

  
**CLEARWATER**  
G R O U P  
Environmental Services

September 8, 2005

Mr. Jerry Wickham  
Hazardous Materials Specialist  
Alameda County Environmental Health Services  
Environmental Protection Division  
1131 Harbor Bay Parkway, Suite 250  
Alameda, CA 94502-6577

**Re: *Quarterly Groundwater Monitoring Report – Third Quarter 2005***  
Eagle Gas Station  
4301 San Leandro Street  
Oakland, California 94601  
LOP Site ID# 2118  
USTCF Claim No. 014551  
Clearwater Project No. ZP046E

Alameda County  
SEP 12 2005  
Environmental Health

Dear Mr. Wickham:

Clearwater Group (Clearwater) has prepared a Quarterly Groundwater Monitoring Report for the subject site. This report presents the Third Quarter 2005 groundwater monitoring activities and associated results. The groundwater samples were collected in accordance with standard environmental field protocols, and were submitted to a California-certified analytical laboratory for analysis of Total Petroleum Hydrocarbons as gasoline (TPH-g), Total Petroleum Hydrocarbons as diesel (TPH-d), benzene, toluene, ethylbenzene, xylenes (BTEX), and five fuel oxygenates including Methyl Tert-Butyl Ether (MTBE) and Tert-Butyl Alcohol (TBA). Groundwater monitoring was requested by the Alameda County Environmental Health Services (ACEHS) in a letter dated October 18, 2001.

**SITE DESCRIPTION**

The site is located in the southern portion of Oakland, Alameda County, California at the southern corner of the intersection of San Leandro Street and High Street, and is approximately 1,000 feet east of Interstate Highway 880 (Figure 1). The site is bounded by commercial property to the southeast, southwest and northwest and by the Bay Area Rapid Transit (BART) tracks to the northeast (see Figure 2). The site is underlain predominantly by clays with some clayey gravel and clayey sand at depths to approximately 10 feet below ground surface (bgs), and silty sand below 20 feet bgs in some areas.

## BACKGROUND

On 21 and 22 April 1999, Clearwater oversaw the removal of five underground storage tanks (USTs) consisting of two 6,000-gallon gasoline tanks, two 4,000-gallon diesel tanks, and one 300-gallon used-oil tank from the site. Strong petroleum odors were detected from soils near the former UST locations during field observation. A total of five soil samples and three groundwater samples were collected from the UST excavations for confirmation. Laboratory analysis confirmed that an unauthorized release of petroleum had occurred. The former UST excavation area is shown in Figure 2.

In a letter dated 10 May 1999, the ACEHS recommended that soil be remediated by over-excavation and "as much groundwater as possible" be pumped from the excavation. Approximately 800 tons of petroleum-impacted soils were excavated and disposed of as Class II non-hazardous waste; and approximately 1,000 gallons of petroleum-impacted groundwater was pumped and removed from the site. Groundwater did not recharge quickly after the initial pumping. Existing on- and off-site structures limited the amount of soil that could be safely excavated. Soil samples collected from the excavation walls and product-piping trenches indicated that residual petroleum and MTBE concentrations still existed.

On 4 and 5 August 1999, approximately 100 linear feet of product piping was removed. Vent piping from between the former USTs and the south corner of the on-site building was also removed. All piping was cut up and disposed of as scrap metal. On August 5, 1999, confirmation soil samples were collected along the piping trench. Six samples were collected from approximately three feet bgs. An additional four samples were collected, one for each of the four former fuel dispensers. Laboratory analytical results indicated that hydrocarbon-related contamination existed along the piping trenches.

On September 26, 2000 West Hazmat of Rancho Cordova, California, used a CME 75 drill rig to advance three borings to approximately 25 feet bgs and collect soil samples. Each of the three borings was converted to a groundwater-monitoring well (see Figure 2) using clean, flush-threaded, 2-inch diameter polyvinyl chloride (PVC) for well casing. The construction data for these three wells are presented in Table 1.

On 3 and 10 October 2000, Clearwater surveyed the top of the casing elevation for each of the well relative to an arbitrary datum; and developed the wells for monitoring purpose. Initial groundwater samples collected from these wells contained 83,000 micrograms per liter ( $\mu\text{g/L}$ ) to 250,000  $\mu\text{g/L}$  TPH-g and 33,000  $\mu\text{g/L}$  to 400,000  $\mu\text{g/L}$  MTBE.

On August 3, 2001 Clearwater submitted its *Groundwater Monitoring Report - Second Quarter 2001* and *Sensitive Receptor Survey and Workplan for Continuing Investigation*. It was determined, at that time, that there were no major ecological receptors, permanent surface waters or domestic-use wells within a 2,000-foot radius of the site. The proposed scope of the workplan included the installation of eight groundwater monitoring wells

around the site to delineate the MTBE plume in groundwater. In response to Clearwater's workplan, the ACEHS, in a correspondence dated 18 October 2001, recommended that the installation of additional off-site wells not be performed for the time being. Instead, the ACEHS requested that further characterization of subsurface soils and groundwater on the subject site be completed prior to the installation of any off-site wells.

Quarterly monitoring was suspended after the third quarter 2001 event that took place on August 3, 2001. Quarterly monitoring resumed in July 2003 and has continued every quarter since then. The historical groundwater monitoring and sampling results are listed in Table 2.

On 9 January 2004, after completing its review of the Third Quarter 2003 Groundwater Monitoring Report, ACEHS requested a work plan to include additional on-site and off-site subsurface investigations and address the extent of groundwater impact on site. Clearwater, then, proceed to submit an Interim Remedial Action Plan (IRAP) on 14 January 2004.

In order to expedite the implementation of the IRAP, Clearwater formally requested Oakland Fire Department to review the IRAP and the Fourth Quarter 2004 groundwater monitoring report as well as to oversee the project. The Fire Department verbally agreed to oversee this project. The correspondence was shown in letters to the Fire Department dated on 3 and 15 December 2004. Fire Department turned the project over to ACEHS. ACEHS provided its review comments for the IRAP and the *First Quarter 2005 Groundwater Monitoring Report* in a letter dated May 26, 2005. Pursuant to ACEHS' request described in this letter, Clearwater submitted a *Soil and Groundwater Investigation Workplan* on August 10, 2005.

## **GROUNDWATER MONITORING ACTIVITIES**

The Third Quarter 2005 groundwater monitoring event included gauging of groundwater depth, well purging and sampling, and laboratory analysis. They are described below:

### **Groundwater Gauging, Purging, and Sampling**

On 8 August 2005, all three existing on-site monitoring wells were monitored. An electronic water level indicator accurate to within  $\pm 0.01$  feet was used to gauge the depth to water. All wells were checked for the presence of Separate Phase Hydrocarbons (SPH) prior to purging.

All the wells were purged of groundwater prior to groundwater sampling until measurements of temperature, pH, and conductivity stabilized, which occurred by removal of approximately three wetted casing volumes. Depth to water and well purging information was recorded on Well Gauging/Purging Calculations and Purging Data Sheets (see Attachment 1). Purging devices were decontaminated between wells with an Alconox® wash followed by double rinsing in clean tap water to prevent cross-

contamination. Purge water and rinseate were pumped into labeled 55-gallons drums and removed from the site for future disposal. Following recovery of water levels to at least 80% of their static levels, groundwater samples were collected from the monitoring wells using disposable polyethylene bailers. Samples were labeled, documented on a chain-of-custody form, and placed on ice in a chilled cooler for transport to the project laboratory.

All work was performed in accordance with Clearwater's Groundwater Monitoring and Sampling Field Procedures (see Attachment 2).

### **Laboratory Analysis**

Groundwater samples were analyzed by Kiff Analytical LLC, a California Department of Health Services certified laboratory, located in Davis, California. Analyses were conducted by EPA Method 8260B for TPH-g, BTEX, and five oxygenates including MTBE, di-isopropyl ether (DIPE), ethyl tertiary butyl ether (ETBE), tertiary amyl methyl ether (TAME), and TBA. Analysis for TPH-d was conducted by EPA Method 8015M. Complete laboratory analytical reports including chain-of-custody forms are included in Attachment 3.

