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Alameda County  
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Environmental Health

**QUARTERLY GROUNDWATER MONITORING REPORT  
July 19, 2004**

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

**ACHCSA Fuel Leak Case No. RO0000377**

Prepared For:

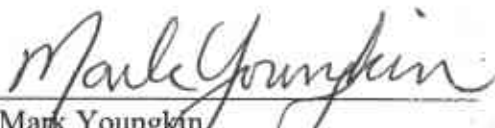
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## QUARTERLY GROUNDWATER MONITORING REPORT July 19, 2004

5930 College Avenue, Oakland, California

### Introduction

This report presents the results and findings of the July 19, 2004 groundwater monitoring and sampling activities conducted by Golden Gate Tank Removal, Inc. (GGTR) at 5930 College Avenue in Oakland, California. This was the 15th quarterly monitoring event performed at the site for the three existing monitor wells, MW1 through MW3. 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 biannual monitoring and sampling of GR-MW1 & GR-MW2 on April 23, 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 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 July 2004) ranged between approximately 5.5 and 13 fbg. The average depth to groundwater reported during the July 2004 monitoring event was approximately 9.5 fbg, with an associated mean groundwater elevation of 186.97 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 gradient measured during the July 2004 event was approximately 0.001 ft/ft directed 51° west of north. 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 July 19, 2004, 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 (insitu) 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. DO and ORP were 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.

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.

## **Water Sample Analytical Methods**

On July 19, 2004, NSL submitted the groundwater samples collected from the three monitoring wells 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; SW8020F)
- Volatile Organic Compounds (EPA Method 8260), including lead scavengers 1,2-dibromoethane (EDB) and 1,2-dichloroethane (EDC)

NSL completed all volatile organic analyses by July 27, 2004, 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 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. A laboratory-supplied trip blank consisting of de-ionized water was returned with the groundwater samples to the laboratory and analyzed for BTEX only (Sample ID 7335-TB), the results of which are included in Table 1.

## **Groundwater Monitoring Results**

The groundwater elevations measured relative to the top of well casing in MW1 through MW3 ranged between 186.95 (MW1) and 186.98 (MW2) feet above Mean Sea Level. The associated groundwater gradient calculated for the July 19, 2004 monitoring event was 0.1 foot / 100 feet (0.001 ft/ft) directed approximately 51° west of north. The groundwater gradient and associated elevation isocontour lines are shown on 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 July 19, 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) across the site. The current gradient data is shown in bold type.

**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
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
<b>07/19/04</b>	<b>186.97</b>	<b>51° west of north</b>	<b>0.1 foot / 100 feet</b>

### Discussion of Monitoring Results

The mean groundwater elevation measured at the site during this event was approximately 2.04 feet lower than that measured during the monitoring event in April 2004 and comparable to the mean groundwater elevation reported in July 2001 (186.26 feet) and 2002 (186.63 feet). Based on the relative groundwater elevation data recorded for this event, the groundwater flow direction was directed approximately 51° west of north, representing a presumed counterclockwise shift of approximately 149° toward the northwest, 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, is relatively similar to historical gradient directions measured during this time of year in April 2001 and July 2002. The calculated gradient slope for this event (0.001 foot/foot) has decreased significantly since the previous two monitoring events in February and March 2004, and is historically the most gradual slope recorded at the site since October 1999.

Shallow, unconfined groundwater in the vicinity of the former UST cavity and monitored area (July 2004) was characterized by relatively moderate dissolved oxygen concentrations ranging between 6.7% (0.61 milligrams per liter, mg/L) in MW2 and 7.7% (0.70 mg/L) in MW3, signifying that aerobic biodegradation is potentially continuing in the shallow

groundwater beneath the site. The groundwater in each well was also initially monitored for Oxidation-Reduction Potential (ORP), which ranged between -046 millivolts in MW2 to +053 millivolts in MW3, generally signifying that anaerobic biodegradation (iron reduction range) may potentially be occurring within the shallow groundwater once the dissolved oxygen is depleted. The July 2004 ORP values are consistent with those recorded in October 2003, however have fluctuated slightly since the April 2004 event. The groundwater was also characterized by an average pH, specific conductivity, and temperature of 6.45, 580 micromhos per centimeter ( $\mu\text{mhos/cm}$ ), and 19.0 Centigrade degrees, respectively. Neither free product nor surface sheen was present in the purge water or groundwater samples in MW1 through MW3 during the July 2004 monitoring event; however, slight to moderate gasoline-like hydrocarbon odors were detected in the purge water removed from all three wells. Documentation of the well purging and sampling activities is contained in the Field Data Sheets of the Appendix.

### 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 July 19, 2004 monitoring event. A copy of the Laboratory Certificate of Analysis and the Chain-of-Custody Record associated with GGTR's groundwater samples is in the Appendix. Documentation of the well purging and sampling activities is contained in the Field Data Sheets of the Appendix.

#### July 19, 2004 Groundwater Sampling Results

Well ID	Sample ID	TPH-G (ug/L)	BTEX (ug/L)	MTBE (ug/L)	VOC/OXY (ug/L)
MW1	7335-MW1	63900	7260 / 2270 / 2510 / 10100	373 (303*)	32650 / NA
MW2	7335-MW2	28300	2540 / 239 / 1320 / 2300	283 (373*)	10284 / NA
MW3	7335-MW3	9860	20.4 / 3.2 / 30.6 / 117	ND (ND*)	568.2 / 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 and/or Fuel Oxygenate analysis

Total Petroleum Hydrocarbons as gasoline (TPH-G) increased in monitor well MW1 from 49,200 to 63,900 micrograms per liter (ug/L) as compared to the April 2004 monitoring event. The concentration of TPH-G reported in MW2 decreased from 30,400 to 28,300 ug/L as compared to the last monitoring event, however has generally decreased as compared to the April 2001 (56,000 ug/L) and 2002 (66,700 ug/L) events. The

concentration of TPH-G measured in MW3 has continued to increase slightly since the July 2002 monitoring event, and has increased since the April 2004 event from 7,210 to 9,860 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) increased in MW1 from 85 ug/L (114 ug/L, as confirmed by EPA Method 8260) to 373 ug/L (303 ug/L, EPA 8260), and in MW2, from 112 ug/L (203 ug/L, EPA Method 8260) to 283 ug/L (373 ug/L, EPA Method 8260) as compared to the April 2004 event. Again, the MTBE concentrations measured in MW2 since January 2002 appear to remain relatively stable, fluctuating only slightly between 112 ug/L (April 2004) 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 Secondary MCL listed for this chemical constituent (5 ug/L).

The benzene concentration measured in the groundwater sample collected in MW1 decreased from 7,910 to 7,260 ug/L, and that in MW2 decreased from 3,750 to 2,540 ug/L, as compared with the April 2004 event. The benzene concentration measured in MW3 decreased significantly from 227 to 20.4 ug/L. The concentrations of toluene and ethylbenzene in MW1 have increased since the April 2004 event, while total xylenes have remained the same. The concentrations of toluene, ethylbenzene, and total xylenes measured in MW2 and MW3 have fluctuated slightly since the April 2004 event. The BTEX concentrations measured in each well continues to exceed the CRWQCB's Tier 1 ESL established for each constituent, where groundwater is potentially a threatened drinking water resource. Also the BTEX concentrations measured in MW1 and MW2 exceed the CRWQCB's Primary MCL value established for each constituent. Only the benzene concentration reported in MW3 (20.4 ug/L) exceeds the Primary MCL established for this constituent (1 ug/L). Respective Tier 1 ESL and MCL Values are tabulated at the end of Table 1.

The total concentration of Volatile Organic Compounds (VOCs) measured in MW1 has increased since the April 2004 event. The concentrations of 1,2-Dichloroethane (EDC) and 1,2-dibromoethane (EDB), reported in MW1 through MW3 remained below the respective laboratory reporting limit for each VOC constituent ( $\leq 100$  ug/L for EDC and  $<50$  ug/L for EDB) and do not appear to be constituents of concern at the site. The groundwater samples collected in MW1 and MW2 contained 303 and 373 ug/L MTBE (as confirmed by VOC



analyses), which were higher than the MTBE concentrations reported in these wells in April 2004. The samples collected in MW1 and MW3 contained 801 and 475 ug/L naphthalene (VOC), which exceeds the Tier 1 ESL listed for this constituent (21 ug/L). The concentration of naphthalene at MW3 was 16 ug/L.

As requested by the ACHCSA in their 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 non-detectable results (except MTBE) 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 as suggested in the September 2003 letter, do not need to be incorporated into the current monitoring schedule and were not analyzed during either the February, April, or July 2004 event. Monitoring of DO and ORP should be continued to further evaluate the biodegradation potential in the shallow groundwater beneath the site. Fourth Quarter 2004 monitoring activities were conducted at the site on October 22, 2004, a report of which is due on January 31, 2005, pursuant to the ACHCSA's June 3, 2004 Work Plan Approval Letter.

### **GeoTracker AB2886 EDF Upload**

In general accordance with State Assembly Bill 2886, GGTR uploaded the fluid-level monitoring data associated with the July 19, 2004 event in electronic deliverable format to the State Water Resources Control Board's GeoTracker Database System. The GeoTracker Upload Confirmation Number is **3838657975**. 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 July 19, 2004 event in electronic deliverable format to the State GeoTracker Database System. The GeoTracker Upload Confirmation Number is **8948096632**. A confirmation report copy corresponding to Lab Number/Submittal Title 04-1099: 7/19/04 GW Analytical Data (MW1-MW3) is included in the Appendix.

### **Waste Management**

The drummed well purge and equipment wash and rinse water (@ 23 gallons) generated during the July 2004 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. 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*.

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  
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**  
11/11/04 **GGTR submits July 19 2004 Groundwater Monitoring Report to the  
ACHCSA**

