F	Reporting I	Limit		50	5,000	≤50	0.5 (1)	0.5 / 0.5 / 0.5 / 1.0
		CRWQCB M				NC	NC	Varies	5 11	1 / 150 / 700 / 1,750
		CRWQCB.	July 2003 1	ESL		100/500	100/640	Varies	5/1,800	1.0 (46) / 40 (130) / 30 (290) / 13 (13)

**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	Casing Elevation	DTW (Feet/	Water Elevation	Product/ Odor/ Sheen	TPH-G	TEPH	Total VOCs	MTBE	B/T/E/X
		(Feet/MSL)	TOC)	(Feet/MSL)		(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)
	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 1	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
MW2	01/07/02	197.28	4.92	192.36	odor	59,600			366 <sup>3</sup>	10,300 / 3,250 / 4,180 / 14,400
NI W Z	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
								(MTBE)		
	10/23/02	197.28	13.85	183.43	none	13,300		8,686 <sup>6</sup>	322 (360 <sup>3</sup>	
	10/15/03	197.28	12.38	184.90	none	11,300		6,642 9	264 (322 <sup>3</sup>	
	02/02/04	197.28	8.80	188.48	none	21,700		8,020 13	168 (200 <sup>3</sup>	
	04/23/04	197.28	8.40	188.88	Slight odor	30,400		13,921 16	112 (203 <sup>3</sup>	3,570 / 322 / 1,620 / 4,140
	07/19/04	197.28	10.30	186.98	odor	28,300		10,28419	283 (373 <sup>3</sup>	) 2,540 / 239 /1,320 / 2,300
	10/22/04	197.28	10.25	187.03	Moderate	13,500		4,548 <sup>22</sup>	273 (229 <sup>3</sup>	) 1,790 / 54 / 892 / 915
					odor					
	1/21/05	197.28	6.65	190.63	Moderate	27,8000		17746 <sup>25</sup>	161 (163³	5980 / 1030 / 2890 / 9070
					odor				•	
	4/14/05	197.28	8.7	188.58	none	46100		24398 <sup>28</sup>	155 (150 <sup>3</sup>	5,170 / 787 / 2,530 / 6,010
	1	Laboratory R	Reporting I	Limit		50	5,000	≤50	0.5 (1)	0.5 / 0.5 / 0.5 / 1.0
	CRWQCB MSWQO (MCL)						NC	Varies	5 11	1 / 150 / 700 / 1,750
		CRWQCB J	July 2003	ESL		100/500	100/640	Varies	5/1,800	1.0 (46) / 40 (130) / 30 (290) / 13 (13)

**Table Notes Following** 

# Historical Results of Groundwater Sample Analysis & Fluid-Level Data

5930 College Avenue, Oakland, CA

5750 College Avenue, Oakmin, CA										
Well	Sample	TOC	DTW	Water	Product/	TPH-G	TEPH	Total	MTBE	B/T/E/X
ID	Date	Elevation	(Feet/	Elevation	Odor/			VOCs		
	1045	(Feet/MSL)	TOC)	(Feet/MSL)	Sheen	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)
	10/07/99	49.39 1	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
MW3	01/07/02	195.22	4.25	190.97	sheen/odor	7,260			81.7 <sup>3</sup>	723 / 138 / 492 / 887
141 44 2	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	28.3 (20 <sup>3</sup> )	37.1 / 4.7 / 98.5 / 187
								(MTBE)		
	10/23/02	195.22	10.02	185.20	Sheen/odor	2,830		865 <sup>7</sup>	ND (ND 3)	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 3)	91.3 / 8.4 / 69.9 / 148
	02/02/04	195.22	6.85	188.37	Sheen/odor	5,140		769.5 14	ND (ND 3)	126 / 8.7 / 134 / 238
	04/23/04	195.22	6.17	189.05	none	7,210		2,807.9 17	ND (ND 3)	227 / 39.5 / 448 / 879
	07/19/04	195.22	8.25	186.97	Slight odor	9,860		568.2 <sup>20</sup>	ND (ND 3)	20.4 / 3.2 / 30.6 / 117
	10/22/04	195.22	9.25	185.97	None	7,420		1,901 <sup>23</sup>	96 (21 <sup>3</sup> )	152 / 12.8 / 267 / 480
	1/21/05	195.22	5.22	190.00	Slight odor	2,420		809.5 <sup>26</sup>	ND (ND 3)	111 / 11.4 / 139 / 265
	4/14/05	195.22	6.64	188.58	Odor /	5130		2107 <sup>29</sup>	54 (41.4 <sup>3</sup> )	357 / 19.4 / 287 / 510
					sheen					
	02/02/04	1		NA						ND/ND/ND/ND
TB	04/23/04			NA						ND/ND/ND/ND
	07/19/04			NA						ND/ND/ND/ND
	10/22/04			NA						ND/ND/ND/ND
		Laboratory	Reporting L	imit		50	5,000	<50	0.5 (1)	0.5 / 0.5 / 0.5 / 1.0
		CRWQCB N				NC	NC	Varies	5 11	1/150/700/1,750
			July 2003 E			100/500	100/640	Varies	5/1,800	1.0 (46) / 40 (130) / 30 (290) / 13
									·	(13)

TABLE NOTES ON FOLLOWING PAGE

# **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)	Oxygenates (ug/L)	TPH-D (mg/L)
PW1	4/14/05	197.17	6.4	190.77	none	3360		968 <sup>30</sup>	ND (ND <sup>3</sup> )	62.8 / 6.7 / 79.5/ 317	ND	2.12

**TABLE 1 NOTES:** TOC - top of well easing (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; TB = Trip Blank (7335-TB)

ND - not detected above laboratory reporting limit

NC - no criteria established; NA - not applicable

-- - not analyzed for this constituent

fbg - feet below grade surface

- <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)
- 5 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
- 7 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
- 8 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)</p>