## **GROUNDWATER MONITORING RESULTS**

During well purging, strong odors were detected from monitoring well MW-2. This indicates the existence of high concentrations of volatiles in groundwater. Odors were also detected emanating from monitoring wells MW-1 and MW-3, but not as noticeably. This observation has been confirmed by the extremely high TPH-g concentration (<150,000 µg/L in MW-2) determined from the laboratory analysis. Like the Second Quarter 2005 observations, sheen was only found in monitoring well MW-1. This suggested the existence of low solubility hydrocarbon product or semi-volatiles. This observation also has been confirmed by the higher TPH-d concentration (2,000 µg/L in MW-1) obtained from the laboratory analysis. Water purged from all three wells was clear with relatively low turbidity. Groundwater recovered slowly in wells MW-1 and MW-2 after purging.

### **Groundwater Elevation and Flow**

Depths to water ranged from approximately 10.09 feet (MW-1) to 13.36 (MW-2) feet bgs (see Table 2) on August 8, 2005. Depth to water data combined with the surveyed top of casing elevation was used to calculate the groundwater elevation. It should be noted that the top of casing elevation was re-surveyed on March 28, 2005 because the previous survey was performed using an arbitrary datum. The most recent survey data has been used for this quarterly monitoring event. The calculated elevation ranged from 9.99 ft (MW-1) to 8.69 ft (MW-2) above mean sea level. A groundwater elevation contour map was generated and is shown in Figure 3. During this monitoring event, groundwater was flowing in the southeast direction. The associated hydraulic gradient was approximately 0.015 ft/ft. The identified groundwater flow direction was consistent with the results

determined from the previous groundwater-monitoring event. Groundwater flow for the First and Second Quarter 2005 monitoring event was in a southeasterly direction with a gradient of 0.028 and 0.025 ft/ft, respectively.

### **Laboratory Analytical Results**

Diesel-range hydrocarbons were detected in samples collected from all three groundwater-monitoring wells. Concentrations of TPH-d ranged from 180 µg/L (MW-3) to 2,000 µg/L (MW-1). High level of MTBE was identified in all monitoring wells with concentration ranging from 8,500 µg/L (MW-1) to 770,000 µg/L (MW-2). Samples collected from monitoring well MW-1, MW-2, and MW-3 also contained elevated concentration of TBA of 250,000 µg/L, 85,000 µg/L and 44,000 µg/L, respectively. TAME was detected in this quarter in all three wells with concentrations ranging from <50 µg/L (MW-1) to 2,200 µg/L (MW-2). The Method Reporting Limits for TPH-g and BTEX were relatively high due to the interference of high concentration of MTBE and TBA. As a result, no exact TPH-g and BTEX concentrations were reported. Laboratory analytical results are listed in Table 2 and also shown in Figure 4.

### **FINDINGS**

Based on the Third Quarter 2005 monitoring results discussed above, findings of this monitoring event are listed below:

- The most recent surveyed data raises the calculated groundwater elevation by approximately 1.5 ft. However, it does not change the groundwater flow direction and gradient. Therefore, the historical groundwater flow conditions presented in previous monitoring reports are not affected.
- Although the TPH-d concentration in groundwater was not high, elevated concentrations of MTBE, TBA, and TPH-g confirmed that groundwater under the site has been impacted by oxygenates and gasoline.
- Based on the determined groundwater flow direction, monitoring wells MW-1 and MW-3 are both upgradient of monitoring well MW-2. As a result, it is clear that the trend of MTBE concentration change is decreasing in monitoring wells MW-1 and MW-3. Conversely, no significant reduction of MTBE concentration has been identified in monitoring well MW-2.
- It is also clear that the trend of MTBE concentration change is opposite to the trend of TBA concentration change. This situation has been identified in all monitoring wells. It suggests that degradation or conversion from MTBE to TBA has been occurring at the site.
- The TBA concentration detected in monitoring well MW-1 is approximately 30 times higher than the MTBE concentration. This observation indicates that biological

breakdown from MTBE to TBA occurs, and oxygenates contamination may have occurred on site for years.

- Due to the existence of significant hydraulic gradient and high concentrations of MTBE, TBA, and TPH-g in down gradient monitoring well MW-2, the potential of off-site contaminant migration exists.

## **FORECASTED ACTIVITIES**

The ACEHS letter dated May 26, 2005 requested the following activities for the subject site: implementation of an interim remedial action, performance of a three-dimensional soil and groundwater investigation, preparation of a Corrective Action Plan, and continuous quarterly groundwater monitoring. Clearwater submitted a *Soil and Groundwater Investigation Workplan* on August 10, 2005. The design, construction/installation, and operation and maintenance of the interim remedial system described in the *Workplan* will commence before the Fourth Quarter 2005 monitoring event.

## **NOTES**

1. A meeting with the ACEHS specialists to discuss the site conditions and submitted documents was held in Environmental Protection Division's office in Alameda on September 7, 2005.
2. According to the owner, Spartan Tank Line of San Jose supplies the gasoline for the subject site. Clearwater will obtain the Material Safety Data Sheets for the gasoline products sold on the property regarding gasoline additives.

## **FIGURES**

- Figure 1: Site Location Map
- Figure 2: Site Plan
- Figure 3: Groundwater Elevation Map – 8/8/05
- Figure 4: Dissolved Hydrocarbon Map – 8/8/05

## **TABLES**

- Table 1: Well Construction Data
- Table 2: Groundwater Elevations and Sample Analytical Results

## **ATTACHMENTS**

- Attachment 1: Well Gauging Data/Purge Calculations, Purging Data
- Attachment 2: Groundwater Monitoring and Sampling Field Procedures
- Attachment 3: Laboratory Analytical Reports and Chain-of-Custody Form

Cc: Mr. Muhammad Jamil  
40092 Davis Street  
Fremont, CA 94538


San Francisco Bay Regional  
Water Quality Control Board  
1515 Clay Street, Suite 1400  
Oakland, CA 94612

**CERTIFICATION**

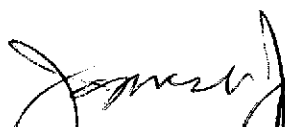
This report was prepared under the supervision of a professional State of California Professional Geologist at Clearwater Group. All statements, conclusions and recommendations are based solely upon published results from previous consultants, field observations by Clearwater Group and laboratory analysis performed by Clearwater Group, using a California DHS-certified laboratory for chemical analysis.

Information and interpretation presented herein are for the sole use of the client and the regulatory agency. The service performed by Clearwater Group has been conducted in a manner consistent with the level of care and skill ordinarily exercised by members of our profession currently practicing under similar conditions in the area. No other warranty, expressed or implied, is made.

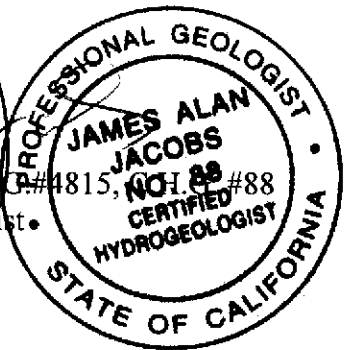
Sincerely,  
Clearwater Group



Jim Ho, Ph.D., P.E., CGWP  
Principal Engineer



James A. Jacobs, P.C.#4815,  
Chief Hydrogeologist.





