February 5, 2009

Mr. Jerry Wickham
Hazardous materials Specialist
Alameda County Health Care Services Agency
Environmental Health Services
Environmental Protection
1131 Harbor bay Parkway, Suite 250
Alameda, CA 94502

RE: Eagle Gas Station
4301 San Leandro Street
Oakland, CA 94601
LOP StID# 2118
Fuel Leak Case No. RO0000096
USTCF Claim No. 014551
Clearwater Group Project # ZP046D

Dear Mr. Wickham

As the legally authorized representative of the above project location, I have reviewed the quarterly Groundwater monitoring Report – Fourth Quarter 2008 prepared by my consultant of record, Clearwater Group. I declare, under penalty of perjury, that the information and /or recommendations contained in this report are true and correct to the best of my knowledge.

Sincerely,

Muhammad Jamil 2-5-09

Mr. Muhammad Jamil

CLEARWATER
GROUP
Environmental Services

February 3, 2009

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

Re: ***Quarterly Groundwater Monitoring Report – Fourth Quarter 2008***
Eagle Gas Station
4301 San Leandro Street
Oakland, California 94601

LOP Site ID# 2118
USTCF Claim No. 014551
ACEH Case No. RO# 0000096

Clearwater Project No. ZP046M

Dear Mr. Wickham:

Clearwater Group (Clearwater) has prepared this *Quarterly Groundwater Monitoring Report – Fourth Quarter 2008*, for the Eagle Gas Station site. This report presents the results of the groundwater monitoring activities performed on December 8 and 9, 2008, and presents Clearwater's recommended changes of sampling procedure for future groundwater monitoring events.

SITE DESCRIPTION

The site is located in the southern portion of the City of Oakland, Alameda County, California, at the southern corner of the intersection of San Leandro Street and High Street. The site is located approximately 1,100 feet northeast of Interstate Highway 880 and approximately 500 feet southeast of the 42nd Avenue overcrossing (**Figure 1**). The site is bounded by commercial property to the southeast and southwest, by High Street to the northwest, and by San Leandro Street to the northeast (**Figure 2**). The site is operated as a gas station and convenience store. A site investigation history is provided as **Attachment A**.

RECENT GROUNDWATER MONITORING WELL INSTALLATIONS

Clearwater recently installed two sets of paired shallow-zone and deep-zone wells offsite (well MW-9/MW-9D and MW-10/MW-10D) and one deep-zone well onsite (well MW-11D, **Figure 2**). The well installations were reported in Clearwater's January 21, 2008 Groundwater Monitoring Well Installation Report. California Department of Water Resources (DWR) Well Completion Reports were produced and sent to the Alameda County Public Works Agency (ACPWA), on January 22, 2009. The ACPWA indicated that they would forward the Well Completion Reports to the DWR.

The new wells were surveyed by Kister, Savio & Rei, of Richmond, California on January 12, 2009. The new wells and two preexisting onsite wells, MW-3 and IS-4, were surveyed relative to the North American Vertical Datum of 1988 (NAVD 88). The survey also established a benchmark on the south corner of High Street and San Leandro Street to facilitate future surveying.

FOURTH QUARTER 2008 GROUNDWATER MONITORING EVENT

The Fourth Quarter 2008 groundwater monitoring event was conducted on December 8 and 9, 2008. The monitoring event included measuring the depths to groundwater, well purging and sampling, and laboratory analysis of groundwater samples. Well construction details for all groundwater monitoring wells are presented in **Table 1**.

Five new wells have been added since the previous groundwater monitoring event (Third Quarter of 2008) in September 2008. Wells MW-9, MW-9D, MW-10, and MW-10D were installed offsite; well MW-11D was installed onsite.

Groundwater Gauging, Purging, and Sampling

On December 8, 2008, the depth to groundwater in all 25 wells was measured (**Tables 2** and **3**). An electronic water-level indicator accurate to within 1/100 foot was used to measure the depth to groundwater from the top of each well casing. All the wells were visually checked for the presence of light non-aqueous phase liquid (LNAPL) during well purging.

Per the Alameda County Environmental Health Services (ACEH) letter dated September 4, 2008 (**Attachment B**), the following wells were sampled; MW-1, MW-1D, MW-2, MW-3, MW-4, MW-4D, MW-5, MW-5D, MW-7, MW-7D, MW-8, IS-4, IS-5, and EW-2. In addition, the five new wells were initially sampled during this groundwater monitoring event.

Prior to groundwater sampling, these wells were purged of approximately three well volumes using a disposable polyethylene bailer until the temperature, conductivity, and pH measurements of the purge water stabilized, in accordance with Clearwater's *Groundwater Monitoring and Sampling Field Procedures* (**Attachment C**). Depth-to-water and well purging data were recorded on Well Gauging/Purging Calculations and Purge Data Sheets (**Attachment D**).

Following recovery of the water levels to at least 80% of their static levels, groundwater samples were collected from these wells. A new disposable polyethylene bailer was used for each well. The samples were labeled, documented on a chain-of-custody form, and placed on ice in a chilled cooler for transport to the laboratory. The purge water and rinseate were pumped into an internal tank in the sampling van and removed from the site for disposal at InStrat, Rio Vista, California, a licensed treatment, storage, and disposal facility.

Laboratory Analysis

The groundwater samples were analyzed by Kiff Analytical, LLC (Kiff), of Davis, California. Kiff is a State of California, Department of Health Services-certified laboratory. All the samples were analyzed by Environmental Protection Agency (EPA) Method 8260B for total petroleum hydrocarbons as gasoline (TPH-g); benzene, toluene, ethylbenzene, and total xylenes (BTEX); and five oxygenates including methyl tertiary butyl ether (MTBE), di-isopropyl ether (DIPE), ethyl tertiary butyl ether (ETBE), tertiary amyl methyl ether (TAME), and tert-butanol (TBA). The samples were also analyzed for total petroleum hydrocarbons as diesel (TPH-d) by EPA Method 8015.

The new wells were additionally analyzed for ethylene dibromide (EDB), ethylene dichloride (EDC), methanol, and ethanol, as part of the initial well sampling protocol requested by ACEH.

The Kiff analytical report (#66380), including the chain-of-custody forms, is included in **Attachment E**.

GROUNDWATER MONITORING RESULTS

Observations During Groundwater Sampling

During depth-to-water measurement and well purging, apparent petroleum odors were detected emanating from monitoring wells MW-1, MW-2, MW-4, MW-5, MW-6, MW-8, IS-1, IS-3, IS-4, IS-5, IS-6, EW-1, and EW-2. Sheens were observed in the groundwater from monitoring wells MW-1, MW-4, MW-5, MW-6, MW-8, IS-3, IS-4, and IS-5 and off-site wells MW-10 and MW-10D. Strong odor and free product were noted from/on the groundwater samples collected from wells IS-5 (measured at approximately 1 inch thick), MW-4 (trace of product) and MW-8 (trace of product). No sheen or odor was identified in the water from monitoring wells MW-1D, MW-3, MW-4D, MW-5D, MW-7, MW-7D, IS-1, IS-2, EW-2, or MW-11D. Groundwater purged from wells MW-4, MW-8, and IS-2 had high turbidity; groundwater in the remaining wells had moderate to low turbidity. The color of the water ranged from brown to gray to tan. **Attachment D** presents the observations made during groundwater sampling.

Change in Top-of-Casing Elevations

The new wells and preexisting, onsite wells MW-3 and IS-4 were surveyed relative to NAVD 88. When the survey results were calculated, it became apparent that the mean sea level value (City of Oakland Coordinate System) used for the previous well survey differed from NAVD 88.

All of the wells listed on **Tables 2** and **3** have had their Top of Casing elevations adjusted to match NAVD 88, beginning with this quarter.

Groundwater Elevation and Flow Direction

On December 8, 2008, the onsite, shallow-zone groundwater elevations ranged from a low of 12.64 feet above mean sea level (AMSL) in well MW-2 to a high of 20.15 feet AMSL in well MW-1 (**Table 2**). The onsite shallow-zone groundwater elevation contour map (**Figure 3**) shows highly variable groundwater flow directions and gradients (shown as 'i') and an apparent onsite groundwater mound. This groundwater monitoring event, conducted in the Fourth Quarter, 2008, is the first event where the results of depth to groundwater information from offsite wells will be incorporated.

Of the various flow directions, that with the steepest gradient is near the northern corner of this site. Three representative flow directions and gradients are shown on **Figure 3**. On the southwest side of the site near well MW-2, the gradient is toward the south at 0.333; along the east edge of the site the gradient is 0.25 toward the east; and at the north corner near well MW-3, the gradient is 0.600 toward the north. The contouring of the offsite areas is smoother than that of the onsite areas because the data points (groundwater monitoring wells) are less densely spaced between the site and the offsite wells.

The groundwater flow direction and gradient for the deep-zone were determined from five onsite wells (MW-1D, MW-4D, MW-5D, MW-7D, and MW-11D) and two offsite wells (MW-9D and MW-10D). The groundwater elevations in the deep-zone monitoring wells (MW-1D, MW-4D, MW-5D, MW-7D, MW-9D, MW-10D, and MW-11D) ranged from a low of 10.44 feet AMSL (MW-4D) to a high of 10.61 feet AMSL (MW-1D) (**Table 3**). **Figure 4** shows that the potentiometric surface of the deep-zone is flatter than the potentiometric surface of the shallow-zone. A slight mounding occurs in the area of well MW-1D. A representative gradient of 0.0017 toward the east is shown on **Figure 4**. With the installation of additional groundwater monitoring wells screened within the deep-zone, the determinations of groundwater flow direction and gradient could change significantly.

The apparent groundwater flow direction and gradient in the shallow-zone (**Figures 3**) are different from the groundwater flow direction and gradient in the deep-zone (**Figure 4**). At each pair of shallow-zone and deep-zone wells (MW-1/MW-1D, MW-4/MW-4D, MW-5/MW-5D, MW-7/MW-7D, MW-9/MW-9D, and MW-10/MW-10D), the groundwater elevation was higher in the shallow-zone well. The differences ranged from 3.06 feet (wells MW-7/MW-7D) to 9.54 feet (wells MW-1/MW-1D). **Table 1** presents the screened and filter pack intervals of the shallow-zone and deep-zone wells.

Groundwater Sample Analytical Results: Shallow-Zone Wells

Consistent with historical data, the primary constituents of concern (COCs) detected at the site are TPH-g, TPH-d, benzene, MTBE, and TBA. The groundwater sample analytical results are

summarized in **Table 4**. The shallow-zone wells sampled using the reduced sampling schedule were MW-1, MW-2, MW-3, MW-4, MW-5, MW-7, MW-8, IS-4, IS-5, and EW-2, in addition to new off-site wells MW-9 and MW-10.

TPH-g concentrations were reported above the laboratory method-reporting limit (MRL) in samples collected from shallow-zone monitoring wells MW-1 (360 µg/L), MW-2 (6,400 µg/L), MW-4 (69,000 µg/L), MW-8 (1,700,000 µg/L), MW-9 (1,200 µg/L), MW-10 (8,000 µg/L), IS-4 (20,000 µg/L), and IS-5 (47,000 µg/L). However, the modified MRLs for samples with interfering TPH-g concentrations ranged from a low of <900 µg/L (MW-3) to a high of <15,000 µg/L (MW-7). **Figure 5** presents the TPH-g concentrations in groundwater for the shallow-zone.

The detected concentrations of diesel-range hydrocarbons (TPH-d) in the samples collected from shallow-zone wells ranged from a low of 94 µg/L (MW-3) to a high of 140,000 µg/L (IS-5). TPH-d was not reported above the MRLs in the groundwater samples from wells MW-9 (<800 µg/L), MW-2 (<2,000 µg/L), EW-2 (<1,500 µg/L), MW-8 (<2,000,000 µg/L) and MW-10 (<2,000 µg/L).

Benzene concentrations reported above the MRLs ranged from a low of 2.4 µg/L (MW-1) to a high of 3,600 µg/L (MW-4). Benzene concentrations were not reported above the MRLs in samples collected from monitoring wells MW-3 (<9.0 µg/L), MW-5 (<90 µg/L), and MW-7 (<150 µg/L). **Figure 6** presents the benzene concentrations in groundwater for the shallow-zone.

MTBE concentrations were reported above the MRLs in all the samples collected from the shallow-zone wells and ranged from a low of 540 µg/L (MW-1) to 360,000 µg/L (MW-4). **Figure 7** presents the MTBE concentrations in groundwater for the shallow-zone.

TBA concentrations were reported above the MRLs from all the samples collected from the shallow-zone wells and ranged from 15,000 µg/L (MW-1) to 660,000 µg/L (MW-4). **Figure 8** presents the TBA concentrations in groundwater for the shallow-zone.

Groundwater Sample Analytical Results: Deep-Zone Wells

TPH-d was reported in samples collected from deep-zone monitoring wells MW-9D (150 µg/L), and MW-10D (120 µg/L). TPH-d was not detected in any of the remaining wells above the MRL of 50 µg/L.

TPH-g was reported in samples collected from offsite deep-zone monitoring wells MW-9D (420 µg/L), and MW-10D (120 µg/L). TPH-d was not detected in any of the onsite wells above the MRL of 50 µg/L (**Figure 9**).

None of the BTEX components (benzene, toluene, ethylbenzene, and xylenes) were detected in any of the samples collected from the onsite deep-zone wells, at MRLs ranging from 0.50 µg/L (MW-1D and MW-5D) to <0.50 µg/L (MW-7D). The groundwater samples from both offsite

wells MW-9D and MW-10D contained detectable concentrations of benzene, ethylbenzene, and xylenes. Sample MW-9D contained 0.60 µg/L benzene, 1.7 µg/L ethylbenzene, and 3.4 µg/L xylenes. Sample MW-10D contained 0.64 µg/L benzene, 0.63 µg/L ethylbenzene, and 1.3 µg/L xylenes. **Figure 10** presents the benzene concentrations in the deep-zone.

MTBE was detected in all the deep-zone wells, at concentrations ranging from 0.91 µg/L (MW-1D) to 320 µg/L (MW-7D; **Figure 11**).

TBA was not detected in samples from wells MW-1D, MW-5D, MW-7D, MW-9D, and MW-10D at a detection limit of 5 µg/L. TBA was detected at a concentration of 74 µg/L in the sample from well MW-4D and 5.0 µg/L in the sample from MW-11D. **Figure 12** presents the groundwater sample analytical results for TBA in the deep-zone.

FINDINGS AND CONCLUSIONS

Groundwater Gradients and Flow Direction

The mounded groundwater elevation contour pattern observed in the shallow-zone during this quarterly monitoring event (**Figure 3**) is consistent with historical shallow-zone groundwater elevation contour patterns observed since February 2006 (First Quarter 2006). However, the groundwater elevation contour pattern is modified by the addition of two additional data points (determinations of groundwater elevation) with the addition of wells MW-9 and MW-10, rather than by any change in the historic groundwater elevation contour pattern.

The groundwater elevation contour pattern within the deep-zone (**Figure 4**) was determined from data collected from the deep-zone wells (MW-1D, MW-4D, MW-5D, MW-7D, MW-9D, MW-10D, and MW-11D). The generally flat-lying potentiometric surface has little relief. Both **Figure 3** (shallow-zone) and **Figure 4** (deep-zone) indicate groundwater mounding in the area of well pair MW-1/MW-1D. Data from previous groundwater monitoring events have been plotted to show the deep-zone potentiometric surface as a groundwater depression, or trough shape, with the trough opening toward due north.

Shallow-Zone Groundwater

The groundwater sample analytical results indicate that the site's shallow-zone groundwater continues to be significantly impacted by TPH-g, TPH-d, benzene, MTBE, and TBA. TBA levels have generally increased over time as MTBE levels have decreased. The high TBA concentrations are likely due to the biodegradation of MTBE. TBA concentrations in the samples from shallow-zone wells MW-5, MW-8, IS-4, and IS-5 have been generally increasing over time as MTBE concentrations in these wells have been generally decreasing (**Table 4**).

Deep-Zone Groundwater

TPH-g was not detected in groundwater samples collected from the onsite, deep-zone wells; however, offsite deep-zone wells MW-9D and MW-10D contained 420 µg/L and 120 µg/L of TPH-g, respectively. BTEX components were not detected in any of the onsite deep-zone

samples, but benzene, ethylbenzene, and xylenes were detected in samples from offsite deep-zone wells MW-9D and MW-10D.

MTBE was detected in all the deep-zone wells, at concentrations ranging from 0.91 µg/L (well MW-1D) to 320 µg/L (well MW-7D). **Figures 11** and **12** indicate that the highest concentrations of MTBE and TBA, respectively, occur onsite. TBA was detected in samples from onsite deep-zone wells MW-4D and MW-11D at concentrations of 74 µg/L and 5.0 µg/L, respectively.

The results indicated that the deep-zone appears to be impacted by MTBE and its breakdown product TBA, but not by TPH-g. The site has historically had detections of TPH-d in wells MW-1D, MW-4D, MW-5D, and MW-7D; however, these concentrations appear to be decreasing with time (**Table 5**).

The overlying onsite, shallow-zone is highly impacted with MTBE and TBA. The occurrence of MTBE and TBA in the deep-zone may reflect transport of MTBE and TBA (but not TPH-g) from the upper-zone, due to the greater mobility of MTBE and TBA.

Geotracker Upload

On January 5, 2009, Clearwater staff uploaded the electronic laboratory report (EDF) to Geotracker, the State of California website that provides online public access to environmental data. The depth-to-water data spreadsheet GEO_WELL was uploaded to Geotracker on the same day. Confirmations of the electronic submittals of these groundwater and laboratory data to the website are included **(Attachment F)**. Upon the completion and certification of this report, it will be scanned into PDF format and uploaded to the Geotracker website per the January 1, 2005, GEO_REPORT requirement.

PROPOSED CHANGE OF SAMPLING PROCEDURE FOR FUTURE QUARTERLY GROUNDWATER MONITORING EVENTS

Clearwater recommends upgrading the site well purging and groundwater sampling procedure to the EPA-recommended low-flow purging protocol, beginning with the next quarterly groundwater monitoring event (First Quarter of 2009). **Attachment G** presents the protocol for low-flow groundwater sampling.

FUTURE WORK

Clearwater received September 4, 2008, ACEH approval of the proposed new monitoring well installation in its *2008 Soil and Groundwater Investigation and Pilot Test Work Plan*, dated July 2, 2008. Clearwater has implemented the well installation and reporting elements of the investigative actions in the approved work plan. The installation of the five wells described in this report represent the first phase of implementing the work plan. The results obtained from the investigation were presented in Clearwater's January 21, 2009, *Groundwater Monitoring Well Installation Report.*

RECOMMENDATIONS

Clearwater has performed extensive on-site groundwater sampling during quarterly groundwater monitoring events beginning in the Third Quarter of 2000 through this quarterly groundwater monitoring event. Based on a recent USTCF request, and in order save time and available funds, Clearwater recommends further reducing the number of wells sampled during the quarterly groundwater events to only three wells: IS-5, MW-4 and MW-8, in addition to a minimum of one year of quarterly sampling for the new wells (MW-9, MW-9D, MW-10, MW-10D, and MW-11D; **Figure 2**). During each quarterly groundwater monitoring event, all of the wells would continue to be checked for the presence of free product and sheen, along with collecting depth to water measurements. All of the wells would be sampled once per year, in the third quarter, and analyzed for all constituents, or as needed relative to future remediation system operation and monitoring. Concentration versus time charts for wells MW-1 to MW-8 are included in **Attachment H**.

Two shallow-zone groundwater monitoring wells and three deep-zone groundwater monitoring wells were installed as part of the ACEH approved tasks in the *2008 Soil and Groundwater Investigation and Pilot Test Work Plan.* The wells were installed to investigate off-site groundwater conditions and to further define the hydrology of the deep-zone groundwater onsite and offsite. The five new wells should be sampled quarterly for one year. After one year the quarterly groundwater monitoring results from these wells should be evaluated to determine if a trend has been established and whether these wells may be placed on a reduced sampling schedule.

CERTIFICATION

This report was prepared under the supervision of a Professional Geologist registered in the State of California. All statements, conclusions, and recommendations are based solely upon published results from previous consultants, field observations by Clearwater staff, and laboratory analyses performed by a State-of-California-certified laboratory related to the work performed by Clearwater. Information and interpretation presented herein are for the sole use of the client and regulatory agency. A third party should not rely upon the information and interpretation contained in this document.

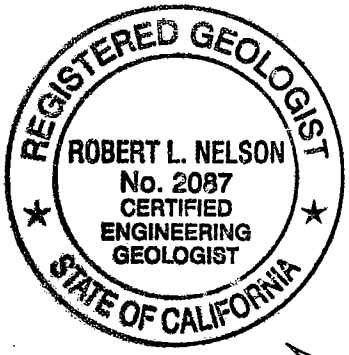
The service provided by Clearwater has been conducted in a manner consistent with the level of care and skill ordinarily exercised by members of this profession currently practicing under similar conditions in the area of the site. No other warranty, expressed or implied, is made.

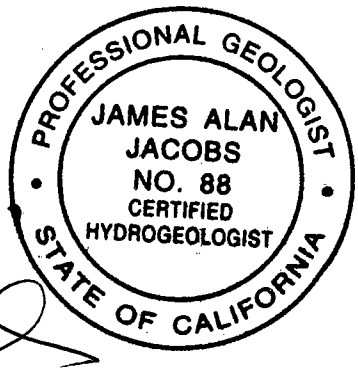
CLEARWATER
GROUP
Environmental Services

LICENSED PROFESSIONALS

In-house licensed professionals direct all projects. These professionals, including geologists and engineers, shall be guided by the highest standards of ethics, honesty, integrity, fairness, personal honor, and professional conduct. To the fullest extent possible, the licensed professional shall protect the public health and welfare and property in carrying out their professional duties. In the course of normal business, recommendations by the in-house professional may include the use of equipment, services, or products in which the Company has an interest. Therefore, the Company is making full disclosure of potential or perceived conflicts of interest to all parties.

Sincerely,
CLEARWATER GROUP





Robert L. Nelson, P.G. #6270, C.E.G. #2087
Senior Geologist

James A. Jacobs, P.G. #4815, C.H.G. #88
Chief Hydrogeologist

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

CLEARWATER
GROUP
Environmental Services

FIGURES:

Figure 1: Site Vicinity Map
Figure 2: Site Plan
Figure 3: Shallow-Zone Groundwater Elevation Contour Map
Figure 4: Deep-Zone Groundwater Elevation Contour Map
Figure 5: Shallow-Zone TPH-gasoline Concentrations in Groundwater (µg/L)
Figure 6: Shallow-Zone Benzene Concentrations in Groundwater (µg/L)
Figure 7: Shallow-Zone MTBE Concentrations in Groundwater (µg/L)
Figure 8: Shallow-Zone TBA Concentrations in Groundwater (µg/L)
Figure 9: Deep-Zone TPH-gasoline Concentrations in Groundwater (µg/L)
Figure 10: Deep-Zone Benzene Concentrations in Groundwater (µg/L)
Figure 11: Deep-Zone MTBE Concentrations in Groundwater (µg/L)
Figure 12: Deep-Zone TBA Concentrations in Groundwater (µg/L)

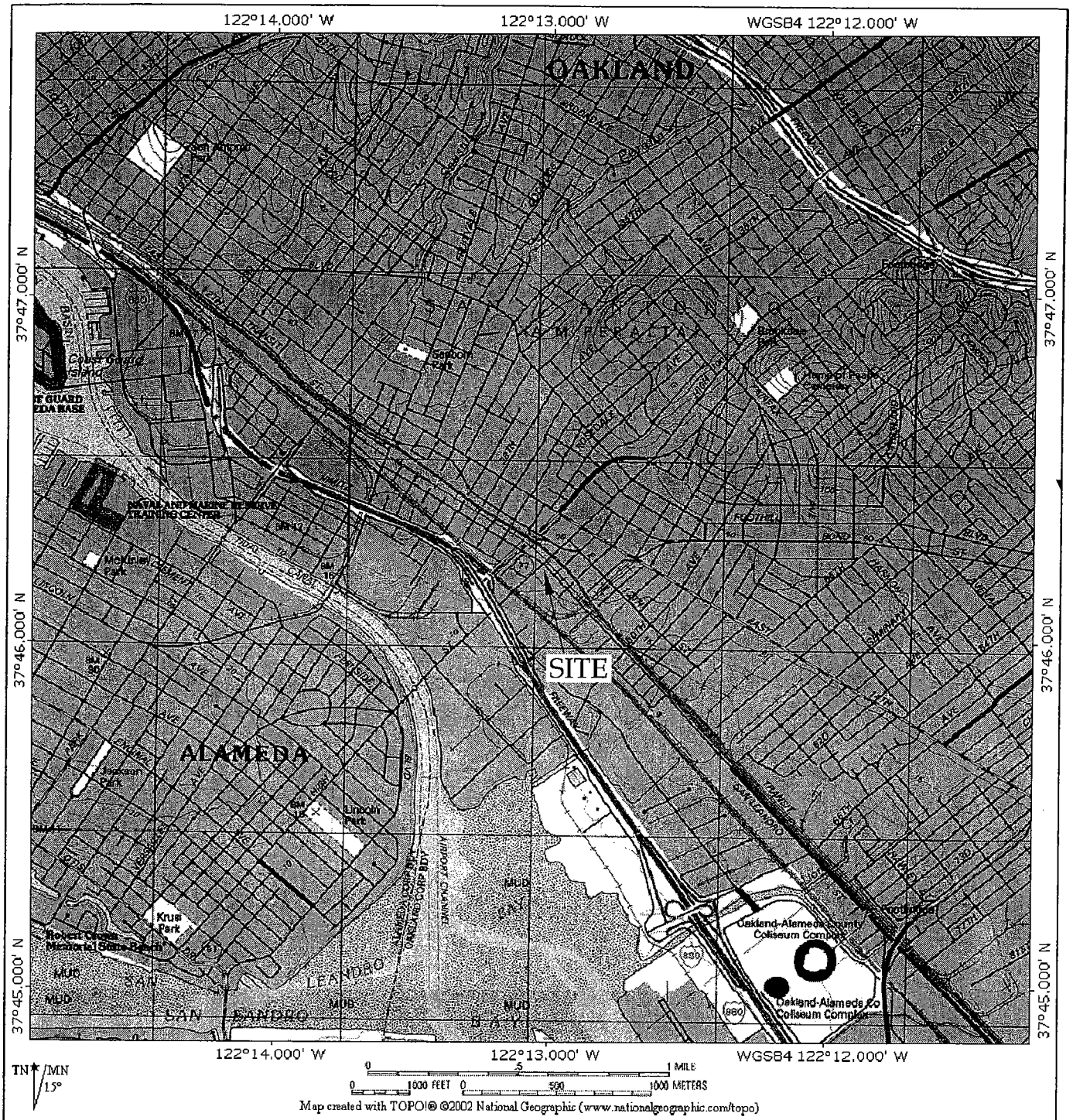
TABLES:

Table 1: Well Construction Details
Table 2: Groundwater Elevations, Shallow-Zone
Table 3: Groundwater Elevations, Deep-Zone
Table 4: Groundwater Sample Analytical Results, Shallow-Zone
Table 5: Groundwater Sample Analytical Results, Deep-Zone

ATTACHMENTS:

Attachment A: Site Investigation History
Attachment B: Letter dated September 4, 2008, from Alameda County Environmental Health
Attachment C: Groundwater Monitoring and Sampling Field Procedures
Attachment D: Well Gauging/Purging Calculation Data Sheet and Purge Data Sheets
Attachment E: Kiff Analytical Reports #66380 with Chain-of-Custody Documents
Attachment F: Geotracker Confirmation Page
Attachment G: Low-Flow (Minimal Drawdown) Groundwater Monitoring Standard Operating Procedure
Attachment H: Well Concentration Charts MW-1 to MW-8

FIGURES



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

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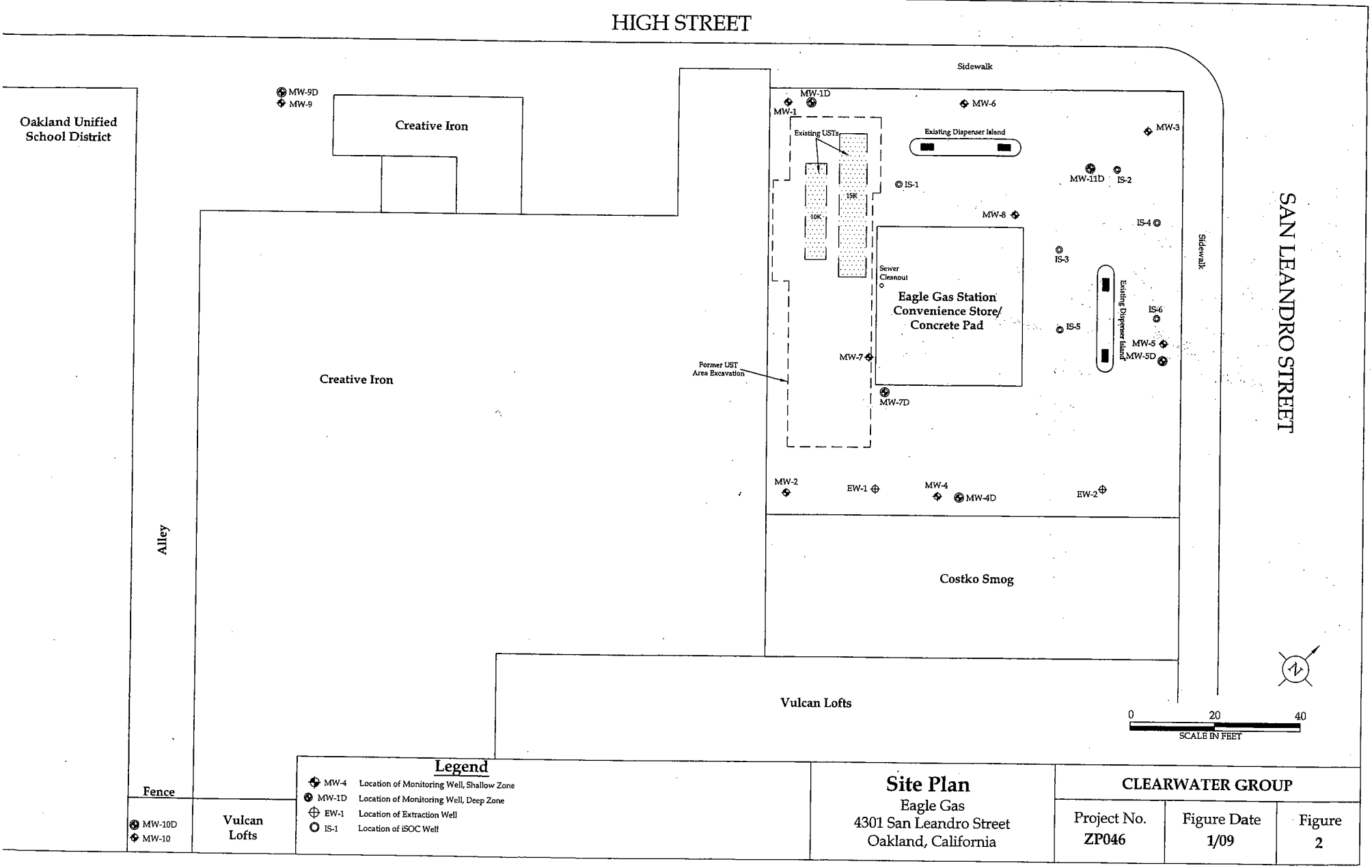
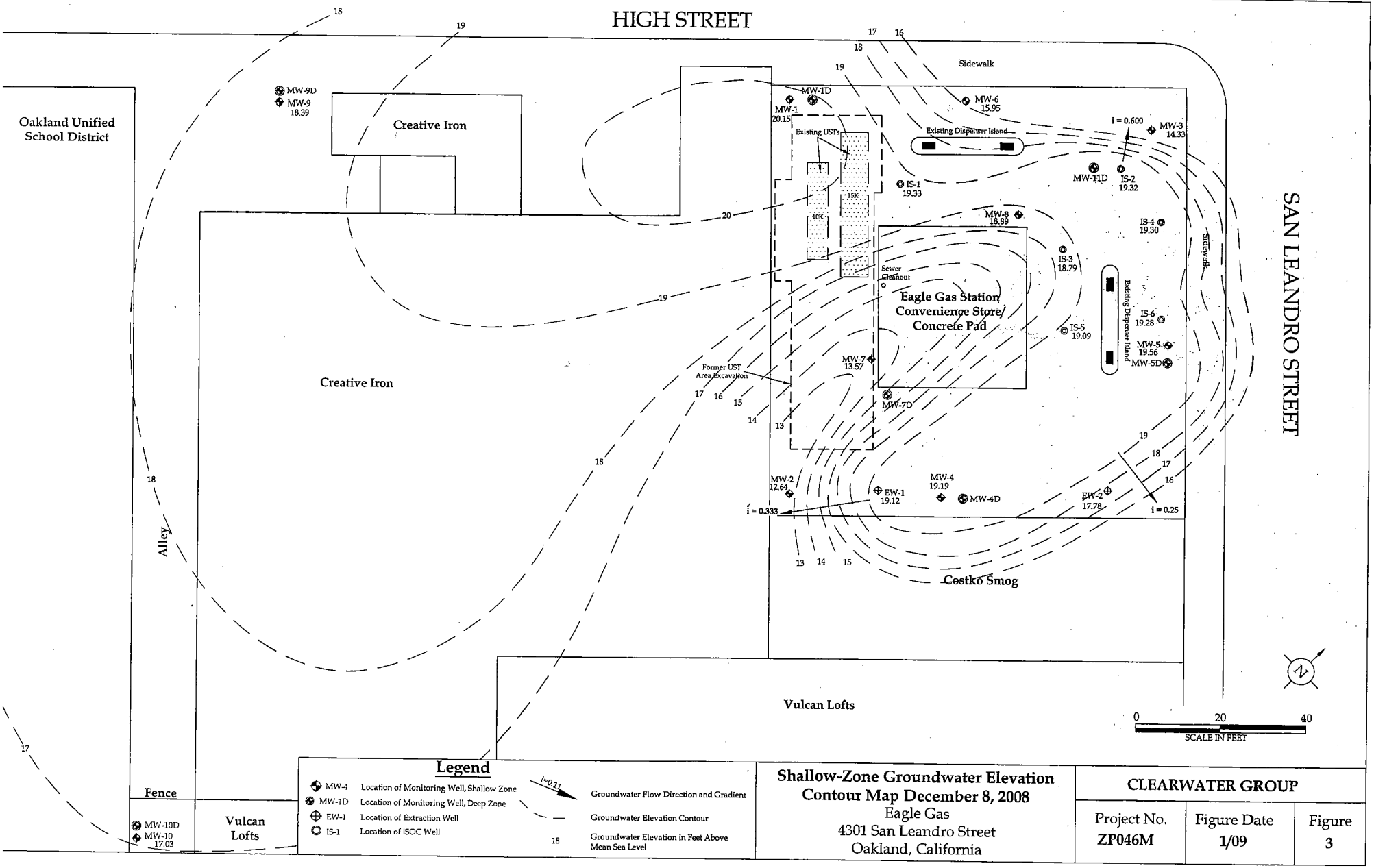
Project No.	Figure Date	Figure
ZP046	**1/08**	**1**

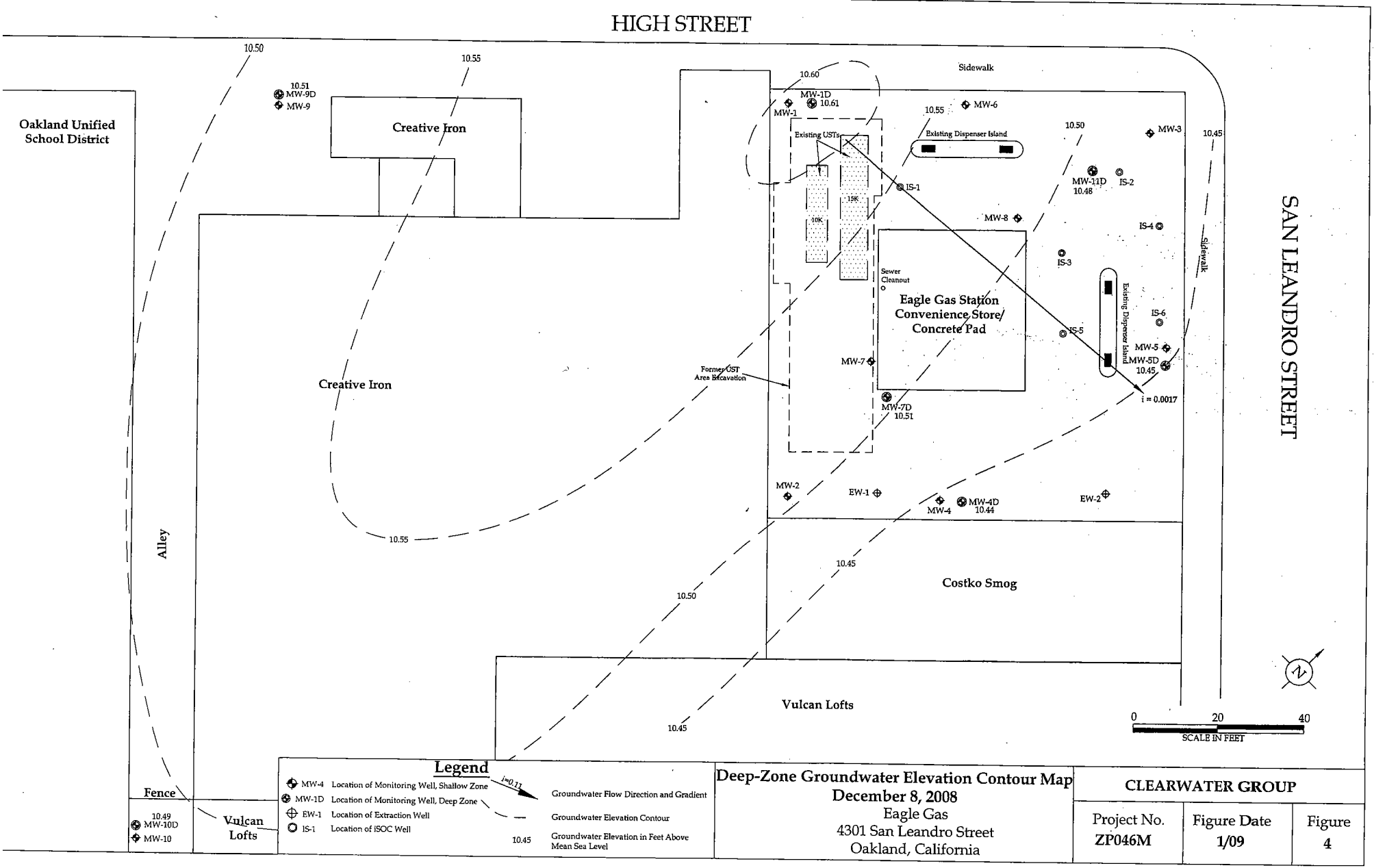

HIGH STREET
SAN LEANDRO STREET
Sidewalk
Sidewalk
Oakland Unified School District
Creative Iron
Creative Iron
Alley
MW-9D
MW-9
MW-1D
MW-1
MW-6
MW-3
Existing USTs
Existing Dispenser Island
MW-11D
IS-2
IS-1
15K
10K
MW-8
IS-4
IS-3
Sewer Cleanout
Eagle Gas Station Convenience Store/ Concrete Pad
Existing Dispenser Island
IS-6
IS-5
MW-5
MW-5D
Former UST Area Excavation
MW-7
MW-7D
MW-2
EW-1
MW-4
MW-4D
EW-2
Costko Smog
Vulcan Lofts
0
20
40
SCALE IN FEET
Fence
MW-10D
MW-10
Vulcan Lofts
Legend
MW-4 Location of Monitoring Well, Shallow Zone
MW-1D Location of Monitoring Well, Deep Zone
EW-1 Location of Extraction Well
IS-1 Location of iSOC Well
Site Plan
Eagle Gas
4301 San Leandro Street
Oakland, California
CLEARWATER GROUP
Project No.
ZP046
Figure Date
1/09
Figure
2