#### Historical Results of Groundwater Sample Analysis & Fluid-Level Data

5930 College Avenue, Oakland, CA

#### TABLE 1 NOTES:

- 9 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)</p>
- 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)</li>
- 11 Secondary Maximum Contaminant Level established by CRWQCB
- <sup>12</sup> VOC concentrations reported as 194 ug/l MTBE, 14,700 ug/l benzene, 7,620 ug/l toluene, 3,940 ug/l ethylbenzene, 18,710 ug/l total xylenes, 47 ug/l 4-methyl-2-pentanone, 116 ug/l isopropylbenzene, 342 ug/l n-propylbenzene, 701 ug/l 1,3,5-trimethylbenzene, 2,690 ug/l 1,2,4-trimethylbenzene, 66 ug/l n-butylbenzene, 992 ug/l naphthalene, and ND<50 ug/L 1,2-dibromoethane (EDB) & ND<100 ug/L 1,2-dichloroethane (EDC)</p>
- <sup>13</sup> VOC concentrations reported as 200 ug/l MTBE, 2,370 ug/l benzene, 92 ug/l toluene, 1,200 ug/l ethylbenzene, 2,024 ug/l total xylenes, 73 ug/l isopropylbenzene, 186 ug/l n-propylbenzene, 306 ug/l 1,3,5-trimethylbenzene, 1,090 ug/l 1,2,4-trimethylbenzene, 66 ug/l n-butylbenzene, 413 ug/l naphthalene, and ND<5 ug/L 1,2-dibromoethane (EDB) & ND<10 ug/L 1,2-dichloroethane (EDC)</p>
- VOC concentrations reported as 110 ug/l benzene, 6.4 ug/l toluene, 148 ug/l ethylbenzene, 238.1 ug/l total xylenes,
   23 ug/l isopropylbenzene, 83 ug/l n-propylbenzene, 22 ug/l 1,3,5-trimethylbenzene, 68 ug/l 1,2,4-trimethylbenzene,
   38 ug/l n-butylbenzene, 33 ug/l naphthalene, and ND<0.5 ug/L 1,2-dibromoethane (EDB) & ND<1 ug/L 1,2-dichloroethane (EDC)</li>
- <sup>15</sup> VOC concentrations reported as 1,210 ug/l methylene chloride, 114 ug/l MTBE, 10,300 ug/l benzene, 1,960 ug/l toluene, 2,220 ug/l ethylbenzene, 10,230 ug/l total xylenes, 180 ug/l n-propylbenzene, 417 ug/l 1,3,5-trimethylbenzene, 1,560 ug/l 1,2,4-trimethylbenzene, 559 ug/l naphthalene, and ND<50 ug/L 1,2-dibromoethane (EDB) & ND<100 ug/L 1,2-dichloroethane (EDC)</p>
- <sup>16</sup> VOC concentrations reported as 203 ug/l MTBE, 4,570 ug/l benzene, 511 ug/l tolucne, 1,760 ug/l ethylbenzene, 4,055 ug/l total xylenes, 215 ug/l isopropylbenzene, 469 ug/l 1,3,5-trimethylbenzene, 1,570 ug/l 1,2,4-trimethylbenzene, 568 ug/l naphthalene, and ND<5 ug/L 1,2-dibromoethane (EDB) & ND<10 ug/L 1,2-dichloroethane (EDC)</p>
- 17 VOC concentrations reported as 341 ug/l benzene, 42.9 ug/l toluene, 547 ug/l ethylbenzene, 1,185 ug/l total xylenes,
   29 ug/l isopropylbenzene, 82 ug/l n-propylbenzene, 60 ug/l 1,3,5-trimethylbenzene, 337 ug/l 1,2,4-trimethylbenzene,
   24 ug/l n-butylbenzene, 160 ug/l naphthalene, and ND<0.5 ug/L 1,2-dibromoethane (EDB) & ND<1 ug/L 1,2-dichloroethane (EDC)</li>
- <sup>18</sup> VOC concentrations reported as 303 ug/l MTBE, 11200 ug/l benzene, 2440 ug/l tolucne, 2730 ug/l ethylbenzene, 12540 ug/l total xylenes, 239 ug/l n-propylbenzene, 89 ug/l isopropylbenzene, 507 ug/l 1,3,5-trimethylbenzene, 1890 ug/l 1,2,4-trimethylbenzene, and 801 ug/l naphthalene.
- <sup>19</sup> VOC concentrations reported as 373 ug/l MTBE, 3670 ug/l benzene, 207 ug/l toluene, 1450 ug/l ethylbenzene, 2403 ug/l total xylenes, 73 ug/l isopropylbenzene, 316 ug/l 1,3,5-trimethylbenzene, 1070 ug/l 1,2,4-trimethylbenzene, 475 ug/l naphthalene, 173 ug/l n-propylbenzene, 475 ug/l naphthalene, and 72 ug/l n-butylbenzene.
- VOC concentrations reported as 39.3 ug/l benzene, 3.6 ug/l toluene, 31 ug/l ethylbenzene, 59.3 ug/l total xylenes, 27 ug/l isopropylbenzene, 2 ug/l 1,1,2,2-tetrachloroethane, 105 ug/l n-propylbenzene, 48 ug/l 1,3,5-trimethylbenzene, 204 ug/l 1,2,4-trimethylbenzene, 34 ug/l n-butylbenzene, 16 ug/l naphthalene, and ND<0.5 ug/L 1,2-dibromoethane (EDB) & ND<1 ug/L 1,2-dichloroethane (EDC)</li>
- <sup>21</sup> VOC concentrations reported as 296 ug/l MTBE, 15600 ug/l benzene, 1440 ug/l toluene, 3020 ug/l ethylbenzene, 12020 ug/l total xylenes, 264 ug/l n-propylbenzene, 520 ug/l 1,3,5-trimethylbenzene, 1990 ug/l 1,2,4-trimethylbenzene, and 700 ug/l naphthalene.
- <sup>22</sup> VOC concentrations reported as 229 ug/l MTBE, 2010 ug/l benzene, 54 ug/l toluene, 799 ug/l ethylbenzene, 667 ug/l total xylenes, 49 ug/l isopropylbenzene, 80 ug/l 1,3,5-trimethylbenzene, 257 ug/l 1,2,4-trimethylbenzene, 227 ug/l naphthalene, 132 ug/l n-propylbenzene, and 44 ug/l n-butylbenzene.