**Figures**

122°14.000' W

122°13.000' W

WGS84 122°12.000' W

37°47.000' N

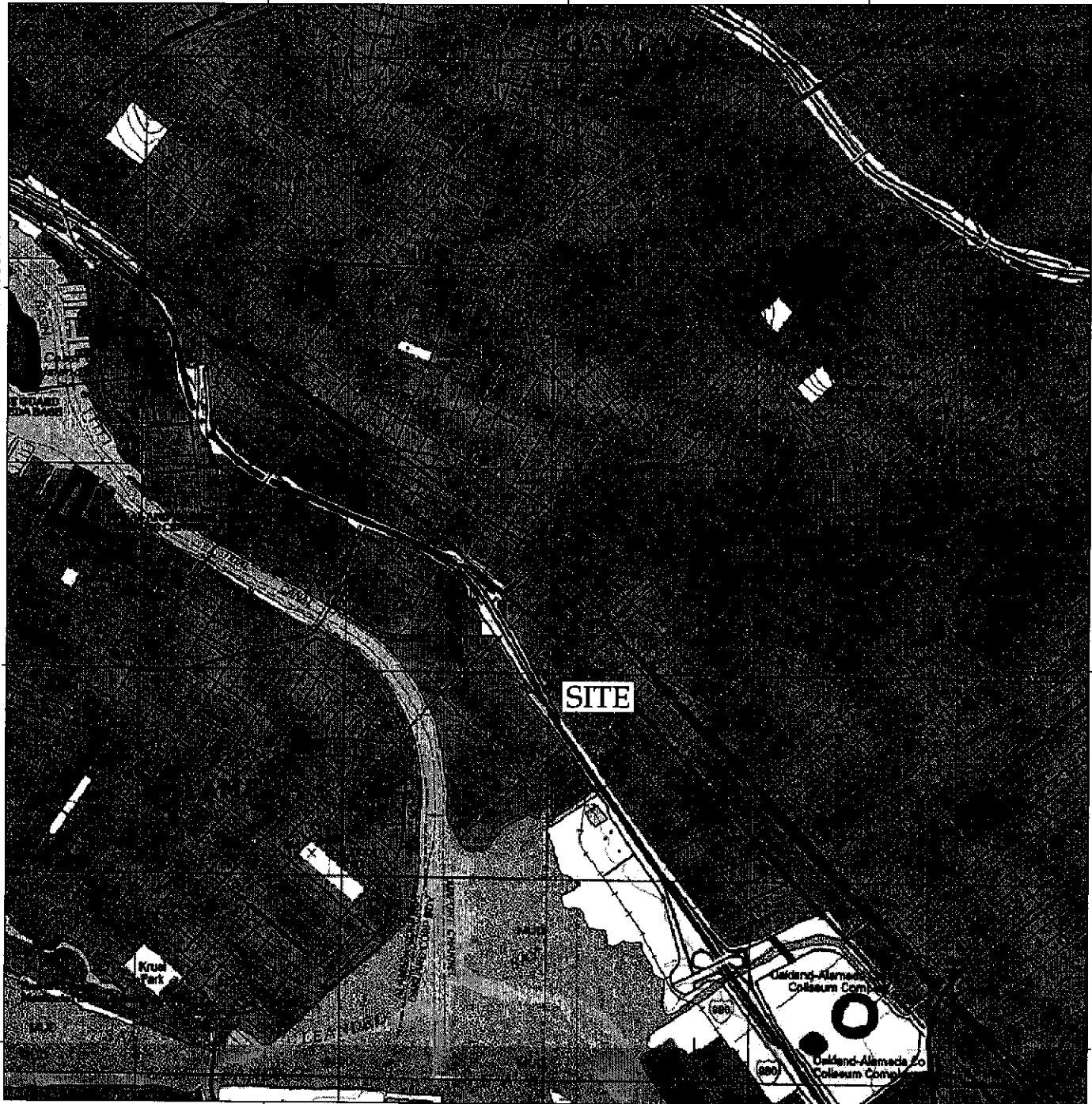
37°47.000' N

37°46.000' N

37°46.000' N

37°45.000' N

37°45.000' N

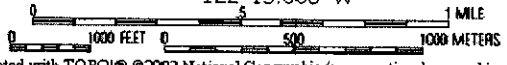


122°14.000' W

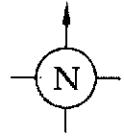
122°13.000' W

WGS84 122°12.000' W

TN  
15°  
MN



Map created with TOPO!® ©2002 National Geographic ([www.nationalgeographic.com/topo](http://www.nationalgeographic.com/topo))



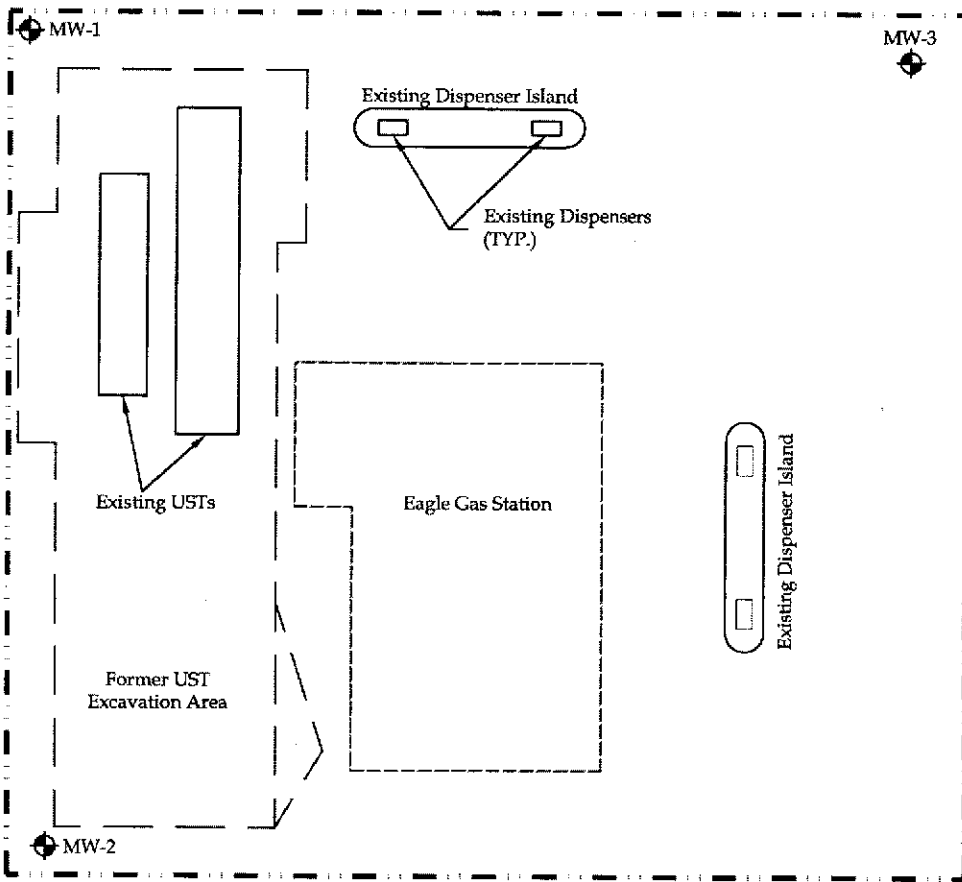
**SITE VICINITY MAP**  
 Eagle Gas  
 4301 San Leandro Street  
 Oakland, California

**CLEARWATER GROUP**

Project No. ZP046E	Figure Date 6/05	Figure 1
-----------------------	---------------------	-------------

HIGH STREET

Public Sidewalk



Adjacent Commercial Structure

Existing USTs

Former UST Excavation Area

MW-2

Eagle Gas Station

Adjacent Commercial Structure

Existing Dispenser Island

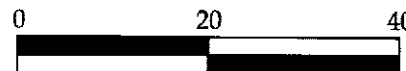
Existing Dispensers (TYP.)