Shallow-Zone Groundwater Elevation Contour Map December 8, 2008
Eagle Gas
4301 San Leandro Street
Oakland, California

CLEARWATER GROUP

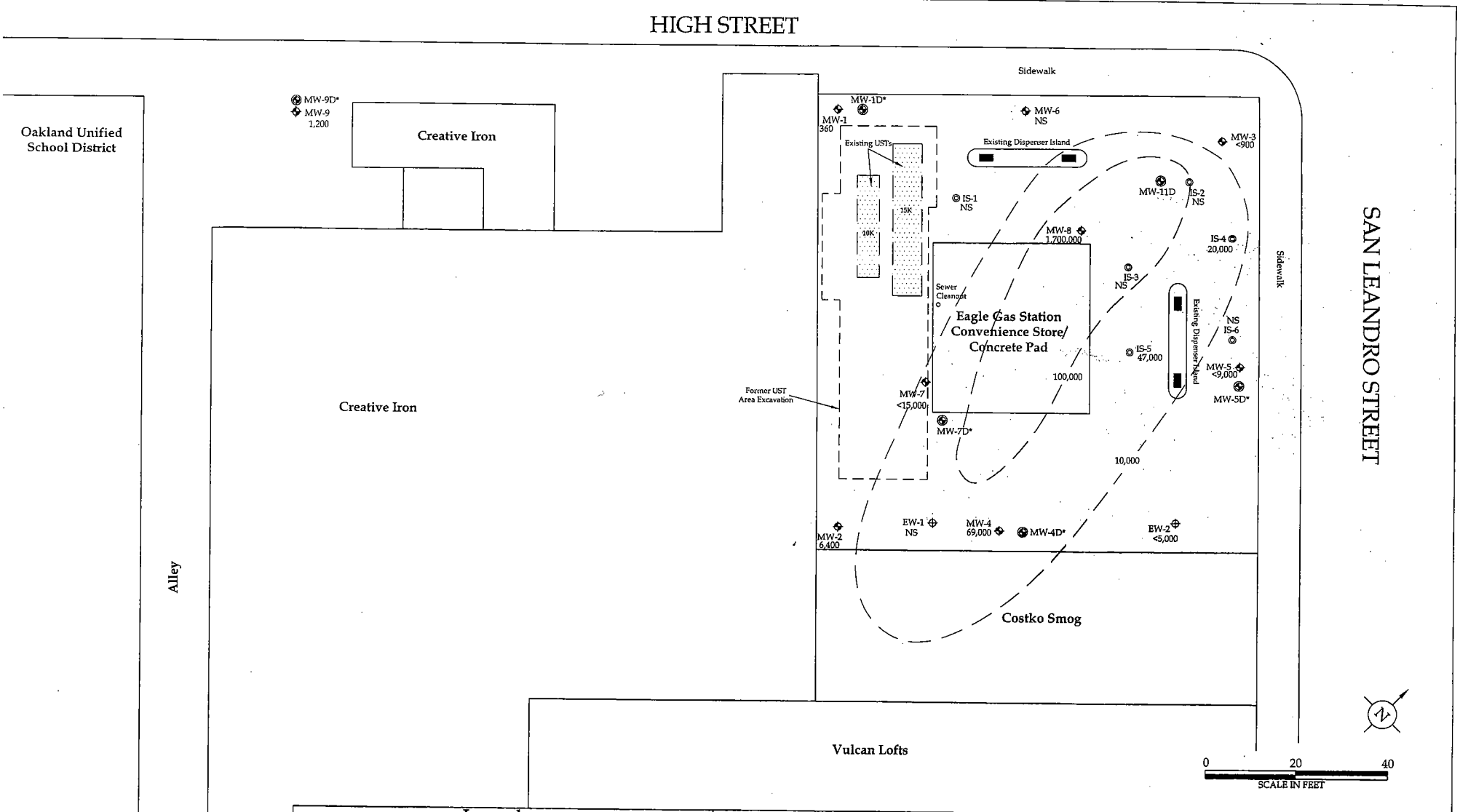
Project No.	Figure Date	Figure
ZP046M	1/09	3

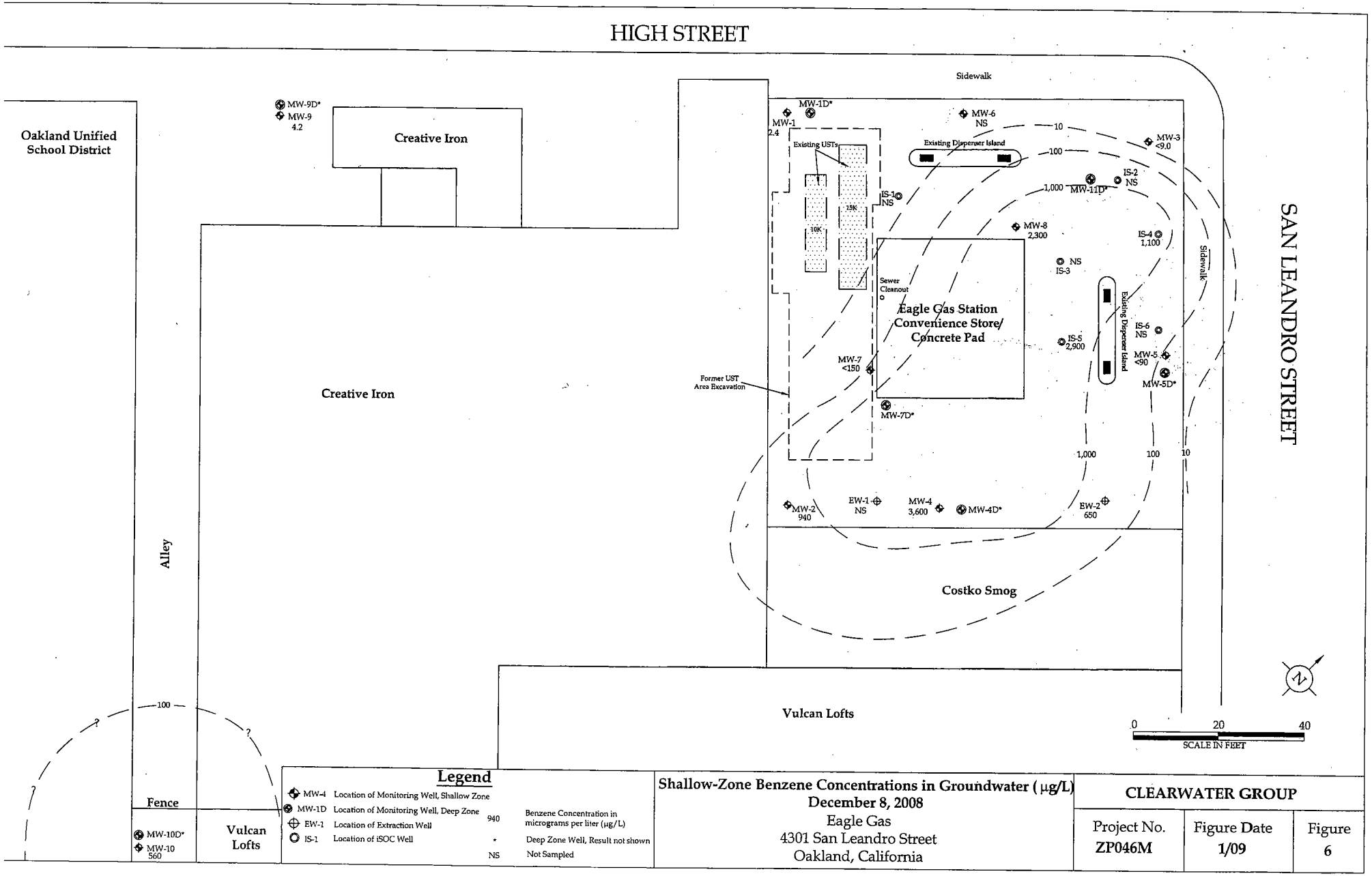


Deep-Zone Groundwater Elevation Contour Map
December 8, 2008
Eagle Gas
4301 San Leandro Street
Oakland, California

CLEARWATER GROUP

Project No.	Figure Date	Figure
ZP046M	1/09	4

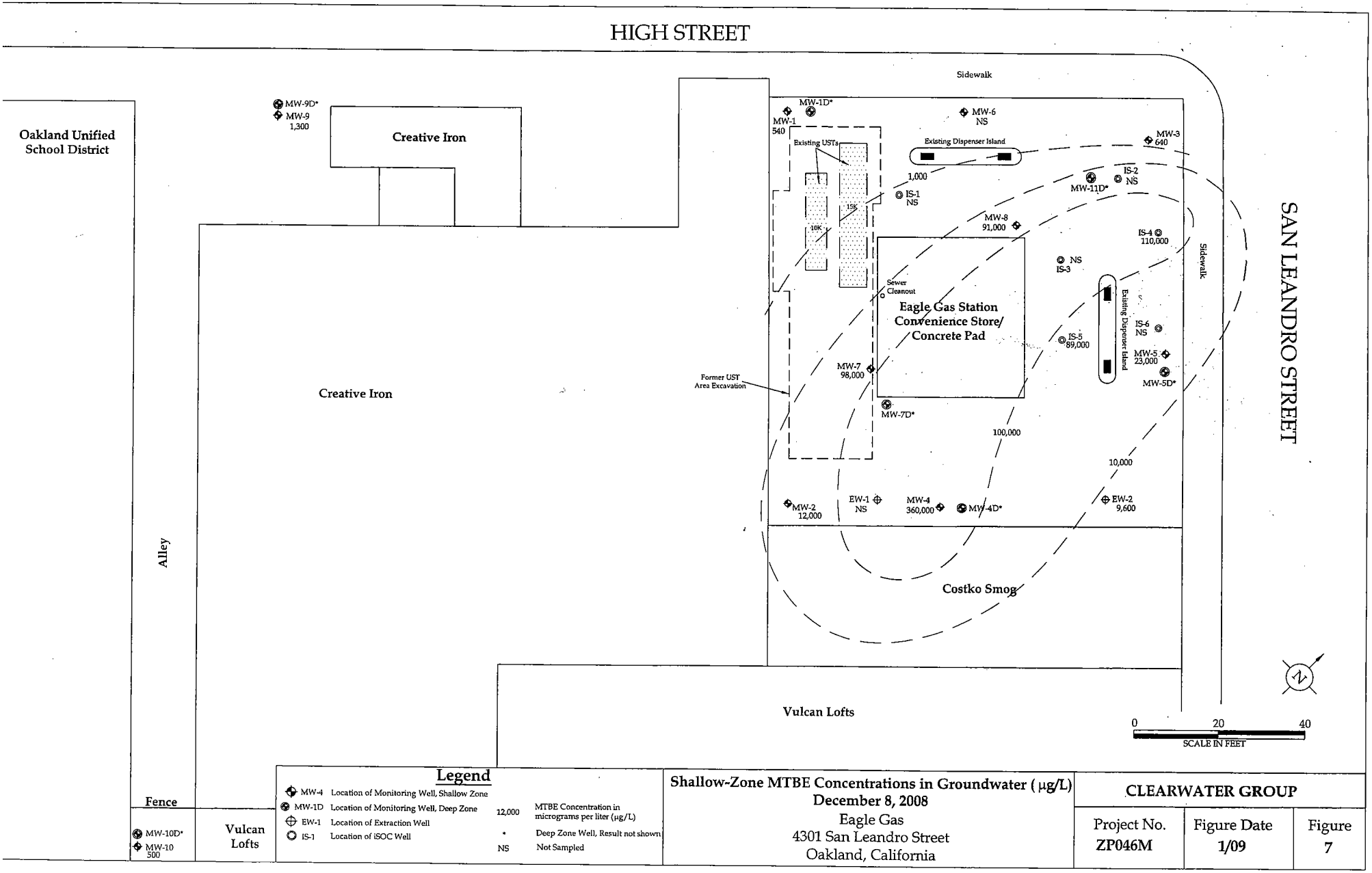

HIGH STREET
SAN LEANDRO STREET
Sidewalk
Sidewalk
Oakland Unified School District
Creative Iron
Creative Iron
Alley
Vulcan Lofts
Costko Smog
Eagle Gas Station Convenience Store/ Concrete Pad
Existing USTs
Existing Dispenser Island
Existing Dispenser Island
Sewer Cleanout
Former UST Area Excavation
MW-9D*
MW-9 1,200
MW-1D*
MW-1 360
MW-6 NS
MW-3 <900
MW-11D
IS-2 NS
IS-1 NS
MW-8 1,700,000
IS-4 20,000
IS-3 NS
NS IS-6
IS-5 47,000
MW-5 <9,000
MW-5D*
MW-7 <15,000
MW-7D*
100,000
10,000
MW-2 6,400
EW-1 NS
MW-4 69,000
MW-4D*
EW-2 <5,000
15K
10K
0
20
40
SCALE IN FEET
Fence
MW-10D*
MW-10 8,000
Vulcan Lofts
Legend
MW-4 Location of Monitoring Well, Shallow Zone
MW-1D Location of Monitoring Well, Deep Zone
EW-1 Location of Extraction Well
IS-1 Location of iSOC Well
6,400 TPH-gasoline Concentration in micrograms per liter (µg/L)
• Deep Zone Well, Result not shown
NS Not Sampled
Shallow-Zone TPH-g Concentrations in Groundwater (µg/L)
December 8, 2008
Eagle Gas
4301 San Leandro Street
Oakland, California
CLEARWATER GROUP
Project No. ZP046M
Figure Date 1/09
Figure 5

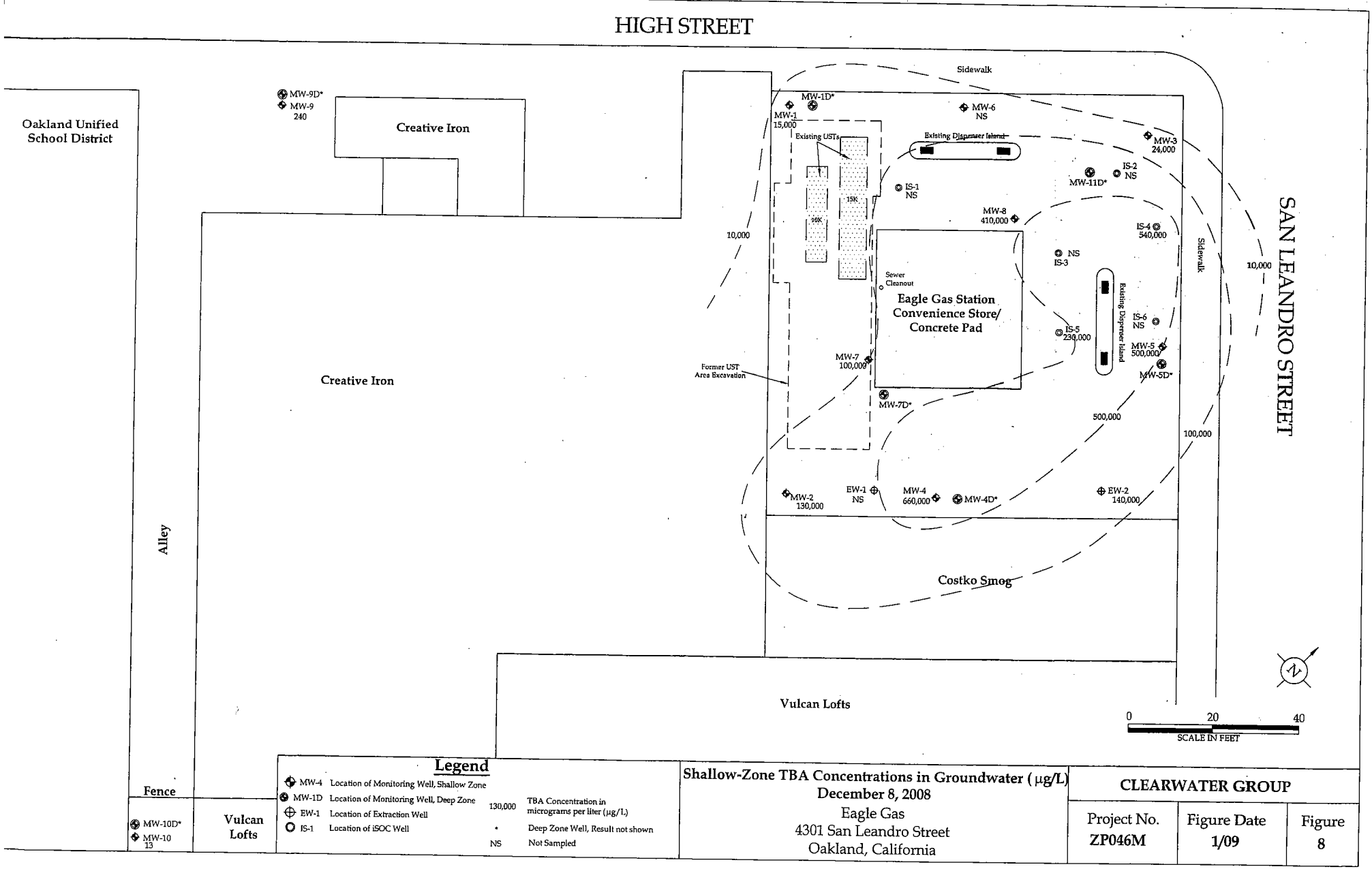


Shallow-Zone Benzene Concentrations in Groundwater (µg/L)
December 8, 2008
Eagle Gas
4301 San Leandro Street
Oakland, California

CLEARWATER GROUP

Project No.	Figure Date	Figure
ZP046M	1/09	6


HIGH STREET
SAN LEANDRO STREET
Sidewalk
Oakland Unified School District
Creative Iron
Creative Iron
MW-9D*
MW-9
1,300
MW-1D*
MW-1
540
MW-6
NS
MW-3
640
Existing USTs
Existing Dispenser Island
1,000
IS-1
NS
IS-2
NS
MW-11D*
15K
10K
MW-8
91,000
IS-4
110,000
NS
IS-3
Sewer Cleanout
Eagle Gas Station
Convenience Store/
Concrete Pad
Existing Dispenser Island
IS-6
NS
IS-5
89,000
MW-5
23,000
MW-5D*
Former UST Area Excavation
MW-7
98,000
MW-7D*
100,000
10,000
MW-2
12,000
EW-1
NS
MW-4
360,000
MW-4D*
EW-2
9,600
Costko Smog
Alley
Vulcan Lofts
Fence
MW-10D*
MW-10
500
Vulcan Lofts
0
20
40
SCALE IN FEET
Legend
MW-4 Location of Monitoring Well, Shallow Zone
MW-1D Location of Monitoring Well, Deep Zone
EW-1 Location of Extraction Well
IS-1 Location of iSOC Well
12,000 MTBE Concentration in micrograms per liter (µg/L)
* Deep Zone Well, Result not shown
NS Not Sampled
Shallow-Zone MTBE Concentrations in Groundwater (µg/L)
December 8, 2008
Eagle Gas
4301 San Leandro Street
Oakland, California
CLEARWATER GROUP
Project No. ZP046M
Figure Date 1/09
Figure 7



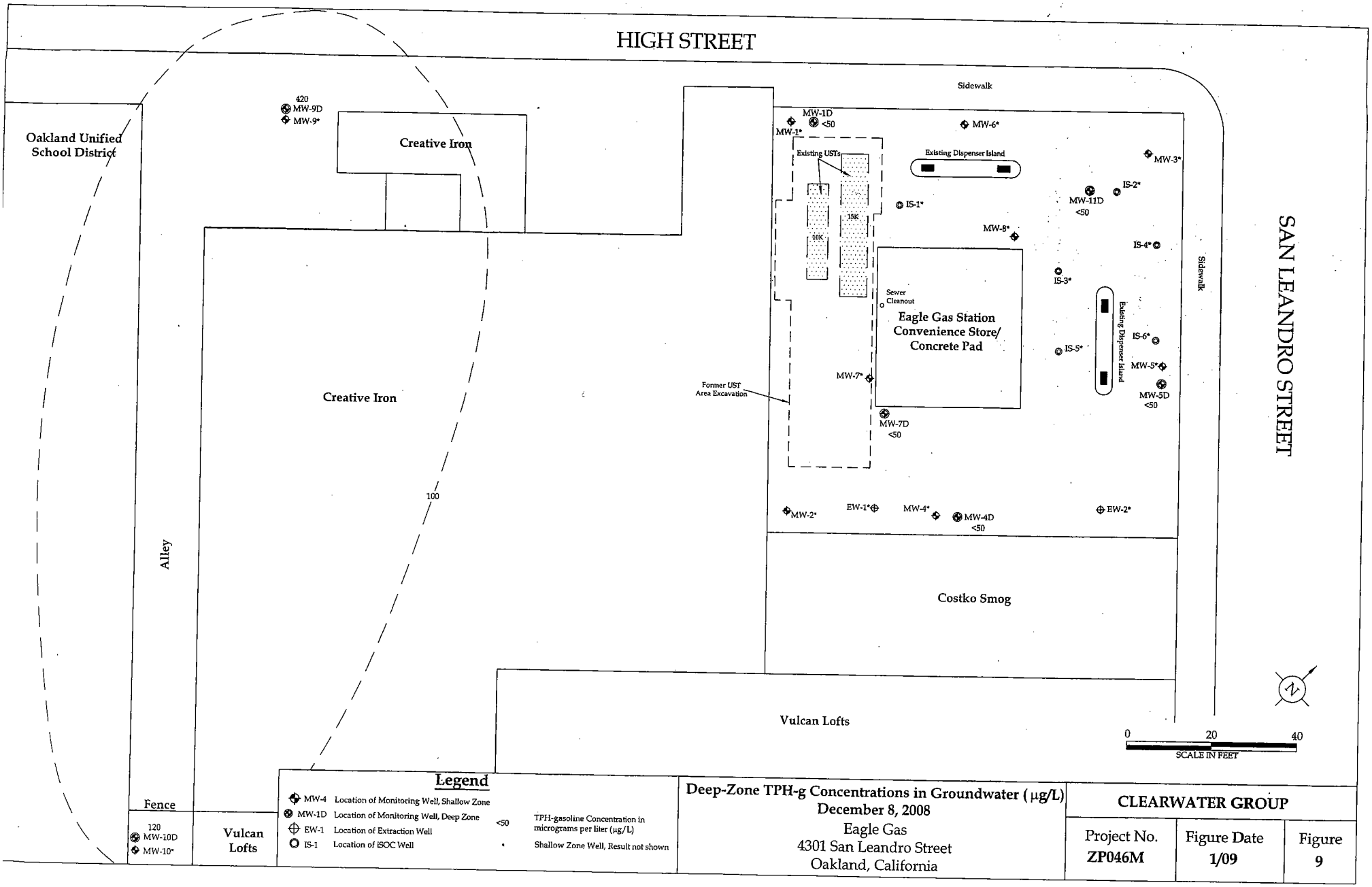
Legend

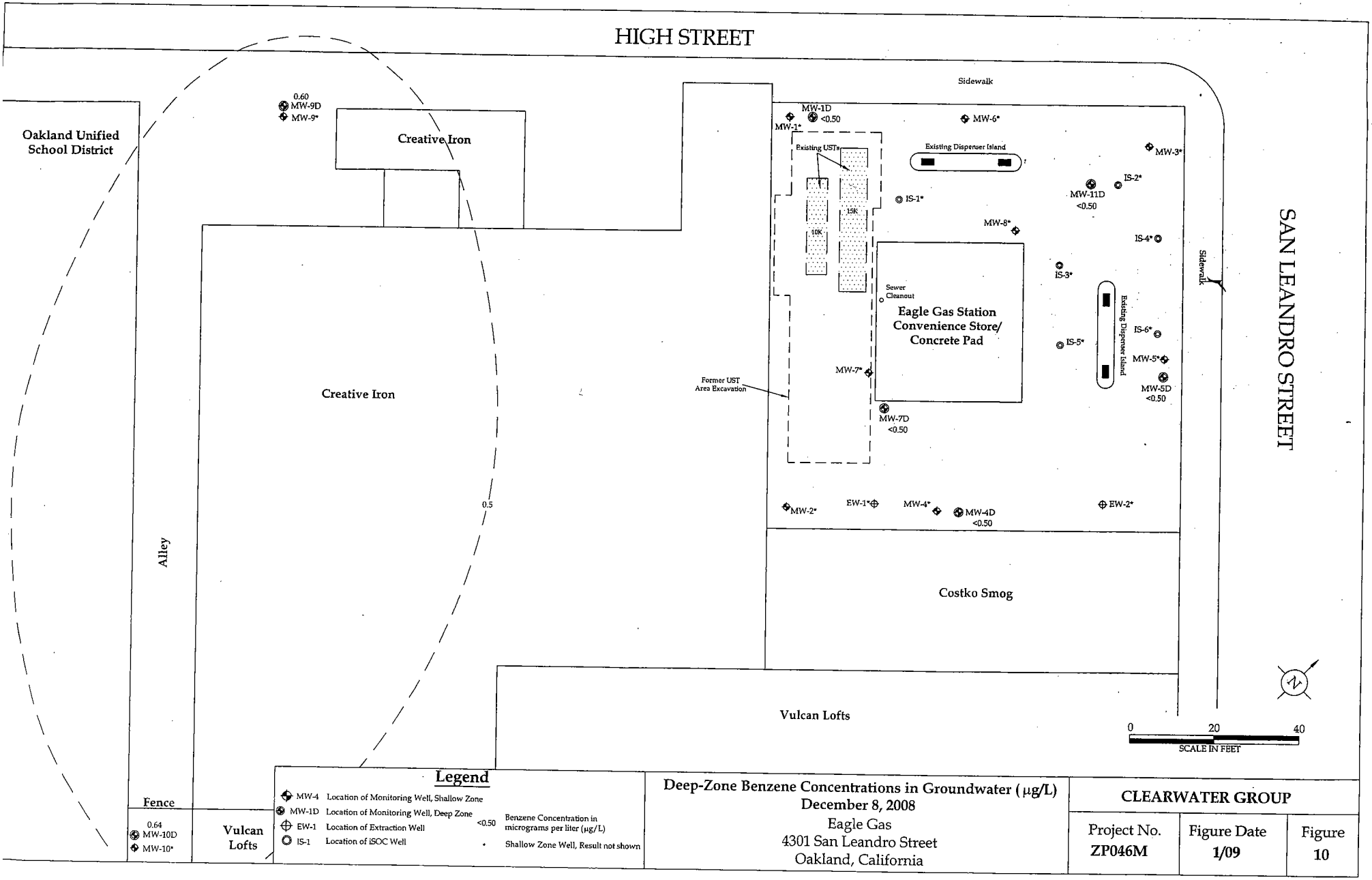
MW-4	Location of Monitoring Well, Shallow Zone		
MW-1D	Location of Monitoring Well, Deep Zone	130,000	TBA Concentration in micrograms per liter (µg/L)
EW-1	Location of Extraction Well	*	Deep Zone Well, Result not shown
IS-1	Location of iSOC Well	NS	Not Sampled

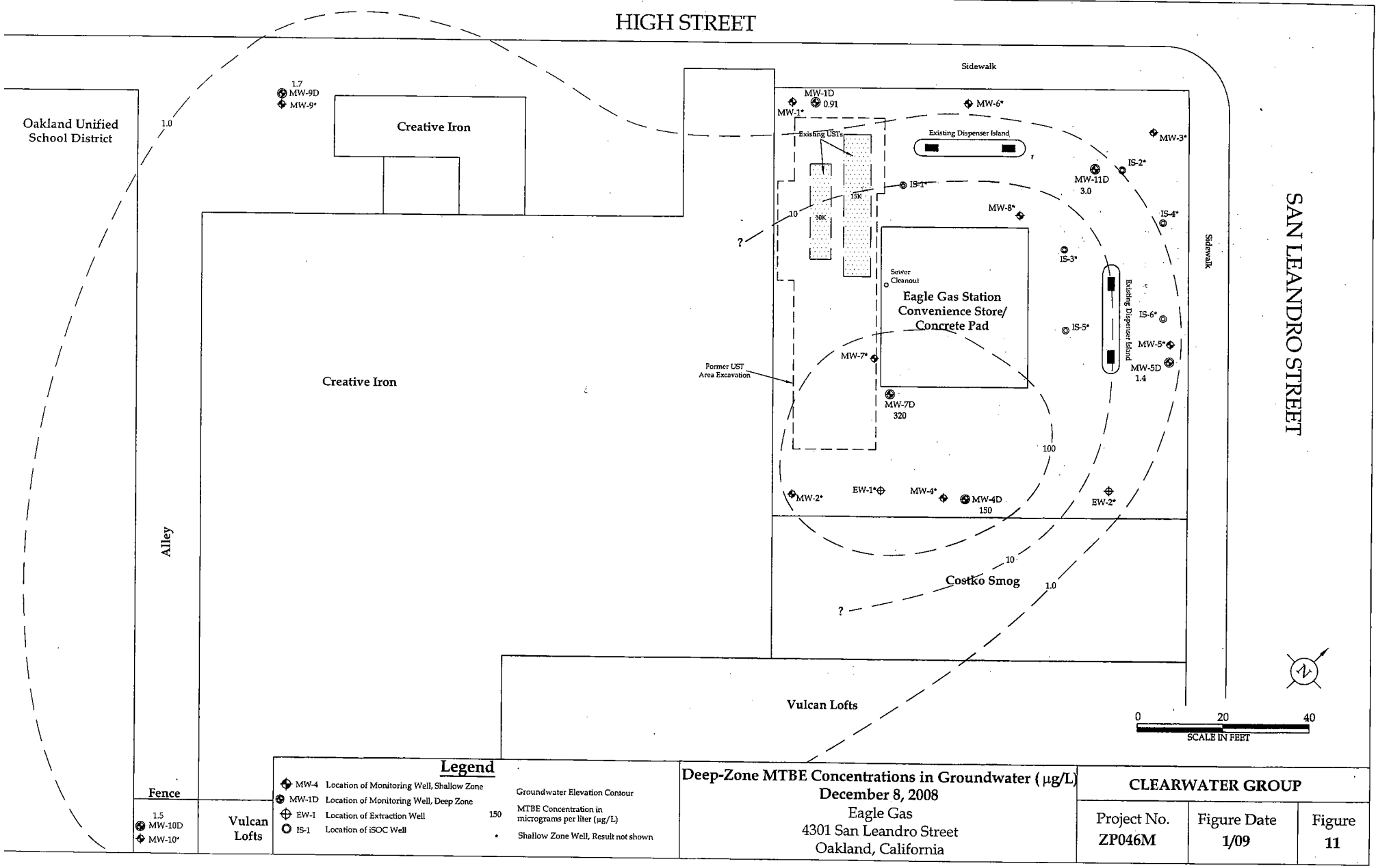
Shallow-Zone TBA Concentrations in Groundwater (µg/L)
December 8, 2008
Eagle Gas
4301 San Leandro Street
Oakland, California

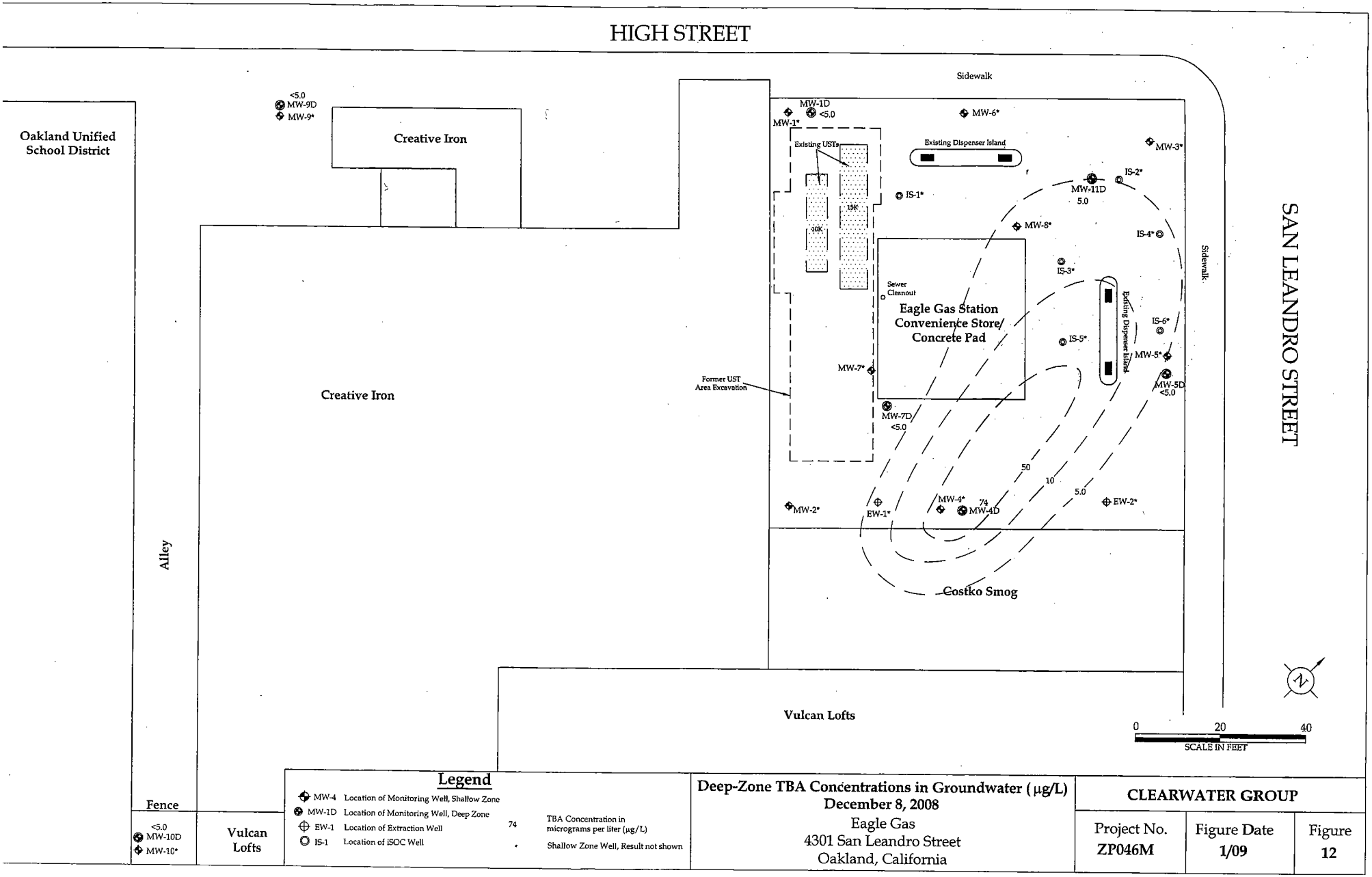
CLEARWATER GROUP

Project No.	Figure Date	Figure
ZP046M	1/09	8


HIGH STREET
SAN LEANDRO STREET
Sidewalk
Oakland Unified School District
Creative Iron
Creative Iron
Alley
Fence
Vulcan Lofts
Costko Smog
Vulcan Lofts
420
MW-9D
MW-9*
MW-1D
<50
MW-1*
MW-6*
Existing USTs
Existing Dispenser Island
MW-3*
IS-2*
MW-11D
<50
IS-1*
MW-8*
IS-4*
10K
15K
IS-3*
Sewer Cleanout
Eagle Gas Station
Convenience Store/
Concrete Pad
Existing Dispenser Island
IS-6*
IS-5*
MW-5*
MW-5D
<50
MW-7*
Former UST Area Excavation
MW-7D
<50
100
MW-2*
EW-1*
MW-4*
MW-4D
<50
EW-2*
120
MW-10D
MW-10*
0
20
40
SCALE IN FEET
Legend
MW-4 Location of Monitoring Well, Shallow Zone
MW-1D Location of Monitoring Well, Deep Zone
EW-1 Location of Extraction Well
IS-1 Location of iSOC Well
<50 TPH-gasoline Concentration in micrograms per liter (µg/L)
* Shallow Zone Well, Result not shown
Deep-Zone TPH-g Concentrations in Groundwater (µg/L)
December 8, 2008
Eagle Gas
4301 San Leandro Street
Oakland, California
CLEARWATER GROUP
Project No.
ZP046M
Figure Date
1/09
Figure
9