### **Report Distribution**

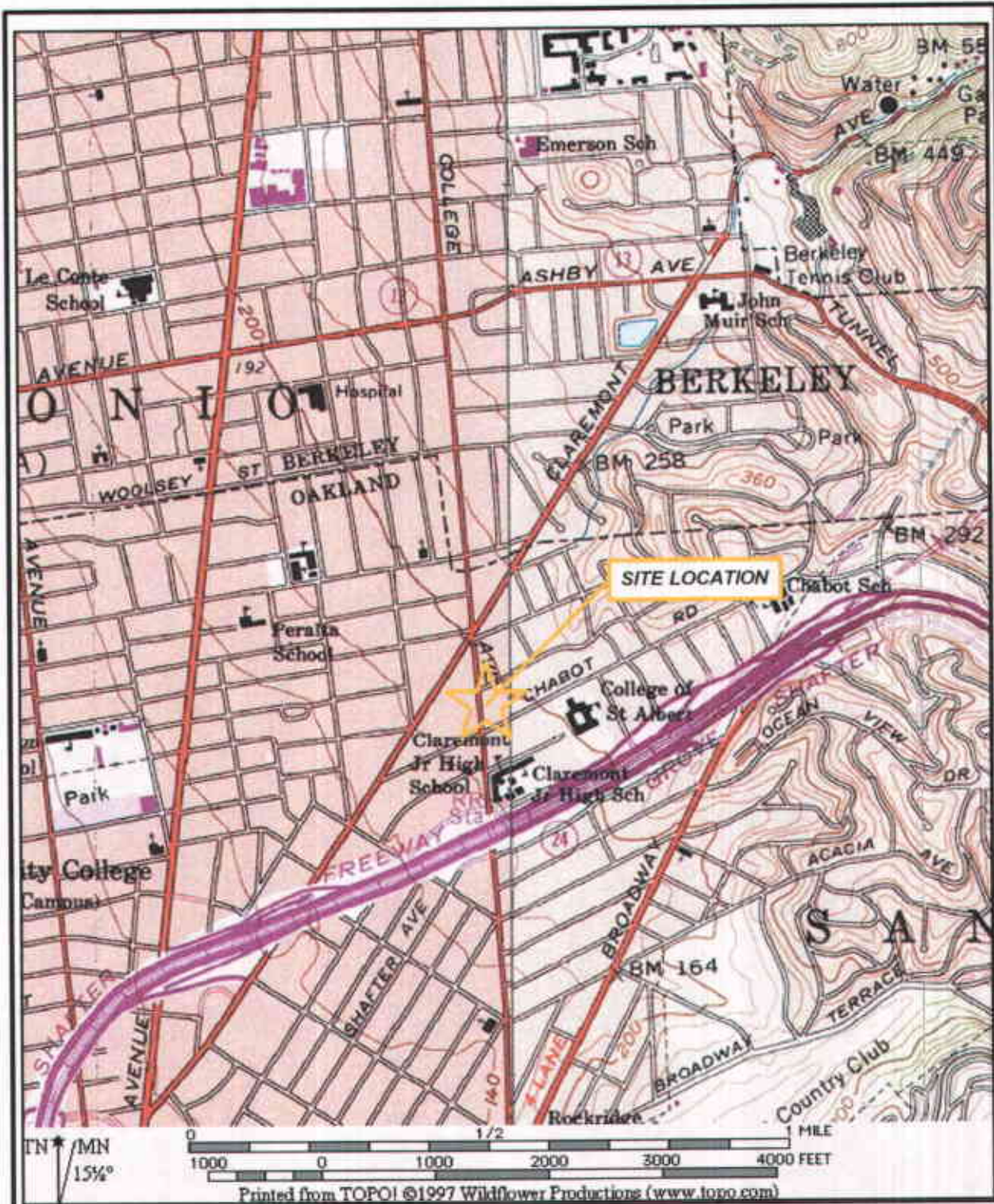
A copy of this quarterly groundwater monitoring report be submitted to the following site representatives:

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

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*(2 Copies; Bound)*



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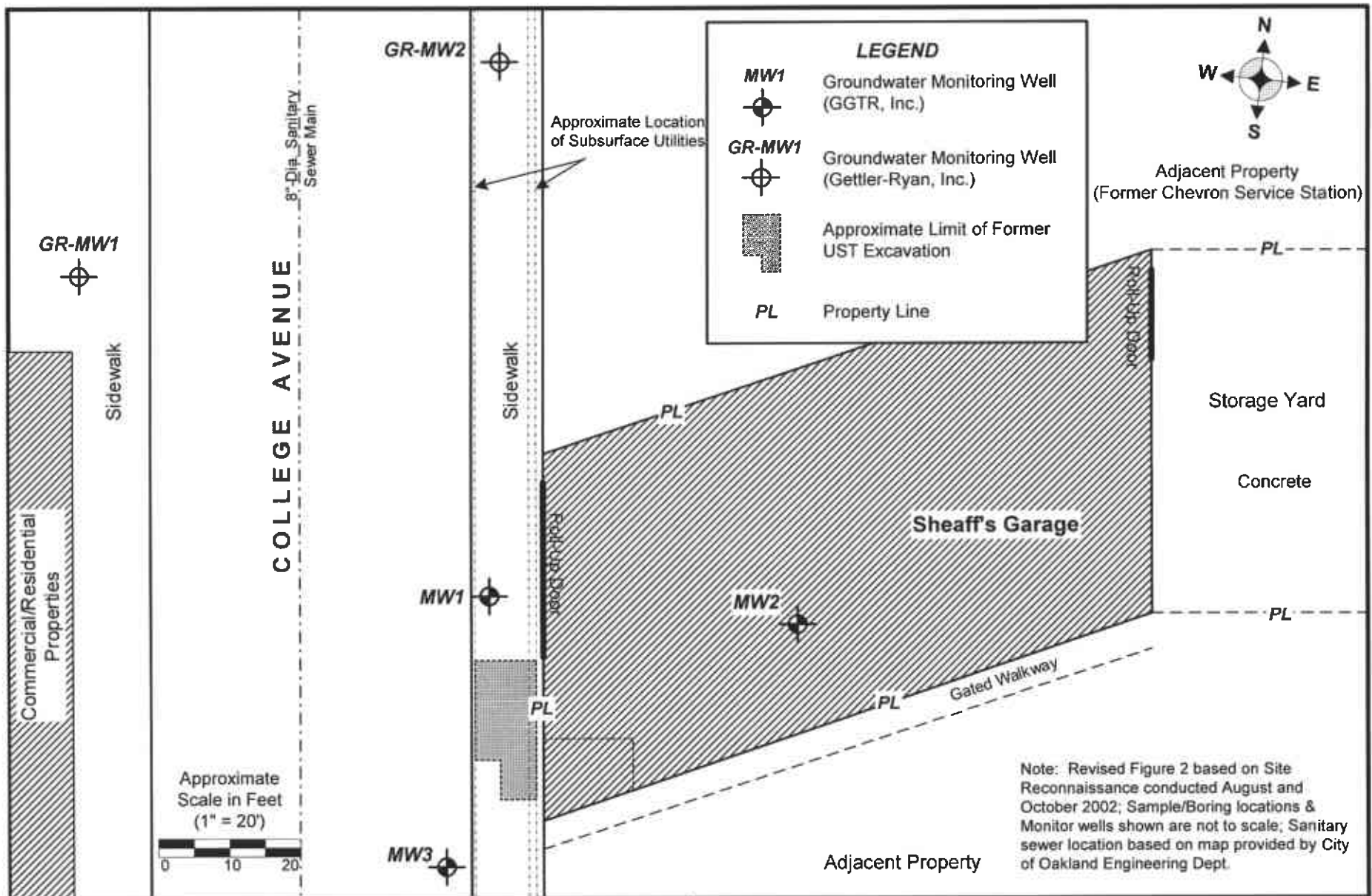
**SITE LOCATION MAP**  
 Sheaff's Garage  
 5930 College Avenue  
 Oakland, California

GGTR Project No. 7335

Fr: 7335.sc.wp.F1

Revision By: baw/12.03

Figure 1



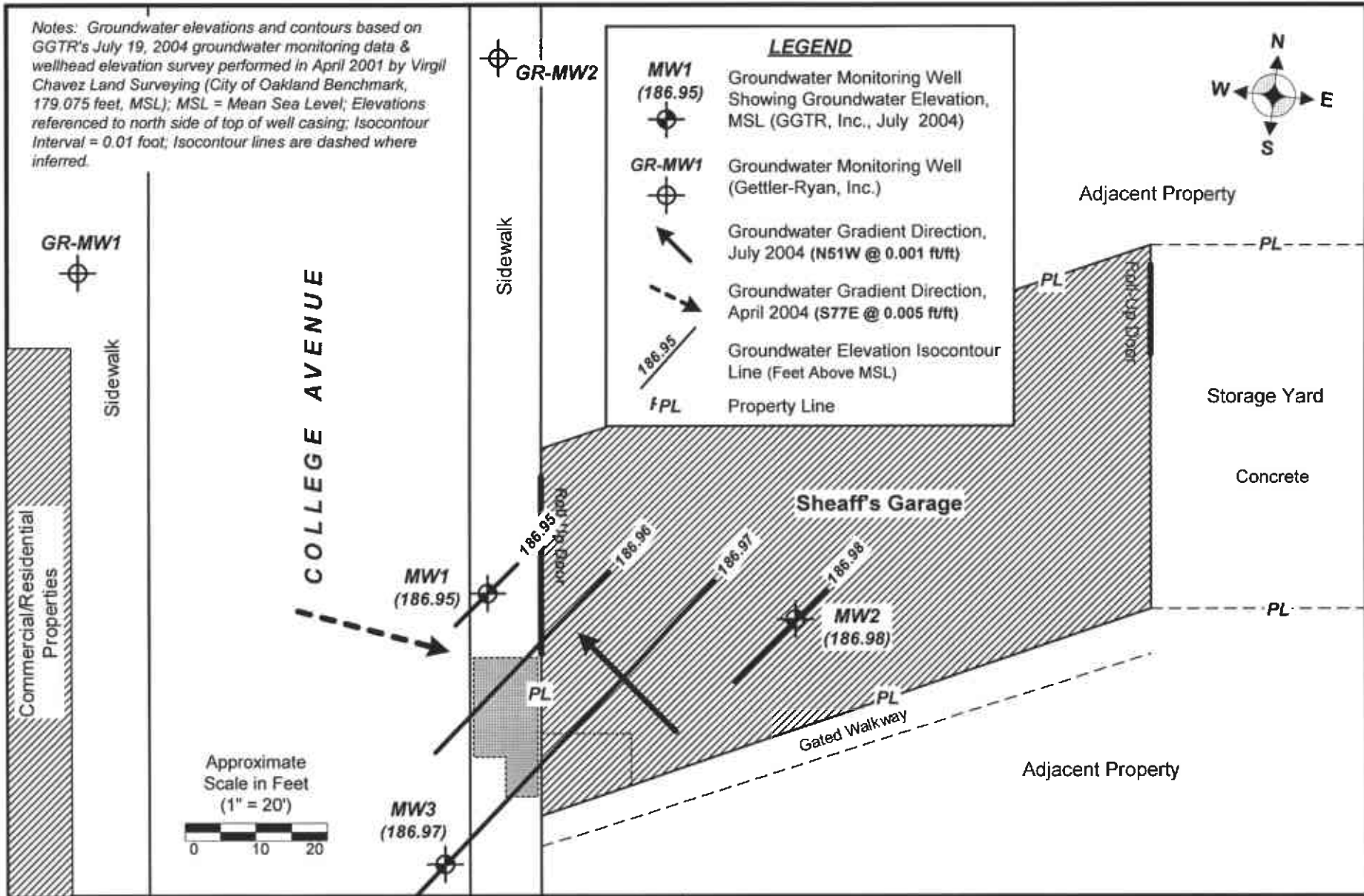
**GOLDEN GATE TANK REMOVAL**

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

Notes: Groundwater elevations and contours based on GGTR's July 19, 2004 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 = 0.01 foot; Isocontour lines are dashed where inferred.