MW-3

Existing Dispenser Island

Public Sidewalk

SAN LEANDRO STREET



APPROXIMATE SCALE IN FEET



**LEGEND**

- PROPERTY LINE
- ◆ MW-1 MONITORING WELL

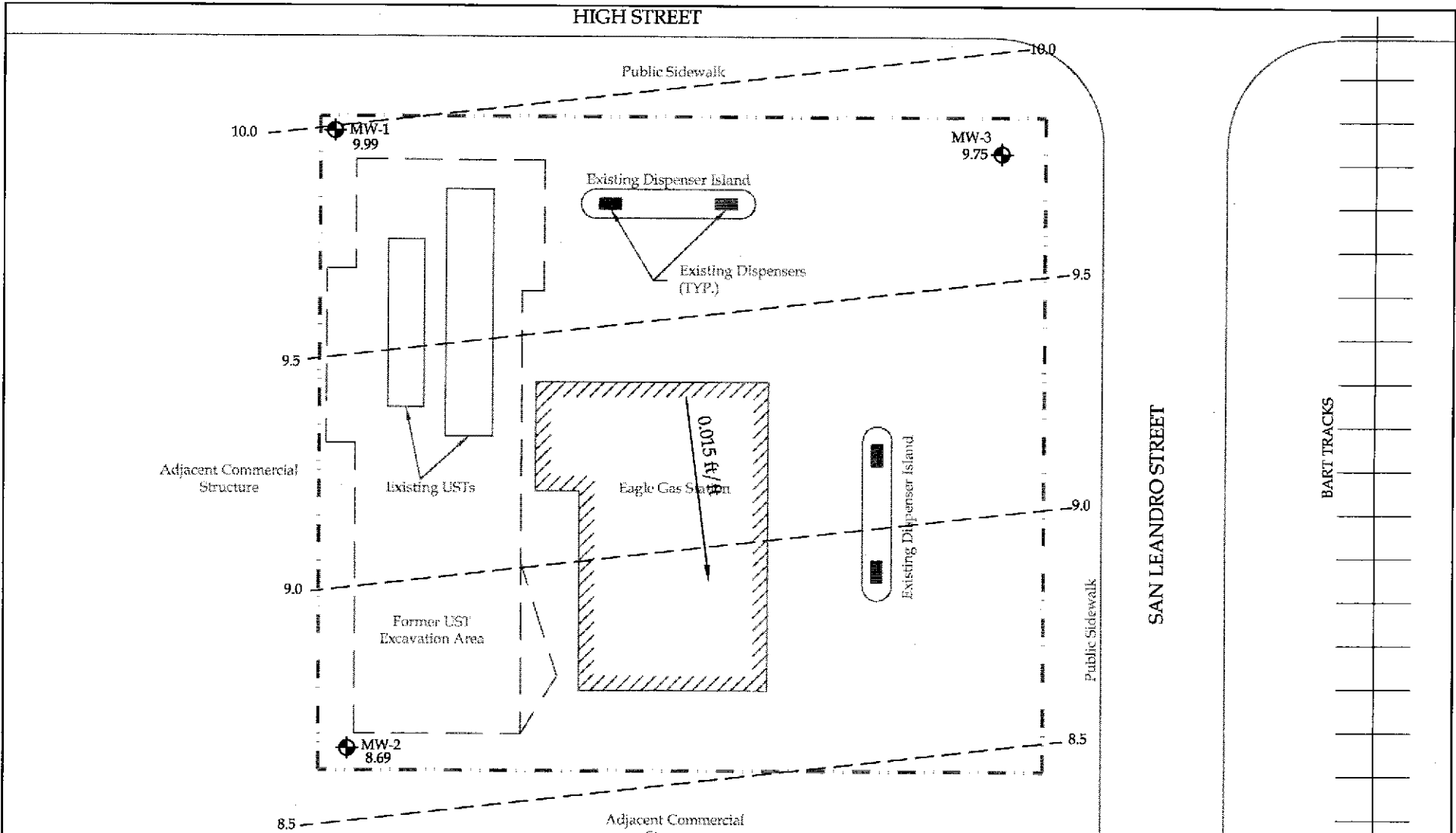
**SITE PLAN**  
 Eagle Gas  
 4301 San Leandro Street  
 Oakland, California

**CLEARWATER GROUP**

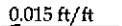
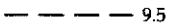
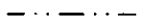

Project No.  
ZP046E

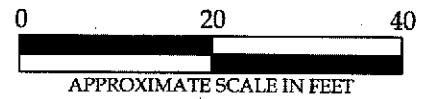
Figure Date  
6/05

Figure  
2



**LEGEND**

- 
 0.015 ft/ft    APPROX. GROUNDWATER FLOW DIRECTION & GRADIENT
- 
 9.5    GROUNDWATER ELEVATION CONTOUR (HEIGHT IN FEET ABOVE MSL)
- 
 PROPERTY LINE
- 
 MW-1    MONITORING WELL



<b>GROUNDWATER ELEVATION MAP</b> August 8, 2005 Eagle Gas 4301 San Leandro Street Oakland, California		<b>CLEARWATER GROUP</b>	
Project No. <b>ZP046E</b>	Figure Date <b>09/05</b>	Figure <b>3</b>	

HIGH STREET

Public Sidewalk

**MW-1**  
 TPHd = 2,000  
 TPHg <5,000  
 B < 50  
 T < 50  
 E < 50  
 X < 50  
 MTBE = 8,500  
 TAME = <50  
 TBA = 250,000

MW-1

**MW-3**  
 TPHd = 180  
 TPHg <15,000  
 B <150  
 T <150  
 E <150  
 X <150  
 MTBE =75,000  
 TAME = 500  
 TBA = 44,000

MW-3

**MW-2**  
 TPHd = 770  
 TPHg <150,000  
 B <1,500  
 T <1,500  
 E <1,500  
 X <1,500  
 MTBE = 770,000  
 TAME = 2,200  
 TBA = 85,000

MW-2

Adjacent Commercial Structure

Existing USTs

Former UST Excavation Area

Existing Dispenser Island

Existing Dispensers (TYP.)

Eagle Gas Station

Existing Dispenser Island

Public Sidewalk

SAN LEANDRO STREET

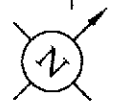
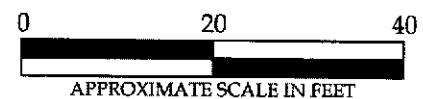
Adjacent Commercial Structure

**LEGEND**

**MW-1**  
 TPHd = 1,800  
 TPHg <10,000  
 B < 100  
 T <100  
 E <100  
 X <100  
 MTBE = 85,000  
 TAME = 390  
 TBA = 79,000

CONCENTRATIONS OF: TOTAL PETROLEUM HYDROCARBONS AS DESELIL (TPHd), HYDROCARBONS AS GASOLINE (TPHg), BENZENE (B), TOULENE (T), ETHYLBENZENE (E), TOTAL XYLENES (X), AND METHYL TERT-BUTYL ETHER (MTBE), TERT AMYL METHYL ETHER (TAME), TERTIARY BUTYL ALCOHOL (TBA). ALL CONCENTRATIONS REPORTED IN MICROGRAMS PER LITER (µg/L)

--- PROPERTY LINE  
 MW-1 MONITORING WELL



**DISSOLVED HYDROCARBON MAP**

August 8, 2005  
 Eagle Gas  
 4301 San Leandro Street  
 Oakland, California

**CLEARWATER GROUP**

Project No. <b>ZP046E</b>	Figure Date <b>09/05</b>	Figure <b>4</b>
------------------------------	-----------------------------	--------------------

**Tables**

**Table 1**  
**WELL CONSTRUCTION DATA**  
**Eagle Gas**  
 4301 San Leandro Street  
 Oakland, California  
 Clearwater Group Project No. ZP046A

Well I.D.	Date Installed	Borehole Diameter (inches)	Depth of Borehole (feet)	Casing Diameter (inches)	Screened Interval (feet)	Filter Pack (feet)	Bentonite Seal (feet)	Cement (feet)
MW-1	9/26/2000	8	25	2	10-25	6-25	3-6	0-3
MW-2	9/26/2000	8	25	2	10-25	6-25	3-6	0-3
MW-3	9/26/2000	8	25	2	10-25	6-25	3-6	0-3