#### Historical Results of Groundwater Sample Analysis & Fluid-Level Data

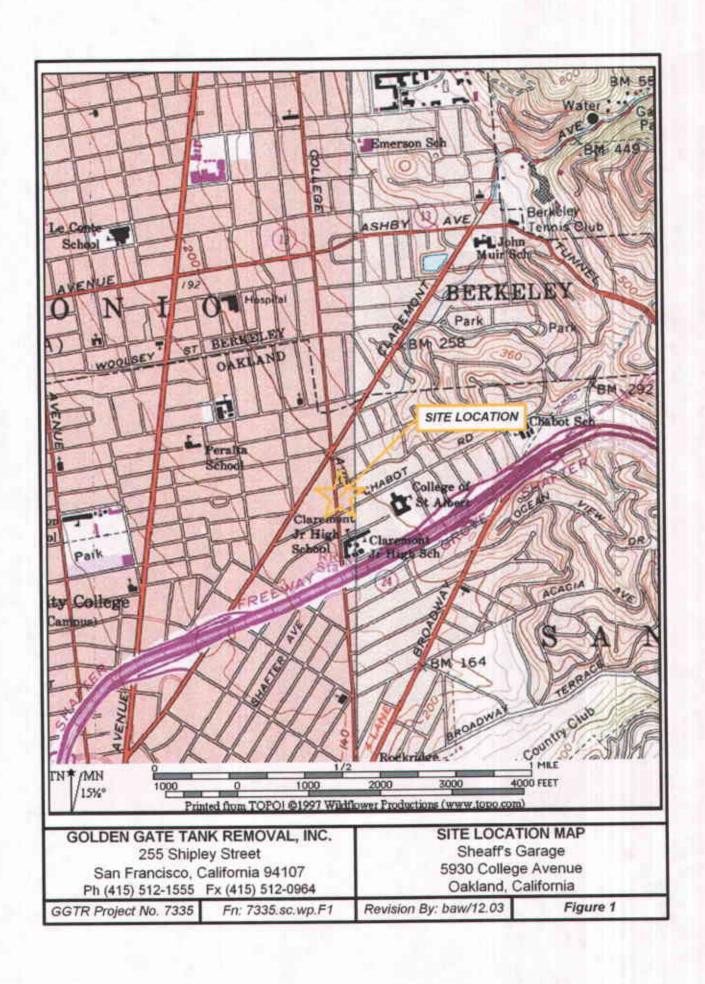
5930 College Avenue, Oakland, CA

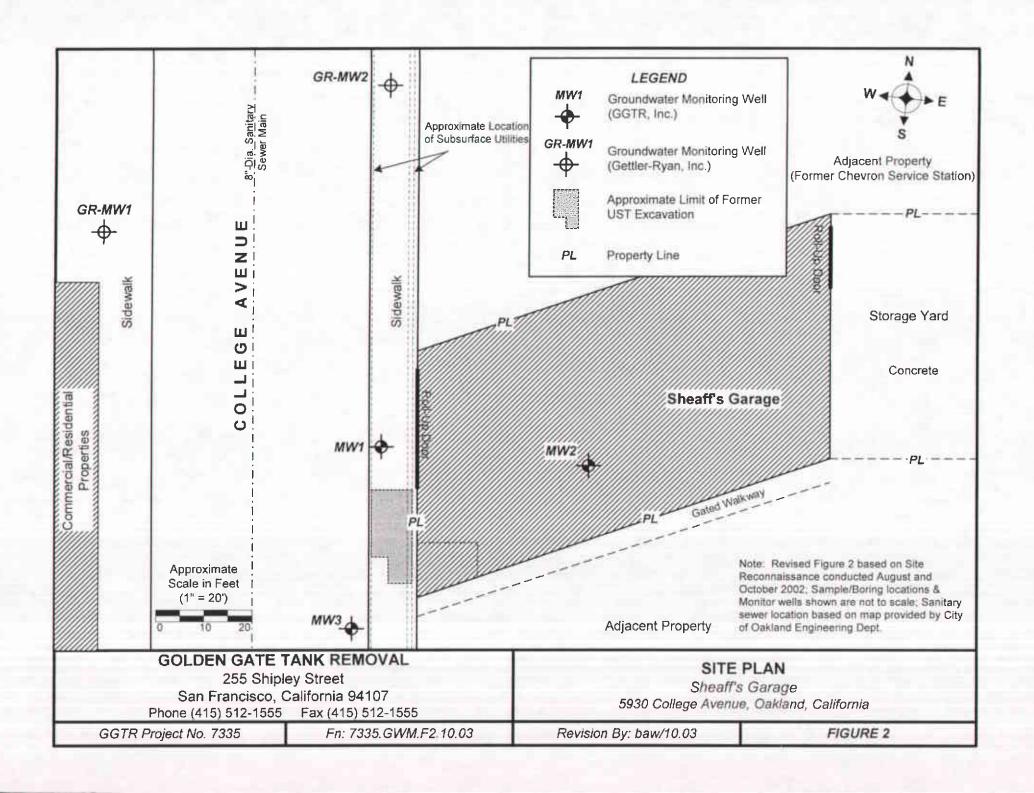
#### **TABLE 1 NOTES:**

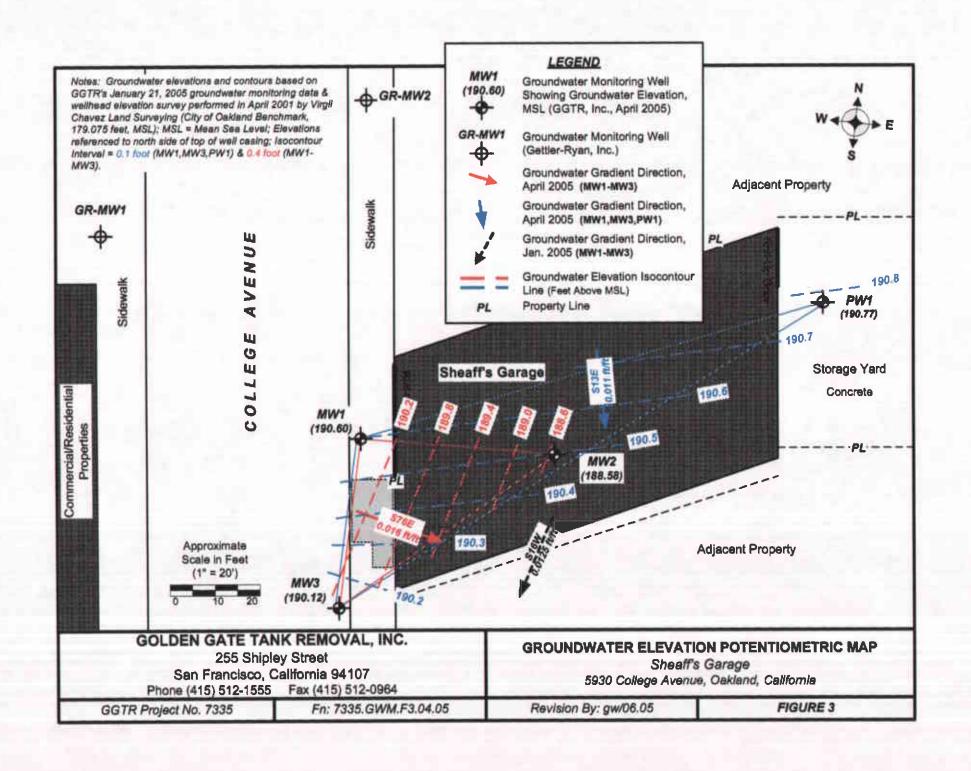
- <sup>23</sup> VOC concentrations reported as 21 ug/l MTBE, 128 ug/l benzene, 12 ug/l toluene, 225 ug/l ethylbenzene, 394 ug/l total xylenes, 55 ug/l isopropylbenzene, 182 ug/l n-propylbenzene, 192 ug/l 1,3,5-trimethylbenzene, 574 ug/l 1,2,4-trimethylbenzene, 42 ug/l n-butylbenzene, and 76 ug/l naphthalene
- VOC concentrations reported as 174 ug/l MTBE, 16600 ug/l benzene, 7130 ug/l toluene, 3580 ug/l ethylbenzene17200 ug/l total xylenes, 271 ug/l n-propylbenzene, 525 ug/l 1,3,5-trimethylbenzene, 2080 ug/l 1,2,4-trimethylbenzene, and 662 ug/l naphthalene
- VOC concentrations reported as 163 ug/l MTBE, 5710 ug/l benzene, 936 ug/l toluene, 2380 ug/l ethylbenzene, 5750 ug/l total xylenes, 239 ug/l n-propylbenzene, 371 ug/l 1,3,5-trimethylbenzene, 1500 ug/l 1,2,4-trimethylbenzene, and 697 ug/l naphthalene
- VOC concentrations reported as 9.8 ug/l toluene, 150 ug/l ethylbenzene, 241.7 ug/l total xylenes, 25 ug/l isopropylbenzene, 88 ug/l n-propylbenzene, 23 ug/l 1,3,5-trimethylbenzene, 96 ug/l 1,2,4-trimethylbenzene, 15 ug/l n-butylbenzene, and 43 ug/l naphthalene
- VOC concentrations reported as 410ug/l MTBE, 19,800 ug/l benzene, 9420 ug/l toluene, 4970 ug/l ethylbenzene 26670 ug/l total xylenes, 141 ug/l isopropylbenzene, 437 ug/l n-propylbenzene, 882ug/l 1,3,5-trimethylbenzene, 3450 ug/l 1,2,4-trimethylbenzene, and 1220 ug/l naphthalene
- VOC concentrations reported as 150 ug/l MTBE, 8190 ug/l benzene, 9420 ug/l toluene, 3210 ug/l ethylbenzene, 6870 ug/l total xylenes, 293 ug/l n-propylbenzene, 109 ug/l isopropylbenzene, 445 ug/l 1,3,5-trimethylbenzene, 2390 ug/l 1,2,4-trimethylbenzene, and 1490 ug/l naphthalene
- <sup>29</sup> VOC concentrations reported as 27.4 ug/l toluene, 351 ug/l ethylbenzene, 41.4 ug/l MTBE, 388 ug/l benzene, 570.2 ug/l total xylenes, 45 ug/l isopropylbenzene, 148 ug/l n-propylbenzene, 85 ug/l 1,3,5-trimethylbenzene, 302 ug/l 1,2,4-trimethylbenzene, 28 ug/l n-butylbenzene, and 121 ug/l naphthalene
- <sup>30</sup> VOC concentrations reported as 12 ug/l cis-1,2-Dichloroethene, 55.9 ug/l Benzene, 3.3 ug/l Trichloroethene, 9.2 ug/l Toluene, 84.9 ug/l Tetrachloroethene, 88 ug/l Ethylbenzene, 319.7 ug/l total Xylenes, 11 ug/l Isopropylbenzene,27 ug/l n-propylbenzene, 110 ug/l 1,3,5-Trimethylbenzene, 257 ug/l 1,2,4-Trimethylbenzene, 22 ug/l n-Butylbenzene, 56 ug/l Napthalene