**LEGEND**

- MW1 (186.95)** Groundwater Monitoring Well Showing Groundwater Elevation, MSL (GGTR, Inc., July 2004)
- GR-MW1** Groundwater Monitoring Well (Gettler-Ryan, Inc.)
- Groundwater Gradient Direction, July 2004 (N51W @ 0.001 ft/ft)**
- Groundwater Gradient Direction, April 2004 (S77E @ 0.005 ft/ft)**
- Groundwater Elevation Isocontour Line (Feet Above MSL)**
- FPL** Property Line

**GOLDEN GATE TANK REMOVAL, INC.**  
 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

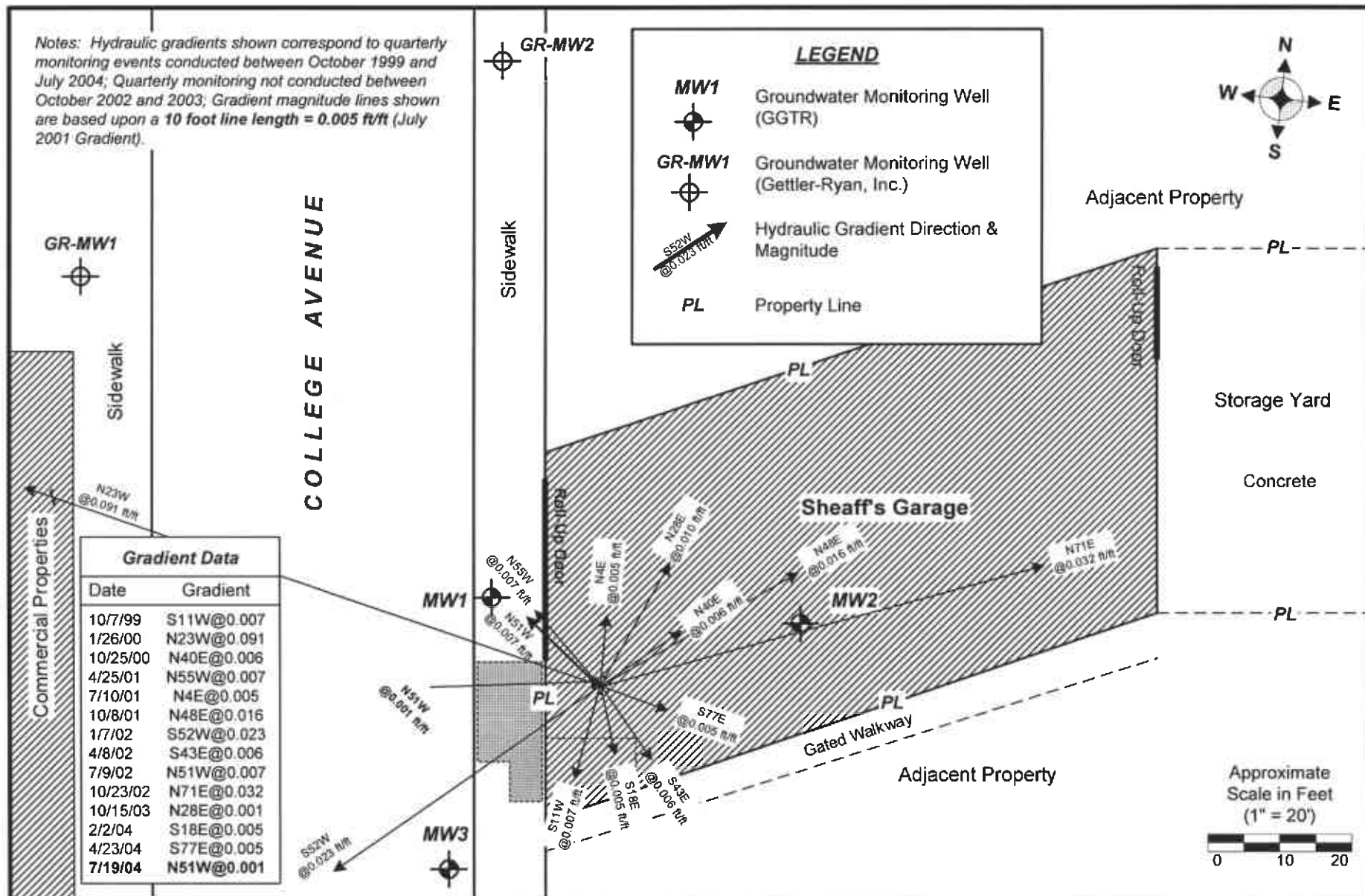
Fn: 7335.GWM.F3.07.04

Revision By: baw/11.04

**FIGURE 3**



Notes: Hydraulic gradients shown correspond to quarterly monitoring events conducted between October 1999 and July 2004; Quarterly monitoring not conducted between October 2002 and 2003; Gradient magnitude lines shown are based upon a 10 foot line length = 0.005 ft/ft (July 2001 Gradient).



Gradient Data	
Date	Gradient
10/7/99	S11W@0.007
1/26/00	N23W@0.091
10/25/00	N40E@0.006
4/25/01	N55W@0.007
7/10/01	N4E@0.005
10/8/01	N48E@0.016
1/7/02	S52W@0.023
4/8/02	S43E@0.006
7/9/02	N51W@0.007
10/23/02	N71E@0.032
10/15/03	N28E@0.001
2/2/04	S18E@0.005
4/23/04	S77E@0.005
7/19/04	N51W@0.001

**GOLDEN GATE TANK REMOVAL, INC.**

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**ROSE DIAGRAM: HISTORICAL HYDRAULIC GRADIENT**

Sheaff's Garage  
 5930 College Avenue, Oakland, California

**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
	02/02/04	195.90	7.35	188.55	none	108,000	--	50,118 <sup>12</sup>	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> )	7260 / 2270 / 2510 / 10,100	
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 July 2003 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 (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)
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 (MTBE)	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
	02/02/04	197.28	8.80	188.48	none	21,700	--	8,020 <sup>13</sup>	168 (200 <sup>3</sup> )	2,130 / 51 / 1,030 / 2,060
	04/23/04	197.28	8.40	188.88	Slight odor	30,400	--	13,921 <sup>16</sup>	112 (203 <sup>3</sup> )	3,570 / 322 / 1,620 / 4,140
07/19/04	197.28	10.30	186.98	odor	28,300	--	10,284 <sup>19</sup>	283 (373 <sup>3</sup> )	2540 / 239 / 1320 / 2300	
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 July 2003 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	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	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
	02/02/04	195.22	6.85	188.37	Sheen/odor	5,140	--	769.5 <sup>14</sup>	ND (ND <sup>3</sup> )	126 / 8.7 / 134 / 238
04/23/04	195.22	6.17	189.05	none	7,210	--	2,807.9 <sup>17</sup>	ND (ND <sup>3</sup> )	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 <sup>3</sup> )	20.4 / 3.2 / 30.6 / 117	
TB	02/02/04			NA		--	--	--	--	ND / ND / ND / ND
	04/23/04			NA		--	--	--	--	ND / ND / ND / ND
	07/19/04			NA		--	--	--	--	ND / ND / ND / ND
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 July 2003 ESL						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; 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

**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
- <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)
- <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)
- <sup>14</sup> - 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)
- <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)

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

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

- <sup>16</sup> - VOC concentrations reported as 203 ug/l MTBE, 4,570 ug/l benzene, 511 ug/l toluene, 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)
- <sup>17</sup> - 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)
- <sup>18</sup> - VOC concentrations reported as 303 ug/l MTBE, 11200 ug/l benzene, 2440 ug/l toluene, 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.
- <sup>20</sup> - VOC concentrations reported as 39.3 ug/l benzene, 3.6 ug/l toluene, 31 ug/l ethylbenzene, 59.3ug/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)

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 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 FORM  
FLUID-LEVEL MONITORING DATA SHEET  
WELL PURGING/SAMPLING DATA SHEETS  
GEOTRACKER AB2886 UPLOAD CONFIRMATION FORMS**

**QUARTERLY GROUNDWATER MONITORING REPORT  
July 19, 2004**

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

GGTR Project No. 7335  
November 11, 2004



North State Labs

CA ELAP# 1753

90 South Spruce Avenue, Suite V • South San Francisco, CA 94080 • (650) 266-4563 • FAX (650) 266-4560

## Case Narrative

Client: Golden Gate Tank Removal

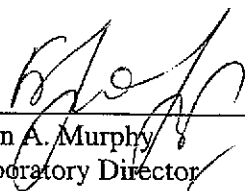
Project: 5930 COLLEGE AVE., OAKLAND

Lab No: 04-1099

Date Received: 07/19/2004

Date reported: 08/12/2004

Four water samples were analyzed for total petroleum hydrocarbons as gasoline by method 8015M, BTEX and MTBE by method 8021B, and VOCs by method 8260B GC/MS. No errors were noted during analysis. Results for quality control samples met all QC/QA criteria.



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John A. Murphy  
Laboratory Director





# North State Labs

CA ELAP# 1753

90 South Spruce Avenue, Suite V • South San Francisco, CA 94080 • (650) 266-4563 • FAX (650) 266-4560

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

Lab Number: 04-1099  
Client: Golden Gate Tank  
Project: 5930 COLLEGE AVE. OAKLAND

Date Reported: 08/12/2004

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

Analyte	Method	Result	Unit	Date Sampled	Date Analyzed
Sample: 04-1099-01	Client ID: 7335-MW-1			07/19/2004	W
Benzene	SW8020F	7260	UG/L		07/26/2004
Ethylbenzene	SW8020F	2510	UG/L		07/26/2004
Gasoline Range Organics	SW8020F	63900	UG/L		07/26/2004
Methyl-tert-butyl ether	SW8020F	*373	UG/L		07/26/2004
Toluene	SW8020F	2270	UG/L		07/26/2004
Xylenes	SW8020F	10100	UG/L		07/26/2004
Sample: 04-1099-02	Client ID: 7335-MW-2			07/19/2004	W
Benzene	SW8020F	2540	UG/L		07/26/2004
Ethylbenzene	SW8020F	1320	UG/L		07/26/2004
Gasoline Range Organics	SW8020F	28300	UG/L		07/26/2004
Methyl-tert-butyl ether	SW8020F	*283	UG/L		07/26/2004
Toluene	SW8020F	239	UG/L		07/26/2004
Xylenes	SW8020F	2300	UG/L		07/26/2004
Sample: 04-1099-03	Client ID: 7335-MW-3			07/19/2004	W
Benzene	SW8020F	20.4	UG/L		07/21/2004
Ethylbenzene	SW8020F	30.6	UG/L		07/21/2004
Gasoline Range Organics	SW8020F	9860	UG/L		07/21/2004
Methyl-tert-butyl ether	SW8020F	*ND<0.5	UG/L		07/21/2004
Toluene	SW8020F	3.2	UG/L		07/21/2004
Xylenes	SW8020F	117	UG/L		07/21/2004

\*Confirmed by GC/MS method 8260B.