Note: All depths and Intervals are below ground surface

**TABLE 2**  
**GROUNDWATER ELEVATIONS AND SAMPLE ANALYTICAL RESULTS**

Eagle Gas Station  
4301 San Leandro Street  
Oakland, California

Sample ID	Sample Date	TOC (feet)	DTW (feet)	GWE (feet)	TPH-d (µg/L)	TPH-g (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	TBA (µg/L)
MW-1	10/3/2000	18.37	8.96	9.41	460	93,000	<500	<500	<500	<500	130,000	<10,000	<10,000	<10,000	<2,000
	10/27/2000	18.37	7.27	11.1	---	---	---	---	---	---	---	---	---	---	---
	1/26/2001	18.37	7.60	10.77	1,600*	51,000	270	<100	<100	<100	77,000	<5,000	<5,000	<5,000	<20,000
	5/8/2001	18.37	7.50	10.87	470*	36,000*	<100	<100	<100	<100	15,000	<5,000	<5,000	<5,000	<20,000
	8/3/2001	18.37	7.09	11.28	2,200*	19,000*	<50	59	<50	<50	96,000	<5,000	<5,000	<5,000	<20,000
	7/1/2003	18.37	7.59	10.78	3,000	<25,000	<250	<250	<250	<250	170,000	<250	<250	980	8700
	10/1/2003	18.37	8.36	10.01	2,600	<20,000	<200	<200	<200	<200	69,000	<200	<200	270	15,000
	2/13/2004	18.37	8.80	9.57	1,800	<10,000	<100	<100	<100	<100	85,000	<100	<100	390	79,000
	5/17/2004	18.37	10.92	7.45	5,400	<15,000	<150	<150	<150	<150	60,000	<150	<150	260	160,000
	8/6/2004	18.37	7.76	10.61	510	<10,000	<100	<100	<100	<100	26,000	<100	<100	100	250,000
	11/12/2004	18.37	9.25	9.12	3,500	<5,000	<50	<50	<50	<50	25,000	<50	<50	150	160,000
	2/15/2005	18.37	10.12	8.25	2,900	<5,000	<50	<50	<50	<50	12,000	<50	<50	70	160,000
	5/9/2005	18.37	9.58	8.79	1,700	<5,000	<50	<50	<50	<50	11,000	<50	<50	53	200,000
	8/8/2005**	20.08	10.09	9.99	2,000	<5,000	<50	<50	<50	<50	8,500	<50	<50	<50	250,000
MW-2	10/3/2000	20.28	20.26	0.02	210	250,000	<1,250	<1,250	<1,250	<1,250	400,000	<25,000	<25,000	<25,000	<100,000
	10/27/2000	20.28	13.88	6.40	---	---	---	---	---	---	---	---	---	---	---
	1/26/2001	20.28	12.10	8.18	6,000*	740,000	3,800	<500	940	1,600	1,000,000	<50,000	<50,000	<50,000	<200,000
	5/8/2001	20.28	12.05	8.23	2,100*	140,000	2,800	<250	780	640	840,000	<50,000	<50,000	<50,000	<200,000
	8/3/2001	20.28	13.30	6.98	2,600*	42,000*	1,100	63	230	130	880,000	<25,000	<25,000	<25,000	<100,000
	7/1/2003	20.28	14.98	5.30	2,200	<200,000	<2,000	<2,000	<2,000	<2,000	790,000	<2,000	<2,000	3,400	<20,000
	10/1/2003	20.28	15.99	4.29	870	<100,000	<1,000	<1,000	<1,000	<1,000	620,000	<1,000	<1,000	2,700	<20,000
	2/13/2004	20.28	13.88	6.40	1200	<20,000	860	<200	260	<200	710,000	<200	<200	2,000	<25,000
	5/17/2004	20.38	14.68	5.70	2,500	<50,000	860	<500	<500	<500	760,000	<500	<500	2,500	13000J
	8/6/2004	20.38	15.36	5.02	420	<50,000	590	<500	<500	<500	810,000	<500	<500	3,600	17,000J
	11/12/2004	20.38	15.49	4.89	500	<150,000	<1500	<1500	<1500	<1500	700,000	<1500	<1500	2,800	25,000J
	2/15/2005	20.38	14.16	6.22	990	<150,000	<1,500	<1,500	<1,500	<1,500	630,000	<1,500	<1,500	2,600	32,000
	5/9/2005	20.38	13.62	6.76	1,100	<150,000	<1,500	<1,500	<1,500	<1,500	570,000	<1,500	<1,500	2,300	32,000
	8/8/2005**	22.05	13.36	8.69	770	<150,000	<1,500	<1,500	<1,500	<1,500	770,000	<1,500	<1,500	2,200	85,000



**TABLE 2  
GROUNDWATER ELEVATIONS AND SAMPLE ANALYTICAL RESULTS**

Eagle Gas Station  
4301 San Leandro Street  
Oakland, California

Sample ID	Sample Date	TOC (feet)	DTW (feet)	GWE (feet)	TPH-d (µg/L)	TPH-g (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	TBA (µg/L)
MW-3	10/3/2000	18.98	---	---	120	83,000	<500	<500	<500	<500	33,000	<2,500	<2,500	<2,500	<10,000
	10/27/2000	18.98	18.75	0.23	---	---	---	---	---	---	---	---	---	---	---
	1/26/2001	18.98	13.38	5.60	900*	230,000	930	<500	<500	<500	330,000	<25,000	<25,000	<25,000	<100,000
	5/8/2001	18.98	11.82	7.16	1,100*	95,000	840	<250	<250	<250	390,000	<12,500	<12,500	<12,500	<50,000
	8/3/2001	18.98	13.44	5.54	290*	30,000*	<50	51	<50	<50	270,000	<12,500	<12,500	<12,500	<50,000
	7/1/2003	18.98	12.67	6.31	620	<50,000	<500	<500	<500	<500	230,000	<500	<500	1,800	<5,000
	10/1/2003	18.98	14.04	4.94	370	<20,000	<200	<200	<200	<200	120,000	<200	<200	1,200	<5,000
	2/13/2004	18.98	12.20	6.78	430	<20,000	280	<200	<200	<200	210,000	<200	<200	1,200	<5000
	5/17/2004	18.98	11.87	7.11	920	<25,000	<250	<250	<250	<250	150,000	<250	<250	1,100	5600J
	8/6/2004	18.98	13.07	5.91	78	<20,000	<200	<200	<200	<200	110,000	<200	<200	760	<2,500
	11/12/2004	18.98	12.83	6.15	120	<20,000	<200	<200	<200	<200	100,000	<200	<200	660	6,000
	2/15/2005	18.98	11.95	7.03	130	<25,000	<250	<250	<250	<250	110,000	<250	<250	760	12,000
	5/9/2005	18.98	10.51	8.47	320	<15,000	<150	<150	<150	<150	97,000	<150	<150	780	30,000
	8/8/2005**	20.73	10.98	9.75	180	<15,000	<150	<150	<150	<150	75,000	<150	<150	500	44,000

**NOTES:**

- TOC Top of well casing referenced to arbitrary datum prior to 3Q2005
- DTW Depth to water
- GWE Groundwater elevation
- TPHd Total petroleum hydrocarbons as diesel by EPA Method 8015 (modified)
- TPHg Total petroleum hydrocarbons as gasoline by EPA Method 8260B
- BTEX Benzene, toluene, ethylbenzene, total xylenes by EPA Method 8260B
- MTBE Methyl tertiary butyl ether by EPA Method 8260B
- DIPE Di-isopropyl ether by EPA Method 8260B
- ETBE Ethyl tertiary butyl ether by EPA Method 8260B
- TAME Tertiary amyl methyl ether by EPA Method 8260B
- TBA Tertiary butyl alcohol by EPA Method 8260B
- (µg/L) Micrograms per liter
- <# Not detected in concentrations above laboratory reporting limit
- no samples collected, no data available
- \* Laboratory note: \*Results within quantitation range; chromatographic pattern not typical of fuel"
- \*\* wells re-surveyed on 3/28/2005