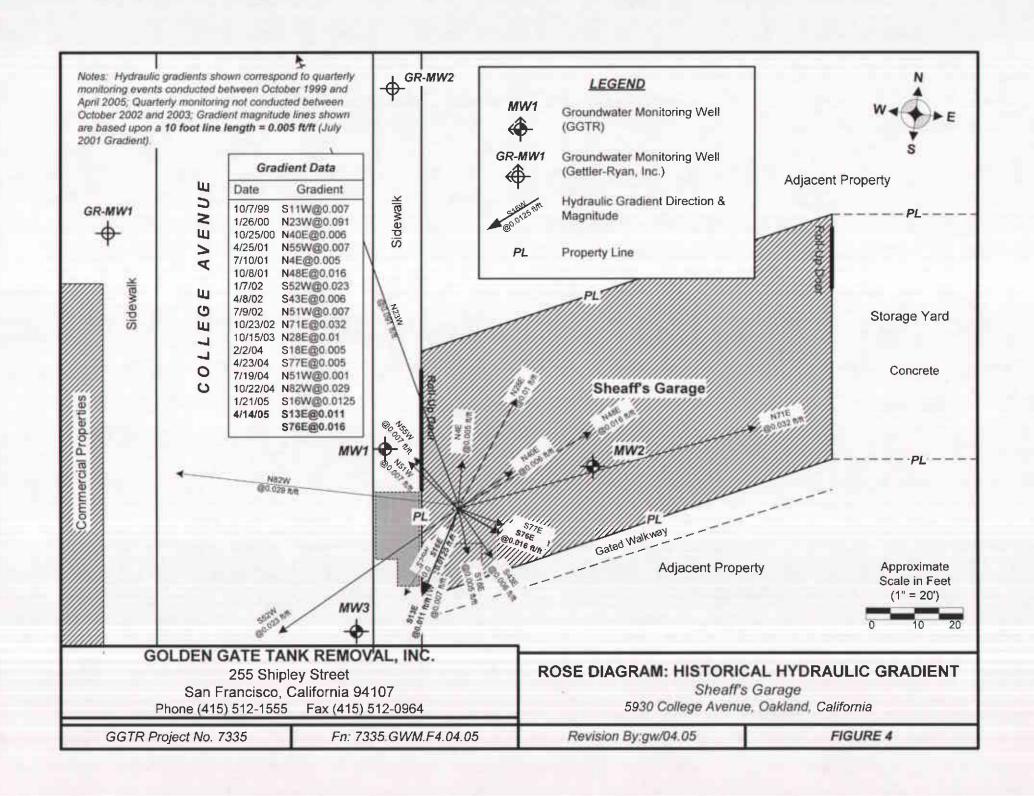
CRWQCB MSWQO (Primary MCL) = California Regional Water Quality Control Board, Municipal Supply Water Quality Objective;
Primary Maximum Contaminant Level

CRWQCB/ESL = California Regional Water Quality Control Board's Tier 1Environmental (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 FORM
FLUID-LEVEL MONITORING DATA SHEET
WELL PURGING/SAMPLING DATA SHEETS
GEOTRACKER AB2886 UPLOAD CONFIRMATION FORM
GETTLER-RYAN GROUNDWATER MONITORING DATA

### QUARTERLY GROUNDWATER MONITORING REPORT April 14, 2005

Sheaff's Garage
5930 College Avenue
Oakland, California
ACHCSA Fuel Leak Case No. RO0000377

GGTR Project No. 7335



# Case Narrative

Client: Golden Gate Tank Removal Project: 5930 COLLEGE AVE.

Lab No:

05-0541

Date Received:

04/14/05

Date reported: 04/22/05

Four water samples were analyzed for gasoline by method 8015B, BTEX /MTBE by method 8021B and VOCs by GC/MS method 8260B. The sample 05-0541-04 was also analyzed for diesel range hydrocarbons by method 8015B and fuel oxygenates by GC/MS method 8260B. No errors occurred. All results for QC/QA samples were within acceptance limits. No MS/MSD were analyzed for diesel due to insufficient sample volume submitted, batch accepted based on LCS/LCSD recoveries.

Erin Cunniffe

Laboratory Director



### CERTIFICATE OF ANALYSIS

Lab Number:

05-0541

Client:

Golden Gate Tank

Project:

5930 COLLEGE AVE.

Date Reported: 04/21/2005

Gasoline, BTEX and MTBE by Methods 8015B/8021B Diesel Range Hydrocarbons by Method 8015B

Analyte	Method R	esult Un	nit Date Sampled	Date Analyzed
Sample: 05-0541-01 Client	ID: 7335-MW1		04/14/2005	W
Benzene	SW8020F	15100	UG/L	04/15/2005
Ethylbenzene	SW8020F	4220	UG/L	04/15/2005
Gasoline Range Organics	SW8020F	116000	UG/L	04/15/2005
Methyl-tert-butyl ether	SW8020F	*366	UG/L	04/15/2005
SUR-a,a,a-Trifluorotoluene	SW8020F	91	PERCENT	04/15/2005
Toluene	SW8020F	7080	UG/L	04/15/2005
Xylenes	SW8020F	20700	UG/L	04/15/2005
Sample: 05-0541-02 Client	ID: 7335-MW2		04/14/2005	M
Benzene	SW8020F	5170	UG/L	04/15/2005
Ethylbenzene	SW8020F	2530	UG/L	04/15/2005
Gasoline Range Organics	SW8020F	46100	UG/L	04/15/2005
Methyl-tert-butyl ether	SW8020F	*155	UG/L	04/15/2005
SUR-a,a,a-Trifluorotoluene	SW8020F	85	PERCENT	04/15/2005
Toluene	SW8020F	787	UG/L	04/15/2005
Xylenes	SW8020F	6010	UG/L	04/15/2005

<sup>\*</sup>Confirmed by GC/MS;\*\*Does not match diesel pattern



#### CERTIFICATE OF ANALYSIS

Lab Number:

05-0541

Client:

Golden Gate Tank

Project:

5930 COLLEGE AVE.

Date Reported: 04/21/2005

Gasoline, BTEX and MTBE by Methods 8015B/8021B Diesel Range Hydrocarbons by Method 8015B

Analyte	Method Res	ultU	Jnit Date Sampled	<u>Date Analyze</u> d
Sample: 05-0541-03 Client	ID: 7335-MW3		04/14/2005	W
Benzene	SW8020F	357	UG/L	04/14/2005
Ethylbenzene	SW8020F	287	UG/L	04/14/2005
Gasoline Range Organics	SW8020F	5130	UG/L	04/14/2005
Methyl-tert-butyl ether	SW8020F	<b>*</b> 54	UG/L	04/14/2005
SUR-a,a,a-Trifluorotoluene	SW8020F	89	PERCENT	04/14/2005
Toluene	SW8020F	19.4	UG/L	04/14/2005
Xylenes	SW8020F	510	UG/L	04/14/2005
Sample: 05-0541-04 Client	ID: 7335-PW-1		04/14/2005	W
Benzene	SW8020F	62.8	UG/L	04/14/2005
Ethylbenzene	SW8020F	79.5	UG/L	04/14/2005
Gasoline Range Organics	SW8020F	3360	UG/L	04/14/2005
Methyl-tert-butyl ether	SW8020F	*ND<0.	5 UG/L	04/14/2005
SUR-a,a,a-Trifluorotoluene	SW8020F	90	PERCENT	04/14/2005
Toluene	SW8020F	6.7	UG/L	04/14/2005
Xylenes	SW8020F	317	UG/L	04/14/2005
Diesel Fuel #2	CATFH	**2.12	MG/L	04/15/2005

<sup>\*</sup>Confirmed by GC/MS; \*\*Does not match diesel pattern



### CERTIFICATE OF ANALYSIS

Quality Control/Quality Assurance

Lab Number:

05-0541

Client:

Golden Gate Tank

Project:

5930 COLLEGE AVE.

Date Reported: 04/21/2005

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

Diesel Range Hydrocarbons by Method 8015B

Analyte	Method Reporting Unit Limit		Blank	Avg MS/MSD Recovery	RPD	
Gasoline Range Organics	SW8020F	50	UG/L	ND	77/88	13
Benzene	SW8020F	0.5	UG/L	ND	71/80	12
Toluene	SW8020F	0.5	UG/L	ND	73/82	12
Ethylbenzene	SW8020F	0.5	UG/L	ND	79/89	12
Xylenes	SW8020F	1.0	UG/L	ND	78/88	12
Methyl-tert-butyl ether	SW8020F	0.5	UG/L	ND	79/87	10
SUR-a,a,a-Trifluorotoluene	SW8020F		PERCEN	т 101	101/100	1
Diesel Fuel #2	CATFH	0.05	MG/L	ND	78/88	12

ELAP Certificate NO:1753

Reviewed and Approved

Page 3 of 3



### CERTIFICATE OF ANALYSIS

Job Number: 05-0541

Client : Golden Gate Tank
Project : 5930 COLLEGE AVE.