Page

1



North State Labs

CA ELAP# 1753

90 South Spruce Avenue, Suite V • South San Francisco, CA 94080 • (650) 266-4563 • FAX (650) 266-4560

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

Quality Control/Quality Assurance

Lab Number: 04-1099  
Client: Golden Gate Tank  
Project: 5930 COLLEGE AVE. OAKLAND

Date Reported: 08/12/2004  
Gasoline, BTEX and MTBE by Methods 8015M/8021B

Analyte	Method	Reporting Unit Limit	Blank	Avg MS/MSD Recovery	RPD
Gasoline Range Organics	SW8020F	50 UG/L	ND	68/87	25
Benzene	SW8020F	0.5 UG/L	ND	84/93	10
Toluene	SW8020F	0.5 UG/L	ND	90/97	7
Ethylbenzene	SW8020F	0.5 UG/L	ND	91/93	2
Xylenes	SW8020F	1.0 UG/L	ND	93/101	8
Methyl-tert-butyl ether	SW8020F	0.5 UG/L	ND	66/75	13

ELAP Certificate NO:1753

Reviewed and Approved

  
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: 04-1099  
Client : Golden Gate Tank  
Project : 5930 COLLEGE AVE. OAKLAND

Date Sampled : 07/19/2004  
Date Analyzed: 07/27/2004  
Date Reported: 08/12/2004

## Volatile Organics by GC/MS Method 8260

Laboratory Number	04-1099-01	04-1099-02	04-1099-03
Client ID	7335-MW-1	7335-MW-2	7335-MW-3
Matrix	W	W	W
Analyte	UG/L	UG/L	UG/L
Bromochloromethane	ND<20	ND<10	ND<1
Dichlorodifluoromethane	ND<20	ND<10	ND<1
Chloromethane	ND<20	ND<10	ND<1
Vinyl chloride	ND<10	ND<5	ND<0.5
Bromomethane	ND<20	ND<10	ND<1
Chloroethane	ND<20	ND<10	ND<1
Trichlorofluoromethane	ND<20	ND<10	ND<1
1,1-Dichloroethene	ND<10	ND<5	ND<0.5
Acetone	ND<200	ND<100	ND<10
Methylene chloride	ND<100	ND<50	ND<5
trans-1,2-Dichloroethene	ND<20	ND<10	ND<1
Methyl-tert-butyl ether	303	373	ND<0.5
1,1-Dichloroethane	ND<10	ND<5	ND<0.5
2,2-Dichloropropane	ND<20	ND<10	ND<1
cis-1,2-Dichloroethene	ND<20	ND<10	ND<1
2-Butanone	ND<100	ND<50	ND<5
Chloroform	ND<10	ND<5	ND<0.5
Carbon tetrachloride	ND<10	ND<5	ND<0.5
1,1-Dichloropropene	ND<20	ND<10	ND<1
Benzene	11200	3670	39.3
1,2-Dichloroethane	ND<20	ND<10	ND<1
Trichloroethene	ND<10	ND<5	ND<0.5
1,2-Dichloropropane	ND<20	ND<10	ND<1
Dibromomethane	ND<20	ND<10	ND<1
Bromodichloromethane	ND<20	ND<10	ND<1
trans-1,3-Dichloropropene	ND<20	ND<10	ND<1
4-Methyl-2-pentanone	ND<20	ND<10	ND<1
Toluene	2440	207	3.6
cis-1,3-Dichloropropene	ND<20	ND<10	ND<1
1,1,2-Trichloroethane	ND<20	ND<10	ND<1
Tetrachloroethene	ND<10	ND<5	ND<0.5
1,3-Dichloropropane	ND<20	ND<10	ND<1
2-Hexanone	ND<20	ND<10	ND<1
Dibromochloromethane	ND<20	ND<10	ND<1
1,2-Dibromoethane	ND<10	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: 04-1099
Client : Golden Gate Tank
Project : 5930 COLLEGE AVE. OAKLAND

Date Sampled : 07/19/2004
Date Analyzed: 07/27/2004
Date Reported: 08/12/2004

Volatile Organics by GC/MS Method 8260

Table with 4 columns: Laboratory Number, Client ID, Matrix, Analyte, and three columns of results (04-1099-01, 04-1099-02, 04-1099-03). Rows list various analytes like Chlorobenzene, Xylene, Styrene, etc.

Comments:



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

Job Number: 04-1099
Client : Golden Gate Tank
Project : 5930 COLLEGE AVE. OAKLAND

Date Sampled : 07/19/2004
Date Analyzed: 07/27/2004
Date Reported: 08/12/2004

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 chemical analytes and their corresponding results and recovery percentages.



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

Number: 04-1099  
nt : Golden Gate Tank  
ect : 5930 COLLEGE AVE. OAKLAND

Date Sampled : 07/19/2004  
Date Analyzed: 07/27/2004  
Date Reported: 08/12/2004

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

atory Number	04-1099	MS/MSD	RPD	Recovery	RPD
at ID	Blank	Recovery		Limit	Limit
.x	W	W			
rite	Results	%Recoveries			
	UG/L				
form	ND<1				
opylbenzene	ND<1				
benzene	ND<1				
,2-Tetrachloroethane	ND<1				
pylbenzene	ND<1				
rotoluene	ND<1				
rotoluene	ND<1				
-Trimethylbenzene	ND<1				
Butylbenzene	ND<1				
-Trimethylbenzene	ND<1				
ichlorobenzene	ND<1				
ichlorobenzene	ND<1				
utylbenzene	ND<1				
ichlorobenzene	ND<1				
ylbenzene	ND<1				
halene	ND<1				
-Trichlorobenzene	ND<1				
lorobutadiene	ND<1				
-Trichlorobenzene	ND<1				
-Trichloropropane	ND<1				
nitrile	ND<5				
onitrile	ND<1				
anol	ND<5				
-Trichloroethane	ND<1				
ibromofluoromethane	104	109/110	1	67-129	21
oluene-d8	107	99/100	1	72-119	16
-Bromofluorobenzene	100	101/101	0	78-121	19
,2-Dichloroethane-d4	94	100/106	6	85-115	25

ved and Approved

*[Signature]*  
A. Murphy  
atory Director



# North State Labs

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

04-1099

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

Client: GOLDEN GATE TANK REMOVAL	Report to: BRYANT WHITE LER	Phone: 415-512-1935	Turnaround Time 5-10 DAT
Mailing Address: 6611Z 255 SHIPLEY ST SF CA 94107	Billing to: → SAME	Fax: 415-512-0964	
		email:	Date: 07-19-04
		PO# 7335	Sampler: K.A.

Project / Site Address / Global ID: T0600102112					Analysis Requested							EDF <input checked="" type="checkbox"/>	Field Point ID
Sample ID	Sample Type	Container No. / Type	Pres.	Sampling Date / Time	6/Box / MIBC	SW9020/F	VOCs	8260	BTEX				
7335-MW-1	G.W.	4/VOAS	HCl	7-19-04 / 1210	X	X							7335-MW-1
7335-MW-2	↓	↓	↓	↓ / 1135	X	X							7335-MW-2
7335-MW-3	↓	↓	↓	↓ / 1045	X	X							7335-MW-3
7335-TB	DI H2O	2/VOAS	✓	↓ / 0800				X					7335-TB

Relinquished by: KAN ATKINSON	Date: 7-19-04	Time: 1335	Received by: [Signature]	Lab Comments/ Hazards
Relinquished by:	Date:	Time:	Received by:	
Relinquished by:	Date:	Time:	Received by:	

# QA/QC Report Method Blank Summary

North State Environmental, South San Francisco, CA

Lab Report No.: 04-1099    Date: 08/12/2004

Page: 16

QC Batch: 072748260W	Analysis: Volatile Organic Compounds by GC/MS
Matrix: Water	Method: SW8260B
Lab Samp ID: BLK	Prep Meth: SW5030B
Analysis Date: 07/27/2004	Prep Date: 07/27/2004
Basis: Wet	Notes:

Analyte	Det Limit	Rep Limit	Note	Result	Units	Pvc Dil
Acetone	5.850	10.	PQL	ND	UG/L	1
Acetonitrile	2.069	5.	PQL	ND	UG/L	1
Acrylonitrile	0.354	1.	PQL	ND	UG/L	1
Benzene	0.176	0.5	PQL	ND	UG/L	1
Bromochloromethane	0.255	1.	PQL	ND	UG/L	1
Bromodichloromethane	0.147	1.	PQL	ND	UG/L	1
Bromoform	0.219	1.	PQL	ND	UG/L	1
Bromomethane	0.132	1.	PQL	ND	UG/L	1
2-Butanone	1.417	5.	PQL	ND	UG/L	1
Carbon tetrachloride	0.148	0.5	PQL	ND	UG/L	1
Chlorobenzene	0.101	1.	PQL	ND	UG/L	1
Dibromochloromethane	0.148	1.	PQL	ND	UG/L	1
Chloroethane	0.232	1.	PQL	ND	UG/L	1
Chloroform	0.158	0.5	PQL	ND	UG/L	1
Chloromethane	0.363	1.	PQL	ND	UG/L	1
1,2-Dibromoethane	0.216	0.5	PQL	ND	UG/L	1
Dibromomethane	0.176	1.	PQL	ND	UG/L	1
1,2-Dichlorobenzene	0.150	1.	PQL	ND	UG/L	1
1,3-Dichlorobenzene	0.130	1.	PQL	ND	UG/L	1
1,4-Dichlorobenzene	0.122	1.	PQL	ND	UG/L	1
Dichlorodifluoromethane	0.411	1.	PQL	ND	UG/L	1
1,1-Dichloroethane	0.110	0.5	PQL	ND	UG/L	1
1,2-Dichloroethane	0.167	1.	PQL	ND	UG/L	1
1,1-Dichloroethene	0.139	0.5	PQL	ND	UG/L	1
trans-1,2-Dichloroethene	0.084	1.	PQL	ND	UG/L	1
1,2-Dichloropropane	0.197	1.	PQL	ND	UG/L	1
cis-1,3-Dichloropropene	0.158	1.	PQL	ND	UG/L	1
trans-1,3-Dichloropropene	0.320	1.	PQL	ND	UG/L	1
Ethylbenzene	0.378	0.5	PQL	ND	UG/L	1
Hexachlorobutadiene	0.641	1.	PQL	ND	UG/L	1



# QA/QC Report Method Blank Summary

North State Environmental, South San Francisco, CA

Lab Report No.: 04-1099 Date: 08/12/2004

Page: 17

QC Batch: 072748260W Matrix: Water Lab Samp ID: BLK Analysis Date: 07/27/2004 Basis: Wet	Analysis: Volatile Organic Compounds by GC/MS Method: SW8260B Prep Meth: SW5030B Prep Date: 07/27/2004 Notes:					
Analyte	Det Limit	Rep Limit	Note	Result	Units	Pvc Dil
2-Hexanone	0.295	1.	PQL	ND	UG/L	1
Isobutanol	1.296	5.	PQL	ND	UG/L	1
Isopropylbenzene	0.125	1.	PQL	ND	UG/L	1
Methylene chloride	0.692	5.	PQL	ND	UG/L	1
4-Methyl-2-pentanone	0.354	1.	PQL	ND	UG/L	1
Naphthalene	0.785	1.	PQL	ND	UG/L	1
Styrene	0.109	1.	PQL	ND	UG/L	1
1,1,1,2-Tetrachloroethane	0.138	1.	PQL	ND	UG/L	1
1,1,2,2-Tetrachloroethane	0.355	1.	PQL	ND	UG/L	1
Tetrachloroethene (PCE)	0.084	0.5	PQL	ND	UG/L	1
Toluene	0.478	0.5	PQL	ND	UG/L	1
1,2,4-Trichlorobenzene	0.207	1.	PQL	ND	UG/L	1
1,1,1-Trichloroethane	0.29	1.	PQL	ND	UG/L	1
1,1,2-Trichloroethane	0.172	1.	PQL	ND	UG/L	1
Trichloroethene (TCE)	0.120	0.5	PQL	ND	UG/L	1
Trichlorofluoromethane	0.092	1.	PQL	ND	UG/L	1
1,2,3-Trichloropropane	0.269	1.	PQL	ND	UG/L	1
Vinyl chloride	0.360	0.5	PQL	ND	UG/L	1
o-Xylene	0.319	0.5	PQL	ND	UG/L	1
Bromobenzene	0.627	1.	PQL	ND	UG/L	1
n-Butylbenzene	0.166	1.	PQL	ND	UG/L	1
sec-Butylbenzene	0.743	1.	PQL	ND	UG/L	1
tert-Butylbenzene	0.099	1.	PQL	ND	UG/L	1
2-Chlorotoluene	0.089	1.	PQL	ND	UG/L	1
4-Chlorotoluene	0.061	1.	PQL	ND	UG/L	1
cis-1,2-Dichloroethene	0.094	1.	PQL	ND	UG/L	1
1,3-Dichloropropane	0.160	1.	PQL	ND	UG/L	1
2,2-Dichloropropane	0.675	1.	PQL	ND	UG/L	1
1,1-Dichloropropene	0.058	1.	PQL	ND	UG/L	1
Methyl-tert-butyl ether (MTBE)	0.314	0.5	PQL	ND	UG/L	1