**Attachments**



# PURGE DATA SHEET

Job No.: ZP046c Location: 4301 SAN LEANDRO ST. OAKLAND, CA Date: 8/8/05 Sheet 1 of 1 Tech: RODNEY BERRY

WELL #	TIME	VOL. (gal.)	ORP	CND	TMP	DO	pH	Fe <sup>2+</sup>	Fe <sub>T</sub>	Sample for:
NW-1	1547	2.00	NA	1002	71.2	NA	7.21	NA	NA	Sample for: <u>50AYS</u> TPHg <u>8015</u> TPHd 8260 BTEX <u>MTBE</u> Metals Purging Method: <u>TBA</u> PVC Bailer/Pump/Disp. Bailer
alc. purge	1553	4.00	↓	1000	71.0	↓	7.21	↓	↓	
ume	1555	7.00	↓	1004	71.0	↓	7.21	↓	↓	
6.92										

COMMENTS: color, turbidity, recharge, sheen, odor  
CLEAR, low, poor, sheen, odor  
 POST DEPTH TO WATER: 10.08 SAMPLE TIME: 1645

WELL #	TIME	VOL. (gal.)	ORP	CND	TMP	DO	pH	Fe <sup>2+</sup>	Fe <sub>T</sub>	Sample for:
NW3	1607	2.00	NA	773	70.6	NA	7.21	NA	NA	Sample for: <u>50AYS</u> TPHg <u>8015</u> TPHd 8260 BTEX <u>MTBE</u> Metals Purging Method: <u>TBA</u> PVC Bailer/Pump/Disp. Bailer
alc. purge	1610	4.00	↓	769	70.5	↓	7.24	↓	↓	
ume	1613	6.00	↓	768	70.5	↓	7.24	↓	↓	
5.79										

COMMENTS: color, turbidity, recharge, sheen, odor  
Cloudy, low, good, NO SHEEN, some odor  
 POST DEPTH TO WATER: 10.94 SAMPLE TIME: 1700

WELL #	TIME	VOL. (gal.)	ORP	CND	TMP	DO	pH	Fe <sup>2+</sup>	Fe <sub>T</sub>	Sample for:
NW2	1621	2.00	NA	974	66.4	NA	7.13	NA	NA	Sample for: <u>50AYS</u> TPHg <u>8015</u> TPHd 8260 BTEX <u>MTBE</u> Metals Purging Method: <u>TBA</u> PVC Bailer/Pump/Disp. Bailer
alc. purge	1624	4.00	↓	972	66.3	↓	7.12	↓	↓	
ume	1628	5.50	↓	972	66.4	↓	7.12	↓	↓	
1.46										

COMMENTS: color, turbidity, recharge, sheen, odor  
CLEAR, low, poor, NO SHEEN, strong odor  
 POST DEPTH TO WATER: 13.33 SAMPLE TIME: 1715

## CLEARWATER GROUP

### Groundwater Monitoring and Sampling Field Procedures

---

#### Groundwater Monitoring

Prior to beginning, a decontamination area is established. Decontamination procedures consist of scrubbing downhole equipment in an Alconox® solution wash (wash solution is pumped through any purging pumps used), and rinsing in a first rinse of potable water and a second rinse of potable water or deionized water if the latter is required. Any non-dedicated downhole equipment is decontaminated prior to use.

Prior to gauging, purging, and sampling a well, caps for all on-site wells should be opened to allow atmospheric pressure to equalize if local groundwater is under confined or semi-confined condition. The static water level is measured to the nearest 0.01 feet with electronic water sounder. Depth to bottom is typically measured once per year, at the request of the project manager, and during Clearwater's first visit to a site. If historical analytical data are not available, with which to establish a reliable order of increasing well contamination, the water sounder and tape will be decontaminated between each well. If floating separate-phase hydrocarbons (SPH) are suspected or observed, SPH is collected using a clear, open-ended product bailer, and the thickness is measured to the nearest 0.01 feet in the bailer. SPH may alternatively be measured with an electronic interface probe. Any monitoring well containing a measurable thickness of SPH before or during purging is not additionally purged and no sample is collected from that well. Wells containing hydrocarbon sheen are sampled unless otherwise specified by the project manager. Field observations such as well integrity as well as water level measurements and floating product thicknesses are noted on the Gauging Data/Purge Calculations form.

#### Well Purging

Each monitoring well to be sampled is purged using either a PVC bailer or a submersible pump. Physical parameters (pH, temperature and conductivity) of the purge water are monitored during purging activities to assess if the water sample collected is representative of the aquifer. If required, parameters such as dissolved oxygen, turbidity, salinity etc. are also measured. Samples are considered representative if parameter stability is achieved. Stability is defined as a change of less than 0.25 pH units, less than 10% change in conductivity in micro mhos, and less than 1.0 degree centigrade (1.8 degrees Fahrenheit) change in temperature. Parameters are measured in a discreet sample decanted from the bailer separately from the rest of the purge water. Parameters are measured at least four times during purging; initially, and at volume intervals of one well volume. Purging continues until three well casing volumes have been removed or until the well completely dewater. Wells which dewater or demonstrate a slow recharge may be sampled after fewer than three well volumes have been removed. Well purging information is recorded on the Purge Data sheet. All meters used to measure parameters are calibrated daily. Purge water is sealed, labeled, and stored on site in D.O.T.-approved 55-gallon drums. After being chemically profiled, the water is removed to an appropriate disposal facility by a licensed waste hauler.

#### Groundwater Sample Collection

Groundwater samples are collected immediately after purging or, if purging rate exceeds well recharge rate, when the well has recharged to at least 80% of its static water level. If recharge is extremely slow, the well is allowed to recharge for at least two hours, if practicable, or until sufficient volume has accumulated for sampling. The well is sampled within 24 hours of purging or repurged. Samples are collected using polyethylene bailers, either disposable or dedicated to the well. Samples being analyzed for compounds most sensitive to volatilization are collected first. Water samples are placed in appropriate laboratory-supplied containers, labeled, documented on a chain of custody form and placed on ice in a chilled cooler for transport to a state-certified analytical laboratory. Analytical detection limits match or surpass standards required by relevant local or regional guidelines.

#### Quality Assurance Procedures

To prevent contamination of the samples, Clearwater personnel adhere to the following procedures in the field:

- A new, clean pair of latex gloves is put on prior to sampling each well.
- Wells are gauged, purged and groundwater samples are collected in the expected order of increasing degree of contamination based on historical analytical results.

- All purging equipment will be thoroughly decontaminated between each well, using the procedures previously described at the beginning of this section.
- During sample collection for volatile organic analysis, the amount of air passing through the sample is minimized. This helps prevent the air from stripping the volatiles from the water. Sample bottles are filled by slowly running the sample down the side of the bottle until there is a convex meniscus over the mouth of the bottle. The lid is carefully screwed onto the bottle such that no air bubbles are present within the bottle. If a bubble is present, the cap is removed and additional water is added to the sample container. After resealing the sample container, if bubbles still are present inside, the sample container is discarded and the procedure is repeated with a new container.

Laboratory and field handling procedures may be monitored, if required by the client or regulators, by including quality control (QC) samples for analysis with the groundwater samples. Examples of different types of QC samples are as follows:

- Trip blanks are prepared at the analytical laboratory by laboratory personnel to check field handling procedures. Trip blanks are transported to the project site in the same manner as the laboratory-supplied sample containers to be filled. They are not opened, and are returned to the laboratory with the samples collected. Trip blanks are analyzed for purgeable organic compounds.
- Equipment blanks are prepared in the field to determine if decontamination of field sampling equipment has been effective. The sampling equipment used to collect the groundwater samples is rinsed with distilled water which is then decanted into laboratory-supplied containers. The equipment blanks are transported to the laboratory, and are analyzed for the same chemical constituents as the samples collected at the site.
- Duplicates are collected at the same time that the standard groundwater samples are being collected and are analyzed for the same compounds in order to check the reproducibility of laboratory data. They are typically only collected from one well per sampling event. The duplicate is assigned an identification number that will not associate it with the source well.