HIGH STREET
SAN LEANDRO STREET
Sidewalk
Oakland Unified School District
Creative Iron
Creative Iron
Alley
0.60
MW-9D
MW-9*
MW-1D
<0.50
MW-1*
MW-6*
Existing USTs
Existing Dispenser Island
MW-3*
IS-2*
MW-11D
<0.50
IS-1*
15K
10K
MW-8*
IS-4*
IS-3*
Sewer Cleanout
Eagle Gas Station
Convenience Store/
Concrete Pad
Existing Dispenser Island
IS-6*
IS-5*
MW-5*
MW-5D
<0.50
MW-7*
Former UST Area Excavation
MW-7D
<0.50
0.5
MW-2*
EW-1*
MW-4*
MW-4D
<0.50
EW-2*
Costko Smog
Vulcan Lofts
0
20
40
SCALE IN FEET
Fence
0.64
MW-10D
MW-10*
Vulcan Lofts
Legend
MW-4 Location of Monitoring Well, Shallow Zone
MW-1D Location of Monitoring Well, Deep Zone
EW-1 Location of Extraction Well
IS-1 Location of iSOC Well
<0.50 Benzene Concentration in micrograms per liter (µg/L)
• Shallow Zone Well, Result not shown
Deep-Zone Benzene Concentrations in Groundwater (µg/L)
December 8, 2008
Eagle Gas
4301 San Leandro Street
Oakland, California
CLEARWATER GROUP
Project No.
ZP046M
Figure Date
1/09
Figure
10


HIGH STREET
SAN LEANDRO STREET
Sidewalk
Sidewalk
Oakland Unified School District
Creative Iron
Creative Iron
Alley
Vulcan Lofts
Vulcan Lofts
Costko Smog
Eagle Gas Station Convenience Store/ Concrete Pad
Existing Dispenser Island
Existing Dispenser Island
Existing USTs
Sewer Cleanout
Former UST Area Excavation
MW-9D 1.7
MW-9*
MW-1D 0.91
MW-1*
MW-6*
MW-3*
MW-11D 3.0
IS-2*
IS-1*
MW-8*
IS-4*
IS-3*
IS-6*
IS-5*
MW-5* MW-5D 1.4
MW-7*
MW-7D 320
MW-2*
EW-1*
MW-4*
MW-4D 150
EW-2*
15K
10K
10
100
1.0
?
?
MW-10D 1.5
MW-10*
Fence
0 20 40
SCALE IN FEET
Legend
MW-4 Location of Monitoring Well, Shallow Zone
MW-1D Location of Monitoring Well, Deep Zone
EW-1 Location of Extraction Well
IS-1 Location of iSOC Well
Groundwater Elevation Contour
150 MTBE Concentration in micrograms per liter (µg/L)
Shallow Zone Well, Result not shown
Deep-Zone MTBE Concentrations in Groundwater (µg/L)
December 8, 2008
Eagle Gas
4301 San Leandro Street
Oakland, California
CLEARWATER GROUP
Project No. ZP046M
Figure Date 1/09
Figure 11



Deep-Zone TBA Concentrations in Groundwater (µg/L)
December 8, 2008
Eagle Gas
4301 San Leandro Street
Oakland, California

CLEARWATER GROUP

Project No.	Figure Date	Figure
ZP046M	1/09	12

TABLES

TABLE 1
WELL CONSTRUCTION DETAILS
Eagle Gas
4301 San Leandro Street
Oakland, California
Clearwater Group Project No. ZP046

Well I.D.	Date Installed	Installed by	Borehole Diameter (inches)	Casing Diameter (inches)	Depth of Borehole (feet bgs)	Cement (feet bgs)	Bentonite Seal (feet bgs)	Filter Pack (feet bgs)	Filter Pack Material	Screened Interval (feet bgs)	Slot Size (inches)
MW-1	9/26/2000	Western Hazmat	8	2	25	0-5	5-7	7-25	#2/12 sand	10-25	0.01
MW-1D	10/4/2007	Gregg Drilling	8	2	45	0-31	31-33	33-45	#2/12 sand	35-45	0.01
MW-2	9/26/2000	Western Hazmat	8	2	25	0-5	5-7	7-25	#2/12 sand	10-25	0.01
MW-3	9/26/2000	Western Hazmat	8	2	25	0-5	5-7	7-25	#2/12 sand	10-25	0.01
MW-4	12/19/2005	HEW Drilling	8	2	25	0-5	5-8	8-25	#3 sand	10-25	0.02
MW-4D	12/19/2005	HEW Drilling	8	2	45	0-30	30-33	33-45	#3 sand	35-45	0.02
MW-5	12/15/2005	HEW Drilling	8	2	25	0-5	5-8	8-25	#3 sand	10-25	0.02
MW-5D	12/15/2005	HEW Drilling	8	2	45	0-30	30-33	33-45	#3 sand	35-45	0.02
MW-6	12/20/2005	HEW Drilling	8	2	25	0-5	5-8	8-25	#3 sand	10-25	0.02
MW-7	12/19/2005	HEW Drilling	8	2	25	0-5	5-8	8-25	#3 sand	10-25	0.02
MW-7D	10/4/2007	Gregg Drilling	8	2	45	0-31	31-33	33-45	#2/12 sand	35-45	0.01
MW-8	12/21/2005	HEW Drilling	8	2	25	0-5	5-8	8-25	#3 sand	10-25	0.02
IS-1	12/20/2005	HEW Drilling	8	2	25	0-3	3-6	6-25	#3 sand	10-25	0.02
IS-2	12/20/2005	HEW Drilling	8	2	25	0-3	3-6	6-25	#3 sand	10-25	0.02
IS-3	12/21/2005	HEW Drilling	8	2	25	0-3	3-6	6-25	#3 sand	10-25	0.02
IS-4	12/20/2005	HEW Drilling	8	2	25	0-3	3-6	6-25	#3 sand	10-25	0.02
IS-5	12/21/2005	HEW Drilling	8	2	25	0-3	3-6	6-25	#3 sand	10-25	0.02
IS-6	12/20/2005	HEW Drilling	8	2	25	0-3	3-6	6-25	#3 sand	10-25	0.02
EW-1	12/16/2005	HEW Drilling	8	4	25	0-3	3-6	6-25	#3 sand	10-25	0.02
EW-2	12/16/2005	HEW Drilling	8	4	25	0-3	3-6	6-25	#3 sand	10-25	0.02
MW-9	12/3/2008	HEW Drilling	8	2	15	0-2	2-4	4-15	#2/12 sand	5-15	0.01
MW-9D	12/3/2008	HEW Drilling	8	2	40	0-24	24-26*	28-40	#2/12 sand	30-40	0.01
MW-10	12/2/2008	HEW Drilling	8	2	15	0-2	2-4	4-15	#2/12 sand	5-15	0.01
MW-10D	12/2/2008	HEW Drilling	8	2	52	0-36	36-38*	40-52	#2/12 sand	42-52	0.01
MW-11D	12/1/2008	HEW Drilling	8	2	45	0-30	30-32*	38-45	#2/12 sand	40-45	0.01

Note: All depths and intervals are below ground surface (bgs)
* = Borehole partially caved after setting filter pack

TABLE 2
GROUNDWATER ELEVATIONS, SHALLOW ZONE
Eagle Gas
4301 San Leandro Street
Oakland, California

Well Name	Measurement Date	TOC in feet AMSL	DTW in feet BTOC	GWE in feet AMSL
MW-1	10/3/2000	18.37	8.96	9.41
	10/27/2000	18.37	7.27	11.10
	1/26/2001	18.37	7.60	10.77
	5/8/2001	18.37	7.50	10.87
	8/3/2001	18.37	7.09	11.28
	7/1/2003	18.37	7.59	10.78
	10/1/2003	18.37	8.36	10.01
	2/13/2004	18.37	8.80	9.57
	5/17/2004	18.37	10.92	7.45
	8/6/2004	18.37	7.76	10.61
	11/12/2004	18.37	9.25	9.12
	2/15/2005	18.37	10.12	8.25
	5/9/2005	18.37	9.58	8.79
	8/8/2005	20.08	10.09	9.99
	11/16/2005	20.08	9.81	10.27
	2/22/2006	20.08	9.58	10.50
	5/16/2006	20.08	6.89	13.19
	8/23/2006	20.08	9.21	10.87
	11/13/2006	20.08	8.55	11.53
	2/13/2007	20.08	7.11	12.97
	5/15/2007	20.08	6.63	13.45
	8/15/2007	20.08	9.61	10.47
	11/13/2007	20.08	13.63	6.45
	2/19/2008	20.08	6.13	13.95
	6/25/2008	20.08	6.72	13.36
	9/17/2008	20.08	8.45	11.63
	12/8/2008	**26.64**	**6.49**	**20.15**
MW-2	10/3/2000	20.28	20.26	0.02
	10/27/2000	20.28	13.88	6.40
	1/26/2001	20.28	12.10	8.18
	5/8/2001	20.28	12.05	8.23
	8/3/2001	20.28	13.30	6.98
	7/1/2003	20.28	14.98	5.30
	10/1/2003	20.28	15.99	4.29
	2/13/2004	20.28	13.88	6.40
	5/17/2004	20.38	14.68	5.70
	8/6/2004	20.38	15.36	5.02
	11/12/2004	20.38	15.49	4.89
	2/15/2005	20.38	14.16	6.22
	5/9/2005	20.38	13.62	6.76
	8/8/2005	22.05	13.36	8.69
	11/16/2005	22.05	14.51	7.54
	2/22/2006	22.05	12.69	9.36
	5/16/2006	22.05	12.01	10.04
	8/23/2006	21.98	11.33	10.65
	11/13/2006	21.98	13.64	8.34
	2/13/2007	21.98	12.78	9.20
	5/16/2007	21.98	13.17	8.81
	8/16/2007	21.98	13.48	8.50
	11/16/2007	21.98	14.11	7.87
	2/19/2008	21.98	14.02	7.96
	6/25/2008	21.98	14.63	7.35
	9/17/2008	21.98	14.76	7.22
	12/8/2008	**28.54**	**15.90**	**12.64**

TABLE 2
GROUNDWATER ELEVATIONS, SHALLOW ZONE
Eagle Gas
4301 San Leandro Street
Oakland, California

Well Name	Measurement Date	TOC in feet AMSL	DTW in feet BTOC	GWE in feet AMSL
MW-3	10/3/2000	18.98	NA	NA
	10/27/2000	18.98	18.75	0.23
	1/26/2001	18.98	13.38	5.60
	5/8/2001	18.98	11.82	7.16
	8/3/2001	18.98	13.44	5.54
	7/1/2003	18.98	12.67	6.31
	10/1/2003	18.98	14.04	4.94
	2/13/2004	18.98	12.20	6.78
	5/17/2004	18.98	11.87	7.11
	8/6/2004	18.98	13.07	5.91
	11/12/2004	18.98	12.83	6.15
	2/15/2005	18.98	11.95	7.03
	5/9/2005	18.98	10.51	8.47
	8/8/2005	20.73	10.98	9.75
	11/16/2005	20.73	12.89	7.84
	2/22/2006	20.73	10.31	10.42
	5/16/2006	20.73	9.03	11.70
	8/23/2006	20.68	10.81	9.87
	11/13/2006	20.68	12.29	8.39
	2/13/2007	20.68	11.23	9.45
	5/15/2007	20.68	10.39	10.29
	8/15/2007	20.68	11.81	8.87
	11/14/2007	20.68	12.26	8.42
	2/19/2008	20.68	10.72	9.96
	6/25/2008	20.68	11.30	9.38
	9/17/2008	20.68	12.82	7.86
	12/8/2008	**27.24**	**12.91**	**14.33**
MW-4	2/22/2006	21.63	7.87	13.76
	5/16/2006	21.63	8.04	13.59
	8/23/2006	21.53	9.77	11.76
	11/13/2006	21.53	8.78	12.75
	2/13/2007	21.53	7.56	13.97
	5/16/2007	21.53	7.97	13.56
	8/16/2007	21.53	9.03	12.50
	11/16/2007	21.53	8.52	13.01
	2/19/2008	21.53	7.51	14.02
	6/25/2008	21.53	8.10	13.43
	9/17/2008	21.53	9.66	11.87
	12/8/2008	**28.09**	**8.90**	**19.19**
MW-5	2/21/2006	20.48	6.63	13.85
	5/16/2006	20.48	6.62	13.86
	8/23/2006	20.41	7.62	12.79
	11/13/2006	20.41	7.31	13.10
	2/13/2007	20.41	6.54	13.87
	5/16/2007	20.41	6.79	13.62
	8/16/2007	20.41	7.99	12.42
	11/16/2007	20.41	7.51	12.90
	2/19/2008	20.41	8.41	12.00
	6/25/2008	20.41	9.00	11.41
	9/17/2008	20.41	8.35	12.06
	12/8/2008	**26.97**	**7.41**	**19.56**

TABLE 2
GROUNDWATER ELEVATIONS, SHALLOW ZONE
Eagle Gas
4301 San Leandro Street
Oakland, California

Well Name	Measurement Date	TOC in feet AMSL	DTW in feet BTOC	GWE in feet AMSL
MW-6	2/22/2006	20.45	9.88	10.57
	5/16/2006	20.45	9.35	11.10
	8/23/2006	20.47	10.48	9.99
	11/13/2006	20.47	10.86	9.61
	2/13/2007	20.47	10.31	10.16
	5/15/2007	20.47	10.35	10.12
	8/15/2007	20.47	10.74	9.73
	11/14/2007	20.47	10.91	9.56
	2/19/2008	20.47	9.82	10.65
	6/25/2008	20.47	10.43	10.04
	9/17/2008	20.47	11.76	8.71
	12/8/2008	**27.03**	**11.08**	**15.95**
MW-7	2/22/2006	21.13	11.72	9.41
	5/16/2006	21.13	8.72	12.41
	8/23/2006	21.14	11.34	9.80
	11/13/2006	21.14	12.53	8.61
	2/13/2007	21.14	11.83	9.31
	5/15/2007	21.14	10.99	10.15
	8/15/2007	21.14	12.41	8.73
	11/14/2007	21.14	13.41	7.73
	2/19/2008	21.14	9.51	11.63
	6/25/2008	21.14	10.03	11.11
	9/17/2008	21.14	13.68	7.46
	12/8/2008	**27.70**	**14.13**	**13.57**
MW-8	2/22/2006	21.03	7.28	13.75
	5/16/2006	21.03	7.48	13.55
	8/23/2006	20.95	8.19	12.76
	11/13/2006	20.95	8.15	12.80
	2/13/2007	20.95	6.58	14.37
	5/16/2007	20.95	7.24	13.71
	8/16/2007	20.95	8.61	12.34
	11/16/2007	20.95	8.21	12.74
	2/19/2008	20.95	7.01	13.94
	6/25/2008	20.95	7.59	13.36
	9/17/2008	20.95	9.24	11.71
	12/8/2008	**27.51**	**8.62**	**18.89**
MW-9	**12/8/2008**	**25.35**	**6.96**	**18.39**
MW-10	**12/8/2008**	**25.23**	**8.20**	**17.03**
IS-1	2/22/2006	20.57	6.91	13.66
	5/16/2006	20.57	7.01	13.56
	8/23/2006	20.58	7.82	12.76
	11/13/2006	20.58	8.21	12.37
	2/13/2007	20.58	6.14	14.44
	5/15/2007	20.58	7.04	13.54
	8/15/2007	20.58	8.06	12.52
	11/13/2007	20.58	7.61	12.97
	2/19/2008	20.58	6.42	14.16
	6/25/2008	20.58	7.04	13.54
	9/17/2008	20.58	8.85	11.73
	12/8/2008	**27.14**	**7.81**	**19.33**

TABLE 2
GROUNDWATER ELEVATIONS, SHALLOW ZONE
Eagle Gas
4301 San Leandro Street
Oakland, California

Well Name	Measurement Date	TOC in feet AMSL	DTW in feet BTOC	GWE in feet AMSL
IS-2	2/22/2006	20.87	6.92	13.95
	5/16/2006	20.87	6.99	13.88
	8/23/2006	20.78	7.91	12.87
	11/13/2006	20.78	8.23	12.55
	2/13/2007	20.78	6.76	14.02
	5/15/2007	20.78	6.87	13.91
	8/15/2007	20.78	8.08	12.70
	11/14/2007	20.78	7.69	13.09
	2/19/2008	20.78	6.63	14.15
	6/25/2008	20.78	7.21	13.57
	9/17/2008	20.78	8.67	12.11
	12/8/2008	**27.34**	**8.02**	**19.32**
IS-3	2/22/2006	20.99	7.32	13.67
	5/16/2006	20.99	7.86	13.13
	8/23/2006	20.87	8.19	12.68
	11/13/2006	20.87	8.03	12.84
	2/13/2007	20.87	7.03	13.84
	5/16/2007	20.87	7.17	13.70
	8/15/2007	20.87	8.43	12.44
	11/14/2007	20.87	7.93	12.94
	2/19/2008	20.87	6.01	14.86
	6/25/2008	20.87	6.59	14.28
	9/17/2008	20.87	9.12	11.75
	12/8/2008	**27.43**	**8.64**	**18.79**
IS-4	2/22/2006	20.79	6.95	13.84
	5/16/2006	20.79	7.17	13.62
	8/23/2006	20.68	7.83	12.85
	11/13/2006	20.68	8.46	12.22
	2/13/2007	20.68	9.02	11.66
	5/15/2007	20.68	6.99	13.69
	8/15/2007	20.68	8.05	12.63
	11/14/2007	20.68	6.38	14.30
	2/19/2008	20.68	6.11	14.57
	6/25/2008	20.68	6.70	13.98
	9/17/2008	20.68	8.59	12.09
	12/8/2008	**27.24**	**7.94**	**19.30**
IS-5	2/22/2006	21.02	7.17	13.85
	5/16/2006	21.02	6.81	14.21
	8/23/2006	20.91	8.12	12.79
	11/13/2006	20.91	8.41	12.50
	2/13/2007	20.91	6.78	14.13
	5/16/2007	20.91	7.15	13.76
	8/15/2007	20.91	8.32	12.59
	11/16/2007	20.91	7.71	13.20
	2/19/2008	20.91	7.35	13.56
	6/25/2008	20.91	7.93	12.98
	9/17/2008	20.91	8.96	11.95
	12/8/2008	**27.47**	**8.38**	**19.09**
IS-6	2/22/2006	20.56	6.89	13.67
	5/16/2006	20.56	6.44	14.12
	8/23/2006	20.47	7.69	12.78
	11/13/2006	20.47	7.72	12.75
	2/13/2007	20.47	6.12	14.35

TABLE 2
GROUNDWATER ELEVATIONS, SHALLOW ZONE
Eagle Gas
4301 San Leandro Street
Oakland, California

Well Name	Measurement Date	TOC in feet AMSL	DTW in feet BTOC	GWE in feet AMSL
	5/16/2007	20.47	6.67	13.80
	8/15/2007	20.47	7.91	12.56
	11/14/2007	20.47	7.22	13.25
	2/19/2008	20.47	6.49	13.98
	6/25/2008	20.47	7.07	13.40
	9/17/2008	20.47	8.37	12.10
	12/8/2008	**27.03**	**7.75**	**19.28**
EW-1	2/22/2006	21.74	8.06	13.68
	5/16/2006	21.74	7.97	13.77
	8/23/2006	21.65	9.61	12.04
	11/13/2006	21.65	8.78	12.87
	2/13/2007	21.65	6.31	15.34
	5/16/2007	21.65	8.13	13.52
	8/16/2007	21.65	8.71	12.94
	11/16/2007	21.65	8.70	12.95
	2/19/2008	21.65	7.71	13.94
	6/25/2008	21.65	8.30	13.35
	9/17/2008	21.65	9.82	11.83
	12/8/2008	**28.21**	**9.09**	**19.12**
EW-2	2/22/2006	20.46	7.31	13.15
	5/16/2006	20.46	7.25	13.21
	8/23/2006	20.37	8.31	12.06
	11/13/2006	20.37	8.18	12.19
	2/13/2007	20.37	7.15	13.22
	5/16/2007	20.37	7.74	12.63
	8/16/2007	20.37	9.45	10.92
	11/16/2007	20.37	9.64	10.73
	2/19/2008	20.37	7.91	12.46
	6/25/2008	20.37	8.50	11.87
	9/17/2008	20.37	10.24	10.13
	12/8/2008	**26.93**	**9.15**	**17.78**

Notes:

TOC — Top-of-well casing referenced to City of Oakland datum prior to Third Quarter 2005. Wells re-surveyed on March 28, 2005. Wells MW-9D, MW-10D, and MW-11D were surveyed relative to the North American Vertical Datum of 1988 (NAVD 88) on January 12, 2009. All other well TOC elevations were raised 6.56 feet to match January 12, 2009 survey, beginning in December 2008 (Fourth Quarter 2008).

AMSL — Above mean sea level

BTOC — Below top of casing

GWE — Groundwater elevation measured in feet above mean sea level

NA — Not Available

TABLE 3
GROUNDWATER ELEVATIONS, DEEP -ZONE
Eagle Gas
4301 San Leandro Street
Oakland, California

Well Name	Measurement Date	TOC in feet AMSL	DTW in feet BTOC	GWE in feet AMSL
MW-1D	11/13/2007	19.98	15.61	4.37
	11/27/2007	19.98	15.52	4.46
	2/19/2008	19.98	13.81	6.17
	6/25/2008	19.98	14.43	5.55
	9/17/2008	19.98	15.77	4.21
	9/22/2008	19.98	15.68	4.30
	12/8/2008	**26.54**	**15.93**	**10.61**
MW-4D	2/21/2006	21.54	15.58	5.96
	5/16/2006	21.54	13.23	8.31
	8/23/2006	21.44	15.33	6.11
	11/13/2006	21.44	16.23	5.21
	2/13/2007	21.44	15.73	5.71
	5/15/2007	21.44	15.38	6.06
	8/15/2007	21.44	16.42	5.02
	11/13/2007	21.44	17.21	4.23
	11/27/2007	21.44	15.85	5.59
	2/29/2008	21.44	15.41	6.03
	6/25/2008	21.44	16.01	5.43
	9/17/2008	21.44	17.36	4.08
	9/2/2008	21.44	17.23	4.21
	12/8/2008	**28.00**	**17.56**	**10.44**
MW-5D	2/21/2006	20.32	13.68	6.64
	5/16/2006	20.32	12.72	7.60
	8/23/2006	20.22	14.48	5.74
	11/13/2006	20.22	14.98	5.24
	2/13/2007	20.22	14.48	5.74
	5/15/2007	20.22	14.13	6.09
	8/15/2007	20.22	15.21	5.01
	11/13/2007	20.22	15.94	4.28
	11/27/2007	20.22	15.85	4.37
	2/19/2008	20.22	14.17	6.05
	6/25/2008	20.22	14.77	5.45
	9/17/2008	20.22	6.11	14.11
	9/22/2008	20.22	16.00	4.22
	12/8.2008	**26.78**	**16.33**	**10.45**
MW-7D	11/13/2007	21.36	19.21	2.15
	11/27/2007	21.36	17.02	4.34
	2/19/2008	21.36	15.78	5.58
	6/25/2008	21.36	16.36	5.00
	9/17/2008	21.36	17.24	4.12
	9/22/2208	21.36	17.39	3.97
	12/8/2008	**27.92**	**17.41**	**10.51**
MW-9D	**12/8/2008**	**25.49**	**14.98**	**10.51**
MW-10D	**12/8/2008**	**25.30**	**14.81**	**10.49**
MW-11D	**12/8/2008**	**27.23**	**16.75**	**10.48**

TABLE 3
GROUNDWATER ELEVATIONS, DEEP -ZONE
Eagle Gas
4301 San Leandro Street
Oakland, California

Well Name	Measurement Date	TOC in feet AMSL	DTW in feet BTOC	GWE in feet AMSL

Notes:

TOC	Top-of-well casing referenced to arbitrary datum prior to Third Quarter 2005. Wells re-surveyed on March 28, 2005. Wells MW-9D, MW-10D, and MW-11D were surveyed relative to the North American Vertical Datum of 1988 (NAVD 88) on January 12, 2009. All other well TOC elevations were raised 6.56 feet to match January 12, 2009 survey, beginning in December 2008 (Fourth Quarter 2008)
DTW	Depth to water
AMSL	Above mean sea level
BTOC	Below top of casing
GWE	Groundwater elevation measured in feet above mean sea level

TABLE 4
GROUNDWATER SAMPLE ANALYTICAL RESULTS - SHALLOW ZONE
Eagle Gas
4301 San Leandro Street
Oakland, California

Sample Name	Sample Date	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)	Methanol (µg/L)	Ethanol (µg/L)	DCA (µg/L)	EDB (µg/L)
ESL (µg/L)		**640**	**500**	**46**	**130**	**290**	**100**	**1,800**	--	--	--	**18,000**	--	**50,000**	**200**	**150**
MW-1	10/3/2000	**460**	93,000	<500	<500	<500	<500	130,000	<10,000	<10,000	<10,000	<2,000	---	---	---	---
	10/27/2000	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
	1/26/2001	**1,600***	**51,000**	**270**	<100	<100	<100	**77,000**	<5,000	<5,000	<5,000	<20,000	---	---	---	---
	5/8/2001	**470***	**36,000***	<100	<100	<100	<100	**15,000**	<5,000	<5,000	<5,000	<20,000	---	---	---	---
	8/3/2001	**2,200***	**19,000***	<50	**59**	<50	<50	**96,000**	<5,000	<5,000	<5,000	<20,000	---	---	---	---
	7/1/2003	**3,000**	<25,000	<250	<250	<250	<250	**170,000**	<250	<250	**980**	**8,700**	---	---	---	---
	10/1/2003	**2,600**	<20,000	<200	<200	<200	<200	**69,000**	<200	<200	**270**	**15,000**	---	---	---	---
	2/13/2004	**1,800**	<10,000	<100	<100	<100	<100	**85,000**	<100	<100	**390**	**79,000**	---	---	---	---
	5/17/2004	**5,400**	<15,000	<150	<150	<150	<150	**60,000**	<150	<150	**260**	**160,000**	---	---	---	---
	8/6/2004	**510**	<10,000	<100	<100	<100	<100	**26,000**	<100	<100	**100**	**250,000**	---	---	---	---
	11/12/2004	**3,500**	<5,000	<50	<50	<50	<50	**25,000**	<50	<50	**150**	**160,000**	---	---	---	---
	2/15/2005	**2,900**	<5,000	<50	<50	<50	<50	**12,000**	<50	<50	**70**	**160,000**	---	---	---	---
	5/9/2005	**1,700**	<5,000	<50	<50	<50	<50	**11,000**	<50	<50	**53**	**200,000**	---	---	---	---
	8/8/2005	**2,000**	<5,000	<50	<50	<50	<50	**8,500**	<50	<50	<50	**250,000**	---	---	---	---
	11/16/2005	**3,600**	<5,000	<50	<50	<50	<50	**3,800**	<50	<50	<50	**140,000**	<5,000	<500	<50	<50
	2/22/2006	**2,600**	<5,000	<50	<50	<50	<50	**5,800**	<50	<50	<50	**120,000**	<5,000	<500	<50	<50
	5/16/2006	**4,700**	<5,000	<50	<50	<50	<50	**3,700**	<50	<50	<50	**150,000**	<5,000	<500	<50	<50
	8/23/2006	**2,000**	<5,000	<50	<50	<50	<50	**3,700**	<50	<50	<50	**110,000**	<5,000	<500	<50	<50
	11/13/2006	**NA**	<4,000	<40	<40	<40	<40	**2,000**	<40	<40	<40	**79,000**	NA	NA	NA	NA
	2/13/2007	**900**	<2,500	<25	<25	<25	<25	**3,700**	<25	<25	**25**	**63,000**	NA	NA	NA	NA
	5/15/2007	**3,000**	<2,500	<25	<25	<25	<25	**1,100**	<25	<25	<25	**52,000**	NA	NA	NA	NA
	8/15/2007	**1,000**	<1,000	<10	<10	<10	<10	**230**	<10	<10	<10	**34,000**	NA	NA	NA	NA
	11/13/2007	**170**	<150	<1.5	<1.5	<1.5	<1.5	**630**	<1.5	<1.5	**3.1**	**200**	NA	NA	NA	NA
	2/19/2008	**1,800**	**240**	<1.5	<1.5	**1.7**	**18**	**53**	<1.5	<1.5	<1.5	**2,500**	NA	NA	NA	NA
	6/25/2008	**1,300**	**640**	<0.50	<0.50	<0.50	<0.50	**77**	<0.50	<0.50	**0.6**	**3,800**	NA	NA	NA	NA
	9/17/2008	**2,300**	**430**	<1.5	<1.5	<1.5	<1.5	**86**	<1.5	<1.5	<1.5	**4,100**	NA	NA	NA	NA
	12/8/2008	**4,600**	**360**	**2.4**	<1.5	<1.5	<1.5	**540**	<1.5	<1.5	**4.2**	**15,000**	NA	NA	NA	NA

TABLE 4
GROUNDWATER SAMPLE ANALYTICAL RESULTS - SHALLOW ZONE
Eagle Gas
4301 San Leandro Street
Oakland, California

Sample Name	Sample Date	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)	Methanol (µg/L)	Ethanol (µg/L)	DCA (µg/L)	EDB (µg/L)
ESL (µg/L)		**640**	**500**	**46**	**130**	**290**	**100**	**1,800**	--	--	--	**18,000**	--	**50,000**	**200**	**150**
MW-2	10/3/2000	**210**	**250,000**	<1,250	<1,250	<1,250	<1,250	**400,000**	<25,000	<25,000	<25,000	<100,000	---	---	---	---
	10/27/2000	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
	1/26/2001	**6,000***	**740,000**	**3,800**	<500	**940**	**1,600**	**1,000,000**	<50,000	<50,000	<50,000	<200,000	---	---	---	---
	5/8/2001	**2,100***	**140,000**	**2,800**	<250	**780**	**640**	**840,000**	<50,000	<50,000	<50,000	<200,000	---	---	---	---
	8/3/2001	**2,600***	**42,000***	**1,100**	**63**	**230**	**130**	**880,000**	<25,000	<25,000	<25,000	<100,000	---	---	---	---
	7/1/2003	**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	**870**	<100,000	<1,000	<1,000	<1,000	<1,000	**620,000**	<1,000	<1,000	**2,700**	<20,000	---	---	---	---
	2/13/2004	**1,200**	<20,000	**860**	<200	**260**	<200	**710,000**	<200	<200	**2,000**	<25,000	---	---	---	---
	5/17/2004	**2,500**	<50000	**860**	<500	<500	<500	**760,000**	<500	<500	**2,500**	**13,000J**	---	---	---	---
	8/6/2004	**2,500**	<50000	**590**	<500	<500	<500	**810,000**	<500	<500	**3,600**	**17,000J**	---	---	---	---
	11/12/2004	**500**	<150,000	<1500	<1500	<1500	<1500	**700,000**	<1500	<1500	**2,800**	**25,000J**	---	---	---	---
	2/15/2005	**990**	<150,000	<1,500	<1,500	<1,500	<1,500	**630,000**	<1,500	<1,500	**2,600**	**32,000**	---	---	---	---
	5/9/2005	**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	**770**	<150,000	<1,500	<1,500	<1,500	<1,500	**770,000**	<1,500	<1,500	**2,200**	**85,000**	---	---	---	---
	11/16/2005	**890**	<70,000	<700	<700	<700	<700	**430,000**	<700	<700	**2,100**	**130,000**	<100,000	<7,000	<700	<700
	2/22/2006	<1,500	<70,000	**800**	<700	<700	<700	**400,000**	<700	<700	**1,700**	**130,000**	<70,000	<7,000	<700	<700
	5/16/2006	**1,100**	<70,000	<700	<700	<700	<700	**250,000**	<700	<700	**940**	**140,000**	<70,000	<7,000	<700	<700
	8/23/2006	**660**	<40,000	<400	<400	<400	<400	**200,000**	<400	<400	**830**	**170,000**	<40,000	<4,000	<400	<400
	11/13/2006	**NA**	<40,000	<400	<400	<400	<400	**140,000**	<400	<400	**490**	**170,000**	NA	NA	NA	NA
	2/13/2007	**780**	<20,000	**250**	<200	<200	<200	**100,000**	<200	<200	**240**	**130,000**	NA	NA	NA	NA
	5/16/2007	**800**	<7,000	**150**	<70	<70	<70	**44,000**	<70	<70	**120**	**130,000**	NA	NA	NA	NA
	8/16/2007	**610**	<5,000	**100**	<50	<50	<50	**21,000**	<50	<50	<80[++]	**100,000**	NA	NA	NA	NA
	11/16/2007	**480**	<4,000	**140**	<40	<40	<40	**10,000**	<40	<40	<40	**100,000**	NA	NA	NA	NA
	2/19/2008	**2,600**	**1,400**	**88**	**0.96**	**4.4**	**4.4**	**5,000**	<0.50	**4.6**	**14**	**76,000**	NA	NA	NA	NA
	6/25/2008	**340**	<4,000	<40	<40	<40	<40	**1,300**	<40	<40	<40	**98,000**	NA	NA	NA	NA
	9/18/2008	**370**	**410**	**7.5**	<0.50	**1.8**	**2.7**	**1,200**	<0.50	**4.9**	**2.3**	**120,000**	NA	NA	NA	NA
	12/9/2008	<2,000	**6,400**	**940**	**5.7**	**390**	**140**	**12,000**	<0.50	**9.7**	**200**	**130,000**	NA	NA	NA	NA

TABLE 4
GROUNDWATER SAMPLE ANALYTICAL RESULTS - SHALLOW ZONE
Eagle Gas
4301 San Leandro Street
Oakland, California

Sample Name	Sample Date	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)	Methanol (µg/L)	Ethanol (µg/L)	DCA (µg/L)	EDB (µg/L)
ESL (µg/L)		**640**	**500**	**46**	**130**	**290**	**100**	**1,800**	--	--	--	**18,000**	--	**50,000**	**200**	**150**
MW-3	10/3/2000	**120**	**83,000**	<500	<500	<500	<500	**33,000**	<2,500	<2,500	<2,500	<10,000	---	---	---	---
	10/27/2000	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
	1/26/2001	**900***	**230,000**	**930**	<500	<500	<500	**330,000**	<25,000	<25,000	<25,000	<100,000	---	---	---	---
	5/8/2001	**1,100***	**95,000**	**840**	<250	<250	<250	**390,000**	<12,500	<12,500	<12,500	<50,000	---	---	---	---
	8/3/2001	**290***	**30,000***	<50	**51**	<50	<50	**270,000**	<12,500	<12,500	<12,500	<50,000	---	---	---	---
	7/1/2003	**620**	<50,000	<500	<500	<500	<500	**230,000**	<500	<500	**1,800**	<5,000	---	---	---	---
	10/1/2003	**370**	<20,000	<200	<200	<200	<200	**120,000**	<200	<200	**1,200**	<5,000	---	---	---	---
	2/13/2004	**430**	<20,000	**280**	<200	<200	<200	**210,000**	<200	<200	**1,200**	<5,000	---	---	---	---
	5/17/2004	**920**	<25,000	<250	<250	<250	<250	**150,000**	<250	<250	**1,100**	**5,600J**	---	---	---	---
	8/6/2004	**78**	<20,000	<200	<200	<200	<200	**110,000**	<200	<200	**760**	<2,500	---	---	---	---
	11/12/2004	**120**	<20,000	<200	<200	<200	<200	**100,000**	<200	<200	**660**	**6,000**	---	---	---	---
	2/15/2005	**130**	<25,000	<250	<250	<250	<250	**110,000**	<250	<250	**760**	**12,000**	---	---	---	---
	5/9/2005	**320**	<15,000	<150	<150	<150	<150	**97,000**	<150	<150	**780**	**30,000**	---	---	---	---
	8/8/2005	**180**	<15,000	<150	<150	<150	<150	**75,000**	<150	<150	**500**	**44,000**	---	---	---	---
	11/16/2005	<200	<5,000	<50	<50	<50	<50	**37,000**	<50	<50	**190**	**38,000**	<5,000	<500	<50	<50
	2/22/2006	<600	<5,000	**88**	<50	<50	<50	**57,000**	<50	<50	**420**	**65,000**	<9,000	<500	<50	<50
	5/16/2006	<600^	<9,000	**110**	<90	<90	<90	**42,000**	<90	<90	**340**	**68,000**	<9,000	<900	<90	<90
	8/23/2006	<200^	<4,000	<40	<40	<40	<40	**18,000**	<40	<40	**120**	**60,000**	<4,000	<400	<40	<40
	11/13/2006	NA	<2,000	<20	<20	<20	<20	**6,100**	<20	<20	**30**	**54,000**	NA	NA	NA	NA
	2/13/2007	<200^	<4,000	**52**	<40	<40	<40	**13,000**	<40	<40	**82**	**65,000**	NA	NA	NA	NA
	5/15/2007	<300^	<4,000	**67**	<40	<40	<40	**12,000**	<40	<40	**77**	**71,000**	NA	NA	NA	NA
	8/15/2007	<200^	<4,000	**42**	<40	<40	<40	**4,500**	<40	<40	<40	**64,000**	NA	NA	NA	NA
	11/14/2007	<100	<2,000	**27**	<20	<20	<20	**3,300**	25	<20	<20	**49,000**	NA	NA	NA	NA
	2/19/2008	<300	<2,000	**64**	<20	<20	<20	**3,500**	<20	<20	**31**	**52,000**	NA	NA	NA	NA
	6/25/2008	**140**	<2,000	<20	<20	<20	<20	**1,100**	<20	<20	<20	**54,000**	NA	NA	NA	NA
	9/18/2008	**110**	<900	<9.0	<9.0	<9.0	<9.0	**1,000**	**19**	**<9.0**	**<9.0**	**29,000**	NA	NA	NA	NA
	12/8/2008	**94**	<900	<9.0	<9.0	<9.0	<9.0	**640**	**16**	<9.0	<9.0	**24,000**	NA	NA	NA	NA