# QA/QC Report Method Blank Summary

North State Environmental, South San Francisco, CA

Lab Report No.: 04-1099    Date: 08/12/2004

Page: 18

QC Batch: 072748260W Matrix: Water Lab Samp ID: BLK Analysis Date: 07/27/2004 Basis: Wet	Analysis: Volatile Organic Compounds by GC/MS Method: SW8260B Prep Meth: SW5030B Prep Date: 07/27/2004 Notes:					
Analyte	Det Limit	Rep Limit	Note	Result	Units	Pvc Dil
n-Propylbenzene	0.300	1. PQL		ND	UG/L	1
1,2,3-Trichlorobenzene	0.56	1. PQL		ND	UG/L	1
1,2,4-Trimethylbenzene	0.644	1. PQL		ND	UG/L	1
1,3,5-Trimethylbenzene	0.644	1. PQL		ND	UG/L	1
Xylene, Isomers m & p	0.771	1. PQL		ND	UG/L	1
<b>SURROGATE AND INTERNAL STANDARD RECOVERIES:</b>						
4-Bromofluorobenzene		78-121 SLSA		100%		1
Toluene-d8		72-119 SLSA		107%		1
Dibromofluoromethane		67-129 SLSA		104%		1
1,2-Dichloroethane-d4		85-115 SLSA		94%		1

**QA/QC Report**  
**Matrix Spike/Duplicate Matrix Spike Summary**

North State Environmental, South San Francisco, CA

Lab Report No.: 04-1099 Date: 08/12/2004

QC Batch: 072748260W  
 Matrix: Water  
 Lab Samp ID: 1117-01MS  
 Basis: Wet

Project Name: Lab Generated or Non COE Sample  
 Project No.: Lab Generated or Non COE Sample  
 Field ID: Lab Generated or Non COE Sample  
 Lab Ref ID: 04-1117-01

Analyte	Analysis Method	Spike Level		Sample Result	Spike Result		Units	% Recoveries			Acceptance Criteria		
		MS	DMS		MS	DMS		MS	DMS	RPD	% Rec	MSA	RPD
1,1-Dichloroethene	SW8260B	20.0	20.0	ND	21.2	20.3	UG/L ww	106	102	3.8	128-61	MSA	25MSP
Benzene	SW8260B	20.	20.	1.	24.4	25.3	UG/L ww	117	122	4.2	135-74	MSA	21MSP
Chlorobenzene	SW8260B	20.	20.	ND	23.	22.	UG/L ww	115	110	4.4	139-70	MSA	19MSP
Toluene	SW8260B	20.0	20.0	ND	23.7	22.3	UG/L ww	119	112	6.1	141-61	MSA	19MSP
Trichloroethene (TCE)	SW8260B	20.0	20.0	ND	23.1	22.5	UG/L ww	116	113	2.6	129-69	MSA	20MSP
1,2-Dichloroethane-d4	SW8260B	100.	100.	101.	100.	106.	PERCENT ww	100	106	5.8	115-85	SLSA	25SLSP
4-Bromofluorobenzene	SW8260B	100.	100.	101.	101.	101.	PERCENT ww	101	101	0.00	121-78	SLSA	19SLSP
Dibromofluoromethane	SW8260B	100.	100.	106.	109.	110.	PERCENT ww	109	110	0.91	129-67	SLSA	21SLSP
Toluene-d8	SW8260B	100.	100.	99.	99.	100.	PERCENT ww	99.0	100	1.0	119-72	SLSA	16SLSP

Lab Report No.: 04-1099 Date: 08/12/2004

Page: 4

Project Name: 5930 COLLEGE AVE. Project No: 04-1099	Analysis: BTEX/Gasoline Range Organics (SW8020/8015) Method: SW8020F Prep Meth: SW5030B					
Field ID: 7335-TB Descr/Location: 7335-TB Sample Date: 07/19/2004 Sample Time: 0800 Matrix: Water Basis: Wet	Lab Samp ID: 04-1099-04 Rec'd Date: 07/19/2004 Prep Date: 07/21/2004 Analysis Date: 07/21/2004 QC Batch: 07214MGBXW Notes:					
Analyte	Det Limit	Rep Limit	Note	Result	Units	Pvc Dil
Benzene	0.076	0.5 PQL		ND	UG/L	1
Toluene	0.160	0.5 PQL		ND	UG/L	1
Ethylbenzene	0.215	0.5 PQL		ND	UG/L	1
Xylenes	0.211	1.0 PQL		ND	UG/L	1

Approved by: \_\_\_\_\_

Date: \_\_\_\_\_

# QA/QC Report Method Blank Summary

North State Environmental, South San Francisco, CA

Lab Report No.: 04-1099    Date: 08/12/2004

Page: 14

QC Batch: 07214MGBXW Matrix: Water Lab Samp ID: BLK Analysis Date: 07/21/2004 Basis: Wet	Analysis: BTEX/Gasoline Range Organics Method: SW8020F Prep Meth: SW5030B Prep Date: 07/21/2004 Notes:					
Analyte	Det Limit	Rep Limit	Note	Result	Units	Pvc Dil
Gasoline Range Organics	4.066	50.    PQL		ND	UG/L	1
Benzene	0.076	0.5    PQL		ND	UG/L	1
Toluene	0.160	0.5    PQL		ND	UG/L	1
Ethylbenzene	0.215	0.5    PQL		ND	UG/L	1
Xylenes	0.211	1.0    PQL		ND	UG/L	1
Methyl-tert-butyl ether (MTBE)	0.088	0.5    PQL		ND	UG/L	1

# QA/QC Report

## Matrix Spike/Duplicate Matrix Spike Summary

North State Environmental, South San Francisco, CA

Lab Report No.: 04-1099 Date: 08/12/2004

QC Batch: 07214MGBXW  
 Matrix: Water  
 Lab Samp ID: 1118-03MS  
 Basis: Wet

Project Name: Lab Generated or Non COE Sample  
 Project No.: Lab Generated or Non COE Sample  
 Field ID: Lab Generated or Non COE Sample  
 Lab Ref ID: 04-1118-03

Analyte	Analysis Method	Spike Level		Sample Result	Spike Result		Units	% Recoveries			Acceptance Criteria		
		MS	DMS		MS	DMS		MS	DMS	RPD	% Rec	RPD	
Benzene	SW8020F	100.0	100.0	ND	83.5	93.2	UG/L ww	83.5	93.2	11	123-59	MSA	21MSP
Ethylbenzene	SW8020F	100.0	100.0	ND	90.5	93.2	UG/L ww	90.5	93.2	2.9	130-76	MSA	15MSP
Gasoline Range Organics	SW8020F	1000.	1000.	205.	882.	1070.	UG/L ww	67.7	86.5	24	133-64	MSA	25MSP
Methyl-tert-butyl ether (MTBE)	SW8020F	100.0	100.0	ND	65.8	75.2	UG/L ww	65.8	75.2	13	121-59	MSA	28MSP
Toluene	SW8020F	100.0	100.0	ND	90.1	96.7	UG/L ww	90.1	96.7	7.1	119-75	MSA	11MSP
Xylenes	SW8020F	300.	300.	1.6	280.	306.	UG/L ww	92.8	101	8.5	129-78	MSA	11MSP

North State Environmental, South San Francisco, CA

Lab Report No.: 04-1099 Date: 08/12/2004

Page: 1

Project Name: 5930 COLLEGE AVE. Project No: 04-1099	Analysis: BTEX/Gasoline Range Organics (SW8020/8015) Method: SW8020F Prep Meth: SW5030B					
Field ID: 7335-MW-1 Descr/Location: 7335-MW-1 Sample Date: 07/19/2004 Sample Time: 1210 Matrix: Water Basis: Wet	Lab Samp ID: 04-1099-01 Rec'd Date: 07/19/2004 Prep Date: 07/26/2004 Analysis Date: 07/26/2004 QC Batch: 07214MGBXW Notes: DG					
Analyte	Det Limit	Rep Limit	Note	Result	Units	Pvc Dil
Gasoline Range Organics	4.066	2500.	PQL	63900	UG/L	50
Benzene	0.076	25.	PQL	7260	UG/L	50
Toluene	0.160	25.	PQL	2270	UG/L	50
Ethylbenzene	0.215	25.	PQL	2510	UG/L	50
Xylenes	0.211	50.	PQL	10100	UG/L	50
Methyl-tert-butyl ether (MTBE)	0.088	25.	PQL GI	373	UG/L	50
DG: Reporting limits elevated due to sample dilution GI: Analyte confirmed by GC/MS						

Approved by: \_\_\_\_\_ Date: \_\_\_\_\_

Lab Report No.: 04-1099 Date: 08/12/2004

Page: 5

Project Name: 5930 COLLEGE AVE. Analysis: Volatile Organic Compounds by GC/MS  
 Project No: 04-1099 Method: SW8260B  
 Prep Meth: SW5030B

Field ID: 7335-MW-1 Lab Samp ID: 04-1099-01  
 Descr/Location: 7335-MW-1 Rec'd Date: 07/19/2004  
 Sample Date: 07/19/2004 Prep Date: 07/27/2004  
 Sample Time: 1210 Analysis Date: 07/27/2004  
 Matrix: Water QC Batch: 072748260W  
 Basis: Wet Notes: DG

Analyte	Det Limit	Rep Limit	Note	Result	Units	Pvc Dil
Acetone	5.850	200.	PQL	ND	UG/L	20
Acetonitrile	2.069	100.	PQL	ND	UG/L	20
Acrylonitrile	0.354	20.	PQL	ND	UG/L	20
Benzene	0.176	10.	PQL	EM 11200	UG/L	20
Bromochloromethane	0.255	20.	PQL	ND	UG/L	20
Bromodichloromethane	0.147	20.	PQL	ND	UG/L	20
Bromoform	0.219	20.	PQL	ND	UG/L	20
Bromomethane	0.132	20.	PQL	ND	UG/L	20
2-Butanone	1.417	100.	PQL	ND	UG/L	20
Carbon tetrachloride	0.148	10.	PQL	ND	UG/L	20
Chlorobenzene	0.101	20.	PQL	ND	UG/L	20
Dibromochloromethane	0.148	20.	PQL	ND	UG/L	20
Chloroethane	0.232	20.	PQL	ND	UG/L	20
Chloroform	0.158	10.	PQL	ND	UG/L	20
Chloromethane	0.363	20.	PQL	ND	UG/L	20
1,2-Dibromoethane	0.216	10.	PQL	ND	UG/L	20
Dibromomethane	0.176	20.	PQL	ND	UG/L	20
1,2-Dichlorobenzene	0.150	20.	PQL	ND	UG/L	20
1,3-Dichlorobenzene	0.130	20.	PQL	ND	UG/L	20
1,4-Dichlorobenzene	0.122	20.	PQL	ND	UG/L	20
Dichlorodifluoromethane	0.411	20.	PQL	ND	UG/L	20
1,1-Dichloroethane	0.110	10.	PQL	ND	UG/L	20
1,2-Dichloroethane	0.167	20.	PQL	ND	UG/L	20
1,1-Dichloroethene	0.139	10.	PQL	ND	UG/L	20
trans-1,2-Dichloroethene	0.084	20.	PQL	ND	UG/L	20
1,2-Dichloropropane	0.197	20.	PQL	ND	UG/L	20
cis-1,3-Dichloropropene	0.158	20.	PQL	ND	UG/L	20
trans-1,3-Dichloropropene	0.320	20.	PQL	ND	UG/L	20