Generally, trip blanks and field blanks check field handling and transportation procedures. Duplicates check laboratory procedures. The configuration of QC samples is determined by Clearwater depending on site conditions and regulatory requirements.



Report Number : 45255

Date : 8/16/2005

Jim Ho  
Clearwater Group, Inc.  
229 Tewksbury Avenue  
Point Richmond, CA 94801

Subject : 3 Water Samples  
Project Name : NAZ EAGLE GAS STATION  
Project Number : ZP046C

Dear Mr. Ho,

Chemical analysis of the samples referenced above has been completed. Summaries of the data are contained on the following pages. Sample(s) were received under documented chain-of-custody. US EPA protocols for sample storage and preservation were followed.

Kiff Analytical is certified by the State of California (# 2236). If you have any questions regarding procedures or results, please call me at 530-297-4800.

Sincerely,

A handwritten signature in black ink, appearing to read "Joel Kiff".

Joel Kiff



Report Number : 45255

Date : 8/16/2005

Subject : 3 Water Samples  
Project Name : NAZ EAGLE GAS STATION  
Project Number : ZP046C

## Case Narrative

Matrix Spike/Matrix Spike Duplicate Results associated with sample MW-3 for the analyte Methyl-t-butyl ether were affected by the analyte concentrations already present in the un-spiked sample.

Approved By: \_\_\_\_\_

Joe Kiff





Report Number : 45255

Date : 8/16/2005

Project Name : NAZ EAGLE GAS STATION

Project Number : ZP046C


Sample : MW-1

Matrix : Water

Lab Number : 45255-01

Sample Date :8/8/2005

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	< 50	50	ug/L	EPA 8260B	8/11/2005
Toluene	< 50	50	ug/L	EPA 8260B	8/11/2005
Ethylbenzene	< 50	50	ug/L	EPA 8260B	8/11/2005
Total Xylenes	< 50	50	ug/L	EPA 8260B	8/11/2005
Methyl-t-butyl ether (MTBE)	8500	50	ug/L	EPA 8260B	8/11/2005
Diisopropyl ether (DIPE)	< 50	50	ug/L	EPA 8260B	8/11/2005
Ethyl-t-butyl ether (ETBE)	< 50	50	ug/L	EPA 8260B	8/11/2005
Tert-amyl methyl ether (TAME)	< 50	50	ug/L	EPA 8260B	8/11/2005
Tert-Butanol	250000	700	ug/L	EPA 8260B	8/12/2005
TPH as Gasoline	< 5000	5000	ug/L	EPA 8260B	8/11/2005
Toluene - d8 (Surr)	95.2		% Recovery	EPA 8260B	8/11/2005
4-Bromofluorobenzene (Surr)	97.0		% Recovery	EPA 8260B	8/11/2005
TPH as Diesel	2000	50	ug/L	M EPA 8015	8/11/2005
Octacosane (Diesel Surrogate)	114		% Recovery	M EPA 8015	8/11/2005

Approved By:  Joel Kiff



Report Number : 45255

Date : 8/16/2005

Project Name : NAZ EAGLE GAS STATION

Project Number : ZP046C


Sample : MW-3

Matrix : Water

Lab Number : 45255-02

Sample Date :8/8/2005

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	< 150	150	ug/L	EPA 8260B	8/11/2005
Toluene	< 150	150	ug/L	EPA 8260B	8/11/2005
Ethylbenzene	< 150	150	ug/L	EPA 8260B	8/11/2005
Total Xylenes	< 150	150	ug/L	EPA 8260B	8/11/2005
Methyl-t-butyl ether (MTBE)	75000	150	ug/L	EPA 8260B	8/11/2005
Diisopropyl ether (DIPE)	< 150	150	ug/L	EPA 8260B	8/11/2005
Ethyl-t-butyl ether (ETBE)	< 150	150	ug/L	EPA 8260B	8/11/2005
Tert-amyl methyl ether (TAME)	500	150	ug/L	EPA 8260B	8/11/2005
Tert-Butanol	44000	700	ug/L	EPA 8260B	8/11/2005
TPH as Gasoline	< 15000	15000	ug/L	EPA 8260B	8/11/2005
Toluene - d8 (Surr)	96.5		% Recovery	EPA 8260B	8/11/2005
4-Bromofluorobenzene (Surr)	100		% Recovery	EPA 8260B	8/11/2005
TPH as Diesel	180	50	ug/L	M EPA 8015	8/11/2005
Octacosane (Diesel Surrogate)	112		% Recovery	M EPA 8015	8/11/2005

Approved By:  Joel Kiff



Report Number : 45255

Date : 8/16/2005

Project Name : NAZ EAGLE GAS STATION

Project Number : ZP046C


Sample : MW-2

Matrix : Water

Lab Number : 45255-03

Sample Date :8/8/2005

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	< 1500	1500	ug/L	EPA 8260B	8/11/2005
Toluene	< 1500	1500	ug/L	EPA 8260B	8/11/2005
Ethylbenzene	< 1500	1500	ug/L	EPA 8260B	8/11/2005
Total Xylenes	< 1500	1500	ug/L	EPA 8260B	8/11/2005
Methyl-t-butyl ether (MTBE)	770000	1500	ug/L	EPA 8260B	8/11/2005
Diisopropyl ether (DIPE)	< 1500	1500	ug/L	EPA 8260B	8/11/2005
Ethyl-t-butyl ether (ETBE)	< 1500	1500	ug/L	EPA 8260B	8/11/2005
Tert-amyl methyl ether (TAME)	2200	1500	ug/L	EPA 8260B	8/11/2005
Tert-Butanol	85000	7000	ug/L	EPA 8260B	8/11/2005
TPH as Gasoline	< 150000	150000	ug/L	EPA 8260B	8/11/2005
Toluene - d8 (Surr)	94.5		% Recovery	EPA 8260B	8/11/2005
4-Bromofluorobenzene (Surr)	96.7		% Recovery	EPA 8260B	8/11/2005
TPH as Diesel	770	50	ug/L	M EPA 8015	8/11/2005
Octacosane (Diesel Surrogate)	113		% Recovery	M EPA 8015	8/11/2005

Approved By:  Joel Kiff

Report Number : 45255

Date : 8/16/2005

**QC Report : Method Blank Data**

Project Name : **NAZ EAGLE GAS STATION**

Project Number : **ZP046C**

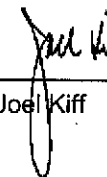
<u>Parameter</u>	<u>Measured Value</u>	<u>Method Reporting Limit</u>	<u>Units</u>	<u>Analysis Method</u>	<u>Date Analyzed</u>
TPH as Diesel	< 50	50	ug/L	M EPA 8015	8/10/2005
Octacosane (Diesel Surrogate)	111		%	M EPA 8015	8/10/2005
Benzene	< 0.50	0.50	ug/L	EPA 8260B	8/11/2005
Toluene	< 0.50	0.50	ug/L	EPA 8260B	8/11/2005
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	8/11/2005
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	8/11/2005
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	8/11/2005
Diisopropyl ether (DIPE)	< 0.50	0.50	ug/L	EPA 8260B	8/11/2005
Ethyl-t-butyl ether (ETBE)	< 0.50	0.50	ug/L	EPA 8260B	8/11/2005
Tert-amyl methyl ether (TAME)	< 0.50	0.50	ug/L	EPA 8260B	8/11/2005
Tert-Butanol	< 5.0	5.0	ug/L	EPA 8260B	8/11/2005
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	8/11/2005
Toluene - d8 (Surr)	97.5		%	EPA 8260B	8/11/2005
4-Bromofluorobenzene (Surr)	100		%	EPA 8260B	8/11/2005
Benzene	< 0.50	0.50	ug/L	EPA 8260B	8/10/2005
Toluene	< 0.50	0.50	ug/L	EPA 8260B	8/10/2005
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	8/10/2005
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	8/10/2005
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	8/10/2005
Diisopropyl ether (DIPE)	< 0.50	0.50	ug/L	EPA 8260B	8/10/2005
Ethyl-t-butyl ether (ETBE)	< 0.50	0.50	ug/L	EPA 8260B	8/10/2005
Tert-amyl methyl ether (TAME)	< 0.50	0.50	ug/L	EPA 8260B	8/10/2005
Tert-Butanol	< 5.0	5.0	ug/L	EPA 8260B	8/10/2005
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	8/10/2005
Toluene - d8 (Surr)	97.5		%	EPA 8260B	8/10/2005
4-Bromofluorobenzene (Surr)	101		%	EPA 8260B	8/10/2005