TABLE 4
GROUNDWATER SAMPLE ANALYTICAL RESULTS - SHALLOW ZONE
Eagle Gas
4301 San Leandro Street
Oakland, California

Sample Name	Sample Date	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)	Methanol (µg/L)	Ethanol (µg/L)	DCA (µg/L)	EDB (µg/L)
ESL (µg/L)		**640**	**500**	**46**	**130**	**290**	**100**	**1,800**	--	--	--	**18,000**	--	**50,000**	**200**	**150**
MW-4	2/22/2006	<8,000	<150,000	**3,200**	**2,000**	**1,600**	**3,800**	**770,000**	<1,500	<1,500	**3,300**	**59,000**	<150,000	<15,000	<1,500	<1,500
	5/16/2006	**3,800**	<70,000	**2,100**	<700	**930**	**1,500**	**410,000**	<700	<700	**2,500**	**110,000**	<70,000	<7,000	<700	<700
	8/23/2006	**8,400**	**89,000**	**4,500**	<700	**2,100**	**2,800**	**870,000**	<700	<700	**4,000**	**89,000**	<70,000	<7,000	<700	<700
	11/13/2006	NA	<150,000	**3,700**	<1,500	<1,500	**2,400**	**950,000**	<1,500	<1,500	**4,000**	**110,000**	NA	NA	NA	NA
	2/13/2007	**2,000**	<150,000	**2,000**	<1,500	<1,500	<1,500	**640,000**	<1,500	<1,500	**2,900**	**130,000**	NA	NA	NA	NA
	5/16/2007	**1,900 ^^**	<70,000	**3,200**	<700	**1,000**	**940**	**430,000**	<700	<700	**2,300**	**160,000**	NA	NA	NA	NA
	8/16/2007	**4,400**	<150,000	**2,400**	<1,500	<1,500	<1,500	**630,000**	<1,500	<1,500	**4,300**	**130,000**	NA	NA	NA	NA
	11/16/2007	**2,200**	<70,000	**4,900**	<700	**1,000**	<700	**620,000**	<700	<700	**3,600**	**150,000**	NA	NA	NA	NA
	2/19/2008	**3,200**	<70,000	**3,900**	<700	**1,400**	<1,500	**350,000**	<700	<700	**2,100**	**130,000**	<70,000	<7,000	NA	NA
	6/25/2008	**13,000**	<70,000	**4,000**	<700	<700	<700	**360,000**	<700	<700	**2,300**	**330,000**	NA	NA	NA	NA
	9/18/2008	**7,600**	<40,000	**3,500**	<400	<400	<400	**220,000**	<400	<400	**1,400**	**490,000**	NA	NA	NA	NA
	12/9/2008	**14,000**	**69,000**	**3,600**	**1400**	**2400**	**10000**	**360,000**	<150	<150	**2,000**	**660,000**	NA	NA	NA	NA
MW-5	2/21/2006	<3,000	<10,000	**460**	<100	**170**	<100	**480,000**	<100	<100	**3,000**	**95,000**	<90,000	<1,000	<100	<100
	5/16/2006	**1,600**	<90,000	<900	<900	<900	<900	**480,000**	<900	<900	**2,300**	**130,000**	<90,000	<9,000	<900	<900
	8/23/2006	**1,400**	<90,000	<900	<900	<900	<900	**510,000**	<900	<900	**2,400**	**270,000**	<90,000	<9,000	<900	<900
	11/13/2006	NA	<90,000	<900	<900	<900	<900	**430,000**	<900	<900	**2,200**	**350,000**	NA	NA	NA	NA
	2/13/2007	**1,000**	<50,000	<500	<500	<500	<500	**260,000**	<500	<500	**740**	**350,000**	NA	NA	NA	NA
	5/16/2007	**2,200 ^^**	<15,000	**650**	<150	<150	<150	**73,000**	<150	<150	**610**	**240,000**	NA	NA	NA	NA
	8/16/2007	**950**	<25,000	<250	<250	<250	<250	**130,000**	<250	<250	**550**	**620,000**	NA	NA	NA	NA
	11/16/2007	**800**	<15,000	<150	<150	<150	<150	**92,000**	<150	<150	**250**	**300,000**	NA	NA	NA	NA
	2/19/2008	**3,400**	<15000	**160**	<150	<150	<150	**38,000**	<150	<150	<150	**480,000**	NA	NA	NA	NA
	6/25/2008	**850**	<15,000	<150	<150	<150	<150	**33,000**	<150	<150	<150	**520,000**	NA	NA	NA	NA
	9/17/2008	**900**	<15,000	<150	<150	<150	<150	**22,000**	<150	<150	<150	**520,000**	NA	NA	NA	NA
	12/9/2008	**1,600**	<9,000	<90	<90	<90	<90	**23,000**	<90	<90	<90	**500,000**	NA	NA	NA	NA

TABLE 4
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Eagle Gas
4301 San Leandro Street
Oakland, California

Sample Name	Sample Date	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)	Methanol (µg/L)	Ethanol (µg/L)	DCA (µg/L)	EDB (µg/L)
ESL (µg/L)		**640**	**500**	**46**	**130**	**290**	**100**	**1,800**	--	--	--	**18,000**	--	**50,000**	**200**	**150**
MW-6	2/22/2006	**2,900**	<10,000	**620**	<100	<100	<100	**50,000**	<100	<100	**210**	**24,000**	<10,000	<1,000	<100	<100
	5/16/2006	**3,200**	<9,000	**1,500**	<90	<90	<90	**50,000**	<90	<90	**280**	**27,000**	<10,000	<900	<90	<90
	8/23/2006	**3,400**	<9,000	**1,600**	<90	<90	<90	**39,000**	<90	<90	**190**	**55,000**	<9,000[++]	<900	<90	<90
	11/13/2006	**NA**	<5,000	**1,200**	<50	<50	<50	**17,000**	<50	<50	**66**	**71,000**	NA	NA	NA	NA
	2/13/2007	**2,400**	**4,900**	**1,800**	<25	<25	<25	**14,000**	<25	<25	**65**	**55,000**	NA	NA	NA	NA
	5/15/2007	**2,600**	**4,900**	**1,900**	**21**	<20	<20	**12,000**	<20	<20	**55**	**60,000**	NA	NA	NA	NA
	8/15/2007	**2,900**	**4,000**	**1,300**	<20	<20	<20	**7,000**	<20	<20	**32**	**69,000**	NA	NA	NA	NA
	11/14/2007	**2,400**	**5,400**	**2,000**	<20	<20	<20	**3,300**	<20	<20	<20	**63,000**	NA	NA	NA	NA
	2/19/2008	**2,300**	**2,000**	**660**	**6.7**	<1.5	**4.6**	**280**	<1.5	<1.5	**1.7**	**4,500**	NA	NA	NA	NA
	6/25/2008	**2,500**	**2,700**	**880**	<20	<20	<20	**1,400**	<20	<20	<20	**74,000**	NA	NA	NA	NA
	9/17/2008	**No groundwater samples collected, per ACEH**														
	12/8/2008	**No groundwater samples collected, per ACEH**														
MW-7	2/22/2006	**400**	<10,000	<100	<100	<100	<100	**88,000**	<100	<100	**430**	**90,000**	<10,000	<1,000	<100	<100
	5/16/2006	**340**	<5,000	<50	<50	<50	<50	**28,000**	<50	<50	**120**	**47,000**	<5,000	<500	<50	<50
	8/23/2006	**280**	<9,000	<90	<90	<90	<90	**62,000**	<90	<90	**280**	**160,000**	<18,000[++]	<900	<90	<90
	11/13/2006	NA	<9,000	<90	<90	<90	<90	**49,000**	<90	<90	**280**	**130,000**	NA	NA	NA	NA
	2/13/2007	**210**	<7,000	<70	<70	<70	<70	**33,000**	<70	<70	**170**	**130,000**	NA	NA	NA	NA
	5/15/2007	**250**	<5,000	<50	<50	<50	<50	**36,000**	<50	<50	**190**	**140,000**	NA	NA	NA	NA
	8/15/2007	**390**	<9,000	<90	<90	<90	<90	**37,000**	<90	<90	**170**	**160,000**	NA	NA	NA	NA
	11/14/2007	**310**	<9,000	<90	<90	<90	<90	**45,000**	<90	<90	**220**	**150,000**	NA	NA	NA	NA
	2/19/2008	**190**	<500	<5.0	<5.0	<5.0	<5.0	**3,000**	<5.0	<5.0	**15**	**13,000**	NA	NA	NA	NA
	6/25/2008	**240**	<4,000	<40	<40	<40	<40	**21,000**	<40	<40	**99**	**100,000**	NA	NA	NA	NA
	9/17/2008	**230**	<9,000	<90	<90	<90	<90	**34,000**	<90	<90	**180**	**70,000**	NA	NA	NA	NA
	12/8/2008	**180**	<15,000	<150	<150	<150	<150	**98,000**	<150	<150	**740**	**100,000**	NA	NA	NA	NA

TABLE 4
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Eagle Gas
4301 San Leandro Street
Oakland, California

Sample Name	Sample Date	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)	Methanol (µg/L)	Ethanol (µg/L)	DCA (µg/L)	EDB (µg/L)
ESL (µg/L)		**640**	**500**	**46**	**130**	**290**	**100**	**1,800**	--	--	--	**18,000**	--	**50,000**	**200**	**150**
MW-8	2/22/2006	**6,800**	<10,000	**1,200**	<100	**270**	**220**	**400,000**	<100	<100	**2,100**	**63,000**	<300,000	<1,000	<100	<100
	5/16/2006	**3,800**	<90,000	**1,600**	<900	<900	<900	**620,000**	<900	<900	**3,000**	**46,000**	<90,000	<9,000	<900	<900
	8/23/2006	**17,000**	<90,000	**940**	<900	<900	<900	**340,000**	<900	<900	**1,200**	**74,000**	<90,000	<9,000	<900	<900
	11/13/2006	NA	<25,000	**490**	<250	<250	<250	**120,000**	<250	<250	**360**	**130,000**	NA	NA	NA	NA
	2/13/2007	**4,100**	<90,000	**1,700**	<900	<900	<900	**410,000**	<900	<900	**1,700**	**160,000**	NA	NA	NA	NA
	5/16/2007	**3,300**	<50,000	**650**	<500	<500	<500	**190,000**	<500	<500	**750**	**170,000**	NA	NA	NA	NA
	8/16/2007	**4,400**	<25,000	**420**	<250	<250	<250	**150,000**	<250	<250	**460**	**210,000**	NA	NA	NA	NA
	11/16/2007	**89,000**	<25,000	<250	<250	<250	<250	**120,000**	<250	<250	<250	**250,000**	NA	NA	NA	NA
	2/19/2008	**120,000**	<10000	**650**	<100	<100	**160**	**56,000**	<100	<100	**210**	**260,000**	NA	NA	NA	NA
	6/25/2008	**3,200**	<15,000	**210**	<150	<150	<150	**70,000**	<150	<150	**190**	**320,000**	NA	NA	NA	NA
	9/18/2008	**8,300**	<25,000	<250	<250	<250	<250	**100,000**	<250	<250	<250	**450,000**	NA	NA	NA	NA
	12/9/2008	**<2,000,000**	**1,700,000**	**2,300**	<250	**37,000**	**67,000**	**91,000**	<250	<250	**1,500**	**410,000**	NA	NA	NA	NA
MW-9	**12/9/2008**	<800	**1,200**	**4.2**	<2.5	**13**	**9.4**	**1,300**	<2.5	<2.5	**10**	**240**	<300	<25	<2.5	<2.5
MW-10	**12/9/2008**	<2,000	**8,000**	**560**	**41**	**35**	**150**	**500**	**5.1**	<1.0	<1.0	**13J**	<200	<10	**78**	<1.0
IS-1	2/22/2006	**4,400**	<5,000	**160**	<50	<50	<50	**21,000**	<50	<50	**64**	**130,000**	<5,000	<500	<50	<50
	5/16/2006	**3,800**	<5,000	**150**	<50	<50	<50	**24,000**	<50	<50	**58**	**130,000**	<5,000	<500	<50	<50
	8/23/2006	**3,800**	<5,000	**65**	<50	<50	<50	**5,800**	<50	<50	<50	**110,000**	<5,000	<500	<50	<50
	11/13/2006	NA	<5,000	<50	<50	<50	<50	**1,000**	<50	<50	<50	**100,000**	NA	NA	NA	NA
	2/13/2007	**1,800**	<4,000	<40	<40	<40	<40	**3,600**	<40	<40	<40	**110,000**	NA	NA	NA	NA
	5/15/2007	**2,000**	<4,000	**49**	<40	<40	<40	**2,800**	<40	<40	<40	**98,000**	NA	NA	NA	NA
	8/15/2007	**2,700**	<4,000	<40	<40	<40	<40	**4,200**	<40	<40	<40	**90,000**	NA	NA	NA	NA
	11/13/2007	**1,400**	<700	<7.0	<7.0	<7.0	<7.0	**470**	<7.0	<7.0	<7.0	25,000	NA	NA	NA	NA
	2/19/2008	**1,800**	**410**	**2.0**	<0.50	<0.50	<0.50	**1,000**	<0.50	**1.8**	**2.7**	80,000	NA	NA	NA	NA
	6/25/2008	**2,500**	<4,000	<40	<40	<40	<40	**3,300**	<40	<40	<40	**94,000**	NA	NA	NA	NA
	9/17/2008	**No groundwater samples collected, per ACEH**														

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GROUNDWATER SAMPLE ANALYTICAL RESULTS - SHALLOW ZONE
Eagle Gas
4301 San Leandro Street
Oakland, California

Sample Name	Sample Date	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)	Methanol (µg/L)	Ethanol (µg/L)	DCA (µg/L)	EDB (µg/L)
ESL (µg/L)		**640**	**500**	**46**	**130**	**290**	**100**	**1,800**	--	--	--	**18,000**	--	**50,000**	**200**	**150**
IS-1	**12/8/2008**	**No groundwater samples collected, per ACEH**														
IS-2	2/22/2006	<4,000	**8,600**	**1,200**	<9.0	**240**	**17**	**190,000**	<9.0	**9**	**1,700**	**29,000**	<150,000	<90	<9.0	<9.0
	5/16/2006	<3,000^	<15,000	**500**	<150	<150	<150	**130,000**	<150	<150	**880**	**24,000**	<15,000	<1,500	<150	<150
	8/23/2006	**2,700**	<40,000	**490**	<400	<400	<400	**150,000**	<400	<400	**1,200**	**39,000**	<40,000^++	<4,000	<400	<400
	11/13/2006	NA	<40,000	<400	<400	<400	<400	**160,000**	<400	<400	**990**	**120,000**	NA	NA	NA	NA
	2/13/2007	<1,500^	<5,000	**230**	<50	<50	<50	**28,000**	<50	<50	**250**	**72,000**	NA	NA	NA	NA
	5/15/2007	<3,000^	<7,000	**690**	<70	**120**	<70	**35,000**	<70	<70	**370**	**32,000**	NA	NA	NA	NA
	8/15/2007	<3,000^	<7,000	**500**	<70	<70	<70	**20,000**	<70	<70	**160**	**160,000**	NA	NA	NA	NA
	11/14/2007	<4,000	**15,000**	**1,100**	<70	**240**	<70	**29,000**	<70	<70	**380**	**25,000**	NA	NA	NA	NA
	2/19/2008	<3000	**5,300**	**550**	**5.0**	**32**	**7.6**	**7,400**	<0.50	**3.2**	**94**	**65,000**	NA	NA	NA	NA
	6/25/2008	**4,300**	**5,500**	**440**	<40	<40	<40	**3,100**	<40	<40	<40	**110,000**	NA	NA	NA	NA
	9/18/2008	**No groundwater samples collected, per ACEH**														
	12/8/2008	**No groundwater samples collected, per ACEH**														
IS-3	2/22/2006	<4,000	**29,000**	**2,700**	**820**	**1,100**	**2,900**	**750,000**	<100	<100	**3,400**	**40,000**	<80,000	<1,000	<100	<100
	5/16/2006	**8,000**	<20,000	**1,110**	<200	**450**	<200	**300,000**	<200	<200	**1,600**	**65,000**	<20,000	<2,000	<200	<200
	8/23/2006	**4,800**	<50,000	**2,900**	<500	**1,100**	**660**	**970,000**	<500	<500	**3,900**	**54,000**	<50,000	<5,000	<500	<500
	11/13/2006	NA	<200,000	**2,800**	<2,000	<2,000	<2,000	**1,100,000**	<2,000	<2,000	**4,500**	**65,000**	NA	NA	NA	NA
	2/13/2007	<3,000	<150,000	**3,200**	<1,500	<1,500	<1,500	**600,000**	<1,500	<1,500	**3,300**	**49,000**	NA	NA	NA	NA
	5/16/2007	<4,000^	<150,000	**2,900**	<1,500	<1,500	<1,500	**630,000**	<1,500	<1,500	**3,400**	**88,000**	NA	NA	NA	NA
	8/15/2007	<3,000^	<150,000	**2,800**	<1,500	<1,500	<1,500	**960,000**	<1,500	<1,500	**4,300**	**98,000**	NA	NA	NA	NA
	11/14/2007	**1,900**	<150,000	**2,600**	<1,500	<1,500	<1,500	**880,000**	**2,000**	<1,500	**3,600**	**130,000**	NA	NA	NA	NA
	2/19/2008	**1,200**	**2,700**	**660**	**4.8**	**160**	<150	**32,000**	**0.63**	**1.8**	**200**	**3,600**	NA	NA	NA	NA
	6/25/2008	**3,500**	<150,000	**3,600**	<1,500	<1,500	<1,500	**840,000**	<1,500	<1,500	**4,000**	**200,000**	NA	NA	NA	NA
	9/17/2008	**No groundwater samples collected, per ACEH**														
	12/8/2008	**No groundwater samples collected, per ACEH**														

TABLE 4
GROUNDWATER SAMPLE ANALYTICAL RESULTS - SHALLOW ZONE
Eagle Gas
4301 San Leandro Street
Oakland, California

Sample Name	Sample Date	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)	Methanol (µg/L)	Ethanol (µg/L)	DCA (µg/L)	EDB (µg/L)
ESL (µg/L)		**640**	**500**	**46**	**130**	**290**	**100**	**1,800**	--	--	--	**18,000**	--	**50,000**	**200**	**150**
IS-4	2/22/2006	**3,100**	**11,000**	**790**	<100	**120**	<100	**280,000**	<100	<100	**2,400**	**51,000**	<10,000	<1,000	<100	<100
	5/16/2006	**5,600**	<15,000	**610**	<150	<150	<150	**220,000**	<150	<150	**1,700**	**53,000**	<15,000	<1,500	<150	<150
	8/23/2006	**4,300**	**6,100**	**280**	<40	<40	<40	**270,000**	<40	<40	**1,600**	**100,000**	<80,000++	<400	<40	<40
	11/13/2006	NA	<50,000	<500	<500	<500	<500	**230,000**	<500	<500	**1,100**	**220,000**	NA	NA	NA	NA
	2/13/2007	**1,500**	<25,000	**380**	<250	<250	<250	**160,000**	<250	<250	**570**	**250,000**	NA	NA	NA	NA
	5/15/2007	**1,700**	<25,000	<250	<250	<250	<250	**150,000**	<250	<250	**820**	**260,000**	NA	NA	NA	NA
	8/15/2007	**1,000**	<15,000	<150	<150	<150	<150	**85,000**	<150	<150	**360**	**280,000**	NA	NA	NA	NA
	11/14/2007	**760**	<9,000	<90	<90	<90	<90	**45,000**	<90	<90	**220**	**110,000**	NA	NA	NA	NA
	2/19/2008	**1,100**	**980**	**39**	**0.94**	**3.1**	**1.2**	**870**	<0.50	**3.4**	**7.6**	**42,000**	NA	NA	NA	NA
	6/25/2008	**4,000**	<9,000	<90	<90	<90	<90	**6,300**	<90	<90	<90	**300,000**	NA	NA	NA	NA
	9/18/2008	<1,500	**2,600**	**14**	**0.96**	**2.6**	**1.9**	**3,100**	<1.0	**9.1**	**8.4**	**280,000**	NA	NA	NA	NA
	12/9/2008	**4,000**	**20,000**	**1,100**	**360**	**710**	**3,000**	**110,000**	**1.1**	**20**	**630**	**540,000**	NA	NA	NA	NA
IS-5	2/22/2006	**35,000**	**66,000**	**4,100**	<250	**3,100**	**7,700**	**420,000**	<250	<250	**4,600**	**40,000**	<25,000	<2,500	<250	<250
	5/16/2006	**11000+**	**33,000**	**2,800**	<200	**1,700**	**1,900**	**350,000**	<200	<200	**3,400**	**29,000**	<20,000	<2,000	<200	<200
	8/23/2006	**11,000**	**71,000**	**5,200**	<500	**6,200**	**4,500**	**350,000**	<500	<500	**3,900**	**32,000**	<50,000	<5,000	<500	<500
	11/13/2006	NA	<50,000	**930**	<500	<500	<500	**440,000**	<500	<500	**2,800**	**89,000**	NA	NA	NA	NA
	2/13/2007	<5,000	<50,000	**3,600**	<500	**2,200**	**3,800**	**240,000**	<500	<500	**3,600**	**28,000**	NA	NA	NA	NA
	5/16/2007	<5,000^	<50,000	**4,500**	<500	<500	<500	**200,000**	<500	<500	**2,700**	**24,000**	NA	NA	NA	NA
	8/15/2007	<10,000^	<50,000	**4,300**	<500	**2,100**	**990**	**310,000**	<500	<500	**3,400**	**48,000**	NA	NA	NA	NA
	11/16/2007	<5,000	<50,000	**2,100**	<500	**1,900**	**3,600**	**260,000**	<500	<500	**2,600**	**55,000**	NA	NA	NA	NA
	2/19/2008	<18,000	**73,000**	**5,200**	**67**	**2,800**	**5,300**	**110,000**	**1.9**	**8.3**	**2,500**	**250,000**	NA	NA	NA	NA
	6/25/2008	**27,000**	<50,000	**3,400**	<500	**740**	**1,300**	**180,000**	<500	<500	**2,600**	**94,000**	NA	NA	NA	NA
	9/18/2008	**10,000,000**	**680,000**	**2,400**	**50**	**18,000**	**27,000**	**190,000**	<10	**13**	**2,200**	**240,00**	NA	NA	NA	NA
	12/9/2008	**140,000**	**47,000**	**2,900**	**44**	**4,400**	**7,100**	**89,000**	**1.3**	**14**	**1,600**	**230,000**	NA	NA	NA	NA

TABLE 4
GROUNDWATER SAMPLE ANALYTICAL RESULTS - SHALLOW ZONE
Eagle Gas
4301 San Leandro Street
Oakland, California

Sample Name	Sample Date	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)	Methanol (µg/L)	Ethanol (µg/L)	DCA (µg/L)	EDB (µg/L)
ESL (µg/L)		**640**	**500**	**46**	**130**	**290**	**100**	**1,800**	--	--	--	**18,000**	--	**50,000**	**200**	**150**
IS-6	2/22/2006	**3,000**	**11,000**	**1,000**	<100	**560**	**180**	**130,000**	<100	<100	**1,400**	**210,000**	<15,000	<1,000	<100	<100
	5/16/2006	**3,300**	<20,000	**1,300**	<200	730	<200	**96,000**	<200	<200	**1,300**	**260,000**	<25,000	<2,500	<200	<200
	8/23/2006	**2,900**	<20,000	**580**	<200	<200	<200	**54,000**	<200	<200	**500**	**370,000**	<20,000	<2,000	<200	<200
	11/13/2006	NA	<9,000	**220**	<90	<90	<90	**20,000**	<90	<90	**170**	**260,000**	NA	NA	NA	NA
	2/13/2007	**1,600**	<9,000	**360**	<90	<90	<90	**28,000**	<90	<90	**210**	**310,000**	NA	NA	NA	NA
	5/16/2007	**1,700**	9,100	**1,400**	<70	300	<70	**21,000**	<70	<70	**240**	**240,000**	NA	NA	NA	NA
	8/15/2007	**1,700**	<9,000	**560**	<90	<90	<90	**8,000**	<90	<90	**100**	**220,000**	NA	NA	NA	NA
	11/14/2007	**880**	<5,000	**200**	<50	<50	<50	**3,700**	<50	<50	**<50**	**190,000**	NA	NA	NA	NA
	2/19/2008	**1,200**	**3,500**	**360**	**2.3**	**41**	**1.6**	**6,100**	**0.66**	**8.6**	**55**	**220,000**	NA	NA	NA	NA
	6/25/2008	**1,900**	<7,000	**200**	<70	<70	<70	**1,600**	<70	<70	<70	**250,000**	NA	NA	NA	NA
	9/17/2008	**No groundwater samples collected, per ACEH**														
	12/8/2008	**No groundwater samples collected, per ACEH**														
EW-1	2/22/2006	**3,200**	<150,000	**3,100**	<1,500	<1,500	<1,500	**700,000**	<1,500	<1,500	**5,100**	**59,000**	<150,000	<15,000	<1,500	<1,500
	5/16/2006	**1,600**	<100,000	**2,000**	<1,000	<1,000	<1,000	**630,000**	<1,000	<1,000	**4,700**	**57,000**	<100,000	<10,000	<1,000	<1,000
	8/23/2006	**2,600**	<150,000	**2,200**	<1,500	<1,500	<1,500	**1,000,000**	<1,500	<1,500	**5,200**	**79,000**	<150,000	<15,000	<1,500	<1,500
	11/13/2006	NA	<100,000	<1,000	<1,000	<1,000	<1,000	**610,000**	<1,000	<1,000	**4,000**	**110,000**	NA	NA	NA	NA
	2/13/2007	**840**	<70,000	**1,200**	<700	<700	<700	**530,000**	<700	<700	**2,500**	**100,000**	NA	NA	NA	NA
	5/16/2007	**1,500**	<70,000	**1,700**	<700	<700	<700	**990,000**	<700	<700	**3,900**	**150,000**	NA	NA	NA	NA
	8/16/2007	**1,400**	<80,000	**1,900**	<800	<800	<800	**680,000**	<800	<800	**3,400**	**210,000**	NA	NA	NA	NA
	11/16/2007	**860**	<70,000	<700	<700	<700	<700	**440,000**	<700	<700	**1,700**	**280,000**	NA	NA	NA	NA
	2/19/2008	**800**	<25000	**340**	**1.5**	<250	<250	**300,000**	<5.0	**26**	**1,200**	**340,000**	NA	NA	NA	NA
	6/25/2008	**1,200**	<40,000	**580**	<400	<400	<400	**260,000**	<400	<400	**1,100**	**450,000**	NA	NA	NA	NA
	9/17/2008	**No groundwater samples collected, per ACEH**														
	12/8/2008	**No groundwater samples collected, per ACEH**														

TABLE 4
GROUNDWATER SAMPLE ANALYTICAL RESULTS - SHALLOW ZONE
Eagle Gas
4301 San Leandro Street
Oakland, California

Sample Name	Sample Date	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)	Methanol (µg/L)	Ethanol (µg/L)	DCA (µg/L)	EDB (µg/L)
ESL (µg/L)		**640**	**500**	**46**	**130**	**290**	**100**	**1,800**	--	--	--	**18,000**	--	**50,000**	**200**	**150**
EW-2	2/22/2006	<3,000	**10,000**	**1,800**	<100	**700**	**670**	**120,000**	<100	<100	**1,200**	**36,000**	<80,000	<1,000	<100	<100
	5/16/2006	<3,000^	<25,000	**2,400**	<250	**1,110**	**880**	**180,000**	<250	<250	**1,400**	**45,000**	<25,000	<2,500	<250	<250
	8/23/2006	<2,000	<25,000	**1,600**	<250	**520**	<250	**120,000**	<250	<250	**930**	**35,000**	<25,000	<2,500	<250	<250
	11/13/2006	NA	<10,000	**610**	<100	**170**	<100	**60,000**	<100	<100	**380**	**25,000**	NA	NA	NA	NA
	2/13/2007	<2,000	<15,000	**1,100**	<150	**230**	<150	**81,000**	<150	<150	**700**	**49,000**	NA	NA	NA	NA
	5/16/2007	<3,000^	**9,900**	**1,700**	<50	**460**	**170**	**96,000**	<50	<50	**870**	**65,000**	NA	NA	NA	NA
	8/16/2007	<2,000^	<15,000	**1,300**	<150	**250**	<150	**100,000**	<150	<150	**700**	**75,000**	NA	NA	NA	NA
	11/16/2007	<1,500	**8,100**	**820**	**5.5**	**190**	**91**	**30000**	<0.50	**4.6**	**230**	**47000**	NA	NA	NA	NA
	2/19/2008	<2000	**11,000**	**1,500**	<50	**610**	**300**	**78,000**	<50	<50	**590**	**130,000**	NA	NA	NA	NA
	6/25/2008	**1,600**	<5,000	**730**	<50	<50	<50	**11,000**	<50	<50	**120**	**130,000**	NA	NA	NA	NA
	9/18/2008	**1,300**	<5,000	**310**	<50	<50	<50	**3,500**	<50	<50	<50	**160,00**	NA	NA	NA	NA
	12/9/2008	<1,500	<5,000	**650**	<50	210	**68**	**9,600**	<50	<50	**150**	**140,000**	NA	NA	NA	NA

Notes:

NA Not analyzed.

TPH-d Total petroleum hydrocarbons as diesel by EPA Method 8015 (modified)

TPH-g 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

DCA 1,2-Dichloroethane

EDB 1,2-Dibromoethane

ESL Environmental Screening Levels for deep soils and groundwater that are not a current or potential source of drinking water;

TABLE 4
GROUNDWATER SAMPLE ANALYTICAL RESULTS - SHALLOW ZONE
Eagle Gas
4301 San Leandro Street
Oakland, California

Sample Name	Sample Date	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)	Methanol (µg/L)	Ethanol (µg/L)	DCA (µg/L)	EDB (µg/L)
ESL (µg/L)		**640**	**500**	**46**	**130**	**290**	**100**	**1,800**	--	--	--	**18,000**	--	**50,000**	**200**	**150**

Notes:

San Francisco Bay Regional Water Quality Control Board, February 2005

(µg/L) Micrograms per liter

See Well Gauging/Purging Calculation Data Sheets for date of depth-to-groundwater measurement

<50 Not detected in concentrations above indicated laboratory reporting limit.

J Estimated quantity because the MTBE-to-TBA ratio is greater than 20 to 1.

--- No samples collected, no data available

-- Not provided

* Laboratory note: "Results within quantitation range; chromatographic pattern not typical of fuel."

^ The method reporting limit for TPH-d is increased due to interference from gasoline-range hydrocarbons.

^^ Petroleum hydrocarbons reported as TPH-d do not exhibit a typical Diesel chromatogram pattern; they have a lower boiling point than typical Diesel fuel.

++ The method reporting limit has been increased due to the presence of an interfering compound.

TABLE 5
GROUNDWATER SAMPLE ANALYTICAL RESULTS - DEEP ZONE
Eagle Gas
4301 San Leandro Street
Oakland, California

Sample Name	Sample Date	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)	Methanol (µg/L)	Ethanol (µg/L)	DCA (µg/L)	EDB (µg/L)
ESL (µg/L)		**640**	**500**	**46**	**130**	**290**	**100**	**1,800**	**--**	**--**	**--**	**18,000**	**--**	**50,000**	**200**	**150**
MW-1D	11/13/2007	**140**	**71**	<0.50	<0.50	<0.50	<0.50	**600**	<0.50	<0.50	**3.4**	**550**	<50	<5.0	<0.50	<0.50
	11/27/2007	**No groundwater samples collected**														
	2/19/2008	**180**	<50	<0.50	<0.50	<0.50	<0.50	**1.5**	<0.50	<0.50	<0.50	<5.0	NA	NA	NA	NA
	6/25/2008	<50	<50	<0.50	<0.50	<0.50	<0.50	**2.8**	<0.50	<0.50	<0.50	<5.0	NA	NA	NA	NA
	9/17/2008	<50	<50	<0.50	<0.50	<0.50	<0.50	**1.7**	<0.50	<0.50	<0.50	<5.0	NA	NA	NA	NA
	12/8/2008	<50	<50	<0.50	<0.50	<0.50	<0.50	**0.91**	<0.50	<0.50	<0.50	<5.0	NA	NA	NA	NA
MW-4D	2/21/2006	<50	<90	<0.90	<0.90	<0.90	<0.90	**440**	<0.90	<0.90	**2**	<5.0	<90	<9.0	<0.90	<0.90
	5/16/2006	<50	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<5.0	<50	<5.0	<0.50	<0.50
	8/23/2006	<50	<50	<0.50	<0.50	<0.50	<0.50	**1**	<0.50	<0.50	<0.50	<5.0	**93**	**8**	<0.50	<0.50
	11/13/2006	NA	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<5.0	NA	NA	NA	NA
	2/13/2007	<50	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<5.0	NA	NA	NA	NA
	5/15/2007	<50	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<5.0	NA	NA	NA	NA
	8/15/2007	**130 ^^**	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<5.0	NA	NA	NA	NA
	11/13/2007	<50	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<5.0	NA	NA	NA	NA
	11/27/2007	**No groundwater samples collected**														
	2/29/2008	**170**	<50	<0.50	<0.50	<0.50	<1.0	**0.64**	<0.50	<0.50	<0.50	<5.0	<50	<5.0	NA	NA
	6/25/2008	<50	<50	<0.50	<0.50	<0.50	<0.50	**7.9**	<0.50	<0.50	<0.50	<5.0	NA	NA	NA	NA
	9/17/2008	**72**	<50	<0.50	<0.50	<0.50	<0.50	**5.7**	<0.50	<0.50	<0.50	<5.0	NA	NA	NA	NA
	12/8/2008	<50	<50	<0.50	<0.50	<0.50	<0.50	**150**	<0.50	<0.50	**0.98**	**74**	NA	NA	NA	NA

TABLE 5
GROUNDWATER SAMPLE ANALYTICAL RESULTS - DEEP ZONE
Eagle Gas
4301 San Leandro Street
Oakland, California

Sample Name	Sample Date	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)	Methanol (µg/L)	Ethanol (µg/L)	DCA (µg/L)	EDB (µg/L)
ESL (µg/L)		**640**	**500**	**46**	**130**	**290**	**100**	**1,800**	--	--	--	**18,000**	--	**50,000**	**200**	**150**
MW-5D	2/21/2006	<50	<50	<0.50	<0.50	<0.50	<0.50	**8**	<0.50	<0.50	<0.50	**6**	<50	<5.0	<0.50	<0.50
	5/16/2006	<50	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<5.0	<50	<5.0	<0.50	<0.50
	8/23/2006	<50	<50	<0.50	<0.50	<0.50	<0.50	**56**	<0.50	<0.50	<0.50	<5.0	**120**	**6**	<0.50	<0.50
	11/13/2006	NA	<50	<0.50	<0.50	<0.50	<0.50	**81**	<0.50	<0.50	<0.50	<5.0	NA	NA	NA	NA
	2/13/2007	<50	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<5.0	NA	NA	NA	NA
	5/15/2007	<50	<50	<0.50	<0.50	<0.50	<0.50	**1.1**	<0.50	<0.50	<0.50	<5.0	NA	NA	NA	NA
	8/15/2007	**330** ^^	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<5.0	NA	NA	NA	NA
	11/13/2007	**3,700**	**51**	<0.50	<0.50	<0.50	<0.50	**3.1**	<0.50	<0.50	<0.50	<0.50	NA	NA	NA	NA
	11/27/2007	**No groundwater samples collected**														
	2/19/2008	**12,000**	<50	<0.50	<0.50	<0.50	<0.50	**190**	<0.50	<0.50	**0.83**	**36**	NA	NA	NA	NA
	6/25/2008	**74**	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<5.0	NA	NA	NA	NA
	9/17/2008	**65**	<50	<0.50	<0.50	<0.50	<0.50	**1.1**	<0.50	<0.50	<0.50	<5.0	NA	NA	NA	NA
	12/8/2008	<50	<50	<0.50	<0.50	<0.50	<0.50	**1.4**	<0.50	<0.50	<0.50	<5.0	NA	NA	NA	NA
MW-7D	11/13/2007	**760**	<150	<1.5	<1.5	<1.5	<1.5	**760**	<1.5	<1.5	**5.3**	<5.0	<150	**31**	<1.5	<1.5
	11/27/2007	**No groundwater samples collected**														
	2/19/2008	**280**	<150	<1.5	<1.5	<1.5	**2.4**	**1,000**	<1.5	<1.5	**7.5**	**17J**	NA	NA	NA	NA
	6/25/2008	**92**	<100	<1.0	<1.0	<1.0	<1.0	**690**	<1.0	<1.0	**5.9**	**63**	NA	NA	NA	NA
	9/17/2008	**52**	<300	<3.0	<3.0	<3.0	<3.0	**1,300**	<3.0	<3.0	**10**	**24J**	NA	NA	NA	NA
	12/8/2008	<50	<50	<0.50	<0.50	<0.50	<0.50	**320**	<0.50	<0.50	**3.2**	<5.0	NA	NA	NA	NA

TABLE 5
GROUNDWATER SAMPLE ANALYTICAL RESULTS - DEEP ZONE
Eagle Gas
4301 San Leandro Street
Oakland, California

Sample Name	Sample Date	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)	Methanol (µg/L)	Ethanol (µg/L)	DCA (µg/L)	EDB (µg/L)
ESL (µg/L)		**640**	**500**	**46**	**130**	**290**	**100**	**1,800**	--	--	--	**18,000**	--	**50,000**	**200**	**150**
MW-9D	**12/9/2008**	**150**	**420**	**0.60**	<0.50	**1.7**	**3.4**	**1.7**	<0.50	<0.50	<0.50	<5.0	<50	<5.0	**0.54**	<0.50
MW-10D	**12/9/2008**	**120**	**120**	**0.64**	<0.50	**0.63**	**1.3**	**1.5**	<0.50	<0.50	<0.50	<5.0	<50	<5.0	**0.51**	<0.50
MW-11D	**12/8/2008**	<50	<50	<0.50	<0.50	<0.50	<0.50	**3.0**	<0.50	<0.50	<0.50	**5.0**	<50	<50	<0.50	<0.50

Notes:

NA	Not analyzed.
TPH-d	Total petroleum hydrocarbons as diesel by EPA Method 8015 (modified)
TPH-g	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
DCA	1,2-Dichloroethane
EDB	1,2-Dibromoethane
ESL	Environmental Screening Levels for deep soils and groundwater that are not a current or potential source of drinking water; San Francisco Bay Regional Water Quality Control Board, February 2005
(µg/L)	Micrograms per liter
<50	Not detected in concentrations above indicated laboratory reporting limit.
J	Estimated quantity because the MTBE-to-TBA ratio is greater than 20 to 1.
--	Not provided
^^	Petroleum hydrocarbons reported as TPH-d do not exhibit a typical Diesel chromatogram pattern; they have a lower boiling point than typical Diesel fuel.
++	The method reporting limit has been increased due to the presence of an interfering compound.