Date Sampled : 04/14/2005

Date Analyzed: 04/15/2005

Date Reported: 04/21/2005

#### Volatile Organics by GC/MS Method 8260B

Inhountary Number	05-0541-01	05-0541-02
Laboratory Number Client ID	7335-MW1	7335-MW2
Matrix	W	M
Analyte	UG/L	UG/L
Bromochloromethane	ND<100	ND<10
Dichlorodifluoromethane	ND<100	ND<10
Chloromethane	ND<100	ND<10
Vinyl chloride	ND<50	ND<5
Bromomethane	ND<100	ND<10
Chloroethane	ND<100	ND<10
Trichlorofluoromethane	ND<100	ND<10
1,1-Dichloroethene	ND<50	ND<5
Acetone	ND<1000	ND<100
Methylene chloride	ND<2500	ND<250
trans-1,2-Dichloroethene	ND<100	ND<10
Methyl-tert-butyl ether	410	150
1,1-Dichloroethane	ND<50	ND<5
2,2-Dichloropropane	ND<100	ND<10
cis-1,2-Dichloroethene	ND<100	ND<10
2-Butanone	ND<500	ND<50
Chloroform	ND<50	ND<5
Carbon tetrachloride	ND<50	ND<5
1,1-Dichloropropene	ND<100	ND<10
Benzene	19800	8190
1,2-Dichloroethane	ND<100	ND<10
Trichloroethene	ND<50	ND<5
1,2-Dichloropropane	ND<100	ND<10
Dibromomethane	ND<100	ND<10
Bromodichloromethane	ND<100	ND<10
trans-1,3-Dichloropropene	ND<100	ND<10
4-Methyl-2-pentanone	ND<100	ND<10
Toluene	9420	1180
cis-1,3-Dichloropropene	ND<100	ND<10
1,1,2-Trichloroethane	ND<100	ND<10
Tetrachloroethene	ND<50	ND<5
1,3-Dichloropropane	ND<100	ND<10
2-Hexanone	ND<100	ND<10
Dibromochloromethane	ND<100	ND<10

#### Comments:



### CERTIFICATE OF ANALYSIS

Job Number: 05-0541

Client : Golden Gate Tank
Project : 5930 COLLEGE AVE.

Date Sampled : 04/14/2005

Date Analyzed: 04/15/2005

Date Reported: 04/21/2005

#### Volatile Organics by GC/MS Method 8260B

Laboratory Number	05-0541-01	05-0541-02
Client ID	7335-MW1	7335-MW2
	M	7555-MW2
Matrix	W	w
Analyte	UG/L	UG/L
1,2-Dibromoethane	ND<50	ND<5
Chlorobenzene	ND<100	ND<10
1,1,1,2-Tetrachloroethane	ND<100	ND<10
Ethylbenzene	4970	3210
Xylene, Isomers m & p	14800	5780
o-Xylene	6900	1090
Styrene	ND<100	ND<10
Bromoform	ND<100	ND<10
Isopropylbenzene	141	109
Bromobenzene	ND<100	ND<10
1,1,2,2-Tetrachloroethane	ND<100	ND<10
n-Propylbenzene	437	293
2-Chlorotoluene	ND<100	ND<10
4-Chlorotoluene	ND<100	ND<10
1,3,5-Trimethylbenzene	882	445
tert-Butylbenzene	ND<100	ND<10
1,2,4-Trimethylbenzene	3450	2390
1,3-Dichlorobenzene	ND<100	ND<10
1,4-Dichlorobenzene	ND<100	ND<10
sec-Butylbenzene	ND<100	ND<10
1,2-Dichlorobenzene	ND<100	ND<10
n-Butylbenzene	ND<100	71
Naphthalene	1220	1490
1,2,4-Trichlorobenzene	ND<100	ND<10
Hexachlorobutadiene	ND<100	ND<10
1,2,3-Trichlorobenzene	ND<100	ND<10
1,2,3-Trichloropropane	ND<100	ND<10
Acetonitrile	ND<500	ND<50
Acrylonitrile	ND<100	ND<10
Isobutanol	ND<500	ND<50
1,1,1-Trichloroethane	ND<100	ND<10
SUR-Dibromofluoromethane	91	90
SUR-Toluene-d8	109	104
SUR-4-Bromofluorobenzene	110	110

#### Comments:



# CERTIFICATE OF ANALYSIS

Job Number: 05-0541

Client : Golden Gate Tank

Project : 5930 COLLEGE AVE.

Date Sampled: 04/14/2005

Date Analyzed: 04/15/2005

Date Reported: 04/21/2005

Volatile Organics by GC/MS Method 8260B

Laboratory Number

05-0541-01

05-0541-02

Client ID

7335-MW1

7335-MW2

Matrix

Analyte

IAT

PERCENT

PERCENT

SUR-1, 2-Dichloroethane-d4

94

95



### CERTIFICATE OF ANALYSIS

Job Number: 05-0541 Date Sampled: 04/14/2005

Client : Golden Gate Tank Date Analyzed: 04/15/2005

Project : 5930 COLLEGE AVE. Date Reported: 04/21/2005

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

Laboratory Number Client ID	05-0541 Blank	MS/MSD Recovery	RPD	Recovery Limit	RPD Limit
Matrix		_		TITILL C	LIMIC
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	113/111	2	70-130	30
Acetone	ND<10				
Methylene chloride	ND<25				
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	111/104	7	70-130	30
1,2-Dichloroethane	ND<1				
Trichloroethene	ND<0.5	118/115	3	70-130	30
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	130/126	3	70-130	30
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	110/105	5	70-130	30
1,1,1,2-Tetrachloroethane	ND<1				
Ethylbenzene	ND<0.5				
Xylene, Isomers m & p	ND<1				
o-Xylene	ND<0.5				



# CERTIFICATE OF ANALYSIS

Job Number: 05-0541

Date Sampled: 04/14/2005

Client Project

: Golden Gate Tank

: 5930 COLLEGE AVE.

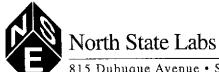
Date Analyzed: 04/15/2005 Date Reported: 04/21/2005

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

Laboratory Number	05-0541	MS/MSD	RPD	Recovery	RPD
Client ID	Blank	Recovery		Limit	Limit
Matrix	W	W			
Analyte	Results UG/L	%Recoveries			
Styrene	ND<1				
Bromoform	ND<1				
Isopropylbenzene	ND<1				
Bromobenzene	ND<1				
1,1,2,2-Tetrachloroethane	ND<1				
n-Propylbenzene	ND<1				
2-Chlorotoluene	ND<1				
4-Chlorotoluene	ND<1				
1,3,5-Trimethylbenzene	ND<1				
tert-Butylbenzene	ND<1				
1,2,4-Trimethylbenzene	ND<1				
1,3-Dichlorobenzene	ND<1				
1,4-Dichlorobenzene	ND<1				
sec-Butylbenzene	ND<1				
1,2-Dichlorobenzene	ND<1				
n-Butylbenzene	ND<1				
Naphthalene	ND<1				
1,2,4-Trichlorobenzene	ND<1				
Hexachlorobutadiene	ND<1				
1,2,3-Trichlorobenzene	ND<1				
1,2,3-Trichloropropane	ND<1				
Acetonitrile	ND<5				
Acrylonitrile	ND<1				
Isobutanol	ND<5				
1,1,1-Trichloroethane	ND<1				
SUR-Dibromofluoromethane	88	94/94	0	85-115	30
SUR-Toluene-d8	106	108/109	1	85-115	30
SUR-4-Bromofluorobenzene	108	108/108	0	85-115	30
SUR-1,2-Dichloroethane-d4	89	92/94	2	85-115	30

Reviewed and Approved

Erin Cunniffey Laboratory Director



# CERTIFICATE OF ANALYSIS

Job Number: 05-0541

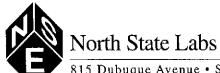
Client : Golden Gate Tank Project : 5930 COLLEGE AVE. Date Sampled : 04/14/2005