DG: Reporting limits elevated due to sample dilution

EM: Compound quantitated at a 200x dilution factor

Approved by: \_\_\_\_\_

Date: \_\_\_\_\_



Lab Report No.: 04-1099 Date: 08/12/2004

Page: 6

Project Name: 5930 COLLEGE AVE.		Analysis: Volatile Organic Compounds by GC/MS					
Project No: 04-1099		Method: SW8260B					
		Prep Meth: SW5030B					
Field ID: 7335-MW-1		Lab Samp ID: 04-1099-01					
Descr/Location: 7335-MW-1		Rec'd Date: 07/19/2004					
Sample Date: 07/19/2004		Prep Date: 07/27/2004					
Sample Time: 1210		Analysis Date: 07/27/2004					
Matrix: Water		QC Batch: 072748260W					
Basis: Wet		Notes: DG					
Analyte	Det Limit	Rep Limit		Note	Result	Units	Pvc Dil
Ethylbenzene	0.378	10.	PQL	EM	2730	UG/L	20
Hexachlorobutadiene	0.641	20.	PQL		ND	UG/L	20
2-Hexanone	0.295	20.	PQL		ND	UG/L	20
Isobutanol	1.296	100.	PQL		ND	UG/L	20
Isopropylbenzene	0.125	20.	PQL		89.	UG/L	20
Methylene chloride	0.692	100.	PQL		ND	UG/L	20
4-Methyl-2-pentanone	0.354	20.	PQL		ND	UG/L	20
Naphthalene	0.785	20.	PQL		801.	UG/L	20
Styrene	0.109	20.	PQL		ND	UG/L	20
1,1,1,2-Tetrachloroethane	0.138	20.	PQL		ND	UG/L	20
1,1,2,2-Tetrachloroethane	0.355	20.	PQL		ND	UG/L	20
Tetrachloroethene (PCE)	0.084	10.	PQL		ND	UG/L	20
Toluene	0.478	10.	PQL	EM	2440	UG/L	20
1,2,4-Trichlorobenzene	0.207	20.	PQL		ND	UG/L	20
1,1,1-Trichloroethane	0.29	20.	PQL		ND	UG/L	20
1,1,2-Trichloroethane	0.172	20.	PQL		ND	UG/L	20
Trichloroethene (TCE)	0.120	10.	PQL		ND	UG/L	20
Trichlorofluoromethane	0.092	20.	PQL		ND	UG/L	20
1,2,3-Trichloropropane	0.269	20.	PQL		ND	UG/L	20
Vinyl chloride	0.360	10.	PQL		ND	UG/L	20
o-Xylene	0.319	10.	PQL	EM	4130	UG/L	20
Bromobenzene	0.627	20.	PQL		ND	UG/L	20
n-Butylbenzene	0.166	20.	PQL		ND	UG/L	20
sec-Butylbenzene	0.743	20.	PQL		ND	UG/L	20
tert-Butylbenzene	0.099	20.	PQL		ND	UG/L	20
2-Chlorotoluene	0.089	20.	PQL		ND	UG/L	20
4-Chlorotoluene	0.061	20.	PQL		ND	UG/L	20
cis-1,2-Dichloroethene	0.094	20.	PQL		ND	UG/L	20
DG: Reporting limits elevated due to sample dilution							
EM: Compound quantitated at a 200x dilution factor							

Approved by: \_\_\_\_\_

Date: \_\_\_\_\_

Lab Report No.: 04-1099 Date: 08/12/2004

Project Name: 5930 COLLEGE AVE.		Analysis: Volatile Organic Compounds by GC/MS				
Project No: 04-1099		Method: SW8260B				
		Prep Meth: SW5030B				
Field ID: 7335-MW-1		Lab Samp ID: 04-1099-01				
Descr/Location: 7335-MW-1		Rec'd Date: 07/19/2004				
Sample Date: 07/19/2004		Prep Date: 07/27/2004				
Sample Time: 1210		Analysis Date: 07/27/2004				
Matrix: Water		QC Batch: 072748260W				
Basis: Wet		Notes: DG				
Analyte	Det Limit	Rep Limit	Note	Result	Units	Pvc Dil
1,3-Dichloropropane	0.160	20. PQL		ND	UG/L	20
2,2-Dichloropropane	0.675	20. PQL		ND	UG/L	20
1,1-Dichloropropene	0.058	20. PQL		ND	UG/L	20
Methyl-tert-butyl ether (MTBE)	0.314	10. PQL	EM	303.	UG/L	20
n-Propylbenzene	0.300	20. PQL		239.	UG/L	20
1,2,3-Trichlorobenzene	0.56	20. PQL		ND	UG/L	20
1,2,4-Trimethylbenzene	0.644	20. PQL	EM	1890.	UG/L	20
1,3,5-Trimethylbenzene	0.644	20. PQL		507.	UG/L	20
Xylene, Isomers m & p	0.771	20. PQL	EM	8410.	UG/L	20
SURROGATE AND INTERNAL STANDARD RECOVERIES:						
4-Bromofluorobenzene		78-121	SLSA	104%		1
Toluene-d8		72-119	SLSA	98%		1
Dibromofluoromethane		67-129	SLSA	108%		1
1,2-Dichloroethane-d4		85-115	SLSA	105%		1
DG: Reporting limits elevated due to sample dilution						
EM: Compound quantitated at a 200x dilution factor						

Approved by: \_\_\_\_\_

Date: \_\_\_\_\_

Lab Report No.: 04-1099 Date: 08/12/2004

Page: 2

Project Name: 5930 COLLEGE AVE. Project No: 04-1099	Analysis: BTEX/Gasoline Range Organics (SW8020/8015) Method: SW8020F Prep Meth: SW5030B					
Field ID: 7335-MW-2 Descr/Location: 7335-MW-2 Sample Date: 07/19/2004 Sample Time: 1135 Matrix: Water Basis: Wet	Lab Samp ID: 04-1099-02 Rec'd Date: 07/19/2004 Prep Date: 07/26/2004 Analysis Date: 07/26/2004 QC Batch: 07214MGBXW Notes: DG					
Analyte	Det Limit	Rep Limit	Note	Result	Units	Pvc Dil
Gasoline Range Organics	4.066	1000.	PQL	28300.	UG/L	20
Benzene	0.076	10.	PQL	2540.	UG/L	20
Toluene	0.160	10.	PQL	239.	UG/L	20
Ethylbenzene	0.215	10.	PQL	1320.	UG/L	20
Xylenes	0.211	20.	PQL	2300.	UG/L	20
Methyl-tert-butyl ether (MTBE)	0.088	10.	PQL	283.	UG/L	20
DG: Reporting limits elevated due to sample dilution GI: Analyte confirmed by GC/MS						

Approved by: \_\_\_\_\_

Date: \_\_\_\_\_

Lab Report No.: 04-1099 Date: 08/12/2004

Page: 8

Project Name: 5930 COLLEGE AVE.		Analysis: Volatile Organic Compounds by GC/MS				
Project No: 04-1099		Method: SW8260B				
		Prep Meth: SW5030B				
Field ID: 7335-MW-2		Lab Samp ID: 04-1099-02				
Descr/Location: 7335-MW-2		Rec'd Date: 07/19/2004				
Sample Date: 07/19/2004		Prep Date: 07/27/2004				
Sample Time: 1135		Analysis Date: 07/27/2004				
Matrix: Water		QC Batch: 072748260W				
Basis: Wet		Notes: DG				
Analyte	Det Limit	Rep Limit	Note	Result	Units	Pvc Dil
Acetone	5.850	100. PQL		ND	UG/L	10
Acetonitrile	2.069	50. PQL		ND	UG/L	10
Acrylonitrile	0.354	10. PQL		ND	UG/L	10
Benzene	0.176	5. PQL	EL	3670.	UG/L	10
Bromochloromethane	0.255	10. PQL		ND	UG/L	10
Bromodichloromethane	0.147	10. PQL		ND	UG/L	10
Bromoform	0.219	10. PQL		ND	UG/L	10
Bromomethane	0.132	10. PQL		ND	UG/L	10
2-Butanone	1.417	50. PQL		ND	UG/L	10
Carbon tetrachloride	0.148	5. PQL		ND	UG/L	10
Chlorobenzene	0.101	10. PQL		ND	UG/L	10
Dibromochloromethane	0.148	10. PQL		ND	UG/L	10
Chloroethane	0.232	10. PQL		ND	UG/L	10
Chloroform	0.158	5. PQL		ND	UG/L	10
Chloromethane	0.363	10. PQL		ND	UG/L	10
1,2-Dibromoethane	0.216	5. PQL		ND	UG/L	10
Dibromomethane	0.176	10. PQL		ND	UG/L	10
1,2-Dichlorobenzene	0.150	10. PQL		ND	UG/L	10
1,3-Dichlorobenzene	0.130	10. PQL		ND	UG/L	10
1,4-Dichlorobenzene	0.122	10. PQL		ND	UG/L	10
Dichlorodifluoromethane	0.411	10. PQL		ND	UG/L	10
1,1-Dichloroethane	0.110	5. PQL		ND	UG/L	10
1,2-Dichloroethane	0.167	10. PQL		ND	UG/L	10
1,1-Dichloroethene	0.139	5. PQL		ND	UG/L	10
trans-1,2-Dichloroethene	0.084	10. PQL		ND	UG/L	10
1,2-Dichloropropane	0.197	10. PQL		ND	UG/L	10
cis-1,3-Dichloropropene	0.158	10. PQL		ND	UG/L	10
trans-1,3-Dichloropropene	0.320	10. PQL		ND	UG/L	10
DG: Reporting limits elevated due to sample dilution						
EL: Compound quantitated at a 100x dilution factor						

Approved by: \_\_\_\_\_

Date: \_\_\_\_\_

Lab Report No.: 04-1099 Date: 08/12/2004

Page: 9

Project Name: 5930 COLLEGE AVE.	Analysis: Volatile Organic Compounds by GC/MS	
Project No: 04-1099	Method: SW8260B	
	Prep Meth: SW5030B	
Field ID: 7335-MW-2	Lab Samp ID: 04-1099-02	
Descr/Location: 7335-MW-2	Rec'd Date: 07/19/2004	
Sample Date: 07/19/2004	Prep Date: 07/27/2004	
Sample Time: 1135	Analysis Date: 07/27/2004	
Matrix: Water	QC Batch: 072748260W	
Basis: Wet	Notes: DG	