ATTACHMENT A

Site Investigation History
Eagle Gas Station
4301 San Leandro Street
Oakland, California 94601
LOP Site ID# 2118
USTCF Claim No. 014551
Clearwater Project No. ZP046M

On April 21 and 22, 1999, Clearwater (formerly Artesian Environmental) 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 hydrocarbon odors were reportedly observed emanating from the excavation pit of the USTs. Five soil samples and three groundwater samples were collected from the UST excavation for confirmation sampling after completion of the UST excavation. Field observations and laboratory analysis indicated that an unauthorized release of petroleum hydrocarbons had occurred. The former UST excavation is shown in **Figure 2** of the Second Quarter 2008 Quarterly Monitoring Report and was defined by driven steel shoring installed to protect the on-site and off-site buildings prior to the field activities.

In a letter dated May 10, 1999, Alameda County Environmental Health Services (ACEH) staff recommended that the soil at the site be remediated by over-excavation and that "as much groundwater as possible" be pumped from the excavation. Approximately 800 tons of petroleum hydrocarbon-impacted soil were excavated and disposed of as Class II non-hazardous waste, and approximately 1,000 gallons of petroleum hydrocarbon-impacted groundwater were pumped and removed from the site. Groundwater did not recharge quickly after the initial pumping. Existing on-site and off-site structures and associated shoring limited the amount of soil that could be safely excavated. Soil samples collected from the excavation walls and product-piping trenches indicated that residual concentrations of petroleum hydrocarbons and methyl-tert-butyl-ether (MTBE) remained.

On August 4 and 5, 1999, approximately 100 linear feet of product piping were removed. Vent piping from between the former USTs and the southern corner of the on-site building was also removed. All piping was cut up and disposed of as scrap metal. On August 5, 1999, six confirmation soil samples were collected along the piping trench approximately 3 feet below ground surface (bgs). In addition, one soil sample was collected from each of the four former fuel dispensers. Laboratory analytical results indicated that petroleum hydrocarbon impacts remained 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. The three borings were completed as groundwater-monitoring wells (**Figure 2**) using clean, flush-threaded,

2-inch diameter polyvinyl chloride (PVC) for the well casing. The construction data for these three wells are presented in **Table 1**.

On October 3 and 10, 2000, Clearwater surveyed the top-of-the-casing (TOC) elevation of each of the wells relative to an arbitrary datum and developed the wells for monitoring purposes. Initial groundwater samples collected from these wells contained 83,000 micrograms per liter (µg/L) to 250,000 µg/L total petroleum hydrocarbon as gasoline (TPH-g) and 33,000 µg/L to 400,000 µg/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, ACEH staff, in correspondence dated October 18, 2001, recommended postponing the installation of the additional off-site wells. Instead, ACEH staff 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 on August 3, 2001. Quarterly monitoring resumed in July 2003 and has since continued. The historical groundwater elevation and analytical results are listed in **Table 2.**

On January 9, 2004, after completing the review of the *Third Quarter 2003 Groundwater Monitoring Report*, ACEH staff requested a workplan that included additional on-site and off-site subsurface investigations to address the extent of groundwater impacts on the site. Clearwater submitted its *Interim Remedial Action Plan* (IRAP), as requested by ACEH staff, on January 14, 2004.

ACEH staff provided review comments for the IRAP and the *First Quarter 2005 Groundwater Monitoring Report* in a letter dated May 26, 2005. Pursuant to the ACEH request described in this letter, Clearwater submitted a *Soil and Groundwater Investigation Workplan* on August 10, 2005. In review letters dated September 21, 2005, and November 1, 2005, ACEH approved the implementation of a modified IRAP proposed in Clearwater's June 13, 2005, letter entitled *Recommendations for Interim Remedial Actions* and the August 10, 2005, *Soil and Groundwater Investigation Workplan.* On the basis of the recommendations made in the above-mentioned documents and correspondences, Clearwater installed 15 additional on-site wells between December 15 and December 20, 2005, and conducted Geoprobe® soil sampling from December 6 to December 9, 2005, and from March 29 to April 2, 2006. In order to monitor the extent of groundwater impacts and the magnitude of vertical migration of contaminants in deeper groundwater, two deep-zone monitoring wells (MW-4D and MW-5D) were installed. These wells were screened between 35 and 45 feet bgs. The construction data for these new wells are

presented in **Table 1**. All the wells were surveyed by Clearwater using a global positioning system (GPS) and laser level on March 16 and 28, 2006.

On the basis of apparent on-site groundwater mounding and unusually steep on-site groundwater gradients, ACEH staff requested a check of the groundwater elevation data. Each well's horizontal position was originally determined using a GPS survey in 2005. Clearwater field-checked the well locations of all the groundwater monitoring wells on August 18, 2006, using a 100-foot-long cloth tape. The horizontal distances between wells were measured, and the well positions were triangulated from these measurements. Several well locations were adjusted slightly on the base map; the revised base map with the resurveyed well locations is shown on **Figure 2** and has been used throughout reports generated since that time.

The TOC elevations of all the wells were remeasured on September 12, 2006, using a survey level and survey staff, accurate to within 1/100th of a foot. The TOC elevation for well MW-1 (northwest corner of site) was the starting datum, and the TOC elevation for all the other wells was calculated as the relative difference from MW-1's TOC elevation. The surveyed TOC elevations were compared with the previously used TOC elevations, which were determined using a laser level. The relative difference in TOC elevation for each well was determined. The maximum vertical difference was found to be 0.12 foot for well IS-3. **Table 2** presents the original elevation values up to May 9, 2005, followed by the resurveyed TOC elevations after that date. The overall groundwater gradient pattern did not significantly change after completion of the monitoring well resurvey.

Sampling analysis for *Escherichia coli* (*E. coli*), total coliform, and water treatment byproducts as residual chlorine was performed in November 2006 on groundwater samples obtained from wells IS-5, MW-8, and MW-7 in an attempt to identify whether on-site groundwater mounding could be caused by water and/or sewer line leaks; both *E. coli* and total coliform were present in IS-5 and MW-8, and water treatment byproducts were present in IS-5, MW-8, and MW-7. Leak testing was performed, and both a crack and an off-set in the sewer line were identified to exist near well IS-1. The sampling results for the *E. coli*, total coliform, and water treatment byproducts were reported in the *Quarterly Groundwater Monitoring Report - Fourth Quarter 2006*, and the sewer line leak test results were reported in the *Quarterly Groundwater Monitoring Report - First Quarter 2007.*

On May 30, 2006, Clearwater submitted its *Soil and Groundwater Investigation Report* to the ACEH, which included an updated Site Conceptual Model for the site. In response to the report, ACEH requested a Workplan to present proposed additional on- and off-site investigations. ACEH staff also provided Technical Comments to be addressed in the Workplan. Clearwater's *Response to Comments* was sent to ACEH on July 7, 2006.

ACEH responded with an August 11, 2006, letter with revised Technical Comments to be incorporated into the Workplan. Clearwater submitted its *Revised Workplan* to the ACEH on December 19, 2006. ACEH responded in a letter dated January 4, 2007, with Technical

Comments, which were to be addressed and incorporated during the field investigation. Submittal of an additional, revised, Workplan was not requested by ACEH staff.

A *Bioremediation Feasibility Study Report* (Feasibility Report) was submitted July 9, 2007. The Feasibility Report concluded that the bioremediation parameters suggest an environment that is generally anaerobic and reducing. It appears that the general lack of sufficient oxygen and essential nutrients is limiting the degradation of the petroleum hydrocarbons.

Clearwater submitted its *2007 Soil and Groundwater Investigation Report* (2007 Report) to the ACEH on December 5, 2007. The scope of work presented in the 2007 Report included an inspection of the on-site sanitary sewer lateral, driving and sampling of 15 off-site soil borings, driving of 2 cone-penetrometer test (CPT) borings, installation of additional on-site "deep-zone" groundwater monitoring wells MW-1D and MW-7D, installation and sampling of 6 shallow soil vapor wells, surveying of 8 well and 15 boring locations using a GPS, and collection of soil samples for a persulfate bench test.

The 2007 Report included a revised Site Conceptual Model (SCM). In the new SCM, the depth of the contact between the clayey gravel layer and the underlying soil has been revised. The site lithology can be conceptually divided into an upper, shallow zone and a lower, deep zone. The shallow-zone is generally more clay-rich and the deep zone is generally coarser grained. The separation between the two zones varies from 25 to 30 feet bgs. The groundwater within the shallow-zone is highly contaminated, whereas the groundwater within the deep zone is relatively less contaminated. Grab groundwater samples collected from off-site borings indicate that the groundwater contamination within both zones extends offsite and that the extent of contamination has not been defined in either zone.

Clearwater generated the groundwater elevation contour diagrams for the 2007 Report using the same depth-to-water data used for this Fourth Quarter 2007 Groundwater Monitoring Event. With this data set the groundwater elevation contour diagram for the shallow zone was consistent with previously reported quarterly groundwater elevation contour diagrams. The groundwater elevation contour diagrams for the deep zone were generated on November 13, 2007, using data from wells MW-1D, MW-4D, MW-5D, and MW-7D. Because the deep zone groundwater elevation contour pattern did not conform with the shallow zone groundwater elevation pattern, the depths to groundwater of deep zone wells were measured a second time November 27, 2007. Both sets of measurements indicated a partial groundwater depression, with a groundwater flow direction toward the north.

Clearwater submitted its *2008 Soil and Groundwater Investigation Work Plan* (2008 Work Plan) to the ACEH on July 2, 2008. The 2008 Work Plan proposed conducting an offsite passive soil vapor survey, installing additional groundwater monitoring wells, determining whether the 42nd Avenue freeway on-ramp is a groundwater discharge area, and performing a high-vacuum dual phase extraction pilot test. The ACEH approved the 2008 Work Plan in a letter dated September

4, 2008. However, the ACEH did not concur with the proposed passive soil vapor sampling survey.

In January 2009, four groundwater monitoring wells (MW-9, MW-9D, MW-10, and MW-10D) were installed on nearby offsite properties and one additional well (MW-11D) was installed onsite. The well installations were described in the January 21, 2009, *Groundwater Monitoring Well Installation Report.* The new wells and wells MW-3 and IS-4 were surveyed relative to the North American Vertical Datum of 1988 (NAVD 88). After the survey the top of casing elevations of all the site wells were adjusted to NAVD 88.

The finalized design and location of the on-site High Vacuum Dual Phase Extraction test trench and observation wells were submitted to the ACEH for review in January 2009.

ATTACHMENT B

ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY
DAVID J. KEARS, Agency Director

ENVIRONMENTAL HEALTH SERVICES
ENVIRONMENTAL PROTECTION
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577
(510) 567-6700
FAX (510) 337-9335

September 4, 2008

Ms. Farah Naz c/o
Mr. Muhammad Jamil
40092 Davis Street
Fremont, CA 94538

Subject: Fuel Leak Case No. RO0000096 and Geotracker Global ID T0600143649, Eagle Gas, 4301 San Leandro Street, Oakland, CA 94601

Dear Ms. Naz:

Alameda County Environmental Health (ACEH) staff has reviewed the fuel leak case file for the above-referenced site including the recently submitted document entitled, "*2008 Soil and Groundwater Investigation Work Plan*," dated July 2, 2008 and received by ACEH on July 17, 2008. The Work Plan proposes:

- conducting an off-site passive soil vapor survey;
- installing off-site wells and one on-site well;
- determining whether the 42nd Avenue freeway on-ramp is a groundwater discharge area;
- performing a high-vacuum dual phase extraction (DPE) pilot test.

The proposed scope of work is generally acceptable with the exception of the proposed off-site passive soil vapor survey. As discussed in technical comment 1, we do not concur with the implementation of the proposed passive soil vapor survey. Well installation, determining whether the 42nd Avenue freeway on-ramp is a groundwater discharge area, and the DPE pilot test may be implemented provided that the technical comments below are addressed and incorporated during field implementation of the proposed activities. We request that you address the following technical comments, perform the proposed work, and send us the reports described below.

TECHNICAL COMMENTS

1. **Proposed Passive Soil Vapor Sampling (Gore Sorber®) Survey.** The proposed passive soil vapor sampling (Gore Sorber®) survey is proposed largely within areas where soil and groundwater sampling was previously conducted. The purpose of many of the proposed lines of passive soil vapor samples appears to be corroboration of previous soil and groundwater sampling results. Since the soil and grab groundwater sample data provide much more direct evidence of contamination than the proposed passive soil vapor sampling survey, corroboration of the soil and grab groundwater sample data does not appear to add significant value to the investigation. Therefore, we do not concur with the proposed passive soil vapor sampling (Gore Sorber®) survey. If you choose to implement the passive soil vapor survey, we recommend that the State Water Resources Control Board UST Cleanup Fund not reimburse you for the costs.

2. **Proposed Monitoring Wells.** The proposed locations for monitoring wells MW-3D, MW-9, MW-9D, MW-10, and MW-10D are acceptable. Pilot soil borings that are continuously sampled for logging purposes or CPT borings are to be used to select filter pack and screen intervals for the wells. In order to prevent the potential for cross-contamination, filter packs and screen intervals must not extend between shallow first-encountered groundwater and lower permeable intervals. In no case shall the filter pack or screen interval for the shallow wells extend below a depth of 25 feet bgs. The deeper wells shall be installed within the lower permeable unit typically encountered at depths of approximately 35 to 45 feet bgs and must not have screen intervals longer than 10 feet. Please present documentation of the well installation in the DPE Pilot Test Report below. Groundwater sampling results are to be incorporated into the quarterly groundwater monitoring reports requested below.

3. **Groundwater Monitoring Program.** The proposed elimination of quarterly groundwater sampling of wells MW-6, IS-1, IS-2, IS-3, IS-6, and EW-1 is approved. Please submit future groundwater monitoring results in the reports requested below.

4. **Dual-Phase Extraction Pilot Test.** The proposal to install one extraction well and three observation wells to conduct a DPE pilot test is generally acceptable and may be implemented. We concur with the proposal to install one extraction well and three observation wells for the proposed dual-phase extraction (DPE) pilot test. Targeting the clayey gravel layer for the DPE pilot testing is acceptable. However, our previous January 10, 2008 requested further discussion of the rationale for installation of the screen interval for the extraction well as shallow as 3.5 feet bgs. Review of historical soil analytical data indicates that most of the mass of contamination appears to be in the zone of seasonal water table fluctuations between depths of approximately 8 to 14 feet bgs. We request that the top of the screen interval for the DPE extraction and observation wells be no shallower than 5 feet bgs. If you disagree with this request and wish to proceed with installation of extraction and observation wells with well screens as shallow as 3.5 feet bgs, you must provide further justification including a discussion of the shallow contamination that is being targeted, how the potential for short circuiting with the surface will be addressed, and any additional steps that will be taken to assure the integrity of the surface seal. Please present results from the DPE pilot test in the Well Installation and DPE Pilot Test Report requested below.

5. **Sewer System Leaks.** As discussed in Appendix H of the 2007 Soil and Groundwater Investigation Report, two leaks were found in the sewer line from the station building. Please report on progress in repairing the leaks in the reports requested below.

6. **Potential Discharge to 42nd Avenue.** Please present the drawings of the 42nd Avenue On-ramp and your plans for evaluating whether contaminated groundwater from the site is discharging to this area in the Well Installation and DPE Pilot Test Report requested below.

TECHNICAL REPORT REQUEST

Please submit technical reports to Alameda County Environmental Health (Attention: Jerry Wickham), according to the following schedule:

- **November 5, 2008** – Third Quarter 2008 Groundwater Monitoring Report

- **January 11, 2009** – Well Installation and DPE Pilot Test Report
- **February 5, 2009** – Fourth Quarter 2008 Groundwater Monitoring Report
- **May 5, 2009** – First Quarter 2009 Groundwater Monitoring Report
- **August 5, 2009** – Second Quarter 2009 Groundwater Monitoring Report

These reports are being requested pursuant to California Health and Safety Code Section 25296.10. 23 CCR Sections 2652 through 2654, and 2721 through 2728 outline the responsibilities of a responsible party in response to an unauthorized release from a petroleum UST system, and require your compliance with this request.

ELECTRONIC SUBMITTAL OF REPORTS

ACEH's Environmental Cleanup Oversight Programs (LOP and SLIC) require submission of reports in electronic form. The electronic copy replaces paper copies and is expected to be used for all public information requests, regulatory review, and compliance/enforcement activities. Instructions for submission of electronic documents to the Alameda County Environmental Cleanup Oversight Program FTP site are provided on the attached "Electronic Report Upload Instructions." Submission of reports to the Alameda County FTP site is an addition to existing requirements for electronic submittal of information to the State Water Resources Control Board (SWRCB) Geotracker website. In September 2004, the SWRCB adopted regulations that require electronic submittal of information for all groundwater cleanup programs. For several years, responsible parties for cleanup of leaks from underground storage tanks (USTs) have been required to submit groundwater analytical data, surveyed locations of monitoring wells, and other data to the Geotracker database over the Internet. Beginning July 1, 2005, these same reporting requirements were added to Spills, Leaks, Investigations, and Cleanup (SLIC) sites. Beginning July 1, 2005, electronic submittal of a complete copy of all reports for all sites is required in Geotracker (in PDF format). Please visit the SWRCB website for more information on these requirements (http://www.swrcb.ca.gov/ust/cleanup/electronic_reporting).

PERJURY STATEMENT

All work plans, technical reports, or technical documents submitted to ACEH must be accompanied by a cover letter from the responsible party that states, at a minimum, the following: "I declare, under penalty of perjury, that the information and/or recommendations contained in the attached document or report is true and correct to the best of my knowledge." This letter must be signed by an officer or legally authorized representative of your company. Please include a cover letter satisfying these requirements with all future reports and technical documents submitted for this fuel leak case.

PROFESSIONAL CERTIFICATION & CONCLUSIONS/RECOMMENDATIONS

The California Business and Professions Code (Sections 6735, 6835, and 7835.1) requires that work plans and technical or implementation reports containing geologic or engineering evaluations and/or judgments be performed under the direction of an appropriately registered or

certified professional. For your submittal to be considered a valid technical report, you are to present site specific data, data interpretations, and recommendations prepared by an appropriately licensed professional and include the professional registration stamp, signature, and statement of professional certification. Please ensure all that all technical reports submitted for this fuel leak case meet this requirement.

UNDERGROUND STORAGE TANK CLEANUP FUND

Please note that delays in investigation, later reports, or enforcement actions may result in your becoming ineligible to receive grant money from the state's Underground Storage Tank Cleanup Fund (Senate Bill 2004) to reimburse you for the cost of cleanup.

AGENCY OVERSIGHT

If it appears as though significant delays are occurring or reports are not submitted as requested, we will consider referring your case to the Regional Board or other appropriate agency, including the County District Attorney, for possible enforcement actions. California Health and Safety Code, Section 25299.76 authorizes enforcement including administrative action or monetary penalties of up to $10,000 per day for each day of violation.

If you have any questions, please call me at (510) 567-6791 or send me an electronic mail message at jerry.wickham@acgov.org.

Sincerely,

Jerry Wickham

Jerry Wickham, California PG 3766, CEG 1177, and CHG 297
Senior Hazardous Materials Specialist

Enclosure: ACEH Electronic Report Upload (ftp) Instructions

cc: Leroy Griffin, Oakland Fire Department, 250 Frank H. Ogawa Plaza, Ste. 3341, Oakland, CA 94612-2032

Robert Nelson, Clearwater Group, 229 Tewksbury Avenue, Point Richmond, CA 94801

Donna Drogos, ACEH
Jerry Wickham, ACEH
File

Alameda County Environmental Cleanup Oversight Programs (LOP and SLIC)	ISSUE DATE: July 5, 2005
	REVISION DATE: December 16, 2005
	PREVIOUS REVISIONS: October 31, 2005
SECTION: Miscellaneous Administrative Topics & Procedures	SUBJECT: Electronic Report Upload (ftp) Instructions

Effective **January 31, 2006**, the Alameda County Environmental Cleanup Oversight Programs (LOP and SLIC) require submission of all reports in electronic form to the county's ftp site. Paper copies of reports will no longer be accepted. The electronic copy replaces the paper copy and will be used for all public information requests, regulatory review, and compliance/enforcement activities.

REQUIREMENTS

- Entire report including cover letter must be submitted to the ftp site as a **single portable document format (PDF) with no password protection.** (Please do not submit reports as attachments to electronic mail.)
- It is **preferable** that reports be converted to PDF format from their original format, (e.g., Microsoft Word) rather than scanned.
- Signature pages and perjury statements **must** be included and have either original or electronic signature.
- **Do not password protect the document.** Once indexed and inserted into the correct electronic case file, the document will be secured in compliance with the County's current security standards and a password. **Documents with password protection will not be accepted.**
- Each page in the PDF document should be rotated in the direction that will make it easiest to read on a computer monitor.
- Reports must be named and saved using the following naming convention:
  RO#_Report Name_Year-Month-Date (e.g., RO#5555_WorkPlan_2005-06-14)

Additional Recommendations

- A separate copy of the tables in the document should be submitted by e-mail to your Caseworker in Excel format. These are for use by assigned Caseworker only.

Submission Instructions

1) Obtain User Name and Password:
   a) Contact the Alameda County Environmental Health Department to obtain a User Name and Password to upload files to the ftp site.
      i) Send an e-mail to dehloptoxic@acgov.org
      or
      ii) Send a fax on company letterhead to (510) 337-9335, to the attention of Alicia Lam-Finneke.
   b) In the subject line of your request, be sure to include **"ftp PASSWORD REQUEST"** and in the body of your request, include the **Contact Information, Site Addresses,** and the **Case Numbers (RO# available in Geotracker) you will be posting for.**

2) Upload Files to the ftp Site
   a) Using Internet Explorer (IE4+), go to ftp://alcoftp1.acgov.org
      (i) Note: Netscape and Firefox browsers will not open the FTP site.
   b) Click on File, then on Login As.
   c) Enter your User Name and Password. (Note: Both are Case Sensitive.)
   d) Open "My Computer" on your computer and navigate to the file(s) you wish to upload to the ftp site.
   e) With both "My Computer" and the ftp site open in separate windows, drag and drop the file(s) from "My Computer" to the ftp window.

3) Send E-mail Notifications to the Environmental Cleanup Oversight Programs
   a) Send email to dehloptoxic@acgov.org notify us that you have placed a report on our ftp site.
   b) Copy your Caseworker on the e-mail. Your Caseworker's e-mail address is the entire first name then a period and entire last name at acgov.org. (e.g., firstname.lastname@acgov.org)
   c) The subject line of the e-mail must start with the RO# followed by **Report Upload.** (e.g., Subject: RO1234 Report Upload)

ATTACHMENT C

CLEARWATER GROUP

Groundwater Monitoring and Sampling Field Procedures

Groundwater Monitoring

Prior to beginning purging tasks or sampling, 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 are opened to allow atmospheric pressure to equalize the water levels if local groundwater is under confined or semi-confined conditions. The static water level is measured to the nearest 0.01± foot with an electronic water sounder. Depth to bottom is measured during each monitoring event, at the request of the project manager, and during Clearwater's first visit to a site. The water sounder and tape will be decontaminated between each well. Floating separate-phase hydrocarbons (SPH) where suspected or observed will be 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 of well integrity, water level, and floating product thicknesses are noted on the Well Gauging/Purging Calculations Data Sheet.

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 discrete 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 purging volume intervals of one casing volume. Purging continues until three well casing volumes have been removed or until the well completely dewaters. Wells that dewater or demonstrate a slow recharge rate 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. Investigation-derived wastes (purge and rinseate water) are handled in one of three ways: 1) Purge and rinseate 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. 2) Purge and rinseate water is collected into a 250-gallon portable holding tank and transported to the Clearwater equipment yard in Point Richmond, CA. At the yard, the investigation-derived waste is then transferred to 55-gallon drums pending disposal at an appropriate disposal facility, or 3) Purge and rinseate water is collected in a 250-gallon portable holding tank and transported to the appropriate disposal facility. The applicable method will be indicated in the field log sheets and the corresponding technical report.

Groundwater Sample Collection

Groundwater samples are collected immediately after purging, with the following exception: If the purging rate exceeds well recharge rate, samples are collected 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 for sampling has accumulated. The well is sampled within 24 hours of purging or is re-purged. 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 (glass or plastic ware depending on the analysis), 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 or cross 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 and purged and groundwater samples are collected in the expected order of increasing degree of contamination based on historical analytical results.
- All purging equipment is 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 liquid being sampled down the inside wall 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 liquid 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 that 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 standard groundwater samples are collected; they are analyzed for the same compounds in order to verify the reproducibility of laboratory data. They are usually collected from only 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 verify field handling and transportation procedures. Duplicates verify laboratory procedures. The configuration of QC samples is determined by Clearwater depending on site conditions and regulatory requirements.

ATTACHMENT D

updated on 10/18/2006 by ht

CLEARWATER GROUP
229 Tewksbury Avenue,
Point Richmond, CA 94801
Tel: (510) 307-9943 Fax: (510) 232-2823

WELL GAUGING/PURGING CALCULATIONS DATA SHEET

Date: 12-8-08 | Job No.: 2P046m | Location: 4301 San Leandro St. Oakland CA

Tech(s): Eric Austin, Gavin Fisco

Drums on Site @ TOA/TOD — Soil: 0 Water: 0

Total number of DRUMS used for this event — Soil: 0 Water:

Well No.	Diameter (in)	DTB (ft)	DTW (ft)	ST (ft)	CV (gal)	PV (gal)	SPL (ft)	Notes
MW-10	2 inch	43.31	15.93	27.38	4.38	13.14		
MW-4D	2 inch	42.29	17.56	24.73	3.96	11.88		
MW-5D	2 inch	42.48	16.33	25.95	4.15	12.45		
MW-7D	2 inch	43.24	17.41	25.83	4.13	12.39		
MW-11D	2 inch	44.92	16.75	28.17	4.50	13.53		
MW-1	2 inch	24.51	6.49	18.02	2.88	8.64		
MW-3	2 inch	23.02	12.91	10.11	1.62	4.86		
MW-7	2 inch	25.90	14.13	11.77	1.88	5.64		

Explanation:
DTB = Depth to Bottom
DTW = Depth to Water
ST = Saturated Thickness (DTB-DTW) must be > 1 foot
CV = Casing Volume (ST x cf)
PV = Purge Volume (standard 3 x CV, well development 10 x CV)
SPL = Thickness of Separate Phase Liquid

Conversion Factors (cf)
2-inch diameter well cf = 0.16 gal/ft
4-inch diameter well cf = 0.65 gal/ft
6-inch diameter well cf = 1.44 gal.ft

Well No.	Diameter (in)	DTB (ft)	DTW (ft)	ST (ft)	CV (gal)	PV (gal)	SPL (ft)	Notes
Mw-2	2 inch	24.60	15.90	8.70	1.39	4.17		
EW-2	4 inch	25.10	9.15	15.95	10.37	31.11		
IS-4	2 inch	24.44	7.94	17.00	2.72	8.16		
Mw-8	2 inch	24.51	8.62	15.89	2.54	7.62		
Mw-4	2 inch	24.48	8.90	15.58	2.49	7.47		
Mw-5	2 inch	25.11	7.41	17.70	2.83	8.49		
IS-5	2 inch	15.13	8.38	6.75	1.08	3.25		
Mw-9	2 inch	14.94	6.96	7.98	1.28	3.84		
Mw-9D	2 inch	39.77	14.98	24.79	3.97	11.91		
Mw-10	2 inch	14.98	8.20	6.78	1.08	3.24		
Mw-10D	2 inch	52.10	14.81	37.29	5.97	17.91		

184.70
10 Gallon Decon water
200 Gallon

Explanation:
DTB = Depth to Bottom
DTW = Depth to Water
ST = Saturated Thickness (DTB-DTW) must be > 1 foot
CV = Casing Volume (ST x cf)
PV = Purge Volume (standard 3 x CV, well development 10 x CV)
SPL = Thickness of Separate Phase Liquid

Conversion Factors (cf)
2-inch diameter well cf = 0.16 gal/ft
4-inch diameter well cf = 0.65 gal/ft
6-inch diameter well cf = 1.44 gal.ft

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Point Richmond, CA 94801
Tel: (510) 307-9943 Fax: (510) 232-2823

WELL GAUGING/PURGING CALCULATIONS DATA SHEET

Date: 12/8/08 | Job No.: 2P046m | Location: 4301 San Leandro Oakland, CA

Tech(s): Eric V. Austin, Gavin Finco

Drums on Site @ TOA/TOD — Soil: 0 Water: 0

Total number of DRUMS used for this event — Soil: 0 Water: 0

Well No.	Diameter (in)	DTB (ft)	DTW (ft)	ST (ft)	CV (gal)	PV (gal)	SPL (ft)	Notes
MW-6	2 inch	25.25	11.08					DTW Only
IS-1	2 inch	24.90	7.81					
IS-2	2 inch	25.20	8.02					
IS-3	2 inch	24.16	8.64					
IS-6	2 inch	25.35	7.75					
EW-1	4 inch	25.11	9.09					

Explanation:
DTB = Depth to Bottom
DTW = Depth to Water
ST = Saturated Thickness (DTB-DTW) must be > 1 foot
CV = Casing Volume (ST x cf)
PV = Purge Volume (standard 3 x CV, well development 10 x CV)
SPL = Thickness of Separate Phase Liquid

Conversion Factors (cf)
2-inch diameter well cf = 0.16 gal/ft
4-inch diameter well cf = 0.65 gal/ft
6-inch diameter well cf = 1.44 gal.ft

PURGE DATA SHEET

Job No.: ZP046m Location: 4301 San Leandro St. Oakland, CA Sheet 1 of 10

Date: 12/6/08 Tech: Eric V. Martin

WELL #	TIME	VOL. (gal.)	ORP	CND (µ/cm)	TMP (°F)	DO (mg/L)	pH	Fe^{2+}	Fe_T	
MW-10	10:00	4.00	183.1	1029	65.67	5.39	6.99			
Calc. purge	10:15	8.00	166.8	1004	66.34	5.78	7.29			
volume 13.14	10:30	13.00	193.7	964	65.14	6.35	7.04			

Sample for: 5 oxys DIPE ETBE Tame TBA

TPHg (TPHd) 8260

BTEX (MTBE) Metals

Purging Method: PVC Bailer / Pump (Disp. Bailer)

COMMENTS: color, turbidity, recharge, sheen, odor Brown, Moderate, OK, No sheen, No Odor

POST DEPTH TO WATER: NA SAMPLE TIME: 10:45

Job No.: Location: Date: Tech:

WELL #	TIME	VOL. (gal.)	ORP	CND (µ/cm)	TMP (°F)	DO (mg/L)	pH	Fe^{2+}	Fe_T	
MW-40	10:40	4.00	204.6	1004	65.12	6.16	6.99			
Calc. purge	10:51	8.00	198.8	1007	64.17	6.22	6.93			
volume 11.88	10 59	12.00	202.1	981	62.81	6.90	7.20			

Sample for: 5 oxys

TPHg (TPHd) 8260

BTEX (MTBE) Metals

Purging Method: PVC Bailer / Pump (Disp. Bailer)

COMMENTS: color, turbidity, recharge, sheen, odor Tan, Low, OK, No sheen, No Odor

POST DEPTH TO WATER: NA SAMPLE TIME: 11:15

PURGE DATA SHEET

Job No.: 2P0764m Location: Oakland, CA Date: 12-8-05 Sheet 2 of 10 Tech: EA/GF

WELL #	TIME	VOL. (gal.)	ORP	CND (µ/cm)	TMP (°F)	DO (mg/L)	pH	Fe^{2+}	Fe_T	
MW-5D	11:20	4.00	201.5	954	64.34	5.31	6.94			Sample for: 5oxy
Calc. purge	11:30	8.00	196.6	963	64.90	3.30	6.97			TPHg TPHd 8260
volume 12.45	11:40	12.00	190.6	980	65.30	6.51	6.98			BTEX MTBE Metals

Purging Method: PVC Bailer / Pump / ~~Disp. Bailer~~

COMMENTS: color, turbidity, recharge, sheen, odor Tan, low, OK, No sheen, No Odor

POST DEPTH TO WATER: NA SAMPLE TIME: 11:45

WELL #	TIME	VOL. (gal.)	ORP	CND (µ/cm)	TMP (°F)	DO (mg/L)	pH	Fe^{2+}	Fe_T	
MW-7D	11:55	4.00	196.1	1028	65.06	3.24	6.97			Sample for: 5oxy
Calc. purge	12:01	8.00	184.5	1145	64.91	3.78	7.19			TPHg TPHd 8260
olume 12.34	12:11	12.00	170.4	1152	63.69	2.67	7.19			BTEX MTBE Metals

Purging Method: PVC Bailer / Pump / ~~Disp. Bailer~~

COMMENTS: color, turbidity, recharge, sheen, odor Brown, Moderate, OK, No sheen, No Odor

POST DEPTH TO WATER: NA. SAMPLE TIME: 12:15

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PURGE DATA SHEET

Job No.: ZP046M Location: Oakland, CA Date: 12/8/06 Sheet 3 of 10

Tech: EM/GF

WELL #	TIME	VOL. (gal.)	ORP	CND (µ/cm)	TMP (°F)	DO (mg/L)	pH	Fe^{2+}	Fe_T	
MW-10	12:25	4.00	179.1	996	67.21	4.55	7.09			Sample for: 50Kys
Calc. purge	12:35	9.00	172.6	1006	66.52	4.93	7.18			TPHg TPHd 8260
volume 13.53	12:45	14.00	181.5	981	64.49	6.85	7.08			BTEX MTBE Metals

Purging Method: PVC Bailer / Pump / ~~Disp. Bailer~~

COMMENTS: color, turbidity, recharge, sheen, odor Brown, High, OK, No Sheen, No Odor

POST DEPTH TO WATER: NA SAMPLE TIME: 13:00

Job No.: Location: Date: Tech:

WELL #	TIME	VOL. (gal.)	ORP	CND (µ/cm)	TMP (°F)	DO (mg/L)	pH	Fe^{2+}	Fe_T	
MW-1	12:57	3.00	-10.3	973	64.81	1.33	6.93			Sample for: 50Kys
Calc. purge	13:04	6.00	-31.8	972	65.32	1.37	6.95			TPHg TPHd 8260
volume 8.64	13:09	9.00	-42.1	972	65.44	1.26	6.97			~~BTEX~~ ~~MTBE~~ Metals

Purging Method: PVC Bailer / Pump / ~~Disp. Bailer~~

COMMENTS: color, turbidity, recharge, sheen, odor Gray, High, Good, Sheen & Has Odor!