Date Analyzed: 04/15/2005 Date Reported: 04/21/2005

Volatile Organics by GC/MS Method 8260B

Laboratory Number	05-0541-03	05-0541-04
Client ID	7335-MW3	7335-PW-1
Matrix	W	W
Analyte	UG/L	UG/L
Bromochloromethane	ND<1	ND<1
Dichlorodifluoromethane	ND<1	ND<1
Chloromethane	ND<1	ND<1
Vinyl chloride	ND<0.5	ND<0.5
Bromomethane	ND<1	ND<1
Chloroethane	ND<1	ND<1
Trichlorofluoromethane	ND<1	ND<1
1,1-Dichloroethene	ND<0.5	ND<0.5
Acetone	ND<10	ND<10
Methylene chloride	ND<25	ND<25
trans-1,2-Dichloroethene	ND<1	ND<1
Methyl-tert-butyl ether	41.4	ND<0.5
1,1-Dichloroethane	ND<0.5	ND<0.5
2,2-Dichloropropane	ND<1	ND<1
cis-1,2-Dichloroethene	ND<1	12
2-Butanone	ND<5	ND<5
Chloroform	ND<0.5	ND<0.5
Carbon tetrachloride	ND<0.5	ND<0.5
1,1-Dichloropropene	ND<1	ND<1
Benzene	388	55.9
1,2-Dichloroethane	ND<1	ND<1
Trichloroethene	ND<0.5	3.3
1,2-Dichloropropane	ND<1	ND<1
Dibromomethane	ND<1	ND<1
Bromodichloromethane	ND<1	ND<1
trans-1,3-Dichloropropene	ND<1	ND<1
4-Methyl-2-pentanone	ND<1	ND<1
Toluene	27.4	9.2
cis-1,3-Dichloropropene	ND<1	ND<1
1,1,2-Trichloroethane	ND<1	ND<1
Tetrachloroethene	ND<0.5	84.9
1,3-Dichloropropane	ND<1	ND<1
2-Hexanone	ND<1	ND<1
Dibromochloromethane	ND<1	ND<1

GEO PACKERZ



# CERTIFICATE OF ANALYSIS

Job Number: 05-0541

Client : Golden Gate Tank
Project : 5930 COLLEGE AVE.

Date Sampled: 04/14/2005

Date Analyzed: 04/15/2005 Date Reported: 04/21/2005

Volatile Organics by GC/MS Method 8260B

Laboratory Number	05-0541-03	05-0541-04
Client ID	7335-MW3	7335-PW-1
Matrix	W	W
Analyte	UG/L	UG/L
1,2-Dibromoethane	ND<0.5	ND<0.5
Chlorobenzene	ND<1	ND<1
1,1,1,2-Tetrachloroethane	ND<1	ND<1
Ethylbenzene	351	88
Xylene, Isomers m & p	542	288
o-Xylene	28.2	31.7
Styrene	ND<1	ND<1
Bromoform	ND<1	ND<1
Isopropylbenzene	45	11
Bromobenzene	ND<1	ND<1
1,1,2,2-Tetrachloroethane	ND<1	ND<1
n-Propylbenzene	148	27
2-Chlorotoluene	ND<1	ND<1
4-Chlorotoluene	ND<1	ND<1
1,3,5-Trimethylbenzene	85	110
tert-Butylbenzene	ND<1	ND<1
1,2,4-Trimethylbenzene	302	257
1,3-Dichlorobenzene	ND<1	ND<1
1,4-Dichlorobenzene	ND<1	ND<1
sec-Butylbenzene	ND<1	ND<1
1,2-Dichlorobenzene	ND<1	ND<1
n-Butylbenzene	28	22
Naphthalene	121	56
1,2,4-Trichlorobenzene	ND<1	ND<1
Hexachlorobutadiene	ND<1	ND<1
1,2,3-Trichlorobenzene	ND<1	ND<1
1,2,3-Trichloropropane	ND<1	ND<1
Acetonitrile	ND<5	ND<5
Acrylonitrile	ND<1	ND<1
Isobutanol	ND<5	ND<5
1,1,1-Trichloroethane	ND<1	ND<1
SUR-Dibromofluoromethane	107	97
SUR-Toluene-d8	104	103
SUR-4-Bromofluorobenzene	115	101

#### Comments:



#### CERTIFICATE OF ANALYSIS

Job Number: 05-0541

Client : Golden Gate Tank

Project : 5930 COLLEGE AVE.

Date Sampled: 04/14/2005

Date Analyzed: 04/15/2005

Date Reported: 04/21/2005

Volatile Organics by GC/MS Method 8260B

Laboratory Number

05-0541-03

05-0541-04

Client ID

7335-MW3

7335-PW-1

Matrix Analyte w

PERCENT

PERCENT

SUR-1,2-Dichloroethane-d4

109

109



#### CERTIFICATE OF ANALYSIS

Job Number: 05-0541

Client

: Golden Gate Tank

Project : 5930 COLLEGE AVE.

Date Sampled : 04/14/2005

Date Analyzed: 04/15/2005 Date Reported: 04/21/2005

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

Laboratory Number	05-0541	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	109/105	4	70-130	30
Acetone	ND<10				
Methylene chloride	ND<25				
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	126/129	2	70-130	30
1,2-Dichloroethane	ND<1				
Trichloroethene	ND<0.5	103/106	3	70-130	30
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	116/120	3	70-130	30
cis-1,3-Dichloropropene	ND<1				
1,1,2-Trichloroethane	ND<1				
Tetrachloroethene	ND<0.5				
1,3-Dichloropropane 2-Hexanone	ND<1				
Dibromochloromethane	ND<1				
1,2-Dibromoethane	ND<1				
Chlorobenzene	ND<0.5	100 (105	-	70 120	3.0
1,1,1,2-Tetrachloroethane	ND<1	100/105	5	70-130	30
Ethylbenzene	ND<1				
Xylene, Isomers m & p	ND<0.5				
o-Xylene	ND<1				
o waterie	ND<0.5				



#### CERTIFICATE OF ANALYSIS

Job Number: 05-0541

Date Sampled: 04/14/2005

Client

: Golden Gate Tank

Date Analyzed: 04/15/2005

Project : 5930 COLLEGE AVE.

Date Reported: 04/21/2005

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

Laboratory Number	05-0541	MS/MSD	RPD	Recovery	RPD
Client ID	Blank	Recovery		Limit	Limit
Matrix	W	M			
Analyte	Results UG/L	%Recoveries			
Styrene	ND<1				
Bromoform	ND<1				
Isopropylbenzene	ND<1				
Bromobenzene	ND<1				
1,1,2,2-Tetrachloroethane	ND<1				
n-Propylbenzene	ND<1				
2-Chlorotoluene	ND<1				
4-Chlorotoluene	ND<1				
1,3,5-Trimethylbenzene	ND<1				
tert-Butylbenzene	ND<1				
1,2,4-Trimethylbenzene	ND<1				
1,3-Dichlorobenzene	ND<1				
1,4-Dichlorobenzene	ND<1				
sec-Butylbenzene	ND<1				
1,2-Dichlorobenzene	ND<1				
n-Butylbenzene	ND<1				
Naphthalene	ND<1				
1,2,4-Trichlorobenzene	ND<1				
Hexachlorobutadiene	ND<1				
1,2,3-Trichlorobenzene	ND<1				
1,2,3-Trichloropropane	ND<1				
Acetonitrile	ND<5				
Acrylonitrile	ND<1				
Isobutanol	ND<5				
1,1,1-Trichloroethane	ND<1				
SUR-Dibromofluoromethane	95	91/94	3	85-115	30
SUR-Toluene-d8	106	108/107	1	85-115	30
SUR-4-Bromofluorobenzene	105	102/102	0	85-115	30
SUR-1,2-Dichloroethane-d4	98	93/95	2	85-115	30

Reviewed and Approved

Page 5 Of 5



### CERTIFICATE OF ANALYSIS

Job Number: 05-0541

Client : Golden Gate Tank
Project : 5930 COLLEGE AVE.