Analyte	Det Limit	Rep Limit	Note	Result	Units	Pvc Dil
Ethylbenzene	0.378	5. PQL	EL	1450	UG/L	10
Hexachlorobutadiene	0.641	10. PQL		ND	UG/L	10
2-Hexanone	0.295	10. PQL		ND	UG/L	10
Isobutanol	1.296	50. PQL		ND	UG/L	10
Isopropylbenzene	0.125	10. PQL		73	UG/L	10
Methylene chloride	0.692	50. PQL		ND	UG/L	10
4-Methyl-2-pentanone	0.354	10. PQL		ND	UG/L	10
Naphthalene	0.785	10. PQL		475	UG/L	10
Styrene	0.109	10. PQL		ND	UG/L	10
1,1,1,2-Tetrachloroethane	0.138	10. PQL		ND	UG/L	10
1,1,2,2-Tetrachloroethane	0.355	10. PQL		ND	UG/L	10
Tetrachloroethene (PCE)	0.084	5. PQL		ND	UG/L	10
Toluene	0.478	5. PQL		207.	UG/L	10
1,2,4-Trichlorobenzene	0.207	10. PQL		ND	UG/L	10
1,1,1-Trichloroethane	0.29	10. PQL		ND	UG/L	10
1,1,2-Trichloroethane	0.172	10. PQL		ND	UG/L	10
Trichloroethene (TCE)	0.120	5. PQL		ND	UG/L	10
Trichlorofluoromethane	0.092	10. PQL		ND	UG/L	10
1,2,3-Trichloropropane	0.269	10. PQL		ND	UG/L	10
Vinyl chloride	0.360	5. PQL		ND	UG/L	10
o-Xylene	0.319	5. PQL		133	UG/L	10
Bromobenzene	0.627	10. PQL		ND	UG/L	10
n-Butylbenzene	0.166	10. PQL		74	UG/L	10
sec-Butylbenzene	0.743	10. PQL		ND	UG/L	10
tert-Butylbenzene	0.099	10. PQL		ND	UG/L	10
2-Chlorotoluene	0.089	10. PQL		ND	UG/L	10
4-Chlorotoluene	0.061	10. PQL		ND	UG/L	10
cis-1,2-Dichloroethene	0.094	10. PQL		ND	UG/L	10

DG: Reporting limits elevated due to sample dilution  
EL: Compound quantitated at a 100x dilution factor

Approved by: \_\_\_\_\_

Date: \_\_\_\_\_

Lab Report No.: 04-1099 Date: 08/12/2004

Project Name: 5930 COLLEGE AVE.	Analysis: Volatile Organic Compounds by GC/MS	
Project No: 04-1099	Method: SW8260B	
	Prep Meth: SW5030B	
Field ID: 7335-MW-2	Lab Samp ID: 04-1099-02	
Descr/Location: 7335-MW-2	Rec'd Date: 07/19/2004	
Sample Date: 07/19/2004	Prep Date: 07/27/2004	
Sample Time: 1135	Analysis Date: 07/27/2004	
Matrix: Water	QC Batch: 072748260W	
Basis: Wet	Notes: DG	

Analyte	Det Limit	Rep Limit	PQL	Note	Result	Units	Pvc Dil
1,3-Dichloropropane	0.160	10.	PQL		ND	UG/L	10
2,2-Dichloropropane	0.675	10.	PQL		ND	UG/L	10
1,1-Dichloropropene	0.058	10.	PQL		ND	UG/L	10
Methyl-tert-butyl ether (MTBE)	0.314	5.	PQL	EL	373.	UG/L	10
n-Propylbenzene	0.300	10.	PQL		173.	UG/L	10
1,2,3-Trichlorobenzene	0.56	10.	PQL		ND	UG/L	10
1,2,4-Trimethylbenzene	0.644	10.	PQL	EL	1070.	UG/L	10
1,3,5-Trimethylbenzene	0.644	10.	PQL		316.	UG/L	10
Xylene, Isomers m & p	0.771	10.	PQL	EL	2270.	UG/L	10

SURROGATE AND INTERNAL STANDARD RECOVERIES:							
4-Bromofluorobenzene	78-121	SLSA			103%		1
Toluene-d8	72-119	SLSA			97%		1
Dibromofluoromethane	67-129	SLSA			107%		1
1,2-Dichloroethane-d4	85-115	SLSA			108%		1

DG: Reporting limits elevated due to sample dilution  
 EL: Compound quantitated at a 100x dilution factor

Approved by: \_\_\_\_\_

Date: \_\_\_\_\_

Lab Report No.: 04-1099 Date: 08/12/2004

Page: 3

Project Name: 5930 COLLEGE AVE.	Analysis: BTEX/Gasoline Range Organics (SW8020/8015)
Project No: 04-1099	Method: SW8020F
	Prep Meth: SW5030B
Field ID: 7335-MW-3	Lab Samp ID: 04-1099-03
Descr/Location: 7335-MW-3	Rec'd Date: 07/19/2004
Sample Date: 07/19/2004	Prep Date: 07/21/2004
Sample Time: 1045	Analysis Date: 07/21/2004
Matrix: Water	QC Batch: 07214MGBXW
Basis: Wet	Notes:

Analyte	Det Limit	Rep Limit	PQL	Note	Result	Units	Pvc Dil
Gasoline Range Organics	4.066	50.	PQL		9860	UG/L	1
Benzene	0.076	0.5	PQL		204	UG/L	1
Toluene	0.160	0.5	PQL		32	UG/L	1
Ethylbenzene	0.215	0.5	PQL		306	UG/L	1
Xylenes	0.211	1.0	PQL		117.	UG/L	1
Methyl-tert-butyl ether (MTBE)	0.088	0.5	PQL	GI	ND	UG/L	1

GI: Analyte confirmed by GC/MS

Approved by: \_\_\_\_\_

Date: \_\_\_\_\_

Lab Report No.: 04-1099 Date: 08/12/2004

Page: 11

Project Name: 5930 COLLEGE AVE.		Analysis: Volatile Organic Compounds by GC/MS				
Project No: 04-1099		Method: SW8260B				
		Prep Meth: SW5030B				
Field ID: 7335-MW-3		Lab Samp ID: 04-1099-03				
Descr/Location: 7335-MW-3		Rec'd Date: 07/19/2004				
Sample Date: 07/19/2004		Prep Date: 07/27/2004				
Sample Time: 1045		Analysis Date: 07/28/2004				
Matrix: Water		QC Batch: 072748260W				
Basis: Wet		Notes:				
Analyte	Det Limit	Rep Limit	Note	Result	Units	Pvc Dil
Acetone	5.850	10.	PQL	ND	UG/L	1
Acetonitrile	2.069	5.	PQL	ND	UG/L	1
Acrylonitrile	0.354	1.	PQL	ND	UG/L	1
Benzene	0.176	0.5	PQL	39.3	UG/L	1
Bromochloromethane	0.255	1.	PQL	ND	UG/L	1
Bromodichloromethane	0.147	1.	PQL	ND	UG/L	1
Bromoform	0.219	1.	PQL	ND	UG/L	1
Bromomethane	0.132	1.	PQL	ND	UG/L	1
2-Butanone	1.417	5.	PQL	ND	UG/L	1
Carbon tetrachloride	0.148	0.5	PQL	ND	UG/L	1
Chlorobenzene	0.101	1.	PQL	ND	UG/L	1
Dibromochloromethane	0.148	1.	PQL	ND	UG/L	1
Chloroethane	0.232	1.	PQL	ND	UG/L	1
Chloroform	0.158	0.5	PQL	ND	UG/L	1
Chloromethane	0.363	1.	PQL	ND	UG/L	1
1,2-Dibromoethane	0.216	0.5	PQL	ND	UG/L	1
Dibromomethane	0.176	1.	PQL	ND	UG/L	1
1,2-Dichlorobenzene	0.150	1.	PQL	ND	UG/L	1
1,3-Dichlorobenzene	0.130	1.	PQL	ND	UG/L	1
1,4-Dichlorobenzene	0.122	1.	PQL	ND	UG/L	1
Dichlorodifluoromethane	0.411	1.	PQL	ND	UG/L	1
1,1-Dichloroethane	0.110	0.5	PQL	ND	UG/L	1
1,2-Dichloroethane	0.167	1.	PQL	ND	UG/L	1
1,1-Dichloroethene	0.139	0.5	PQL	ND	UG/L	1
trans-1,2-Dichloroethene	0.084	1.	PQL	ND	UG/L	1
1,2-Dichloropropane	0.197	1.	PQL	ND	UG/L	1
cis-1,3-Dichloropropene	0.158	1.	PQL	ND	UG/L	1
trans-1,3-Dichloropropene	0.320	1.	PQL	ND	UG/L	1
Ethylbenzene	0.378	0.5	PQL	31.	UG/L	1
Hexachlorobutadiene	0.641	1.	PQL	ND	UG/L	1

Approved by: \_\_\_\_\_

Date: \_\_\_\_\_



Lab Report No.: 04-1099 Date: 08/12/2004

Page: 12

Project Name: 5930 COLLEGE AVE.		Analysis: Volatile Organic Compounds by GC/MS					
Project No: 04-1099		Method: SW8260B					
		Prep Meth: SW5030B					
Field ID: 7335-MW-3		Lab Samp ID: 04-1099-03					
Descr/Location: 7335-MW-3		Rec'd Date: 07/19/2004					
Sample Date: 07/19/2004		Prep Date: 07/27/2004					
Sample Time: 1045		Analysis Date: 07/28/2004					
Matrix: Water		QC Batch: 072748260W					
Basis: Wet		Notes:					
Analyte	Det Limit	Rep Limit	Note	Result	Units	Pvc Dil	
2-Hexanone	0.295	1. PQL		ND	UG/L	1	
Isobutanol	1.296	5. PQL		ND	UG/L	1	
Isopropylbenzene	0.125	1. PQL		27.	UG/L	1	
Methylene chloride	0.692	5. PQL		ND	UG/L	1	
4-Methyl-2-pentanone	0.354	1. PQL		ND	UG/L	1	
Naphthalene	0.785	1. PQL		16	UG/L	1	
Styrene	0.109	1. PQL		ND	UG/L	1	
1,1,1,2-Tetrachloroethane	0.138	1. PQL		ND	UG/L	1	
1,1,2,2-Tetrachloroethane	0.355	1. PQL		2	UG/L	1	
Tetrachloroethene (PCE)	0.084	0.5 PQL		ND	UG/L	1	
Toluene	0.478	0.5 PQL		36	UG/L	1	
1,2,4-Trichlorobenzene	0.207	1. PQL		ND	UG/L	1	
1,1,1-Trichloroethane	0.29	1. PQL		ND	UG/L	1	
1,1,2-Trichloroethane	0.172	1. PQL		ND	UG/L	1	
Trichloroethene (TCE)	0.120	0.5 PQL		ND	UG/L	1	
Trichlorofluoromethane	0.092	1. PQL		ND	UG/L	1	
1,2,3-Trichloropropane	0.269	1. PQL		ND	UG/L	1	
Vinyl chloride	0.360	0.5 PQL		ND	UG/L	1	
o-Xylene	0.319	0.5 PQL		43	UG/L	1	
Bromobenzene	0.627	1. PQL		ND	UG/L	1	
n-Butylbenzene	0.166	1. PQL		34.	UG/L	1	
sec-Butylbenzene	0.743	1. PQL		ND	UG/L	1	
tert-Butylbenzene	0.099	1. PQL		ND	UG/L	1	
2-Chlorotoluene	0.089	1. PQL		ND	UG/L	1	
4-Chlorotoluene	0.061	1. PQL		ND	UG/L	1	
cis-1,2-Dichloroethene	0.094	1. PQL		ND	UG/L	1	
1,3-Dichloropropane	0.160	1. PQL		ND	UG/L	1	
2,2-Dichloropropane	0.675	1. PQL		ND	UG/L	1	
1,1-Dichloropropene	0.058	1. PQL		ND	UG/L	1	
Methyl-tert-butyl ether (MTBE)	0.314	0.5 PQL		ND	UG/L	1	