POST DEPTH TO WATER: NA SAMPLE TIME: 13:15

PURGE DATA SHEET

Job No.: 2P046m Location: Oakland, CA Date: 12/8/08 Sheet 4 of 10

Tech: EM/GF

WELL #	TIME	VOL. (gal.)	ORP	CND (µ/cm)	TMP (°F)	DO (mg/L)	pH	Fe^{2+}	Fe_T	
MW-3	13:21	1.00	70.5	1031	68.04	2.70	6.77			Sample for: SOXYS
Calc. purge	13:27	3.00	52.5	1043	68.77	2.78	6.77			~~TPHg~~ ~~TPHd~~ 8260
volume 4.86	13:40	5.00	45.0	1034	64.70	3.37	7.40			~~BTEX~~ ~~MTBE~~ Metals

Purging Method: PVC Bailer / Pump / ~~Disp. Bailer~~

COMMENTS: color, turbidity, recharge, sheen, odor Gray, Moderate, poor, No sheen & No Odor

POST DEPTH TO WATER: NA SAMPLE TIME: 13:45

WELL #	TIME	VOL. (gal.)	ORP	CND (µ/cm)	TMP (°F)	DO (mg/L)	pH	Fe^{2+}	Fe_T	
MW-7	13:47	2.00	-40.6	1886	66.25	2.59	6.97			Sample for: SOXYS
Calc. purge	13:53	4.00	-42.5	1881	66.67	2.61	6.97			TPHg TPHd 8260
olume 5.64	14:00	6.00	-43.4	1883	66.71	2.59	6.97			BTEX MTBE Metals

Purging Method: PVC Bailer / Pump / ~~Disp. Bailer~~

COMMENTS: color, turbidity, recharge, sheen, odor Gray, Low, ON, No sheen, No Odor

POST DEPTH TO WATER: ND SAMPLE TIME: 14:15

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PURGE DATA SHEET

Job No.: 20076M Location: Oakland, CA "NAZ" Date: 12/9/08 Sheet 5 of 10

Tech: EW/GF

WELL #	TIME	VOL. (gal.)	ORP	CND (µ/cm)	TMP (°F)	DO (mg/L)	pH	Fe^{2+}	Fe_T	
MW-2	8:03	1.00	76.0	1193	63.43	3.07	6.75			
Calc. purge	8:07	2.00	-29.0	1202	62.69	2.85	6.75			Sample for: SO4-S
volume 4.17	8:11	4.00	-33.2	1199	62.85	2.85	6.75			TPHg (TPHd) 8260
										BTEX (MTBE) Metals

Purging Method: PVC Bailer / Pump / ~~Disp. Bailer~~

COMMENTS: color, turbidity, recharge, sheen, odor Lt. Gray, low, Poor, No sheen, Strong Odor

POST DEPTH TO WATER: NA SAMPLE TIME: 8:15

Job No.: Location: Date: Tech:

WELL #	TIME	VOL. (gal.)	ORP	CND (µ/cm)	TMP (°F)	DO (mg/L)	pH	Fe^{2+}	Fe_T	
EW-2	8:25	10.00	52.0	1406	63.99	3.23	6.73			
Calc. purge	8:32	20.00	-37.3	1361	63.41	3.71	6.72			Sample for: SO4-S
volume 31.11	8:45	31.00	-43.3	1384	60.55	2.74	6.90			TPHg (TPHd) 8260
										BTEX (MTBE) Metals

Purging Method: PVC Bailer / Pump / ~~Disp. Bailer~~

COMMENTS: color, turbidity, recharge, sheen, odor Gray, Moderate, Poor, No sheen & Has Slight Odor

POST DEPTH TO WATER: NA. SAMPLE TIME: 9:00

PURGE DATA SHEET

Job No.: 280460m Location: Oakland, CA. Date: 12/9/08 Sheet 6 of 10 Tech: EVA/JF

WELL #	TIME	VOL. (gal.)	ORP	CND (µ/cm)	TMP (°F)	DO (mg/L)	pH	Fe^{2+}	Fe_T	
IS-4	9:28	2.00	-36.2	1392	68.23	2.70	6.68			Sample for: 5 oxys
Calc. purge	9:37	5.00	-43.7	1439	67.85	2.53	6.74			TPHg TPHd 8260
Volume 8.16	9:45	8.00	-60.3	1415	69.09	2.77	6.79			BTEX MTBE Metals

Purging Method: PVC Bailer / Pump / Disp. Bailer

COMMENTS: color, turbidity, recharge, sheen, odor Gray, Low, poor Has Sheen, Has Odor

POST DEPTH TO WATER: NA SAMPLE TIME: 10:00

WELL #	TIME	VOL. (gal.)	ORP	CND (µ/cm)	TMP (°F)	DO (mg/L)	pH	Fe^{2+}	Fe_T	
MW-8	9:55	2.00	-55.3	1736	64.22	3.01	6.64			Sample for: 5 oxys
Calc. purge	10:01	5.00	-64.0	1826	64.64	2.23	6.72			TPHg TPHd 8260
Volume 7.62	10:05	8.00	-66.8	1838	65.26	2.23	6.72			BTEX MTBE Metals

Purging Method: PVC Bailer / Pump / Disp. Bailer

COMMENTS: color, turbidity, recharge, sheen, odor Gray, Low, Ok, Has sheen, Has Odor - Sig NAPL Product

POST DEPTH TO WATER: NP SAMPLE TIME: 10:15

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PURGE DATA SHEET

Job No.: ZP046m Location: Oakland, CA. Sheet 7 of 10

Date: 12-9-05 Tech: EW/GF

WELL #	TIME	VOL. (gal.)	ORP	CND (µ/cm)	TMP (°F)	DO (mg/L)	pH	Fe^{2+}	Fe_T	
MW-4	10:07	2.00	-65.9	1696	65.18	3.90	6.70			Sample for: 5oxys
Calc. purge	10:11	4.00	-65.5	1696	65.21	3.18	6.69			TPHg TPHd 8260
volume 7.47	10:15	7.00	-64.9	1727	66.36	2.21	6.72			BTEX MTBE Metals

Purging Method: PVC Bailer / Pump / Disp. Bailer

COMMENTS: color, turbidity, recharge, sheen, odor Gray, Moderate, OK, Has Sheen & Has Odor Sign of Product

POST DEPTH TO WATER: NA SAMPLE TIME: 10:30

Job No.: Location: Date: Tech:

WELL #	TIME	VOL. (gal.)	ORP	CND (µ/cm)	TMP (°F)	DO (mg/L)	pH	Fe^{2+}	Fe_T	
MW-5	10:32	2.00	-71.0	1464	68.20	2.46	6.76			Sample for:
Calc. purge	10:36	5.00	-63.2	1459	67.88	2.93	6.73			TPHg TPHd 8260
volume 8.49	10:41	8.00	-70.2	1508	68.95	2.49	6.77			BTEX MTBE Metals

Purging Method: PVC Bailer / Pump / Disp. Bailer

COMMENTS: color, turbidity, recharge, sheen, odor Gray, Low, OK, Has Sheen & Has Odor

POST DEPTH TO WATER: N/A SAMPLE TIME: 10:45

PURGE DATA SHEET

Job No.: 2D46m Location: Oakland, CA Date: 12/4/08 Sheet 8 of 10
Tech: EVA/GF

WELL #	TIME	VOL. (gal.)	ORP	CND (µ/cm)	TMP (°F)	DO (mg/L)	pH	Fe^{2+}	Fe_T	
IS-5	10:46	1.00	-47.3	1465	66.59	5.00	6.62			Sample for: 5oxys
Calc. purge	10:48	2.00	-48.4	1465	66.65	3.36	6.60			TPHg TPHd 8260
volume 3.25	10:55	3.00	-55.1	1433	66.62	1.40	6.65			BTEX MTBE Metals

Purging Method: PVC Bailer / Pump / Disp. Bailer

COMMENTS: color, turbidity, recharge, sheen, odor Has Product
Grey, Moderate, OK - Has Sheen, Has Odor

POST DEPTH TO WATER: NA SAMPLE TIME: 11:00

WELL #	TIME	VOL. (gal.)	ORP	CND (µ/cm)	TMP (°F)	DO (mg/L)	pH	Fe^{2+}	Fe_T	
MW-9	11:25	1.00	-169.4	1253	68.89	2.81	7.05			Sample for: 5oxys
Calc. purge	11:30	2.00	-174.8	1336	69.81	4.01	7.16			TPHg TPHd 8260
olume 3.84	11:36	4.00	-188.4	1296	70.78	2.91	7.05			BTEX MTBE Metals

Purging Method: PVC Bailer / Pump / Disp. Bailer

COMMENTS: color, turbidity, recharge, sheen, odor Brown, High, OK, No Sheen, No Odor

POST DEPTH TO WATER: NA SAMPLE TIME: 11:45

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PURGE DATA SHEET

Job No.: 28046m Location: Oakland, CA Sheet 9 of 10

Date: 12/9/08 Tech: EVA/GF

WELL #	TIME	VOL. (gal.)	ORP	CND (µ/cm)	TMP (°F)	DO (mg/L)	pH	Fe^{2+}	Fe_T	
MW-9d	11:47	4.00	45.8	1016	67.14	4.80	6.90			Sample for: 5 oxys
Calc. purge	11:55	8.00	-28.4	1031	66.23	3.58	7.10			TPHg TPHd 8260
volume 11.91	12:02	12.00	-44.0	1027	66.97	3.84	7.04			BTEX MTBE Metals

Purging Method: PVC Bailer / Pump / Disp. Bailer

COMMENTS: color, turbidity, recharge, sheen, odor Brown, High, OR, No sheen, No Odor

POST DEPTH TO WATER: N/A SAMPLE TIME: 12:15

Job No.: Location: Date: Tech:

WELL #	TIME	VOL. (gal.)	ORP	CND (µ/cm)	TMP (°F)	DO (mg/L)	pH	Fe^{2+}	Fe_T	
MW-10	12:16	1.00	-78.2	1827	65.55	3.10	6.91			Sample for: 5 oxys
Calc. purge	12:20	2.00	-72.2	1471	65.66	7.68	6.97			TPHg TPHd 8260
volume 3.24	12:25	3.00	-68.1	1847	65.60	4.57	6.97			BTEX MTBE Metals

Purging Method: PVC Bailer / Pump / Disp. Bailer

COMMENTS: color, turbidity, recharge, sheen, odor Brown, High, OR, slight sheen & No Odor

POST DEPTH TO WATER: N/A SAMPLE TIME: 12:30

PURGE DATA SHEET

Job No.: ZP0460m Location: Oakland, Ca. Date: 12/9/08 Sheet 10 of 10 Tech: FM/GF

WELL #	TIME	VOL. (gal.)	ORP	CND (µ/cm)	TMP (°F)	DO (mg/L)	pH	Fe^{2+}	Fe_T	
MW-10d.	12:32	5.00	-181.3	1243	65.76	3.37	7.18			Sample for: 5ox 7?
Calc. purge	12:40	11.00	-183.1	1254	65.88	4.27	7.28			TPHg (TPHd) 8260
volume 17.91	12:47	18.00	-178.8	1216	63.84	3.91	7.25			BTEX MTBE Metals

Purging Method: PVC Bailer / Pump / (Disp. Bailer)

COMMENTS: color, turbidity, recharge, sheen, odor Brown, moderate, Good, Slight sheen, No Odor

POST DEPTH TO WATER: NA SAMPLE TIME: 13:00

WELL #	TIME	VOL. (gal.)	ORP	CND (µ/cm)	TMP (°F)	DO (mg/L)	pH	Fe^{2+}	Fe_T	
Calc. purge										Sample for:
olume										TPHg TPHd 8260
										BTEX MTBE Metals

Purging Method: PVC Bailer / Pump / Disp. Bailer

COMMENTS: color, turbidity, recharge, sheen, odor

POST DEPTH TO WATER: SAMPLE TIME:

Clearwater Group, Inc. - 229 Tewksbury Avenue, Point Richmond, California 94801
Phone : (510) 307-9943 Fax : (510) 232-2823

ATTACHMENT E

KIFF Analytical LLC

Report Number : 66380
Date : 12/18/2008

Rob Nelson
Clearwater Group, Inc.
229 Tewksbury Avenue
Point Richmond, CA 94801

Subject : 19 Water Samples
Project Name : NAZ Eagle Gas Station
Project Number : ZP046M

Dear Mr. Nelson,

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,

Joel Kiff

KIFF Analytical LLC

Report Number : 66380
Date : 12/18/2008

Subject : 19 Water Samples
Project Name : NAZ Eagle Gas Station
Project Number : ZP046M

Case Narrative

The Method Reporting Limit for Methanol has been increased due to the presence of an interfering compound for samples MW-9 and MW-10.

Tert-Butanol results for sample MW-10 may be biased slightly high and are flagged with a 'J'. A fraction of MtBE (typically less than 1%) converts to Tert-Butanol during the analysis of water samples. We consider this conversion effect to be mathematically significant in samples that contain MtBE/Tert-Butanol in ratios of over 20:1.

Matrix Spike/Matrix Spike Duplicate results associated with samples MW-7D, MW-3, MW-2, IS-4, and IS-5 for the analytes Benzene and Methyl-t-butyl ether were affected by the analyte concentrations already present in the un-spiked sample.

KIFF Analytical LLC

Report Number : 66380
Date : 12/18/2008

Project Name : **NAZ Eagle Gas Station**
Project Number : **ZP046M**

Sample : **MW-1D** Matrix : Water Lab Number : 66380-01
Sample Date :12/08/2008

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	**< 0.50**	0.50	ug/L	EPA 8260B	12/12/2008
Toluene	**< 0.50**	0.50	ug/L	EPA 8260B	12/12/2008
Ethylbenzene	**< 0.50**	0.50	ug/L	EPA 8260B	12/12/2008
Total Xylenes	**< 0.50**	0.50	ug/L	EPA 8260B	12/12/2008
Methyl-t-butyl ether (MTBE)	**0.91**	0.50	ug/L	EPA 8260B	12/12/2008
Diisopropyl ether (DIPE)	**< 0.50**	0.50	ug/L	EPA 8260B	12/12/2008
Ethyl-t-butyl ether (ETBE)	**< 0.50**	0.50	ug/L	EPA 8260B	12/12/2008
Tert-amyl methyl ether (TAME)	**< 0.50**	0.50	ug/L	EPA 8260B	12/12/2008
Tert-Butanol	**< 5.0**	5.0	ug/L	EPA 8260B	12/12/2008
TPH as Gasoline	**< 50**	50	ug/L	EPA 8260B	12/12/2008
1,2-Dichloroethane-d4 (Surr)	102		% Recovery	EPA 8260B	12/12/2008
Toluene - d8 (Surr)	93.7		% Recovery	EPA 8260B	12/12/2008
TPH as Diesel	**< 50**	50	ug/L	M EPA 8015	12/15/2008
Octacosane (Diesel Surrogate)	102		% Recovery	M EPA 8015	12/15/2008

KIFF Analytical LLC

Report Number : 66380
Date : 12/18/2008

Project Name : **NAZ Eagle Gas Station**
Project Number : **ZP046M**

Sample : **MW-4D** Matrix : Water Lab Number : 66380-02
Sample Date :12/08/2008

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	**< 0.50**	0.50	ug/L	EPA 8260B	12/12/2008
Toluene	**< 0.50**	0.50	ug/L	EPA 8260B	12/12/2008
Ethylbenzene	**< 0.50**	0.50	ug/L	EPA 8260B	12/12/2008
Total Xylenes	**< 0.50**	0.50	ug/L	EPA 8260B	12/12/2008
Methyl-t-butyl ether (MTBE)	**150**	0.50	ug/L	EPA 8260B	12/12/2008
Diisopropyl ether (DIPE)	**< 0.50**	0.50	ug/L	EPA 8260B	12/12/2008
Ethyl-t-butyl ether (ETBE)	**< 0.50**	0.50	ug/L	EPA 8260B	12/12/2008
Tert-amyl methyl ether (TAME)	**0.98**	0.50	ug/L	EPA 8260B	12/12/2008
Tert-Butanol	**74**	5.0	ug/L	EPA 8260B	12/12/2008
TPH as Gasoline	**< 50**	50	ug/L	EPA 8260B	12/12/2008
1,2-Dichloroethane-d4 (Surr)	103		% Recovery	EPA 8260B	12/12/2008
Toluene - d8 (Surr)	92.7		% Recovery	EPA 8260B	12/12/2008
TPH as Diesel	**< 50**	50	ug/L	M EPA 8015	12/13/2008
Octacosane (Diesel Surrogate)	109		% Recovery	M EPA 8015	12/13/2008

KIFF Analytical LLC

Report Number : 66380
Date : 12/18/2008

Project Name : **NAZ Eagle Gas Station**
Project Number : **ZP046M**

Sample : **MW-5D** Matrix : Water Lab Number : 66380-03
Sample Date :12/08/2008

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	**< 0.50**	0.50	ug/L	EPA 8260B	12/12/2008
Toluene	**< 0.50**	0.50	ug/L	EPA 8260B	12/12/2008
Ethylbenzene	**< 0.50**	0.50	ug/L	EPA 8260B	12/12/2008
Total Xylenes	**< 0.50**	0.50	ug/L	EPA 8260B	12/12/2008
Methyl-t-butyl ether (MTBE)	**1.4**	0.50	ug/L	EPA 8260B	12/12/2008
Diisopropyl ether (DIPE)	**< 0.50**	0.50	ug/L	EPA 8260B	12/12/2008
Ethyl-t-butyl ether (ETBE)	**< 0.50**	0.50	ug/L	EPA 8260B	12/12/2008
Tert-amyl methyl ether (TAME)	**< 0.50**	0.50	ug/L	EPA 8260B	12/12/2008
Tert-Butanol	**< 5.0**	5.0	ug/L	EPA 8260B	12/12/2008
TPH as Gasoline	**< 50**	50	ug/L	EPA 8260B	12/12/2008
1,2-Dichloroethane-d4 (Surr)	102		% Recovery	EPA 8260B	12/12/2008
Toluene - d8 (Surr)	93.4		% Recovery	EPA 8260B	12/12/2008
TPH as Diesel	**< 50**	50	ug/L	M EPA 8015	12/13/2008
Octacosane (Diesel Surrogate)	110		% Recovery	M EPA 8015	12/13/2008

KIFF Analytical LLC

Report Number : 66380
Date : 12/18/2008

Project Name : **NAZ Eagle Gas Station**
Project Number : **ZP046M**

Sample : **MW-7D** Matrix : Water Lab Number : 66380-04
Sample Date :12/08/2008

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	**< 0.50**	0.50	ug/L	EPA 8260B	12/13/2008
Toluene	**< 0.50**	0.50	ug/L	EPA 8260B	12/13/2008
Ethylbenzene	**< 0.50**	0.50	ug/L	EPA 8260B	12/13/2008
Total Xylenes	**< 0.50**	0.50	ug/L	EPA 8260B	12/13/2008
Methyl-t-butyl ether (MTBE)	**320**	0.80	ug/L	EPA 8260B	12/13/2008
Diisopropyl ether (DIPE)	**< 0.50**	0.50	ug/L	EPA 8260B	12/13/2008
Ethyl-t-butyl ether (ETBE)	**< 0.50**	0.50	ug/L	EPA 8260B	12/13/2008
Tert-amyl methyl ether (TAME)	**3.2**	0.50	ug/L	EPA 8260B	12/13/2008
Tert-Butanol	**< 5.0**	5.0	ug/L	EPA 8260B	12/13/2008
TPH as Gasoline	**< 50**	50	ug/L	EPA 8260B	12/13/2008
1,2-Dichloroethane-d4 (Surr)	97.6		% Recovery	EPA 8260B	12/13/2008
Toluene - d8 (Surr)	97.0		% Recovery	EPA 8260B	12/13/2008
TPH as Diesel	**< 50**	50	ug/L	M EPA 8015	12/13/2008
Octacosane (Diesel Surrogate)	111		% Recovery	M EPA 8015	12/13/2008

KIFF Analytical LLC

Report Number : 66380
Date : 12/18/2008

Project Name : **NAZ Eagle Gas Station**
Project Number : **ZP046M**

Sample : **MW-11D** Matrix : Water Lab Number : 66380-05
Sample Date :12/08/2008

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	**< 0.50**	0.50	ug/L	EPA 8260B	12/15/2008
Toluene	**< 0.50**	0.50	ug/L	EPA 8260B	12/15/2008
Ethylbenzene	**< 0.50**	0.50	ug/L	EPA 8260B	12/15/2008
Total Xylenes	**< 0.50**	0.50	ug/L	EPA 8260B	12/15/2008
Methyl-t-butyl ether (MTBE)	**3.0**	0.50	ug/L	EPA 8260B	12/15/2008
Diisopropyl ether (DIPE)	**< 0.50**	0.50	ug/L	EPA 8260B	12/15/2008
Ethyl-t-butyl ether (ETBE)	**< 0.50**	0.50	ug/L	EPA 8260B	12/15/2008
Tert-amyl methyl ether (TAME)	**< 0.50**	0.50	ug/L	EPA 8260B	12/15/2008
Tert-Butanol	**5.0**	5.0	ug/L	EPA 8260B	12/15/2008
Methanol	**< 50**	50	ug/L	EPA 8260B	12/15/2008
Ethanol	**< 5.0**	5.0	ug/L	EPA 8260B	12/15/2008
TPH as Gasoline	**< 50**	50	ug/L	EPA 8260B	12/15/2008
1,2-Dichloroethane	**< 0.50**	0.50	ug/L	EPA 8260B	12/15/2008
1,2-Dibromoethane	**< 0.50**	0.50	ug/L	EPA 8260B	12/15/2008
1,2-Dichloroethane-d4 (Surr)	100		% Recovery	EPA 8260B	12/15/2008
Toluene - d8 (Surr)	107		% Recovery	EPA 8260B	12/15/2008
TPH as Diesel	**< 50**	50	ug/L	M EPA 8015	12/13/2008
Octacosane (Diesel Surrogate)	109		% Recovery	M EPA 8015	12/13/2008

KIFF Analytical LLC

Report Number : 66380
Date : 12/18/2008

Project Name : **NAZ Eagle Gas Station**
Project Number : **ZP046M**

Sample : **MW-1** Matrix : Water Lab Number : 66380-06
Sample Date :12/08/2008

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	**2.4**	1.5	ug/L	EPA 8260B	12/13/2008
Toluene	**< 1.5**	1.5	ug/L	EPA 8260B	12/13/2008
Ethylbenzene	**< 1.5**	1.5	ug/L	EPA 8260B	12/13/2008
Total Xylenes	**< 1.5**	1.5	ug/L	EPA 8260B	12/13/2008
Methyl-t-butyl ether (MTBE)	**540**	1.5	ug/L	EPA 8260B	12/13/2008
Diisopropyl ether (DIPE)	**< 1.5**	1.5	ug/L	EPA 8260B	12/13/2008
Ethyl-t-butyl ether (ETBE)	**< 1.5**	1.5	ug/L	EPA 8260B	12/13/2008
Tert-amyl methyl ether (TAME)	**4.2**	1.5	ug/L	EPA 8260B	12/13/2008
Tert-Butanol	**15000**	25	ug/L	EPA 8260B	12/13/2008
TPH as Gasoline	**360**	150	ug/L	EPA 8260B	12/13/2008
1,2-Dichloroethane-d4 (Surr)	104		% Recovery	EPA 8260B	12/13/2008
Toluene - d8 (Surr)	94.0		% Recovery	EPA 8260B	12/13/2008
TPH as Diesel	**4600**	50	ug/L	M EPA 8015	12/13/2008
Octacosane (Diesel Surrogate)	117		% Recovery	M EPA 8015	12/13/2008

KIFF Analytical LLC

Report Number : 66380
Date : 12/18/2008

Project Name : **NAZ Eagle Gas Station**
Project Number : **ZP046M**

Sample : **MW-3** Matrix : Water Lab Number : 66380-07
Sample Date :12/08/2008

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	**< 9.0**	9.0	ug/L	EPA 8260B	12/13/2008
Toluene	**< 9.0**	9.0	ug/L	EPA 8260B	12/13/2008
Ethylbenzene	**< 9.0**	9.0	ug/L	EPA 8260B	12/13/2008
Total Xylenes	**< 9.0**	9.0	ug/L	EPA 8260B	12/13/2008
Methyl-t-butyl ether (MTBE)	**640**	9.0	ug/L	EPA 8260B	12/13/2008
Diisopropyl ether (DIPE)	**16**	9.0	ug/L	EPA 8260B	12/13/2008
Ethyl-t-butyl ether (ETBE)	**< 9.0**	9.0	ug/L	EPA 8260B	12/13/2008
Tert-amyl methyl ether (TAME)	**< 9.0**	9.0	ug/L	EPA 8260B	12/13/2008
Tert-Butanol	**24000**	50	ug/L	EPA 8260B	12/13/2008
TPH as Gasoline	**< 900**	900	ug/L	EPA 8260B	12/13/2008
1,2-Dichloroethane-d4 (Surr)	104		% Recovery	EPA 8260B	12/13/2008
Toluene - d8 (Surr)	95.7		% Recovery	EPA 8260B	12/13/2008
TPH as Diesel	**94**	50	ug/L	M EPA 8015	12/13/2008
Octacosane (Diesel Surrogate)	108		% Recovery	M EPA 8015	12/13/2008

KIFF Analytical LLC

Report Number : 66380
Date : 12/18/2008

Project Name : **NAZ Eagle Gas Station**
Project Number : **ZP046M**

Sample : **MW-7** Matrix : Water Lab Number : 66380-08
Sample Date :12/08/2008

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	**< 150**	150	ug/L	EPA 8260B	12/12/2008
Toluene	**< 150**	150	ug/L	EPA 8260B	12/12/2008
Ethylbenzene	**< 150**	150	ug/L	EPA 8260B	12/12/2008
Total Xylenes	**< 150**	150	ug/L	EPA 8260B	12/12/2008
Methyl-t-butyl ether (MTBE)	**98000**	250	ug/L	EPA 8260B	12/12/2008
Diisopropyl ether (DIPE)	**< 150**	150	ug/L	EPA 8260B	12/12/2008
Ethyl-t-butyl ether (ETBE)	**< 150**	150	ug/L	EPA 8260B	12/12/2008
Tert-amyl methyl ether (TAME)	**740**	150	ug/L	EPA 8260B	12/12/2008
Tert-Butanol	**100000**	1500	ug/L	EPA 8260B	12/12/2008
TPH as Gasoline	**< 15000**	15000	ug/L	EPA 8260B	12/12/2008
1,2-Dichloroethane-d4 (Surr)	97.2		% Recovery	EPA 8260B	12/12/2008
Toluene - d8 (Surr)	99.3		% Recovery	EPA 8260B	12/12/2008
TPH as Diesel	**180**	50	ug/L	M EPA 8015	12/13/2008
Octacosane (Diesel Surrogate)	113		% Recovery	M EPA 8015	12/13/2008

KIFF Analytical LLC

Report Number : 66380
Date : 12/18/2008

Project Name : **NAZ Eagle Gas Station**
Project Number : **ZP046M**

Sample : **MW-2** Matrix : Water Lab Number : 66380-09
Sample Date :12/09/2008

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	**940**	25	ug/L	EPA 8260B	12/13/2008
Toluene	**5.7**	0.50	ug/L	EPA 8260B	12/12/2008
Ethylbenzene	**390**	0.50	ug/L	EPA 8260B	12/12/2008
Total Xylenes	**140**	0.50	ug/L	EPA 8260B	12/12/2008
Methyl-t-butyl ether (MTBE)	**12000**	25	ug/L	EPA 8260B	12/13/2008
Diisopropyl ether (DIPE)	**< 0.50**	0.50	ug/L	EPA 8260B	12/12/2008
Ethyl-t-butyl ether (ETBE)	**9.7**	0.50	ug/L	EPA 8260B	12/12/2008
Tert-amyl methyl ether (TAME)	**200**	0.50	ug/L	EPA 8260B	12/12/2008
Tert-Butanol	**130000**	500	ug/L	EPA 8260B	12/13/2008
TPH as Gasoline	**6400**	2500	ug/L	EPA 8260B	12/13/2008
1,2-Dichloroethane-d4 (Surr)	94.4		% Recovery	EPA 8260B	12/12/2008
Toluene - d8 (Surr)	94.6		% Recovery	EPA 8260B	12/12/2008
TPH as Diesel	**< 2000**	2000	ug/L	M EPA 8015	12/13/2008
(Note: MRL increased due to interference from Gasoline-range hydrocarbons.)					
Octacosane (Diesel Surrogate)	118		% Recovery	M EPA 8015	12/13/2008

KIFF Analytical LLC

Report Number : 66380
Date : 12/18/2008

Project Name : **NAZ Eagle Gas Station**
Project Number : **ZP046M**

Sample : **EW-2** Matrix : Water Lab Number : 66380-10
Sample Date :12/09/2008

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	**650**	50	ug/L	EPA 8260B	12/12/2008
Toluene	**< 50**	50	ug/L	EPA 8260B	12/12/2008
Ethylbenzene	**210**	50	ug/L	EPA 8260B	12/12/2008
Total Xylenes	**68**	50	ug/L	EPA 8260B	12/12/2008
Methyl-t-butyl ether (MTBE)	**9600**	50	ug/L	EPA 8260B	12/12/2008
Diisopropyl ether (DIPE)	**< 50**	50	ug/L	EPA 8260B	12/12/2008
Ethyl-t-butyl ether (ETBE)	**< 50**	50	ug/L	EPA 8260B	12/12/2008
Tert-amyl methyl ether (TAME)	**150**	50	ug/L	EPA 8260B	12/12/2008
Tert-Butanol	**140000**	250	ug/L	EPA 8260B	12/12/2008
TPH as Gasoline	**< 5000**	5000	ug/L	EPA 8260B	12/12/2008
1,2-Dichloroethane-d4 (Surr)	94.6		% Recovery	EPA 8260B	12/12/2008
Toluene - d8 (Surr)	98.9		% Recovery	EPA 8260B	12/12/2008
TPH as Diesel	**< 1500**	1500	ug/L	M EPA 8015	12/16/2008
(Note: MRL increased due to interference from Gasoline-range hydrocarbons.)					
Octacosane (Diesel Surrogate)	94.2		% Recovery	M EPA 8015	12/16/2008

KIFF Analytical LLC

Report Number : 66380
Date : 12/18/2008

Project Name : **NAZ Eagle Gas Station**
Project Number : **ZP046M**

Sample : **IS-4** Matrix : Water Lab Number : 66380-11
Sample Date :12/09/2008

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	**1100**	25	ug/L	EPA 8260B	12/13/2008
Toluene	**360**	0.50	ug/L	EPA 8260B	12/12/2008
Ethylbenzene	**710**	25	ug/L	EPA 8260B	12/13/2008
Total Xylenes	**3000**	25	ug/L	EPA 8260B	12/13/2008
Methyl-t-butyl ether (MTBE)	**110000**	250	ug/L	EPA 8260B	12/16/2008
Diisopropyl ether (DIPE)	**1.1**	0.50	ug/L	EPA 8260B	12/12/2008
Ethyl-t-butyl ether (ETBE)	**20**	0.50	ug/L	EPA 8260B	12/12/2008
Tert-amyl methyl ether (TAME)	**630**	25	ug/L	EPA 8260B	12/13/2008
Tert-Butanol	**540000**	1500	ug/L	EPA 8260B	12/16/2008
TPH as Gasoline	**20000**	2500	ug/L	EPA 8260B	12/13/2008
1,2-Dichloroethane-d4 (Surr)	103		% Recovery	EPA 8260B	12/13/2008
Toluene - d8 (Surr)	95.8		% Recovery	EPA 8260B	12/13/2008
TPH as Diesel	**4000**	50	ug/L	M EPA 8015	12/17/2008
Octacosane (Diesel Surrogate)	98.3		% Recovery	M EPA 8015	12/17/2008

KIFF Analytical LLC

Report Number : 66380
Date : 12/18/2008

Project Name : **NAZ Eagle Gas Station**
Project Number : **ZP046M**

Sample : **MW-8** Matrix : Water Lab Number : 66380-12
Sample Date :12/09/2008

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	**2300**	250	ug/L	EPA 8260B	12/12/2008
Toluene	**< 250**	250	ug/L	EPA 8260B	12/12/2008
Ethylbenzene	**37000**	250	ug/L	EPA 8260B	12/12/2008
Total Xylenes	**67000**	250	ug/L	EPA 8260B	12/12/2008
Methyl-t-butyl ether (MTBE)	**91000**	250	ug/L	EPA 8260B	12/12/2008
Diisopropyl ether (DIPE)	**< 250**	250	ug/L	EPA 8260B	12/12/2008
Ethyl-t-butyl ether (ETBE)	**< 250**	250	ug/L	EPA 8260B	12/12/2008
Tert-amyl methyl ether (TAME)	**1500**	250	ug/L	EPA 8260B	12/12/2008
Tert-Butanol	**410000**	1500	ug/L	EPA 8260B	12/12/2008
TPH as Gasoline	**1700000**	25000	ug/L	EPA 8260B	12/12/2008
1,2-Dichloroethane-d4 (Surr)	93.0		% Recovery	EPA 8260B	12/12/2008
Toluene - d8 (Surr)	99.8		% Recovery	EPA 8260B	12/12/2008
TPH as Diesel	**< 2000000**	2000000	ug/L	M EPA 8015	12/16/2008
(Note: MRL increased due to interference from Gasoline-range hydrocarbons.)					
Octacosane (Diesel Surrogate)	Diluted Out		% Recovery	M EPA 8015	12/16/2008

KIFF Analytical LLC

Report Number : 66380
Date : 12/18/2008

Project Name : **NAZ Eagle Gas Station**
Project Number : **ZP046M**

Sample : **MW-4** Matrix : Water Lab Number : 66380-13
Sample Date :12/09/2008

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	**3600**	500	ug/L	EPA 8260B	12/16/2008
Toluene	**1400**	500	ug/L	EPA 8260B	12/16/2008
Ethylbenzene	**2400**	500	ug/L	EPA 8260B	12/16/2008
Total Xylenes	**10000**	500	ug/L	EPA 8260B	12/16/2008
Methyl-t-butyl ether (MTBE)	**360000**	500	ug/L	EPA 8260B	12/16/2008
Diisopropyl ether (DIPE)	**< 150**	150	ug/L	EPA 8260B	12/13/2008
Ethyl-t-butyl ether (ETBE)	**< 150**	150	ug/L	EPA 8260B	12/13/2008
Tert-amyl methyl ether (TAME)	**2000**	500	ug/L	EPA 8260B	12/16/2008
Tert-Butanol	**660000**	2500	ug/L	EPA 8260B	12/16/2008
TPH as Gasoline	**69000**	50000	ug/L	EPA 8260B	12/16/2008
1,2-Dichloroethane-d4 (Surr)	97.2		% Recovery	EPA 8260B	12/13/2008
Toluene - d8 (Surr)	99.7		% Recovery	EPA 8260B	12/13/2008
TPH as Diesel	**14000**	50	ug/L	M EPA 8015	12/17/2008
Octacosane (Diesel Surrogate)	86.9		% Recovery	M EPA 8015	12/17/2008

KIFF Analytical LLC

Report Number : 66380
Date : 12/18/2008

Project Name : **NAZ Eagle Gas Station**
Project Number : **ZP046M**

Sample : **MW-5** Matrix : Water Lab Number : 66380-14
Sample Date :12/09/2008

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	**< 90**	90	ug/L	EPA 8260B	12/12/2008
Toluene	**< 90**	90	ug/L	EPA 8260B	12/12/2008
Ethylbenzene	**< 90**	90	ug/L	EPA 8260B	12/12/2008
Total Xylenes	**< 90**	90	ug/L	EPA 8260B	12/12/2008
Methyl-t-butyl ether (MTBE)	**23000**	90	ug/L	EPA 8260B	12/12/2008
Diisopropyl ether (DIPE)	**< 90**	90	ug/L	EPA 8260B	12/12/2008
Ethyl-t-butyl ether (ETBE)	**< 90**	90	ug/L	EPA 8260B	12/12/2008
Tert-amyl methyl ether (TAME)	**< 90**	90	ug/L	EPA 8260B	12/12/2008
Tert-Butanol	**500000**	1500	ug/L	EPA 8260B	12/12/2008
TPH as Gasoline	**< 9000**	9000	ug/L	EPA 8260B	12/12/2008
1,2-Dichloroethane-d4 (Surr)	104		% Recovery	EPA 8260B	12/12/2008
Toluene - d8 (Surr)	97.8		% Recovery	EPA 8260B	12/12/2008
TPH as Diesel	**1600**	50	ug/L	M EPA 8015	12/13/2008
Octacosane (Diesel Surrogate)	122		% Recovery	M EPA 8015	12/13/2008

KIFF Analytical LLC

Report Number : 66380
Date : 12/18/2008

Project Name : **NAZ Eagle Gas Station**
Project Number : **ZP046M**

Sample : **IS-5** Matrix : Water Lab Number : 66380-15
Sample Date :12/09/2008

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	**2900**	250	ug/L	EPA 8260B	12/13/2008
Toluene	**44**	0.50	ug/L	EPA 8260B	12/12/2008
Ethylbenzene	**4400**	250	ug/L	EPA 8260B	12/13/2008
Total Xylenes	**7100**	250	ug/L	EPA 8260B	12/13/2008
Methyl-t-butyl ether (MTBE)	**89000**	250	ug/L	EPA 8260B	12/13/2008
Diisopropyl ether (DIPE)	**1.3**	0.50	ug/L	EPA 8260B	12/12/2008
Ethyl-t-butyl ether (ETBE)	**14**	0.50	ug/L	EPA 8260B	12/12/2008
Tert-amyl methyl ether (TAME)	**1600**	250	ug/L	EPA 8260B	12/13/2008
Tert-Butanol	**230000**	1500	ug/L	EPA 8260B	12/13/2008
TPH as Gasoline	**47000**	25000	ug/L	EPA 8260B	12/13/2008
1,2-Dichloroethane-d4 (Surr)	101		% Recovery	EPA 8260B	12/13/2008
Toluene - d8 (Surr)	99.1		% Recovery	EPA 8260B	12/13/2008
TPH as Diesel	**140000**	500	ug/L	M EPA 8015	12/15/2008
Octacosane (Diesel Surrogate)	Diluted Out		% Recovery	M EPA 8015	12/15/2008

KIFF Analytical LLC

Report Number : 66380
Date : 12/18/2008

Project Name : **NAZ Eagle Gas Station**
Project Number : **ZP046M**

Sample : **MW-9** Matrix : Water Lab Number : 66380-16
Sample Date :12/09/2008

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	**4.2**	2.5	ug/L	EPA 8260B	12/18/2008
Toluene	**< 2.5**	2.5	ug/L	EPA 8260B	12/18/2008
Ethylbenzene	**13**	2.5	ug/L	EPA 8260B	12/18/2008
Total Xylenes	**9.4**	2.5	ug/L	EPA 8260B	12/18/2008
Methyl-t-butyl ether (MTBE)	**1300**	2.5	ug/L	EPA 8260B	12/18/2008
Diisopropyl ether (DIPE)	**< 2.5**	2.5	ug/L	EPA 8260B	12/18/2008
Ethyl-t-butyl ether (ETBE)	**< 2.5**	2.5	ug/L	EPA 8260B	12/18/2008
Tert-amyl methyl ether (TAME)	**10**	2.5	ug/L	EPA 8260B	12/18/2008
Tert-Butanol	**240**	15	ug/L	EPA 8260B	12/18/2008
Methanol	**< 300**	300	ug/L	EPA 8260B	12/18/2008
Ethanol	**< 25**	25	ug/L	EPA 8260B	12/18/2008
TPH as Gasoline	**1200**	250	ug/L	EPA 8260B	12/18/2008
1,2-Dichloroethane	**< 2.5**	2.5	ug/L	EPA 8260B	12/18/2008
1,2-Dibromoethane	**< 2.5**	2.5	ug/L	EPA 8260B	12/18/2008
1,2-Dichloroethane-d4 (Surr)	98.8		% Recovery	EPA 8260B	12/18/2008
Toluene - d8 (Surr)	106		% Recovery	EPA 8260B	12/18/2008
TPH as Diesel	**< 800**	800	ug/L	M EPA 8015	12/16/2008
(Note: MRL increased due to interference from Gasoline-range hydrocarbons.)					
Octacosane (Diesel Surrogate)	96.6		% Recovery	M EPA 8015	12/16/2008