Date Sampled: 04/14/2005

Date Analyzed: 04/15/2005 Date Reported: 04/21/2005

#### Fuel Oxygenates by Method 8260B

05-0541-04 Laboratory Number 7335-PW-1 Client ID Matrix Analyte UG/L Methyl-tert-butyl ether ND<0.5 Ethyl tert-butyl ether ND<1 ND<1 tert-Amyl methyl ether ND<0.5 Di-isopropyl ether (DIPE) ND<10 tert-Butyl alcohol 1,2-Dichloroethane ND<1 ND<0.5 1,2-Dibromoethane Ethanol ND<50 97 SUR-Dibromofluoromethane SUR-Toluene-d8 103 101 SUR-4-Bromofluorobenzene SUR-1, 2-Dichloroethane-d4 109



# CERTIFICATE OF ANALYSIS

Job Number: 05-0541

Date Sampled : 04/14/2005

Client : Golden Gate Tank

Date Analyzed: 04/15/2005 Date Reported: 04/21/2005

Project : 5930 COLLEGE AVE.

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

Laboratory Number Client ID Matrix	05-0541 Blank W	MS/MSD Recovery W	RPD	Recovery Limit	RPD Limit
Analyte	Results UG/L	%Recoveries			
Ethanol	ND<50				
Methyl-tert-butyl ether	ND<0.5				
Di-isopropyl ether (DIPE)	ND<0.5				
tert-butyl Alcohol	ND<10				
Ethyl tert-butyl ether	ND<1				
tert-Amyl methyl ether	ND<1				
1,1-Dichloroethene	ND<0.5	109/105	4	70-130	30
Benzene	ND<0.5	126/129	2	70-130	30
Trichloroethene	ND<0.5	103/106	3	70-130	30
Toluene .	ND<0.5	116/120	3	70-130	30
Chlorobenzene	ND<1	100/105	5	70-130	30
SUR-Dibromofluoromethane	95	91/94	3	85-115	30
SUR-Toluene-d8	106	108/107	1	85-115	30
SUR-4-Bromofluorobenzene	105	102/102	0	85-115	30
SUR-1,2-Dichloroethane-d4	98	93/95	2	85-115	30

Reviewed and Approved

Erin Cunniffe / /



TERMS: NET 30 OAC

North State Labs
815 Dubuque Avenue, South San Francisco, CA 94080
Phone: (650) 266-4563 Fax: (650) 266-4560

	ChART		
Chain o	of Custody / Red	quest for Analysis	
Lab Job	No.:	Pageof	

Client: GGTR		<u> </u>	Report	to: BRENT W	HOOLER	Phone	415.5	55.25	555		Turnaround Time
Mailing Address:	<u> </u>		_				Phone: 415 .555 . 2555 Fax: 415 .512 1555			24 hu	
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9F CA	` ,		7	ame		PO#		35		Sampl	er: Wolf
Project / Site Address	s / Global II			Arc Requested	TPH G BTE	#.0 #.0					EDF   PDF
Sample ID	Sample Type	Container No. / Type	Pres.	Sampling Date / Time	F 500 7	0) F.9					Field Point ID
7335 - MWI	H20	5 /VoAs	HCI	41405/1132		1					7335 - MWI
7335 - MW2	1			1 / 1145		ļ					7335-MW2
7335 - MW3				/1125	///	<u> </u>				<del> </del>	7335 - MW3
7335-PW1	<b>\</b>	1000	$\downarrow$	V/1205		\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	<u> </u>				7335-PW-1
		<u> </u>				<u> </u>					
						<u> </u>					
						<u> </u>					
						ļ					
								7			
			<u></u>			<u> </u>	/		/		
	$\bigcirc$ (					<u> </u>		42	<u> </u>		
Relinquished by:	X	Fisolo	D	ate: 4 /// Time:	13% Recei	ved by:	<u> </u>	K-1	18	My	Lab Comments/ Hazards
Relinquished by:	1/2/2	(A)		ate: 1/14/64 Time:	•	ved by:		7/2	7 <u>~</u>		
Relinquished by:	<i>v</i> /	/	D	ate: Time:	Recei	ved by:					

# Golden Gate Tank Removal, Inc.

# FLUID-LEVEL MONITORING DATA

oject No:		7335		Date:	4-14-05
oject/Site	Location: _	5930	Coure	GE AVE	CAKLAND
chnician:	· · ·	WOLF		Instrument	:_ KECK
Boning 4	Deptatio	Depth to c	- Department	Assa Villa	Sale walk
大 等 草里 法国	year year	Product electi	CONTRACTOR STATE		
MWI	5,3	ø	ø	14.6	
NW2	8.7	ø	ø	12.8	000
MW3	5.1	ø	ø	18.8	ODOR
RII	6.4	ø	ø	18.3	
Maama	n anto us E	enced to:	TOC	Crade	Page \_ of_

# Golden Gate Tank Removal, Inc.

# WELL PURGING/SAMPLING DATA

Project Number: 7335 Date: 4 - 14 - 05	
Project / Site Location: 5730 COLLEGE AVE	
CAN AND	
Sampler/Technician: LOOLS	
County Personal Division of the County of th	
Coning/Developed 17-1	
Casing/Borehole Volumes (gallons/foot) 0.02/0.13 (0.20.9 0.7/1.2 0.7/1.6 1.5/2.2 1.5/3.1	
WAII No. 100 hours	
Well No. MW3 Well No. MW1	
A. Total Well Depth 18.8 Pt (toc) A Total Well Depth 19.6 Ft (toc)	
B Denth To Wieter	
A TATE OF A TAKE	
TO STANCE OF THE PARTY OF THE P	
T Commented to 1	
Dr. County Conscipt.	
E There (2) Continu	
TD (TD-ON)	
[B+(ExC)] S_1( F2	
Purge Event #1	
Start Time: 0945 Start Time: 10 (8	
Finish Time: 1005	
Purge Volume: 8.2	
Recharge #1	
Depth to Water:	- 2
Time Measured: 1120 Time Measured: 1122	
Purge Event #2 Start Time:	
The Lab Control of the Control of th	
Phone Walter	
Past 42	
2500 Mg WE	
Time Measured:  Depth to Water: Time Measured: Time Measured:	
Time Wesst, etc.	
Well Fluid Parameters: Well Fluid Parameters:	
(Casing or Borehole Volumes) (Casing or Borehole Volumes)	
0 1 15 2 25 3 0 1 15 2 25 3	
PH 76 7.39 7.54 7.35 7.34 7.4 pH 7.16 2.22 763 7.11 2.79	
T(P) 164 15 165 164 166 17 T(P) 19.2 121 120 121 165 184	
Cond. 489 460 487 488 428 519 Cond. 910 915 916 911	Ale.
Turbifity DO: 4.7% / 0.48 mg   DO 5.2% / 0.49 mg/L	DATA
The state of the s	
Purge device: DCGO PURGE PUMP  Total Gallons Purged: 8.2  Purge device: DCGO PURGE PUMP  Purge device: DCGO PURGE PUMP	
Sampling Device: DISP BALER Sampling Device: DISP BALLER	
Sample Collection Time: 1125  Sample Collection Time: 1132	
Sample Appearance: ODOR   Oce - Class   Sham Sample Appearance: ODOR   No SHEEL I	
Drums Remaining Onsite: 4 Total Volume: 100 Gals. (Show Location on Site Plan)	
(2 solu)	