Approved by: \_\_\_\_\_

Date: \_\_\_\_\_

Project Name: 5930 COLLEGE AVE.		Analysis: Volatile Organic Compounds by GC/MS					
Project No: 04-1099		Method: SW8260B					
		Prep Meth: SW5030B					
Field ID:	7335-MW-3	Lab Samp ID:		04-1099-03			
Descr/Location:	7335-MW-3	Rec'd Date:		07/19/2004			
Sample Date:	07/19/2004	Prep Date:		07/27/2004			
Sample Time:	1045	Analysis Date:		07/28/2004			
Matrix:	Water	QC Batch:		072748260W			
Basis:	Wet	Notes:					
Analyte	Det Limit	Rep Limit		Note	Result	Units	Pvc Dil
n-Propylbenzene	0.300	1.	PQL	EI	105	UG/L	1
1,2,3-Trichlorobenzene	0.56	1.	PQL		ND	UG/L	1
1,2,4-Trimethylbenzene	0.644	1.	PQL	EI	204	UG/L	1
1,3,5-Trimethylbenzene	0.644	1.	PQL		48	UG/L	1
Xylene, Isomers m & p	0.771	1.	PQL		54	UG/L	1
SURROGATE AND INTERNAL STANDARD RECOVERIES:							
4-Bromofluorobenzene		78-121	SLSA		100%		1
Toluene-d8		72-119	SLSA		95%		1
Dibromofluoromethane		67-129	SLSA		102%		1
1,2-Dichloroethane-d4		85-115	SLSA		110%		1
EI: Compound quantitated at a 10x dilution factor							

Approved by: \_\_\_\_\_

Date: \_\_\_\_\_



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

Lab Number: 04-1099  
Client: Golden Gate Tank  
Project: 5930 COLLEGE AVE. OAKLAND

Date Reported: 08/12/2004

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

nalyte	Method	Result	Unit	Date Sampled	Date Analyzed
Sample: 04-1099-04	Client ID: 7335-TB			07/19/2004	W
benzene	SW8020F	ND<0.5	UG/L		07/21/ 2004
ethylbenzene	SW8020F	ND<0.5	UG/L		07/21/ 2004
toluene	SW8020F	ND<0.5	UG/L		07/21/ 2004
xylenes	SW8020F	ND<1.0	UG/L		07/21/ 2004

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# Laboratory Report Project Overview

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EDF 1.2a

Laboratory:	North State Environmental, South San Francisco, CA
Lab Report Number:	04-1099
Project Name:	5930 COLLEGE AVE.
Work Order Number:	04-1099
Control Sheet Number:	T0600102112

# Case Narrative

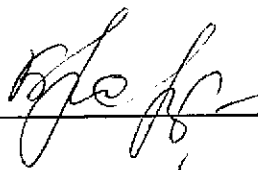
North State Environmental, South San Francisco, CA

Report Date: 08/12/2004  
Report Number: 04-1099

Project: 5930 COLLEGE AVE.  
Order #: 04-1099

Four water samples were analyzed for total petroleum hydrocarbons as gasoline by method 8015M, BTEX and MTBE by method 8021B, and VOCs by method 8260B GC/MS. No errors were noted during analysis. Results for quality control samples met all QC/QA criteria.

Approved by: \_\_\_\_\_



Date: \_\_\_\_\_

8/12/04

# Report Summary

Labreport	Sampid	Labsampid	Mtrx	QC	Anmcode	Exmcode	Logdate	Extdate	Anadate	Lablotct	Run	Sub
04-1099	7335-MW-1	04-1099-01	W	CS	SW8020F	SW5030B	07/19/200	07/26/200	07/26/200	07214MGBXW	1	
							4	4	4			
04-1099	7335-MW-1	04-1099-01	W	CS	SW8260B	SW5030B	07/19/200	07/27/200	07/27/200	072748260W	1	
							4	4	4			
04-1099	7335-MW-2	04-1099-02	W	CS	SW8020F	SW5030B	07/19/200	07/26/200	07/26/200	07214MGBXW	1	
							4	4	4			
04-1099	7335-MW-2	04-1099-02	W	CS	SW8260B	SW5030B	07/19/200	07/27/200	07/27/200	072748260W	1	
							4	4	4			
04-1099	7335-MW-3	04-1099-03	W	CS	SW8020F	SW5030B	07/19/200	07/21/200	07/21/200	07214MGBXW	1	
							4	4	4			
04-1099	7335-MW-3	04-1099-03	W	CS	SW8260B	SW5030B	07/19/200	07/27/200	07/28/200	072748260W	1	
							4	4	4			
04-1099	7335-TB	04-1099-04	W	CS	SW8020F	SW5030B	07/19/200	07/21/200	07/21/200	07214MGBXW	1	
							4	4	4			
		04-1117-01	W	NC	SW8260B	SW5030B	//	07/27/200	07/27/200	072748260W	1	
								4	4			
		04-1118-03	W	NC	SW8020F	SW5030B	//	07/21/200	07/22/200	07214MGBXW	1	
								4	4			
	BLK		W	LB1	SW8020F	SW5030B	//	07/21/200	07/21/200	07214MGBXW	1	
								4	4			
	BLK		W	LB1	SW8260B	SW5030B	//	07/27/200	07/27/200	072748260W	1	
								4	4			
	1117-01MS		W	MS1	SW8260B	SW5030B	//	07/27/200	07/27/200	072748260W	1	
								4	4			
	1118-03MS		W	MS1	SW8020F	SW5030B	//	07/21/200	07/22/200	07214MGBXW	1	
								4	4			
	1117-01MSD		W	SD1	SW8260B	SW5030B	//	07/27/200	07/27/200	072748260W	1	
								4	4			
	1118-03MSD		W	SD1	SW8020F	SW5030B	//	07/21/200	07/22/200	07214MGBXW	1	
								4	4			

# NORTH STATE LABS

## FLUID-LEVEL MONITORING DATA

Project No: 7335 Date: 07-19-04

Project/Site Location: 5930 COLWEGE AVE OAKLAND CA

Technician: KIAN ATKINSON Method: ELECTRONIC

Well	Depth to Water (feet)	Depth to Product (feet)	Product Thickness (feet)	Total Well Depth (feet)	Comments
MW-1	8.95			14.65	@ 1010
MW-2	10.30			19.80	@ 1000
MW-3	8.25			19.00	@ 0995

# NORTH STATE LABS

## WELL PURGING/SAMPLING DATA

Project Number: 7335 Date: 07-19-04  
 Project / Site Location: 5930 COLLEGE AVE  
OAKLAND CA

Sampler/Technician: KIAN ATKINSON

Casing Diameter (inches)	0.75	2	4	6
Casing Volumes (gallons)	0.02	0.2	0.7	1.52

Well No. <u>MW-1</u>	Well No. <u>MW-2</u>																																																																																																																																																						
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# NORTH STATE LABS

## WELL PURGING/SAMPLING DATA

Project Number: 7335 Date: 07-19-04  
 Project / Site Location: 5930 COLLEGE AVE  
OAKLAND CA

Sampler/Technician: KIAN ATKINSON

Casing Diameter (inches)	0.75	2	4	6
Casing Volumes (gallons)	0.02	0.2	0.7	1.52

Well No. <u>MW-3</u>	Well No. _____																																																																																										
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**Confirmation Number:** 8948096632

**Date/Time of Submittal:** 11/11/2004 10:46:03 AM

**Facility Global ID:** T0600102112

**Facility Name:** SHEAFFS SERVICE GARAGE

**Submittal Title:** 04-1099: 07/19/04 GW Analytical Data (MW1-MW3)

**Submittal Type:** GW Monitoring Report

[Click here to view the detections report for this upload.](#)

<b>SHEAFFS SERVICE GARAGE</b> 5930 COLLEGE AVE OAKLAND, CA 94618	<b>Regional Board - Case #: 01-2296</b> SAN FRANCISCO BAY RWQCB (REGION 2) - (BG) <b>Local Agency (lead agency) - Case #: 514</b> ALAMEDA COUNTY LOP - (AG)
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CONF #	TITLE	QUARTER
8948096632	04-1099: 07/19/04 GW Analytical Data (MW1-MW3)	Q3 2004
SUBMITTED BY	SUBMIT DATE	STATUS
Tracy Wallace	11/11/2004	PENDING REVIEW

**SAMPLE DETECTIONS REPORT**

# FIELD POINTS SAMPLED	4
# FIELD POINTS WITH DETECTIONS	3
# FIELD POINTS WITH WATER SAMPLE DETECTIONS ABOVE MCL	3
SAMPLE MATRIX TYPES	WATER

**METHOD QA/QC REPORT**

METHODS USED	SW8020F, SW8260B
TESTED FOR REQUIRED ANALYTES?	N

MISSING PARAMETERS NOT TESTED:

- SW8020F REQUIRES ETBE TO BE TESTED
- SW8020F REQUIRES TAME TO BE TESTED
- SW8020F REQUIRES DIPE TO BE TESTED
- SW8020F REQUIRES TBA TO BE TESTED
- SW8260B REQUIRES ETBE TO BE TESTED
- SW8260B REQUIRES TAME TO BE TESTED
- SW8260B REQUIRES DIPE TO BE TESTED
- SW8260B REQUIRES TBA TO BE TESTED

LAB NOTE DATA QUALIFIERS	Y
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**QA/QC FOR 8021/8260 SERIES SAMPLES**

TECHNICAL HOLDING TIME VIOLATIONS	0
METHOD HOLDING TIME VIOLATIONS	0
LAB BLANK DETECTIONS ABOVE REPORTING DETECTION LIMIT	0
LAB BLANK DETECTIONS	0
DO ALL BATCHES WITH THE 8021/8260 SERIES INCLUDE THE FOLLOWING?	
- LAB METHOD BLANK	Y
- MATRIX SPIKE	Y
- MATRIX SPIKE DUPLICATE	Y
- BLANK SPIKE	N

- SURROGATE SPIKE - NON-STANDARD SURROGATE USED N

**WATER SAMPLES FOR 8021/8260 SERIES**

MATRIX SPIKE / MATRIX SPIKE DUPLICATE(S) % RECOVERY BETWEEN 65-135% Y  
 MATRIX SPIKE / MATRIX SPIKE DUPLICATE(S) RPD LESS THAN 30% Y  
 SURROGATE SPIKES % RECOVERY BETWEEN 85-115% Y  
 BLANK SPIKE / BLANK SPIKE DUPLICATES % RECOVERY BETWEEN 70-130% n/a

**SOIL SAMPLES FOR 8021/8260 SERIES**

MATRIX SPIKE / MATRIX SPIKE DUPLICATE(S) % RECOVERY BETWEEN 65-135% n/a  
 MATRIX SPIKE / MATRIX SPIKE DUPLICATE(S) RPD LESS THAN 30% n/a  
 SURROGATE SPIKES % RECOVERY BETWEEN 70-125% n/a  
 BLANK SPIKE / BLANK SPIKE DUPLICATES % RECOVERY BETWEEN 70-130% n/a

**FIELD QC SAMPLES**

<u>SAMPLE</u>	<u>COLLECTED</u>	<u>DETECTIONS &gt; REPD</u>
QCTB SAMPLES	N	0
QCEB SAMPLES	N	0
QCAB SAMPLES	N	0

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CONTACT SITE ADMINISTRATOR

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(07/19/04)

**Submittal Date/Time:** 11/22/2004 10:57:31 AM

**Confirmation**  
**Number:** 3838657975

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