KIFF Analytical LLC

Report Number : 66380
Date : 12/18/2008

Project Name : **NAZ Eagle Gas Station**
Project Number : **ZP046M**

Sample : **MW-9d** Matrix : Water Lab Number : 66380-17
Sample Date :12/09/2008

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	**0.60**	0.50	ug/L	EPA 8260B	12/13/2008
Toluene	**< 0.50**	0.50	ug/L	EPA 8260B	12/13/2008
Ethylbenzene	**1.7**	0.50	ug/L	EPA 8260B	12/13/2008
Total Xylenes	**3.4**	0.50	ug/L	EPA 8260B	12/13/2008
Methyl-t-butyl ether (MTBE)	**1.7**	0.50	ug/L	EPA 8260B	12/13/2008
Diisopropyl ether (DIPE)	**< 0.50**	0.50	ug/L	EPA 8260B	12/13/2008
Ethyl-t-butyl ether (ETBE)	**< 0.50**	0.50	ug/L	EPA 8260B	12/13/2008
Tert-amyl methyl ether (TAME)	**< 0.50**	0.50	ug/L	EPA 8260B	12/13/2008
Tert-Butanol	**< 5.0**	5.0	ug/L	EPA 8260B	12/13/2008
Methanol	**< 50**	50	ug/L	EPA 8260B	12/13/2008
Ethanol	**< 5.0**	5.0	ug/L	EPA 8260B	12/13/2008
TPH as Gasoline	**420**	50	ug/L	EPA 8260B	12/13/2008
(Note: Primarily compounds not found in typical Gasoline)					
1,2-Dichloroethane	**0.54**	0.50	ug/L	EPA 8260B	12/13/2008
1,2-Dibromoethane	**< 0.50**	0.50	ug/L	EPA 8260B	12/13/2008
1,2-Dichloroethane-d4 (Surr)	99.2		% Recovery	EPA 8260B	12/13/2008
Toluene - d8 (Surr)	104		% Recovery	EPA 8260B	12/13/2008
TPH as Diesel	**150**	50	ug/L	M EPA 8015	12/16/2008
(Note: Discrete peaks in Diesel range, atypical for Diesel Fuel.)					
Octacosane (Diesel Surrogate)	110		% Recovery	M EPA 8015	12/16/2008

KIFF Analytical LLC

Report Number : 66380
Date : 12/18/2008

Project Name : **NAZ Eagle Gas Station**
Project Number : **ZP046M**

Sample : **MW-10** Matrix : Water Lab Number : 66380-18
Sample Date :12/09/2008

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	**560**	1.0	ug/L	EPA 8260B	12/18/2008
Toluene	**41**	1.0	ug/L	EPA 8260B	12/18/2008
Ethylbenzene	**35**	1.0	ug/L	EPA 8260B	12/18/2008
Total Xylenes	**150**	1.0	ug/L	EPA 8260B	12/18/2008
Methyl-t-butyl ether (MTBE)	**500**	1.0	ug/L	EPA 8260B	12/18/2008
Diisopropyl ether (DIPE)	**5.1**	1.0	ug/L	EPA 8260B	12/18/2008
Ethyl-t-butyl ether (ETBE)	**< 1.0**	1.0	ug/L	EPA 8260B	12/18/2008
Tert-amyl methyl ether (TAME)	**< 1.0**	1.0	ug/L	EPA 8260B	12/18/2008
Tert-Butanol	**13 J**	5.0	ug/L	EPA 8260B	12/18/2008
Methanol	**< 200**	200	ug/L	EPA 8260B	12/18/2008
Ethanol	**< 10**	10	ug/L	EPA 8260B	12/18/2008
TPH as Gasoline	**8000**	100	ug/L	EPA 8260B	12/18/2008
1,2-Dichloroethane	**78**	1.0	ug/L	EPA 8260B	12/18/2008
1,2-Dibromoethane	**< 1.0**	1.0	ug/L	EPA 8260B	12/18/2008
1,2-Dichloroethane-d4 (Surr)	91.7		% Recovery	EPA 8260B	12/18/2008
Toluene - d8 (Surr)	102		% Recovery	EPA 8260B	12/18/2008
TPH as Diesel	**< 2000**	2000	ug/L	M EPA 8015	12/13/2008
(Note: MRL increased due to interference from Gasoline-range hydrocarbons.)					
Octacosane (Diesel Surrogate)	93.7		% Recovery	M EPA 8015	12/13/2008

KIFF Analytical LLC

Report Number : 66380
Date : 12/18/2008

Project Name : **NAZ Eagle Gas Station**
Project Number : **ZP046M**

Sample : **MW-10d** Matrix : Water Lab Number : 66380-19
Sample Date :12/09/2008

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	**0.64**	0.50	ug/L	EPA 8260B	12/13/2008
Toluene	**< 0.50**	0.50	ug/L	EPA 8260B	12/13/2008
Ethylbenzene	**0.63**	0.50	ug/L	EPA 8260B	12/13/2008
Total Xylenes	**1.3**	0.50	ug/L	EPA 8260B	12/13/2008
Methyl-t-butyl ether (MTBE)	**1.5**	0.50	ug/L	EPA 8260B	12/13/2008
Diisopropyl ether (DIPE)	**< 0.50**	0.50	ug/L	EPA 8260B	12/13/2008
Ethyl-t-butyl ether (ETBE)	**< 0.50**	0.50	ug/L	EPA 8260B	12/13/2008
Tert-amyl methyl ether (TAME)	**< 0.50**	0.50	ug/L	EPA 8260B	12/13/2008
Tert-Butanol	**< 5.0**	5.0	ug/L	EPA 8260B	12/13/2008
Methanol	**< 50**	50	ug/L	EPA 8260B	12/13/2008
Ethanol	**< 5.0**	5.0	ug/L	EPA 8260B	12/13/2008
TPH as Gasoline (Note: Primarily compounds not found in typical Gasoline)	**120**	50	ug/L	EPA 8260B	12/13/2008
1,2-Dichloroethane	**0.51**	0.50	ug/L	EPA 8260B	12/13/2008
1,2-Dibromoethane	**< 0.50**	0.50	ug/L	EPA 8260B	12/13/2008
1,2-Dichloroethane-d4 (Surr)	102		% Recovery	EPA 8260B	12/13/2008
Toluene - d8 (Surr)	104		% Recovery	EPA 8260B	12/13/2008
TPH as Diesel (Note: Unusual pattern)	**120**	50	ug/L	M EPA 8015	12/13/2008
Octacosane (Diesel Surrogate)	98.7		% Recovery	M EPA 8015	12/13/2008

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Project Name : **NAZ Eagle Gas Station**

Project Number : **ZP046M**

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
TPH as Diesel	< 50	50	ug/L	M EPA 8015	12/13/2008
Octacosane (Diesel Surrogate)	86.5		%	M EPA 8015	12/13/2008
TPH as Diesel	< 50	50	ug/L	M EPA 8015	12/15/2008
Octacosane (Diesel Surrogate)	110		%	M EPA 8015	12/15/2008
TPH as Diesel	< 50	50	ug/L	M EPA 8015	12/16/2008
Octacosane (Diesel Surrogate)	105		%	M EPA 8015	12/16/2008
TPH as Diesel	< 50	50	ug/L	M EPA 8015	12/17/2008
Octacosane (Diesel Surrogate)	85.9		%	M EPA 8015	12/17/2008
Benzene	< 0.50	0.50	ug/L	EPA 8260B	12/11/2008
Toluene	< 0.50	0.50	ug/L	EPA 8260B	12/11/2008
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	12/11/2008
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	12/11/2008
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	12/11/2008
Diisopropyl ether (DIPE)	< 0.50	0.50	ug/L	EPA 8260B	12/11/2008
Ethyl-t-butyl ether (ETBE)	< 0.50	0.50	ug/L	EPA 8260B	12/11/2008
Tert-amyl methyl ether (TAME)	< 0.50	0.50	ug/L	EPA 8260B	12/11/2008
Tert-Butanol	< 5.0	5.0	ug/L	EPA 8260B	12/11/2008
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	12/11/2008
1,2-Dichloroethane-d4 (Surr)	105		%	EPA 8260B	12/11/2008
Toluene - d8 (Surr)	97.4		%	EPA 8260B	12/11/2008

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	< 0.50	0.50	ug/L	EPA 8260B	12/11/2008
Toluene	< 0.50	0.50	ug/L	EPA 8260B	12/11/2008
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	12/11/2008
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	12/11/2008
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	12/11/2008
Diisopropyl ether (DIPE)	< 0.50	0.50	ug/L	EPA 8260B	12/11/2008
Ethyl-t-butyl ether (ETBE)	< 0.50	0.50	ug/L	EPA 8260B	12/11/2008
Tert-amyl methyl ether (TAME)	< 0.50	0.50	ug/L	EPA 8260B	12/11/2008
Tert-Butanol	< 5.0	5.0	ug/L	EPA 8260B	12/11/2008
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	12/11/2008
1,2-Dichloroethane-d4 (Surr)	101		%	EPA 8260B	12/11/2008
Toluene - d8 (Surr)	99.7		%	EPA 8260B	12/11/2008
Benzene	< 0.50	0.50	ug/L	EPA 8260B	12/12/2008
Toluene	< 0.50	0.50	ug/L	EPA 8260B	12/12/2008
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	12/12/2008
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	12/12/2008
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	12/12/2008
Diisopropyl ether (DIPE)	< 0.50	0.50	ug/L	EPA 8260B	12/12/2008
Ethyl-t-butyl ether (ETBE)	< 0.50	0.50	ug/L	EPA 8260B	12/12/2008
Tert-amyl methyl ether (TAME)	< 0.50	0.50	ug/L	EPA 8260B	12/12/2008
Tert-Butanol	< 5.0	5.0	ug/L	EPA 8260B	12/12/2008
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	12/12/2008
1,2-Dichloroethane-d4 (Surr)	99.0		%	EPA 8260B	12/12/2008
Toluene - d8 (Surr)	98.3		%	EPA 8260B	12/12/2008

KIFF ANALYTICAL, LLC

2795 2nd Street, Suite 300 Davis, CA 95618 530-297-4800

Report Number : 66380

Date : 12/18/2008

QC Report : Method Blank Data

Project Name : **NAZ Eagle Gas Station**

Project Number : **ZP046M**

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Tert-Butanol	< 5.0	5.0	ug/L	EPA 8260B	12/13/2008
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	12/13/2008
Toluene	< 0.50	0.50	ug/L	EPA 8260B	12/12/2008
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	12/12/2008
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	12/12/2008
Diisopropyl ether (DIPE)	< 0.50	0.50	ug/L	EPA 8260B	12/12/2008
Ethyl-t-butyl ether (ETBE)	< 0.50	0.50	ug/L	EPA 8260B	12/12/2008
Tert-amyl methyl ether (TAME)	< 0.50	0.50	ug/L	EPA 8260B	12/12/2008
1,2-Dichloroethane-d4 (Surr)	97.4		%	EPA 8260B	12/12/2008
Toluene - d8 (Surr)	100		%	EPA 8260B	12/12/2008
Diisopropyl ether (DIPE)	< 0.50	0.50	ug/L	EPA 8260B	12/12/2008
Ethyl-t-butyl ether (ETBE)	< 0.50	0.50	ug/L	EPA 8260B	12/12/2008
1,2-Dichloroethane-d4 (Surr)	96.5		%	EPA 8260B	12/12/2008
Toluene - d8 (Surr)	101		%	EPA 8260B	12/12/2008
Benzene	< 0.50	0.50	ug/L	EPA 8260B	12/13/2008
Toluene	< 0.50	0.50	ug/L	EPA 8260B	12/13/2008
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	12/13/2008
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	12/13/2008
Diisopropyl ether (DIPE)	< 0.50	0.50	ug/L	EPA 8260B	12/13/2008
Ethyl-t-butyl ether (ETBE)	< 0.50	0.50	ug/L	EPA 8260B	12/13/2008
Tert-amyl methyl ether (TAME)	< 0.50	0.50	ug/L	EPA 8260B	12/13/2008
Tert-Butanol	< 5.0	5.0	ug/L	EPA 8260B	12/13/2008
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	12/13/2008
1,2-Dichloroethane-d4 (Surr)	96.6		%	EPA 8260B	12/13/2008
Toluene - d8 (Surr)	101		%	EPA 8260B	12/13/2008

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	12/16/2008
Tert-Butanol	< 5.0	5.0	ug/L	EPA 8260B	12/16/2008
Toluene	< 0.50	0.50	ug/L	EPA 8260B	12/12/2008
Diisopropyl ether (DIPE)	< 0.50	0.50	ug/L	EPA 8260B	12/12/2008
Ethyl-t-butyl ether (ETBE)	< 0.50	0.50	ug/L	EPA 8260B	12/12/2008
Benzene	< 0.50	0.50	ug/L	EPA 8260B	12/16/2008
Toluene	< 0.50	0.50	ug/L	EPA 8260B	12/16/2008
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	12/16/2008
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	12/16/2008
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	12/16/2008
Tert-amyl methyl ether (TAME)	< 0.50	0.50	ug/L	EPA 8260B	12/16/2008
Tert-Butanol	< 5.0	5.0	ug/L	EPA 8260B	12/16/2008
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	12/16/2008
Toluene	< 0.50	0.50	ug/L	EPA 8260B	12/12/2008
Diisopropyl ether (DIPE)	< 0.50	0.50	ug/L	EPA 8260B	12/12/2008
Ethyl-t-butyl ether (ETBE)	< 0.50	0.50	ug/L	EPA 8260B	12/12/2008
Benzene	< 0.50	0.50	ug/L	EPA 8260B	12/13/2008
Toluene	< 0.50	0.50	ug/L	EPA 8260B	12/13/2008
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	12/13/2008
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	12/13/2008
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	12/13/2008
Diisopropyl ether (DIPE)	< 0.50	0.50	ug/L	EPA 8260B	12/13/2008
Ethyl-t-butyl ether (ETBE)	< 0.50	0.50	ug/L	EPA 8260B	12/13/2008
Tert-amyl methyl ether (TAME)	< 0.50	0.50	ug/L	EPA 8260B	12/13/2008
Tert-Butanol	< 5.0	5.0	ug/L	EPA 8260B	12/13/2008
Methanol	< 50	50	ug/L	EPA 8260B	12/13/2008
Ethanol	< 5.0	5.0	ug/L	EPA 8260B	12/13/2008
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	12/13/2008
1,2-Dichloroethane	< 0.50	0.50	ug/L	EPA 8260B	12/13/2008
1,2-Dibromoethane	< 0.50	0.50	ug/L	EPA 8260B	12/13/2008

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QC Report : Method Blank Data

Project Name : **NAZ Eagle Gas Station**

Project Number : **ZP046M**

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
1,2-Dichloroethane-d4 (Surr)	97.7		%	EPA 8260B	12/13/2008
Toluene - d8 (Surr)	105		%	EPA 8260B	12/13/2008
Benzene	< 0.50	0.50	ug/L	EPA 8260B	12/15/2008
Toluene	< 0.50	0.50	ug/L	EPA 8260B	12/15/2008
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	12/15/2008
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	12/15/2008
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	12/15/2008
Diisopropyl ether (DIPE)	< 0.50	0.50	ug/L	EPA 8260B	12/15/2008
Ethyl-t-butyl ether (ETBE)	< 0.50	0.50	ug/L	EPA 8260B	12/15/2008
Tert-amyl methyl ether (TAME)	< 0.50	0.50	ug/L	EPA 8260B	12/15/2008
Tert-Butanol	< 5.0	5.0	ug/L	EPA 8260B	12/15/2008
Methanol	< 50	50	ug/L	EPA 8260B	12/15/2008
Ethanol	< 5.0	5.0	ug/L	EPA 8260B	12/15/2008
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	12/15/2008
1,2-Dichloroethane	< 0.50	0.50	ug/L	EPA 8260B	12/15/2008
1,2-Dibromoethane	< 0.50	0.50	ug/L	EPA 8260B	12/15/2008
1,2-Dichloroethane-d4 (Surr)	100		%	EPA 8260B	12/15/2008
Toluene - d8 (Surr)	107		%	EPA 8260B	12/15/2008
Benzene	< 0.50	0.50	ug/L	EPA 8260B	12/17/2008
Toluene	< 0.50	0.50	ug/L	EPA 8260B	12/17/2008
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	12/17/2008
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	12/17/2008
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	12/17/2008
Diisopropyl ether (DIPE)	< 0.50	0.50	ug/L	EPA 8260B	12/17/2008
Ethyl-t-butyl ether (ETBE)	< 0.50	0.50	ug/L	EPA 8260B	12/17/2008
Tert-amyl methyl ether (TAME)	< 0.50	0.50	ug/L	EPA 8260B	12/17/2008
Tert-Butanol	< 5.0	5.0	ug/L	EPA 8260B	12/17/2008
Methanol	< 50	50	ug/L	EPA 8260B	12/17/2008
Ethanol	< 5.0	5.0	ug/L	EPA 8260B	12/17/2008
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	12/17/2008
1,2-Dichloroethane	< 0.50	0.50	ug/L	EPA 8260B	12/17/2008
1,2-Dibromoethane	< 0.50	0.50	ug/L	EPA 8260B	12/17/2008

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
1,2-Dichloroethane-d4 (Surr)	98.7		%	EPA 8260B	12/17/2008
Toluene - d8 (Surr)	105		%	EPA 8260B	12/17/2008
Benzene	< 0.50	0.50	ug/L	EPA 8260B	12/12/2008
Toluene	< 0.50	0.50	ug/L	EPA 8260B	12/12/2008
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	12/12/2008
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	12/12/2008
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	12/12/2008
Diisopropyl ether (DIPE)	< 0.50	0.50	ug/L	EPA 8260B	12/12/2008
Ethyl-t-butyl ether (ETBE)	< 0.50	0.50	ug/L	EPA 8260B	12/12/2008
Tert-amyl methyl ether (TAME)	< 0.50	0.50	ug/L	EPA 8260B	12/12/2008
Tert-Butanol	< 5.0	5.0	ug/L	EPA 8260B	12/12/2008
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	12/12/2008
1,2-Dichloroethane-d4 (Surr)	103		%	EPA 8260B	12/12/2008
Toluene - d8 (Surr)	93.4		%	EPA 8260B	12/12/2008
Benzene	< 0.50	0.50	ug/L	EPA 8260B	12/12/2008
Toluene	< 0.50	0.50	ug/L	EPA 8260B	12/12/2008
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	12/12/2008
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	12/12/2008
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	12/12/2008
Diisopropyl ether (DIPE)	< 0.50	0.50	ug/L	EPA 8260B	12/12/2008
Ethyl-t-butyl ether (ETBE)	< 0.50	0.50	ug/L	EPA 8260B	12/12/2008
Tert-amyl methyl ether (TAME)	< 0.50	0.50	ug/L	EPA 8260B	12/12/2008
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	12/12/2008
1,2-Dichloroethane-d4 (Surr)	104		%	EPA 8260B	12/12/2008
Toluene - d8 (Surr)	93.5		%	EPA 8260B	12/12/2008

QC Report : Matrix Spike/ Matrix Spike Duplicate

Report Number : 66380

Date : 12/18/2008

Project Name : **NAZ Eagle Gas Station**

Project Number : **ZP046M**

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	889	910	ug/L	M EPA 8015	12/13/08	88.9	91.0	2.35	70-130	25
TPH as Diesel	BLANK	<50	1000	1000	892	912	ug/L	M EPA 8015	12/15/08	89.2	91.2	2.23	70-130	25
TPH as Diesel	BLANK	<50	1000	1000	849	861	ug/L	M EPA 8015	12/16/08	84.9	86.1	1.45	70-130	25
TPH as Diesel	BLANK	<50	1000	1000	994	893	ug/L	M EPA 8015	12/17/08	99.4	89.3	10.8	70-130	25
Benzene	66347-04	<0.50	39.3	39.3	42.0	41.5	ug/L	EPA 8260B	12/11/08	107	106	0.921	70-130	25
Methyl-t-butyl ether	66347-04	1.4	39.6	39.5	43.4	43.3	ug/L	EPA 8260B	12/11/08	106	106	0.0860	70-130	25
Tert-Butanol	66347-04	<5.0	200	200	215	209	ug/L	EPA 8260B	12/11/08	107	105	2.49	70-130	25
Toluene	66347-04	<0.50	40.1	40.0	41.0	40.4	ug/L	EPA 8260B	12/11/08	102	101	1.18	70-130	25
Benzene	66395-01	<0.50	39.2	39.3	42.2	42.6	ug/L	EPA 8260B	12/12/08	108	108	0.682	70-130	25
Methyl-t-butyl ether	66395-01	<0.50	39.4	39.6	39.6	39.7	ug/L	EPA 8260B	12/12/08	100	100	0.0660	70-130	25
Tert-Butanol	66395-01	<5.0	199	200	205	210	ug/L	EPA 8260B	12/12/08	103	105	2.24	70-130	25
Toluene	66395-01	<0.50	40.0	40.1	41.1	41.3	ug/L	EPA 8260B	12/12/08	103	103	0.0622	70-130	25
Benzene	66414-05	700	39.3	39.3	690	694	ug/L	EPA 8260B	12/12/08	0.00	0.00	0.00	70-130	25
Methyl-t-butyl ether	66414-05	220	39.6	39.6	246	250	ug/L	EPA 8260B	12/12/08	50.3	61.7	20.4	70-130	25
Tert-Butanol	66414-05	130	200	200	321	313	ug/L	EPA 8260B	12/12/08	95.5	91.7	4.04	70-130	25
Toluene	66414-05	14	40.1	40.1	48.2	48.7	ug/L	EPA 8260B	12/12/08	86.1	87.3	1.40	70-130	25

QC Report : Matrix Spike/ Matrix Spike Duplicate

Report Number : 66380

Date : 12/18/2008

Project Name : **NAZ Eagle Gas Station**

Project Number : **ZP046M**

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
Tert-Butanol	66395-04	<5.0	200	199	192	196	ug/L	EPA 8260B	12/13/08	95.9	98.5	2.69	70-130	25
Toluene	66395-04	<0.50	40.1	39.9	37.5	38.3	ug/L	EPA 8260B	12/13/08	93.5	96.0	2.60	70-130	25
Methyl-t-butyl ether	66371-05	<0.50	39.6	39.6	40.3	40.3	ug/L	EPA 8260B	12/12/08	102	102	0.148	70-130	25
Toluene	66371-05	<0.50	40.1	40.1	34.3	34.0	ug/L	EPA 8260B	12/12/08	85.5	84.6	1.01	70-130	25
Methyl-t-butyl ether	66427-05	<0.50	39.6	39.6	39.4	39.8	ug/L	EPA 8260B	12/12/08	99.7	101	0.991	70-130	25
Benzene	66415-08	<0.50	39.3	39.3	35.7	35.0	ug/L	EPA 8260B	12/13/08	90.8	88.8	2.18	70-130	25
Methyl-t-butyl ether	66415-08	43	39.6	39.6	83.1	85.6	ug/L	EPA 8260B	12/13/08	101	108	5.99	70-130	25
Tert-Butanol	66415-08	750	200	200	908	913	ug/L	EPA 8260B	12/13/08	78.6	81.1	3.16	70-130	25
Toluene	66415-08	<0.50	40.1	40.1	33.1	32.3	ug/L	EPA 8260B	12/13/08	82.5	80.4	2.54	70-130	25
Methyl-t-butyl ether	66473-04	<0.50	39.6	39.6	41.6	39.5	ug/L	EPA 8260B	12/16/08	105	99.9	5.00	70-130	25
Tert-Butanol	66473-04	<5.0	200	200	230	224	ug/L	EPA 8260B	12/16/08	115	112	2.53	70-130	25
Methyl-t-butyl ether	66386-04	<0.50	39.6	39.6	37.8	37.3	ug/L	EPA 8260B	12/12/08	95.5	94.3	1.22	70-130	25
Toluene	66386-04	<0.50	40.1	40.1	42.4	41.4	ug/L	EPA 8260B	12/12/08	106	103	2.50	70-130	25
Benzene	66472-02	<0.50	39.3	39.3	37.8	36.8	ug/L	EPA 8260B	12/15/08	96.2	93.6	2.74	70-130	25
Methyl-t-butyl ether	66472-02	<0.50	39.6	39.6	37.1	37.0	ug/L	EPA 8260B	12/15/08	93.7	93.4	0.335	70-130	25

Report Number : 66380

QC Report : Matrix Spike/ Matrix Spike Duplicate

Date : 12/18/2008

Project Name : **NAZ Eagle Gas Station**

Project Number : **ZP046M**

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
Tert-Butanol	66472-02	<5.0	200	200	198	200	ug/L	EPA 8260B	12/15/08	99.1	99.8	0.675	70-130	25
Toluene	66472-02	<0.50	40.1	40.1	42.2	41.0	ug/L	EPA 8260B	12/15/08	105	102	2.82	70-130	25
Methyl-t-butyl ether	66371-04	13	39.6	39.6	47.8	47.6	ug/L	EPA 8260B	12/12/08	88.4	88.1	0.409	70-130	25
Toluene	66371-04	2.1	40.1	40.1	39.9	39.3	ug/L	EPA 8260B	12/12/08	94.2	92.5	1.73	70-130	25
1,2-Dichloroethane	66415-07	<0.50	40.3	40.3	40.7	42.1	ug/L	EPA 8260B	12/13/08	101	104	3.57	70-130	25
Benzene	66415-07	<0.50	39.3	39.3	37.6	38.5	ug/L	EPA 8260B	12/13/08	95.5	97.9	2.56	70-130	25
Methyl-t-butyl ether	66415-07	<0.50	39.6	39.6	43.6	42.0	ug/L	EPA 8260B	12/13/08	110	106	3.60	70-130	25
Tert-Butanol	66415-07	<5.0	200	200	202	204	ug/L	EPA 8260B	12/13/08	101	102	0.864	70-130	25
Toluene	66415-07	<0.50	40.1	40.1	43.6	41.8	ug/L	EPA 8260B	12/13/08	108	104	4.24	70-130	25
1,2-Dichloroethane	66440-04	5.5	40.3	40.3	43.9	43.7	ug/L	EPA 8260B	12/15/08	95.4	94.9	0.545	70-130	25
Benzene	66440-04	<0.50	39.3	39.3	37.3	37.1	ug/L	EPA 8260B	12/15/08	94.8	94.3	0.594	70-130	25
Methyl-t-butyl ether	66440-04	<0.50	39.6	39.6	41.4	41.2	ug/L	EPA 8260B	12/15/08	105	104	0.644	70-130	25
Tert-Butanol	66440-04	20	200	200	217	214	ug/L	EPA 8260B	12/15/08	98.4	97.0	1.41	70-130	25
Toluene	66440-04	<0.50	40.1	40.1	43.5	43.0	ug/L	EPA 8260B	12/15/08	108	107	1.18	70-130	25
1,2-Dichloroethane	66469-01	<0.50	40.3	40.3	38.0	37.8	ug/L	EPA 8260B	12/17/08	94.3	93.8	0.570	70-130	25
Benzene	66469-01	<0.50	39.3	39.3	37.2	37.2	ug/L	EPA 8260B	12/17/08	94.4	94.6	0.193	70-130	25
Methyl-t-butyl ether	66469-01	<0.50	39.6	39.6	41.0	40.8	ug/L	EPA 8260B	12/17/08	104	103	0.583	70-130	25
Tert-Butanol	66469-01	<5.0	200	200	199	200	ug/L	EPA 8260B	12/17/08	99.6	99.7	0.0663	70-130	25
Toluene	66469-01	<0.50	40.1	40.1	43.8	43.8	ug/L	EPA 8260B	12/17/08	109	109	0.228	70-130	25

QC Report : Matrix Spike/ Matrix Spike Duplicate

Report Number : 66380

Date : 12/18/2008

Project Name : **NAZ Eagle Gas Station**

Project Number : **ZP046M**

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
Benzene	66386-05	<0.50	39.3	39.3	39.7	39.7	ug/L	EPA 8260B	12/12/08	101	101	0.0758	70-130	25
Methyl-t-butyl ether	66386-05	<0.50	39.6	39.6	38.6	39.4	ug/L	EPA 8260B	12/12/08	97.6	99.6	2.04	70-130	25
Tert-Butanol	66386-05	<5.0	200	200	210	213	ug/L	EPA 8260B	12/12/08	105	106	1.08	70-130	25
Toluene	66386-05	<0.50	40.1	40.1	37.8	37.8	ug/L	EPA 8260B	12/12/08	94.2	94.3	0.0699	70-130	25
Benzene	66414-03	8.2	39.3	39.3	48.7	47.0	ug/L	EPA 8260B	12/12/08	103	98.5	4.26	70-130	25
Methyl-t-butyl ether	66414-03	60	39.6	39.6	104	103	ug/L	EPA 8260B	12/12/08	113	109	3.76	70-130	25
Toluene	66414-03	<0.50	40.1	40.1	38.6	37.5	ug/L	EPA 8260B	12/12/08	96.1	93.4	2.82	70-130	25

QC Report : Laboratory Control Sample (LCS)

Report Number : 66380
Date : 12/18/2008

Project Name : **NAZ Eagle Gas Station**
Project Number : **ZP046M**

Parameter	Spike Level	Units	Analysis Method	Date Analyzed	LCS Percent Recov.	LCS Percent Recov. Limit
Benzene	39.3	ug/L	EPA 8260B	12/11/08	106	70-130
Methyl-t-butyl ether	39.6	ug/L	EPA 8260B	12/11/08	106	70-130
Tert-Butanol	200	ug/L	EPA 8260B	12/11/08	106	70-130
Toluene	40.1	ug/L	EPA 8260B	12/11/08	102	70-130
Benzene	39.3	ug/L	EPA 8260B	12/12/08	105	70-130
Methyl-t-butyl ether	39.6	ug/L	EPA 8260B	12/12/08	101	70-130
Tert-Butanol	200	ug/L	EPA 8260B	12/12/08	107	70-130
Toluene	40.1	ug/L	EPA 8260B	12/12/08	100	70-130
Benzene	39.3	ug/L	EPA 8260B	12/12/08	88.9	70-130
Methyl-t-butyl ether	39.6	ug/L	EPA 8260B	12/12/08	79.9	70-130
Tert-Butanol	200	ug/L	EPA 8260B	12/12/08	94.8	70-130
Toluene	40.1	ug/L	EPA 8260B	12/12/08	92.4	70-130
Tert-Butanol	200	ug/L	EPA 8260B	12/13/08	97.2	70-130
Toluene	40.1	ug/L	EPA 8260B	12/13/08	95.2	70-130
Methyl-t-butyl ether	39.7	ug/L	EPA 8260B	12/12/08	96.6	70-130
Toluene	40.1	ug/L	EPA 8260B	12/12/08	98.3	70-130

Report Number : 66380

QC Report : Laboratory Control Sample (LCS)

Date : 12/18/2008

Project Name : **NAZ Eagle Gas Station**

Project Number : **ZP046M**

Parameter	Spike Level	Units	Analysis Method	Date Analyzed	LCS Percent Recov.	LCS Percent Recov. Limit
Methyl-t-butyl ether	39.6	ug/L	EPA 8260B	12/12/08	97.7	70-130
Benzene	40.1	ug/L	EPA 8260B	12/13/08	92.6	70-130
Methyl-t-butyl ether	39.7	ug/L	EPA 8260B	12/13/08	93.3	70-130
Tert-Butanol	201	ug/L	EPA 8260B	12/13/08	89.3	70-130
Toluene	40.1	ug/L	EPA 8260B	12/13/08	96.4	70-130
Methyl-t-butyl ether	39.8	ug/L	EPA 8260B	12/16/08	98.1	70-130
Tert-Butanol	201	ug/L	EPA 8260B	12/16/08	114	70-130
Methyl-t-butyl ether	39.6	ug/L	EPA 8260B	12/12/08	94.9	70-130
Toluene	40.0	ug/L	EPA 8260B	12/12/08	100	70-130
Benzene	40.0	ug/L	EPA 8260B	12/15/08	97.8	70-130
Methyl-t-butyl ether	39.6	ug/L	EPA 8260B	12/15/08	94.3	70-130
Tert-Butanol	200	ug/L	EPA 8260B	12/15/08	98.7	70-130
Toluene	40.0	ug/L	EPA 8260B	12/15/08	103	70-130
Methyl-t-butyl ether	39.5	ug/L	EPA 8260B	12/12/08	111	70-130
Toluene	40.0	ug/L	EPA 8260B	12/12/08	113	70-130

Report Number : 66380

QC Report : Laboratory Control Sample (LCS)

Date : 12/18/2008

Project Name : **NAZ Eagle Gas Station**

Project Number : **ZP046M**

Parameter	Spike Level	Units	Analysis Method	Date Analyzed	LCS Percent Recov.	LCS Percent Recov. Limit
1,2-Dichloroethane	40.1	ug/L	EPA 8260B	12/13/08	100	70-130
Benzene	39.2	ug/L	EPA 8260B	12/13/08	94.0	70-130
Methyl-t-butyl ether	39.4	ug/L	EPA 8260B	12/13/08	106	70-130
Tert-Butanol	199	ug/L	EPA 8260B	12/13/08	97.0	70-130
Toluene	39.9	ug/L	EPA 8260B	12/13/08	107	70-130
1,2-Dichloroethane	40.5	ug/L	EPA 8260B	12/15/08	98.2	70-130
Benzene	39.5	ug/L	EPA 8260B	12/15/08	95.9	70-130
Methyl-t-butyl ether	39.8	ug/L	EPA 8260B	12/15/08	106	70-130
Tert-Butanol	201	ug/L	EPA 8260B	12/15/08	98.6	70-130
Toluene	40.3	ug/L	EPA 8260B	12/15/08	108	70-130
1,2-Dichloroethane	40.5	ug/L	EPA 8260B	12/17/08	95.1	70-130
Benzene	39.5	ug/L	EPA 8260B	12/17/08	95.0	70-130
Methyl-t-butyl ether	39.8	ug/L	EPA 8260B	12/17/08	104	70-130
Tert-Butanol	201	ug/L	EPA 8260B	12/17/08	97.7	70-130
Toluene	40.3	ug/L	EPA 8260B	12/17/08	108	70-130
Benzene	39.5	ug/L	EPA 8260B	12/12/08	102	70-130
Methyl-t-butyl ether	39.8	ug/L	EPA 8260B	12/12/08	97.7	70-130
Tert-Butanol	201	ug/L	EPA 8260B	12/12/08	107	70-130
Toluene	40.3	ug/L	EPA 8260B	12/12/08	95.5	70-130

Report Number : 66380

Date : 12/18/2008

QC Report : Laboratory Control Sample (LCS)

Project Name : **NAZ Eagle Gas Station**

Project Number : **ZP046M**

Parameter	Spike Level	Units	Analysis Method	Date Analyzed	LCS Percent Recov.	LCS Percent Recov. Limit
Benzene	39.4	ug/L	EPA 8260B	12/12/08	94.4	70-130
Methyl-t-butyl ether	39.7	ug/L	EPA 8260B	12/12/08	96.9	70-130
Toluene	40.2	ug/L	EPA 8260B	12/12/08	88.2	70-130

KIFF ANALYTICAL, LLC

2795 2nd Street, Suite 300 Davis, CA 95618 530-297-4800

KIFF Analytical LLC

2795 2nd Street, Suite 300
Davis, CA 95618
Lab: 530.297.4800
Fax: 530.297.4802

SRG # / Lab No. 63380

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Chain-of-Custody Record and Analysis Request

Project Contact (Hardcopy or PDF To): Rob Nelson	California EDF Report? ☒ Yes ☐ No
Company / Address: 229 Tewksbury Ave Cleanwater group Pt. Rich, CA.	Sampling Company Log Code: CWGO
Phone Number: 510-307-9945	Global ID: T0605300219
Fax Number: 510-232-2823	EDF Deliverable To (Email Address): gfisec@Cleanwatergroup.com
Project #: ZP0686M / P.O. #:	Bill to:
Project Name: NAZ Eagle Gas Station	Sampler Print Name: Eric V. Austin
	Sampler Signature: Eric V. Austin
Project Address: 4301 San Leandro St, Oakland, CA.	