# Golden Gate Tank Removal, Inc.

# WELL PURGING/SAMPLING DATA

Project Number: 7335 - #	Date: 4.14.05
	COLLEGE AVE
Sampler/Technician:	35 GA
Sampler/Technician:	
Casing/Borchole Diameter (inches) 0.	75/1.75 2/4 4/8 4/10 6/10 6/12
Casing/Borehole Volumes (gallons/foot) 0	.02/0.13   0.2/0.9   0.7/1.2   0.7/1.6   1.5/2.2   1.5/3.1
Well No. MW2	Well No. PW1
a managaman di sana arawa a	
	A STATE OF TAXABLE TO TAXABLE
THE TAX PORT OF THE PARTY OF TH	and the same of th
D TIT-11 CO	
E. Casing Volume Constant  L. Casing Volume Constant	
	B. Casing Volume Constant
(from above table)  F. Three (3) Casing or	(from above table)
	F. Three (3) Casing or
G. 80% Recharge Level	
	G. 80% Recharge Level
[B+(ExC)] 6.92	Ft. [B+(ExC)] 8.7 Ft.
Purge Event #1	Purpe Event #1
Start Time: 1040	Start Time: 1400
Finish Time: 1053	Finish Time: 11 30
Purge Volume: @ 7-	Purge Volume: @ 20 (todien)
Recharge #1	Recharge #1
Depth to Water: 7-1	Depth to Water: 6.3
Time Measured: 1125	Time Measured: 1155
Purge Event #2	
Start Time:	Purge Event #2
Finish Time:	Start Time:
Purge Volume:	Finish Time:
Recharge #2	Purge Volume: Recharge #2
Depth to Water: 6.9	Depth to Water:
Time Measured: 1140	Time Measured:
11 10	
Well Fluid Parameters:	Well Fluid Parameters:
(Casing or Borehole Volum 1.5 2 2	nes) (Casing or Borehole Volumes)
PH 7.17 703 202 \$01 \$	- 2 1 AZ A
T(P) 177 175 12,7 17.7 13	06 7.5 ph 735 725 7.13 7.16 7.35 (
Cond. 1039 1042 1025 1052 10	1.7 17.1 I(F) 17. 16.6 16.5 16.4 16.8 16 1.68 — Cond 996 749 750 583 538 5
TVO	J. DO 147 750 736 328 2
Turbidity 6.9% / 0.76 mg	Turbidity
<del>ORP</del>	ORP
Summary Data:	Summary Data;
Total Galions Purged: 6.6 ->	Total Gallons Purged:
Purge device: DC PURGE PUMP	Purge device:
Sampling Device: DISP BAILE	
Sample Collection Time: 1145	Sample Collection Time: 120 5
Sample Appearance: Class / 05	6
D	Il Volume: Gals. (Show Location on Site Plan)

# **Electronic Submittal Information**

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:** 

04/14/05 Fluid-Level Monitoring Data (MW1-MW3,

PW1)

Submittal Date/Time: 8/18/2005 11:06:00 AM

**Confirmation** 

2514785587

Number:

Back to Main Menu

Logged in as GGTR (AUTH\_RP)

CONTACT SITE ADMINISTRATOR.

Table 1
Groundwater Monitoring Data and Analytical Results

Former Chevron Service Station #209339 5940 College Avenue Oakland, California

WELL ID/	TOC*	DTW	GWE	TPH-G	В	T	E	X	MTBE
DATE	(ft.)	(ft.)	(msl)	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)
MW-1									
01/03/01	196.91	12.75	184.16	930 <sup>1</sup>	2.9	6.9	2.7	7.6	$14/<2.0^3$
04/25/01	196.91	9.23	187.68	2104	2.0	1.5	2.0	3.3	5.3/<2.0 <sup>3</sup>
07/09/01	196.91	11.86	185.05	290 <sup>5</sup>	1.8	2.0	2.5	0.96	<2.5
10/08/01	196.91	13.49	183.42	200	< 0.50	< 0.50	< 0.50	<1.5	<2.5
01/13/02	196.91	7.33	189.58	<50	< 0.50	< 0.50	< 0.50	< 0.50	<2.5
04/08/02	196.91	7.45	189.46	670	< 0.50	<2.0	<1.0	5.6	<2.5
10/15/02	196.91	13.68	183.23	260	0.62	0.82	< 0.50	<1.5	
04/15/03	196.91	6.82	190.09	1,700	1.3	<5.0	< 2.0	<5.0	
10/31/03	196.91	13.72	183.19	150	<2.0	0.7	<2.0	<5.0	
04/23/04	196.91	9.02	187.89	<50	< 0.5	< 0.5	< 0.5	<1.5	
10/22/04	196.91	11.50	185.41	63	< 0.5	< 0.5	< 0.5	<1.5	
04/14/05	196.91	7.11	189.80	<50	< 0.5	<0.5	<0.5	<1.5	
MW-2	197.35	12.48	184.87	$2,100^2$	110	11	63	25	83/2.23
01/03/01	197.35	12.48 8.90	188.45	2,100 1,700 <sup>4</sup>	150	12	30	25 15	150/<2.0
04/25/01 07/09/01	197.35	8.90 11.44	185.91	2,500 <sup>5</sup>	200	21	55	26	<50
07/09/01 10/08/01	197.35 197.35	13.37	183.98	2,300 4,200	200 87	2.8	29	9.8	<2.5
01/13/02	197.35	6.55	190.80	4,200 410	20	2.8	<2.5	4.4	27/<2.0 <sup>3</sup>
04/08/02	197.35	8.37	188.98	4,000	70	1.7	17	17	<2.5
04/08/02 10/15/02		13.00	184.35	4,000 3,100	41	2.2	16	<6.0	
04/15/03	197.35 197.35	7.58	189.77	2,400	37	<2.5	12	<7.5	
0 <del>4</del> /15/03 10/31/03	197.35 197.35	7.58 13.02	184.33	2,400	12	3.4	4.8	<7.5	
			184.33	2,300 960	8.9	1.0	4.8 2.4	<1.5	
04/23/04	197.35	8.38							
10/22/04	197.35 <b>197.35</b>	11.41 <b>6.69</b>	185.94 <b>190.66</b>	2,200 <b>640</b>	24 <b>2.1</b>	<2.5 < <b>2.0</b>	4.1 <2.0	<10 <b>7.5</b>	

Table 1
Groundwater Monitoring Data and Analytical Results

Former Chevron Service Station #209339 5940 College Avenue Oakland, California

WELL ID/	TOC*	DTW	GWE	TPH-G	В	T	E	X	MTBE
DATE	(ft.)	(ft.)	(msl)	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)
TRIP BLANK									
TB-LB									
01/03/01				<50	< 0.50	< 0.50	< 0.50	< 0.50	<2.5
04/25/01				<50	< 0.50	< 0.50	< 0.50	< 0.50	<2.5
07/09/01	<del></del>			<50	< 0.50	< 0.50	< 0.50	< 0.50	<2.5
QA									
10/08/01				<50	< 0.50	< 0.50	< 0.50	<1.5	<2.5
01/13/02				<50	< 0.50	< 0.50	< 0.50	< 0.50	<2.5
04/08/02				<50	< 0.50	< 0.50	< 0.50	<1.5	<2.5
10/15/02				<50	< 0.50	< 0.50	< 0.50	<1.5	
04/15/03				<50	< 0.5	< 0.5	< 0.5	<1.5	
10/31/03				<50	< 0.5	<0.5	< 0.5	<1.5	
04/23/04				<50	< 0.5	<0.5	< 0.5	<1.5	
10/22/04				<50	< 0.5	<0.5	< 0.5	<1.5	
04/14/05				<50	<0.5	<0.5	<0.5	<1.5	

#### Table 1

#### Groundwater Monitoring Data and Analytical Results

Former Chevron Service Station #209339 5940 College Avenue Oakland, California

#### **EXPLANATIONS:**

TOC = Top of Casing	TPH-G = Total Petroleum Hydrocarbons as Gasoline	MTBE = Methyl tertiary butyl ether
(ft.) = Feet	B = Benzene	(ppb) = Parts per billion
DTW = Depth to Water	T = Toluene	= Not Measured/Not Analyzed
GWE = Groundwater Elevation	E = Ethylbenzene	QA = Quality Assurance/Trip Blank
(msl) = Mean sea level	X = Xylenes	

<sup>\*</sup> TOC elevations were surveyed on December 27, 2000, by Virgil Chavez Land Surveying. The benchmark used for the survey was a City of Oakland benchmark being a cut square in the top of curb, at the curb return at the northeast corner of College Avenue and Miles Avenue, (Benchmark Elev. = 179.075 feet, msl).

Laboratory report indicates unidentified hydrocarbons C6-C12.

<sup>&</sup>lt;sup>2</sup> Laboratory report indicates gasoline C6-C12.

MTBE by EPA Method 8260.

<sup>&</sup>lt;sup>4</sup> Laboratory report indicates gasoline C6-C12 + unidentified hydrocarbons <C6.

Laboratory report indicates gasoline C6-C12 + unidentified hydrocarbons C6-C12.