<u>Parameter</u>	<u>Measured Value</u>	<u>Method Reporting Limit</u>	<u>Units</u>	<u>Analysis Method</u>	<u>Date Analyzed</u>
------------------	-----------------------	-------------------------------	--------------	------------------------	----------------------

KIFF ANALYTICAL, LLC

2795 2nd St, Suite 300 Davis, CA 95616 530-297-4800

Approved By: Joel Kiff



Report Number : 45255

Date : 8/16/2005

QC Report : Matrix Spike/ Matrix Spike Duplicate

Project Name : NAZ EAGLE GAS

Project Number : ZP046C

Parameter	Spiked Sample	Sample Value	Spike Level	Spike Dup. Level	Spiked Sample Value	Duplicate Spiked Sample Value	Units	Analysis Method	Date Analyzed	Spiked Sample Percent Recov.	Duplicate Spiked Sample Percent Recov.	Relative Percent Diff.	Spiked Sample Percent Recov. Limit	Relative Percent Diff. Limit
TPH as Diesel	Blank	<50	1000	1000	906	931	ug/L	M EPA 8015	8/10/05	90.6	93.1	2.80	70-130	25
Benzene	45287-04	<0.50	40.0	40.0	41.7	41.4	ug/L	EPA 8260B	8/11/05	104	103	0.896	70-130	25
Toluene	45287-04	<0.50	40.0	40.0	40.0	39.8	ug/L	EPA 8260B	8/11/05	100	99.6	0.516	70-130	25
Tert-Butanol	45287-04	<5.0	200	200	203	202	ug/L	EPA 8260B	8/11/05	102	101	0.311	70-130	25
Methyl-t-Butyl Ether	45287-04	140	40.0	40.0	174	174	ug/L	EPA 8260B	8/11/05	71.1	69.1	2.78	70-130	25
Benzene	45279-03	<0.50	40.0	40.0	40.9	41.0	ug/L	EPA 8260B	8/10/05	102	102	0.164	70-130	25
Toluene	45279-03	<0.50	40.0	40.0	41.1	41.5	ug/L	EPA 8260B	8/10/05	103	104	0.966	70-130	25
Tert-Butanol	45279-03	<5.0	200	200	202	199	ug/L	EPA 8260B	8/10/05	101	99.4	1.76	70-130	25
Methyl-t-Butyl Ether	45279-03	<0.50	40.0	40.0	44.2	44.4	ug/L	EPA 8260B	8/10/05	110	111	0.451	70-130	25

KIFF ANALYTICAL, LLC

2795 2nd St, Suite 300 Davis, CA 95616 530-297-4800

Approved By:  Joe Kiff

Report Number : 45255

Date : 8/16/2005

QC Report : Laboratory Control Sample (LCS)

Project Name : **NAZ EAGLE GAS**

Project Number : **ZP046C**

Parameter	Spike Level	Units	Analysis Method	Date Analyzed	LCS Percent Recov.	LCS Percent Recov. Limit
Benzene	40.0	ug/L	EPA 8260B	8/11/05	101	70-130
Toluene	40.0	ug/L	EPA 8260B	8/11/05	104	70-130
Tert-Butanol	200	ug/L	EPA 8260B	8/11/05	105	70-130
Methyl-t-Butyl Ether	40.0	ug/L	EPA 8260B	8/11/05	102	70-130
Benzene	40.0	ug/L	EPA 8260B	8/10/05	107	70-130
Toluene	40.0	ug/L	EPA 8260B	8/10/05	106	70-130
Tert-Butanol	200	ug/L	EPA 8260B	8/10/05	103	70-130
Methyl-t-Butyl Ether	40.0	ug/L	EPA 8260B	8/10/05	109	70-130

KIFF ANALYTICAL, LLC

2795 2nd St, Suite 300 Davis, CA 95616 530-297-4800

Approved By:

Joel Kiff





2795 2nd Street, Suite 300  
 Davis, CA 95616  
 Lab: 530.297.4800  
 Fax: 530.297.4802

SRG # / Lab No. 45255

Page 1 of 1

Project Contact (Hardcopy or PDF To): Jim Ho  
 California EDF Report?  Yes  No

Company / Address: Clearwater Group  
229 BANKSBURY AVE. Ft. RICHMOND, GA  
 Sampling Company Log Code: CW60

Phone #: (516) 307-9943 Fax #: (516) 232-2823  
 Project #: 2P046C P.O. #: \_\_\_\_\_  
 Global ID: T0605300219  
 EDF Deliverable To (Email Address): Jho@clearwatergroup.com

Project Name: NAZ Eagle Gas Station  
 Sampler Signature: Rodney Berry

Project Address: 4301 SAN LEANDRO ST. OAKLAND, CA

Chain-of-Custody Record and Analysis Request

Analysis Request												TAT	
MTBE (EPA 8260B) per EPA 802.1 level @ 5.0 ppb												<input type="checkbox"/>	For Lab Use Only
MTBE (EPA 8260B) @ 0.5 ppb												<input type="checkbox"/>	
BTEX (EPA 8260B)												<input type="checkbox"/>	
TPH Gas (EPA 8260B)												<input type="checkbox"/>	
5 Oxygenates (EPA 8260B)												<input type="checkbox"/>	
7 Oxygenates (EPA 8260B)												<input type="checkbox"/>	
Lead Scav. (1,2 DCA & 1,2 EDB-EPA 8260B)												<input type="checkbox"/>	
Volatile Halocarbons (EPA 8260B)												<input type="checkbox"/>	
Volatile Organics Full List (EPA 8260B)												<input type="checkbox"/>	
Volatile Organics (EPA 824.2 Drinking Water)												<input type="checkbox"/>	
TPH as Diesel (EPA 8015M)												<input checked="" type="checkbox"/>	
TPH as Motor Oil (EPA 8015M)												<input type="checkbox"/>	
Total Lead (EPA 6010)												<input type="checkbox"/>	
W.E.T. Lead (STLC)												<input type="checkbox"/>	
												<input checked="" type="checkbox"/>	
												<input type="checkbox"/>	

Sample Designation	Sampling		Container				Preservative			Matrix			
	Date	Time	40 ml VOA	Sleeve	Poly	Glass	Tedlar	HCl	HNO <sub>3</sub>	None	Water	Soil	Air
MW-1	8/8/05	1450						X			X		
3	1700										X		
2	1715										X		

Relinquished by: Rodney Berry Date: 8/8/05 Time: 1800  
 Relinquished by: \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_  
 Relinquished by: \_\_\_\_\_ Date: 080905 Time: 0853 Received by Laboratory: Michelle Spencer KIFF Analytical

Remarks: \_\_\_\_\_  
 Bill to: \_\_\_\_\_

For Lab Use Only: Sample Receipt					
Temp °C	Initials	Date	Time	Therm. ID #	Coolant Present
<u>-2</u>	<u>MAS</u>	<u>080905</u>	<u>1040</u>	<u>IR-1</u>	<input checked="" type="checkbox"/> No