Analysis Request — PLEASE CIRCLE METHOD

TAT: ☐ 12 hr ☐ 24 hr ☐ 48hr ☐ 72hr ☒ 1 wk

Sample Designation	Date	Time	Sampling	Container: 40 ml VOA	Container: Sleeve	Container: Poly	Container: Glass	Container: Tedlar	Preservative: HCl	Preservative: HNO_3	Preservative: None	Matrix: Water	Matrix: Soil	Matrix: Air	MTBE @ 0.5 ppb (EPA 8260B)	BTEX (EPA 8260B)	TPH Gas (EPA 8260B)	5 Oxygenates (MTBE, DIPE, ETBE, TAME, TBA) (EPA 8260B)	7 Oxygenates (5 oxy + EtOH, MeOH) (EPA 8260B)	Lead Scav. (1,2 DCA & 1,2 EDB) (EPA 8260B)	Volatile Halocarbons (EPA 8260B)	Volatile Organics Full List (EPA 8260B)	Volatile Organics (EPA 524.2 Drinking Water)	TPH as Diesel (EPA 8015M)	TPH as Motor Oil (EPA 8015M)	CAM 17 Metals (EPA 200.7 / 6010)	5 Waste Oil Metals (Co,Cr,Ni,Pb,Zn) (EPA 200.7 / 6010)	Mercury (EPA 245.1 / 7470 / 7471)	Total Lead (EPA 200.7 / 6010)	W.E.T. Lead (STLC)	[illegible]	EDB & EDC			For Lab Use Only
MW-1D	12/8/08	10:45		6					X			X			X	X	X	X						X									X			01
MW-4D		11:15																																		02
MW-5D		11:45																																		03
MW-7D		12:15																																		04
MW-11D		13:00																	X														X			05
MW-1		13:15																																		06
MW-3		13:45																																		07
MW-7		14:15																																		08

Relinquished by:	Date	Time	Received by:
Eric V. Austin	12-8-08	1635	
Relinquished by:	Date	Time	Received by:
Relinquished by:	Date	Time	Received by Laboratory:
	12/9/08	1120	Kiff Analytical

Remarks:

For Lab Use Only: Sample Receipt

Temp °C	Initials	Date	Time	Therm. ID #	Coolant Present
1.2	KT	12/10/08	1827	IR2	Yes / No

Distribution: White - Lab; Pink - Originator
Rev: 061708

KIFF Analytical LLC

2795 2nd Street, Suite 300
Davis, CA 95618
Lab: 530.297.4800
Fax: 530.297.4802

SRG # / Lab No. 66380

Page 2 of 3

Chain-of-Custody Record and Analysis Request

Project Contact (Hardcopy or PDF To): Rob McLean	California EDF Report? ☒ Yes ☐ No
Company / Address: 229 Tewksbury Ave. Clearwatergroup Of Richmond, CA	Sampling Company Log Code: CWGO
Phone Number: 510-307-9943	Global ID: T0605300219
Fax Number: 510-232-2823	EDF Deliverable To (Email Address): gfisco@clearwatergroup.com
Project #: ZAC4600 / P.O. #:	Bill to:
Project Name: NR2 Eagle Gas Station	Sampler Print Name: Eric V. Austin
	Sampler Signature: Eric V. Austin
Project Address: 9301 San Leandro St. Oakland, CA	

Sample Designation	Sampling: Date	Sampling: Time	Container: 40 ml VOA	Container: Sleeve	Container: Poly	Container: Glass	Container: Tedlar	Preservative: HCl	Preservative: HNO_3	Preservative: None	Matrix: Water	Matrix: Soil	Matrix: Air
MW-2	12-9-08	8:15	6					X			X		
FW-2		9:00											
IS-4		10:00											
MW-8		10:15											
MW-4		10:30											
MW-5		10:45											
IS-5		11:00											
MW-9		11:45											
MW-9d		12:15											

Analysis Request

PLEASE CIRCLE METHOD

Sample Designation	MTBE @ 0.5 ppb (EPA 8260B)	BTEX (EPA 8260B)	TPH Gas (EPA 8260B)	5 Oxygenates (MTBE, DIPE, ETBE, TAME, TBA) (EPA 8260B)	7 Oxygenates (5 oxy + EtOH, MeOH) (EPA 8260B)	Lead Scav. (1,2 DCA & 1,2 EDB) (EPA 8260B)	Volatile Halocarbons (EPA 8260B)	Volatile Organics Full List (EPA 8260B)	Volatile Organics (EPA 524.2 Drinking Water)	TPH as Diesel (EPA 8015M)	TPH as Motor Oil (EPA 8015M)	CAM 17 Metals (EPA 200.7 / 6010)	5 Waste Oil Metals (Cd,Cr,Ni,Pb,Zn) (EPA 200.7 / 6010)	Mercury (EPA 245.1 / 7470 / 7471)	Total Lead (EPA 200.7 / 6010)	W.E.T. Lead (STLC)	EDF	For Lab Use Only
MW-2		X	X	X						X							09
FW-2																	10
IS-4																	11
MW-8																	12
MW-4																	13
MW-5																	14
IS-5																	15
MW-9																	16
MW-9d																	17

TAT

☐ 12 hr ☐ 24 hr ☐ 48hr ☐ 72hr ☒ 1 wk

Relinquished by: Eric V. Austin	Date 12-9-08	Time 1630	Received by:	
Relinquished by:	Date	Time	Received by:	
Relinquished by:	Date 12/10/08	Time 1120	Received by Laboratory: KF Analytical	

Remarks:

For Lab Use Only: Sample Receipt

Temp °C	Initials	Date	Time	Therm. ID #	Cooler
					Y

Distribution: White - Lab; Pink - Originator
Rev: 061708

KIFF Analytical LLC

2795 2nd Street, Suite 300
Davis, CA 95618
Lab: 530.297.4800
Fax: 530.297.4802

SRG # / Lab No. 66380

Page 3 of 3

Chain-of-Custody Record and Analysis Request

Project Contact (Hardcopy or PDF To): Bob Nelson	California EDF Report? ☒ Yes ☐ No
Company / Address: 2151 Fourth Street, Ste. Clearwater Group Pt. Richmond, CA	Sampling Company Log Code: CGRO
Phone Number: 510-307-9943	Global ID: T0600300214
Fax Number: 510-232-2823	EDF Deliverable To (Email Address): jfisco@clearwatergroup.com
Project #: ZP04B1M / P.O. #:	Bill to:
Project Name: NRZ Eagle Gas Station	Sampler Print Name: Eric V. Austin
	Sampler Signature: Eric V. Austin
Project Address: 4130 Smith Corridor NRZ Oakland, CA	

Sample Designation	Sampling: Date	Sampling: Time	Container: 40 ml VOA	Container: Sleeve	Container: Poly	Container: Glass	Container: Tedlar	Preservative: HCl	Preservative: HNO_3	Preservative: None	Preservative:	Preservative:	Matrix: Water	Matrix: Soil	Matrix: Air	MTBE @ 0.5 ppb (EPA 8260B)	BTEX (EPA 8260B)	TPH Gas (EPA 8260B)	5 Oxygenates (MTBE, DIPE, ETBE, TAME, TBA) (EPA 8260B)	7 Oxygenates (5 oxy + EtOH, MeOH) (EPA 8260B)	Lead Scav. (1,2 DCA & 1,2 EDB) (EPA 8260B)	Volatile Halocarbons (EPA 8260B)	Volatile Organics Full List (EPA 8260B)	Volatile Organics (EPA 524.2 Drinking Water)	TPH as Diesel (EPA 8015M)	TPH as Motor Oil (EPA 8015M)	CAM 17 Metals (EPA 200.7 / 6010)	5 Waste Oil Metals (Cd,Cr,Ni,Pb,Zn) (EPA 200.7 / 6010)	Mercury (EPA 245.1 / 7470 / 7471)	Total Lead (EPA 200.7 / 6010)	W.E.T. Lead (STLC)	EDB & EDC				TAT: 1 wk	For Lab Use Only
MW-10	12-9-08	12:30	6					X					X				X	X	X	X				X								X				X	18
MW-10d	12-9-08	13:00	X					X					X				X	X	X	X				X								X				X	19

PLEASE CIRCLE METHOD

TAT: ☐ 12 hr ☐ 24 hr ☐ 48hr ☐ 72hr ☒ 1 wk

Relinquished by:	Date	Time	Received by:
Eric V. Austin	12-9-08	1630	
Relinquished by:	Date	Time	Received by:
Relinquished by:	Date	Time	Received by Laboratory:
	121008	1120	KA Analytical

Remarks:

For Lab Use Only: Sample Receipt

Temp °C	Initials	Date	Time	Therm. ID #	Coolant Present
					Yes / No

Distribution: White - Lab; Pink - Originator
Rev: 061708

ATTACHMENT F

STATE WATER RESOURCES CONTROL BOARD

GEOTRACKER ESI

UPLOADING A EDF FILE

SUCCESS

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

Submittal Type:	**EDF - Monitoring Report - Quarterly**
Submittal Title:	**Groundwater Monitoring 4Q08 (66380)**
Facility Global ID:	**T0600143649**
Facility Name:	**EAGLE GAS**
File Name:	**EDF_NAZEagleGasStation_66380.ZIP**
Organization Name:	**Clearwater Group**
Username:	**CLEARWATERGROUP**
IP Address:	**209.76.203.27**
Submittal Date/Time:	**1/5/2009 1:59:57 PM**
Confirmation Number:	**6993374049**

VIEW QC REPORT

VIEW DETECTIONS REPORT

STATE WATER RESOURCES CONTROL BOARD

GEOTRACKER ESI

UPLOADING A GEO_WELL FILE

SUCCESS

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

Submittal Type:	**GEO_WELL**
Submittal Title:	**Groundwater Monitoring 4Q08**
Facility Global ID:	**T0600143649**
Facility Name:	**EAGLE GAS**
File Name:	**GEO_WELL.zip**
Organization Name:	**Clearwater Group**
Username:	**CLEARWATERGROUP**
IP Address:	**209.76.203.27**
Submittal Date/Time:	**1/5/2009 1:18:10 PM**
Confirmation Number:	**9731167018**

ATTACHMENT G

CLEARWATER GROUP

Low-Flow (Minimal Drawdown) Groundwater Monitoring
Standard Operating Procedure

The purpose of this standard operating procedure (SOP) is to provide a method which minimizes the amount of impact the purging process has on the ground water chemistry during sample collection and to minimize the volume of water that is being purged and disposed. This will take place by placing the pump intake within the screen interval and by keeping the drawdown at a minimal level (0.33 feet) (Puls and Barcelona, 1996) until the water quality parameters have stabilized and sample collection is complete. The flow rate at which the pump will be operating will be depended upon both hydraulic conductivity of the aquifer and the drawdown with the goal of minimizing the drawdown. The flow rate from the pump during purging and sampling will be at a rate that will not compromise the integrity of the analyte that is being sampled. This sampling procedure may or may not provide a discrete ground water sample at the location of the pump intake. The flow of ground-water to the pump intake will be dependent on the distribution of the hydraulic conductivity (K) of the aquifer within the screen interval. In order to minimize the drawdown in the monitoring well a low-flow rate must be utilized. Low-flow refers to the velocity with which water enters the pump intake from the surrounding formation in the immediate vicinity of the well screen. It does not necessarily refer to the flow rate of water discharged at the surface, which can be affected by flow regulators or restrictions (Puls and Barcelona, 1996). This SOP was developed by the Superfund/RCRA Ground Water Forum and draws from an USEPA's Ground Water Issue Paper, Low-Flow (Minimal Drawdown) Ground-Water Sampling Procedure, by Robert W. Puls and Michael J. Barcelona. Also, available USEPA Regional SOPs regarding Low-Stress(Low Flow)Purging and Sampling were used for this SOP.

SCOPE AND APPLICATION

This SOP should be used primarily at monitoring wells which have a screen or an open interval with a length of ten feet or less and can accept a sampling device which minimizes the disturbance to the aquifer or the water column in the well casing. The screen or open interval should have been optimally located to intercept an existing contaminant plume(s) or along flowpaths of potential contaminant releases. Knowledge of the contaminant distribution within the screen interval is highly recommended and is essential for the success of this sampling procedure. The ground-water samples which are collected using this procedure are acceptable for the analyses of ground-water contaminants which may be found at Superfund and RCRA contamination sites. The analytes may be volatile, semi-volatile organic compounds, pesticides, PCBs, metals and other inorganic compounds. The screened interval should be located within the contaminant plume(s) and the pump intake should be placed at or near the known source of the contamination within the screened interval. It is critical to place the pump intake in the exact location or depth for each sampling event. This argues for the use of dedicated, permanently installed sampling devices whenever possible. If this is not possible then the placement of the pump intake should be positioned with a calibrated sampling pump hose sounded with a weighted-tape or using a pre-measured hose. The pump intake should not be placed near the bottom of the screened interval to avoid disturbing any sediment that may have settled at the bottom of the well.

Water-quality indicator parameters and water levels must be measured during purging, prior to sample collection. Stabilization of the water quality parameters as well as monitoring water levels are a prerequisite to sample collection. The water-quality indicator parameters which are recommended include the following: specific electrical conductance, dissolved oxygen, turbidity, oxidation-reduction potential, pH, and temperature. The latter two parameters are useful data, but are generally insensitive as purging parameters. Oxidation-reduction potential may not always be appropriate stabilization parameter, and will depend on site-specific conditions. However, readings should be recorded because of its value as a double check for oxidation conditions, and for fate and transport issues. Also, when samples are collected for metals, semi-volatile organic compounds, and pesticides every effort must be made to reduce turbidity to 10 NTUs or less (not just the stabilization of turbidity) prior to the collection of the water sample. In addition to the measurement of the above parameters, depth to water must be measured during purging (U.S. Environmental Protection Agency, 1995).

Proper well construction, development and maintenance are essential for any ground-water sampling procedure. Prior to conducting the field work, information on the construction of the well and well development should be obtained and that information factored into the site specific sampling procedure. The attached Sampling Checklist is an example of the type of information that is useful.

Stabilization of the water-quality indicator parameters is the criterion for sample collection. But if stabilization is not occurring and the procedure has been strictly followed, then sample collection can take place once three (minimum) to six (maximum) casing volumes have been removed (Schuller et al., 1981 and U.S. Environmental Protection Agency., 1986; Wilde et al., 1998; Gibs and Imbrigiotta., 1990). The specific information on what took place during purging must be recorded in the field notebook or in the ground-water sampling log. This SOP is not to be used where non-aqueous phase liquids (immiscible fluids) are present in the monitoring well.

EQUIPMENT

Depth-to-water measuring device - An electronic water-level indicator or steel tape and chalk, with marked intervals of 0.01 foot. Interface probe for determination of liquid products (NAPL) presence, if needed. Steel tape and weight - Used for measuring total depth of well. Lead weight should not be used. Sampling pump - Submersible or bladder pumps with adjustable rate controls are preferred. Pumps are to be constructed of inert materials, such as stainless steel and teflon®. Pump types that are acceptable include gear and helical driven, centrifugal (low-flow type) and air-activated piston. Adjustable rate, peristaltic pump can be used when the depth to water is 20 feet or less. Tubing - Teflon® or Teflon® lined polyethylene tubing is preferred when sampling for organic compounds. Polyethylene tubing can be used when sampling in organics. Power Source - If a combustion type (gasoline or diesel driven)generator is used, it must be placed downwind of the sampling area. Flow measurement supplies - flow meter, graduated cylinder and a stop watch. Multi-Parameter meter with flow-through-cell - This can be one instrument or more contained in a flow-through cell. The water-quality indicator parameters which must be monitored are pH, ORP/EH, dissolved oxygen (DO), turbidity, pecific conductance, and temperature. Turbidity readings must be collected before the flow cell because of the potential for sediment buildup which can bias the turbidity measurements. Calibration fluids for all

instruments should be NIST-traceable and there should be enough for daily calibration through out the sampling event. The inlet of the flow cell must be located near the bottom of the flow cell and the outlet near the top. The size of the flow cell should be kept to a minimum and a closed cell is preferred. The flow cell must not contain any air or gas bubbles when monitoring for the water-quality indicator parameters. Decontamination Supplies - Including a reliable and documented source of distilled water and any solvents (if used). Pressure sprayers, buckets or decontamination tubes for pumps, brushes and non-phosphate soap will also be needed. Sample bottles, sample preservation supplies, sample tags or labels and chain of custody forms. Approved Field Sampling and Quality Assurance Project Plan. Well construction data, field and water quality data from the previous sampling event. Well keys and map of well locations. Field notebook, ground-water sampling logs and calculator. A suggested field data sheet (ground-water sampling record or ground-water sampling log) are provided in the attachment. Filtration equipment, if needed. An in-line disposable filter is recommended. Polyethylene sheeting which will be placed on ground around the well head. Personal protective equipment specified in the site Health and Safety Plan. Air monitoring equipment as specified in the Site Health and Safety Plan. Tool box - All needed tools for all site equipment used. A 55-gallon drum or container to contain the purged water. Materials of construction of the sampling equipment (bladders, pumps, tubing, and other equipment that comes in contact with the sample) should be limited to stainless steel, Teflon®, glass and other inert material. This will reduce the chance of the sampling materials to alter the ground-water where concentrations of the site contaminants are expected to be near the detection limits. The sample tubing diameter thickness should be maximized and the tubing length should be minimized so that the loss of contaminants into and through the tubing walls may be reduced and the rate of stabilization of ground-water parameters is maximized. The tendency of organics to sorb into and out of material makes the appropriate selection of sample tubing material critical for trace analyses (Pohlmann and Alduino, 1992; Parker and Ranney, 1998).

PURGING AND SAMPLING PROCEDURES

The following describes the purging and sampling procedures for the Low-Stress (Low Flow)/ Minimal Drawdown method for the collection of ground-water samples. These procedures also describe steps for dedicated and non-dedicated systems. Pre-Sampling Activities (Non-dedicated and dedicated system)

1. Sampling locations must begin at the monitoring well with the least contamination, generally up-gradient or furthest from the site or suspected source. Then proceed systematically to the monitoring wells with the most contaminated ground water.

2. Check and record the condition of the monitoring well for damage or evidence of tampering. Lay out polyethylene sheeting around the well to minimize the likelihood of contamination of sampling/purging equipment from the soil. Place monitoring, purging and sampling equipment on the sheeting.

3. Unlock well head. Record location, time, date and appropriate information in a field logbook or on the ground-water sampling log (See attached ground-water sampling record and ground-water sampling log as examples).

4. Remove inner casing cap.

5. Monitor the headspace of the monitoring well at the rim of the casing for volatile organic compounds (VOC) with a Photo-ionization detector (PID) or Flame ionization detector (FID), and record in the logbook. If the existing monitoring well has a history of positive readings of the headspace, then the sampling must be conducted in accordance with the Health and Safety Plan.

6. Measure the depth to water (water level must be measured to nearest 0.01 feet) relative to a reference measuring point on the well casing with an electronic water level indicator or steel tape and record in logbook or ground-water sampling log. If no reference point is found, measure relative to the top of the inner casing, then mark that reference point and note that location in the field logbook. Record information on depth to ground water in the field logbook or ground water sampling log. Measure the depth to water a second time to confirm initial measurement; measurement should agree within 0.01 feet or re-measure.

7. Check the available well information or field information for the total depth of the monitoring well. Use the information from the depth of water in step six and the total depth of the monitoring well to calculate the volume of the water in the monitoring well or the volume of one casing. Record information in field logbook or ground-water sampling log. Purging and Sampling Activities.

8A. Non-dedicated system - Place the pump and support equipment at the wellhead and slowly lower the pump and tubing down into the monitoring well until the location of the pump intake is set at a pre-determined location within the screen interval. The placement of the pump intake should be positioned with a calibrated sampling pump hose, sounded with a weighted-tape, or using a pre-measured hose. Refer to the available monitoring well information to determine the depth and length of the screen interval. Measure the depth of the pump intake while lowering the pump into location. Record pump location in field logbook or groundwater sampling log.

8B. Dedicated system - Pump has already been installed, refer to the available monitoring well information and record the depth of the pump intake in the field logbook or ground-water sampling log.

9. Non-dedicated system and dedicated system - Measure the water level (water level must be measured to nearest 0.01 feet) and record information on the ground-water sampling log, leave water level indicator probe in the monitoring well.

10. Non-dedicated and dedicated system - Connect the discharge line from the pump to a flow-through cell. A "T" connection is needed prior to the flow cell to allow for the collection of water for the turbidity measurements. The discharge line from the flow-through cell must be directed to a container to contain the purge water during the purging and sampling of the monitoring well.

11. Non-dedicated and dedicated system - Start pumping the well at a low flow rate (0.2 to 0.5 liter per minute) and slowly increase the speed. Check water level. Maintain a steady flow rate while maintaining a drawdown of less than 0.33 feet (Puls and Barcelona, 1996). If drawdown is greater than 0.33 feet lower the flow rate. 0.33 feet is a goal to help guide with the flow rate adjustment. It should be noted that this goal may be difficult to achieve under some

circumstances due to geologic heterogeneities within the screened interval, and may require adjustment based on site-specific conditions and personal experience (Puls and Barcelona, 1996).

12. Non-dedicated and dedicated system - Measure the discharge rate of the pump with a graduated cylinder and a stop watch. Also, measure the water level and record both flow rate and water level on the groundwater sampling log. Continue purging, monitor and record water level and pump rate every three to five minutes during purging. Pumping rates should be kept at minimal flow to ensure minimal drawdown in the monitoring well.

13. Non-dedicated and dedicated system - During the purging, a minimum of one tubing volume (including the volume of water in the pump and flow cell) must be purged prior to recording the water-quality indicator parameters. Then monitor and record the water-quality indicator parameters every three to five minutes. The water-quality indicator field parameters are turbidity, dissolved oxygen, specific electrical conductance, pH, redoxpotential and temperature. Oxidation-reduction potential may not always be an appropriate stabilization parameter, and will depend on site-specific conditions. However, readings should be recorded because of its value as a double check for oxidizing conditions. Also, for the final dissolved oxygen measurement, if the readings are less than 1 milligram per liter, it should be collected and analyze with the spectrophotometric method (Wilde et al., 1998 Wilkin et al., 2001), colorimetric or Winkler titration (Wilkin et al., 2001). The stabilization criterion is based on three successive readings of the water quality field parameters; the following are the criteria which must be used:

Parameter Stabilization Criteria Reference
pH ± 0.1 pH units Puls and Barcelona, 1996;
Wilde et al.,
Specific electrical conductance (SEC)
± 3% FS/cm Puls and Barcelona, 1996
oxidation-reduction potential (ORP)
± 10 millivolts Puls and Barcelona 1996
turbidity ± 10 % NTUs (when turbidity is greater than 10 NTUs)
Puls and Barcelona, 1996
Wilde et al., 1998
dissolved oxygen ± 0.3 milligrams per liter Wilde et al., 1998

Once the criteria have been successfully met indicating that the water quality indicator parameters have stabilized, then sample collection can take place.

14. If a stabilized drawdown in the well can't be maintained at 0.33 feet and the water level is approaching the top of the screened interval, reduce the flow rate or turn the pump off (for 15 minutes) and allow for recovery. It should be noted whether or not the pump has a check valve. A check valve is required if the pump is shut off. Under no circumstances should the well be pumped dry. Begin pumping at a lower flow rate, if the water draws-down to the top of the screened interval again turn pump off and allow for recovery. If two tubing volumes (including the volume of water in the pump and flow cell) have been removed during purging then sampling can proceed next time the pump is turned on. This information should be noted in the field notebook or ground-water sampling log with a recommendation for a different purging and sampling procedure.

15. Non-dedicated and dedicated system - Maintain the same pumping rate or reduce slightly for sampling (0.2 to 0.5 liter per minute) in order to minimize disturbance of the water column.

Samples should be collected directly from the discharge port of the pump tubing prior to passing through the flow-through cell. Disconnect the pump's tubing from the flow-through-cell so that the samples are collected from the pump's discharge tubing. For samples collected for dissolved gases or Volatile Organic Compounds (VOCs) analyses, the pump's tubing needs to be completely full of ground water to prevent the ground water from being aerated as the ground water flows through the tubing. The sequence of the samples is immaterial unless filtered (dissolved) samples are collected and they must be collected last (Puls and Barcelona, 1996). All sample containers should be filled with minimal turbulence by allowing the ground water to flow from the tubing gently down the inside of the container. When filling the VOC samples a meniscus must be formed over the mouth of the vial to eliminate the formation of air bubbles and head space prior to capping. In the event that the ground water is turbid,(greaterthen 10 NTUs), a filtered metal (dissolved) sample also should be collected. If filtered metal sample is to be collected, then an in-line filter is fitted at the end of the discharge tubing and the sample is collected after the filter. The in-line filter must be pre-rinsed following manufacturer's recommendations and if there are no recommendations for rinsing, a minimum of 0.5 to 1 liter of ground water from the monitoring well must pass through the filter prior to sampling.

16A. Non-dedicated system - Remove the pump from the monitoring well. Decontaminate the pump and dispose of the tubing if it is non-dedicated.

16B Dedicated system - Disconnect the tubing that extends from the plate at the wellhead (or cap) and discard after use.

17. Non-dedicated system - Before locking the monitoring well, measure and record the well depth (to 0.1 feet). Measure the total depth a second time to confirm initial measurement; measurement should agree within 0.01 feet or re-measure.

18. Non-dedicated and dedicated system - Close and lock the well.

DECONTAMINATION PROCEDURES

Decontamination procedures for the water level meter and the water quality field parameter sensors. The electronic water level indicator probe/steel tape and the water-quality field parameter sensors will be decontaminated by the following procedures:

1. The water level meter will be hand washed with phosphate free detergent and a scrubber, then thoroughly rinsed with distilled water.

2. Water quality field parameter sensors and flow-through cell will be rinsed with distilled water between sampling locations. No other decontamination procedures are necessary or recommended for these probes since they are sensitive. After the sampling event, the flow cell and sensors must be cleaned and maintained per the manufacturer's requirements. Decontamination Procedure for the Sampling Pump Upon completion of the ground water sample collection the sampling pump must be properly decontaminated between monitoring wells. The pump and discharge line including support cable and electrical wires which were in contact with the ground water in the well casing must be decontaminated by the following procedure:

1. The outside of the pump, tubing, support cable and electrical wires must be pressured sprayed with soapy water, tap water and distilled water. Spray outside of tubing and pump until water is flowing off of tubing after each rinse. Use bristle brush to help remove visible dirt and contaminants.

2.Place the sampling pump in a bucket or in a short PVC casing (4-in. diameter) with one end capped. The pump placed in this device must be completely submerged in the water. A small amount of phosphate free detergent must be added to the potable water (tap water).

3. Remove the pump from the bucket or 4-in. casing and scrub the outside of the pump housing and cable.

4. Place pump and discharge line back in the 4-in. casing or bucket, start pump and re-circulate this soapy water for 2 minutes (wash).

5. Re-direct discharge line to a 55-gallon drum, continue to add 5 gallons of potable water (tap water)or until soapy water is no longer visible.

6. Turn pump off and place pump into a second bucket or 4-in. Casing which contains tap water, continue to add 5-gallons of tap water (rinse).

7. Turn pump off and place pump into a third bucket or 4-in. casing which contains distilled/deionized water, continue to add three to five gallons of distilled/deionized water (final rinse).

8. If a hydrophobic contaminant is present (such as separate phase, high levels of PCB's, etc.) An additional decon step, or steps, may be added. For example, an organic solvent, such as reagent-grade isopropanol alcool may be added as a first spraying/bucket prior to the soapy water rinse/bucket.

FIELD QUALITY CONTROL

Quality control (QC) samples must be collected to verify that sample collection and handling procedures were performed adequately and that they have not compromised the quality of the ground water samples. The appropriate EPA program guidance must be consulted in preparing the field QC sample requirements for the site-specific Quality Assurance Project Plan (QAPP).

There are five primary areas of concern for quality assurance (QA) in the collection of representative ground-water samples:

1. Obtaining a ground-water sample that is representative of the aquifer or zone of interest in the aquifer. Verification is based on the field log documenting that the field water-quality parameters stabilized during the purging of the well, prior to sample collection.

2. Ensuring that the purging and sampling devices are made of materials, and utilized in a manner, which will not interact with or alter the analyses.

3. Ensuring that results generated by these procedures are reproducible; therefore, the sampling scheme should incorporate co-located samples (duplicates).

4. Preventing cross-contamination. Sampling should proceed from least to most contaminated wells, if known. Field equipment blanks should be incorporated for all sampling and purging equipment, and decontamination of the equipment is therefore required.

5. Properly preserving, packaging, and shipping samples. All field quality control samples must be prepared the same as regular investigation samples with regard to sample volume, containers, and preservation. The chain of custody procedures for the QC samples will be identical to the field ground water samples. The following are quality control samples which must be collected during the sampling event:

Sample Type Frequency
Field duplicates 1 per 20 samples
Matrix spike 1 per 20 samples
Matrix spike duplicate 1 per 20 samples
Equipment blank Per Regional requirements or policy
Trip blank (VOCs) 1 per sample cooler
Temperature blank 1 per sample cooler

HEALTH AND SAFETY CONSIDERATIONS

Depending on the site-specific contaminants, various protective programs must be implemented prior to sampling the first well. The site Health and Safety Plan should be reviewed with specific emphasis placed on the protection program planned for the sampling tasks. Standard safe operating practices should be followed, such as minimizing contact with potential contaminants in both the liquid and vapor phase through the use of appropriate personal protective equipment. Depending on the type of contaminants expected or determined in previous sampling efforts, the following safe work practices will be employed:

Particulate or metals contaminants

1. Avoid skin contact with, and incidental ingestion of, purge water.

2. Use protective gloves and splash protection.

Volatile organic contaminants

1. Avoid breathing constituents venting from well.

2. Pre-survey the well head space with an appropriate device as specified in the Site Health and Safety Plan.

3. If monitoring results indicate elevated organic constituents, sampling activities may be conducted in level C protection. At a minimum, skin protection will be afforded by disposable protective clothing, such as Tyvek®. General, common practices should include avoiding skin contact with water from preserved sample bottles, as this water will have pH less than 2 or

greater than 10. Also, when filling pre-acidified VOA bottles, hydrochloric acid fumes may be released and should not be inhaled.

POST-SAMPLING ACTIVITIES

Several activities need to be completed and documented once ground-water sampling has been completed. These activities include, but are not limited to:

1. Ensure that all field equipment has been decontaminated and returned to proper storage location. Once the individual field equipment has been decontaminated, tag it with date of cleaning, site name, and name of individual responsible.

2. All sample paperwork should be processed, including copies provided to the Regional Laboratory, Sample Management Office, or other appropriate sample handling and tracking facility.

3. All field data should be complied for site records.

4. All analytical data when processed by the analytical laboratory, should be verified against field sheets to ensure all data has been returned to sampler.

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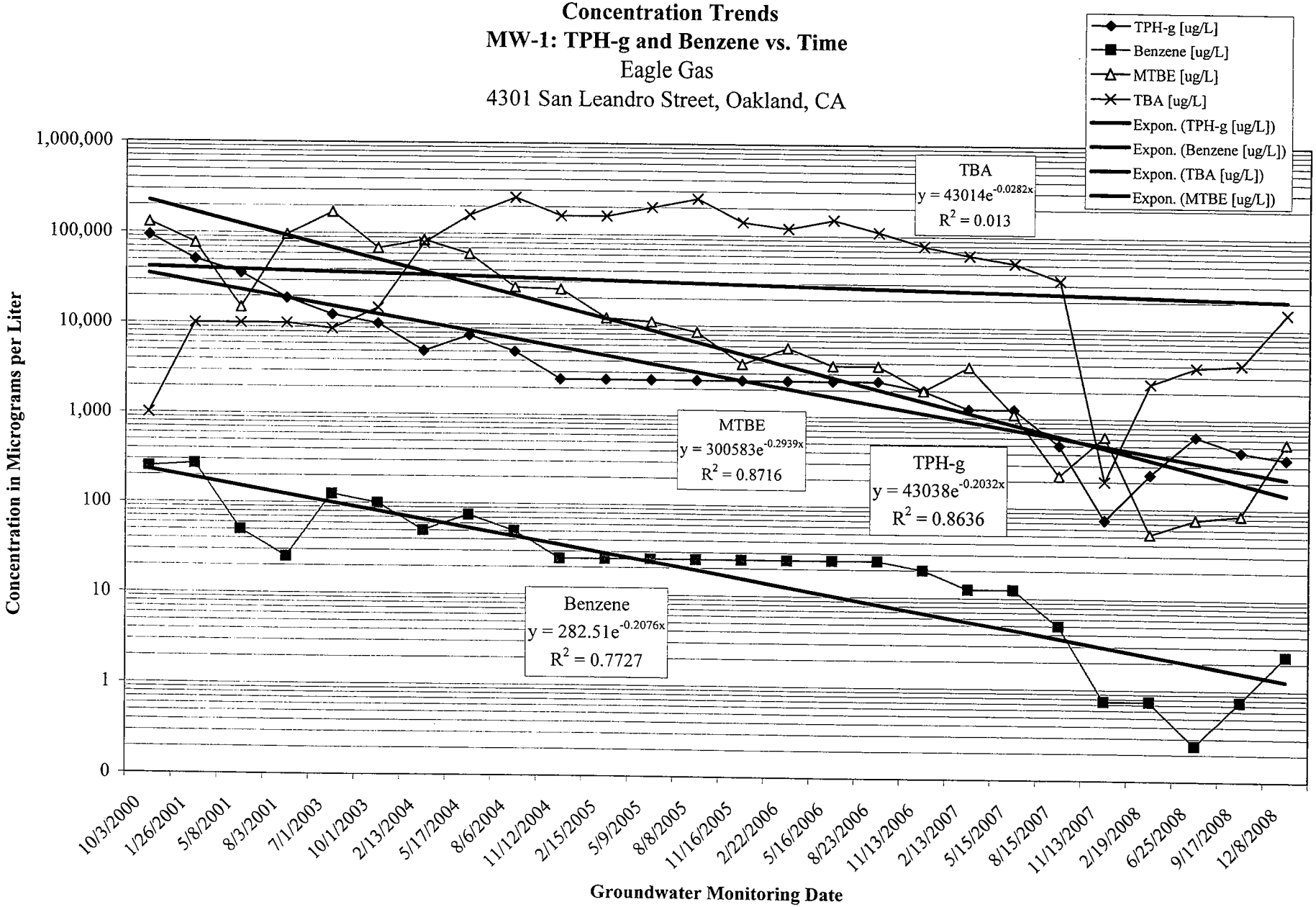
ATTACHMENT H

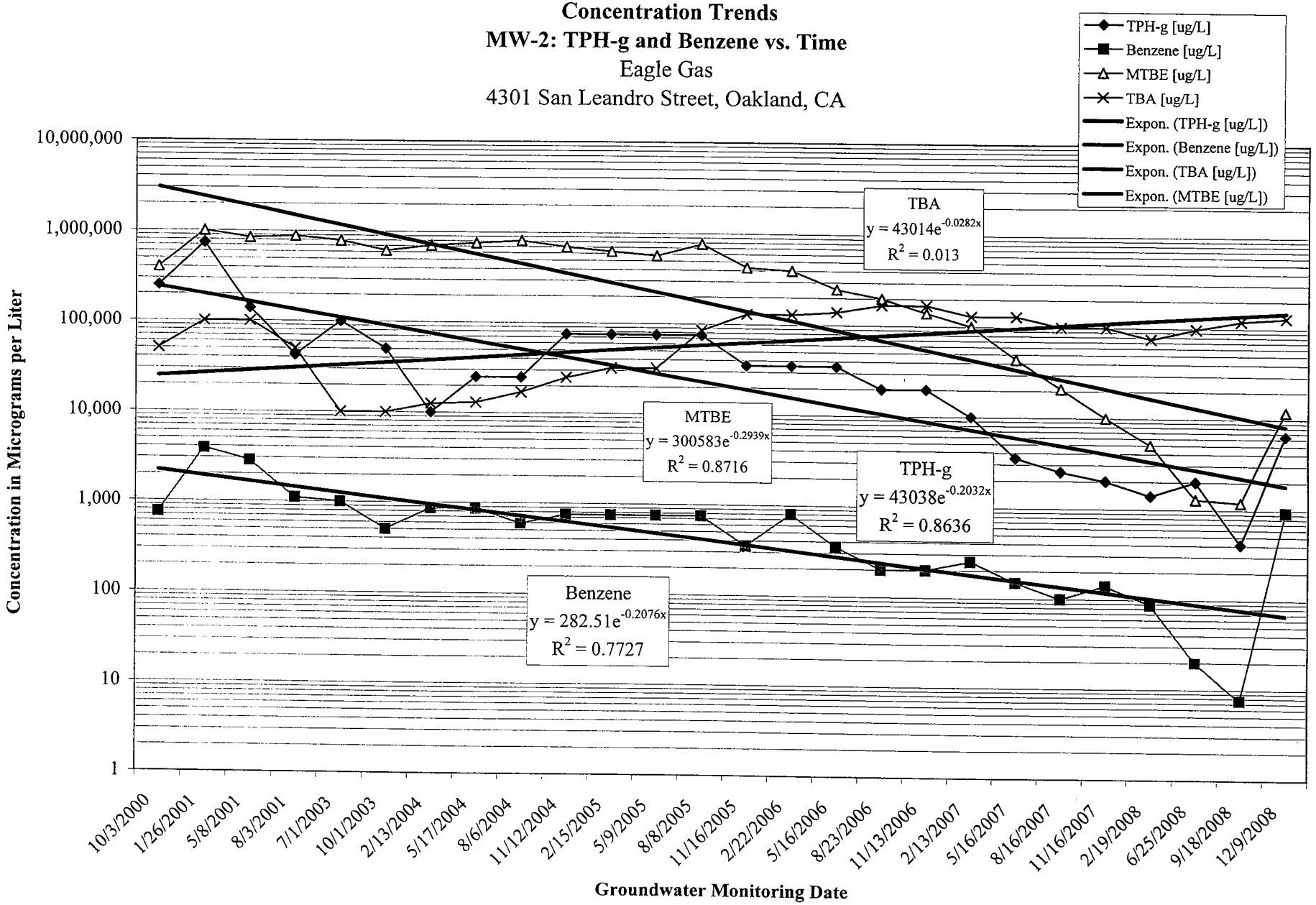
Figure 1
Concentration Trends
MW-1: TPH-g and Benzene vs. Time
Eagle Gas
4301 San Leandro Street, Oakland, CA



ZP046

January 2009

Figure 2
Concentration Trends
MW-2: TPH-g and Benzene vs. Time
Eagle Gas
4301 San Leandro Street, Oakland, CA



ZP046

January 2009

Figure 3
Concentration Trends
MW-3: TPH-g and Benzene vs. Time
Eagle Gas
4301 San Leandro Street, Oakland, CA

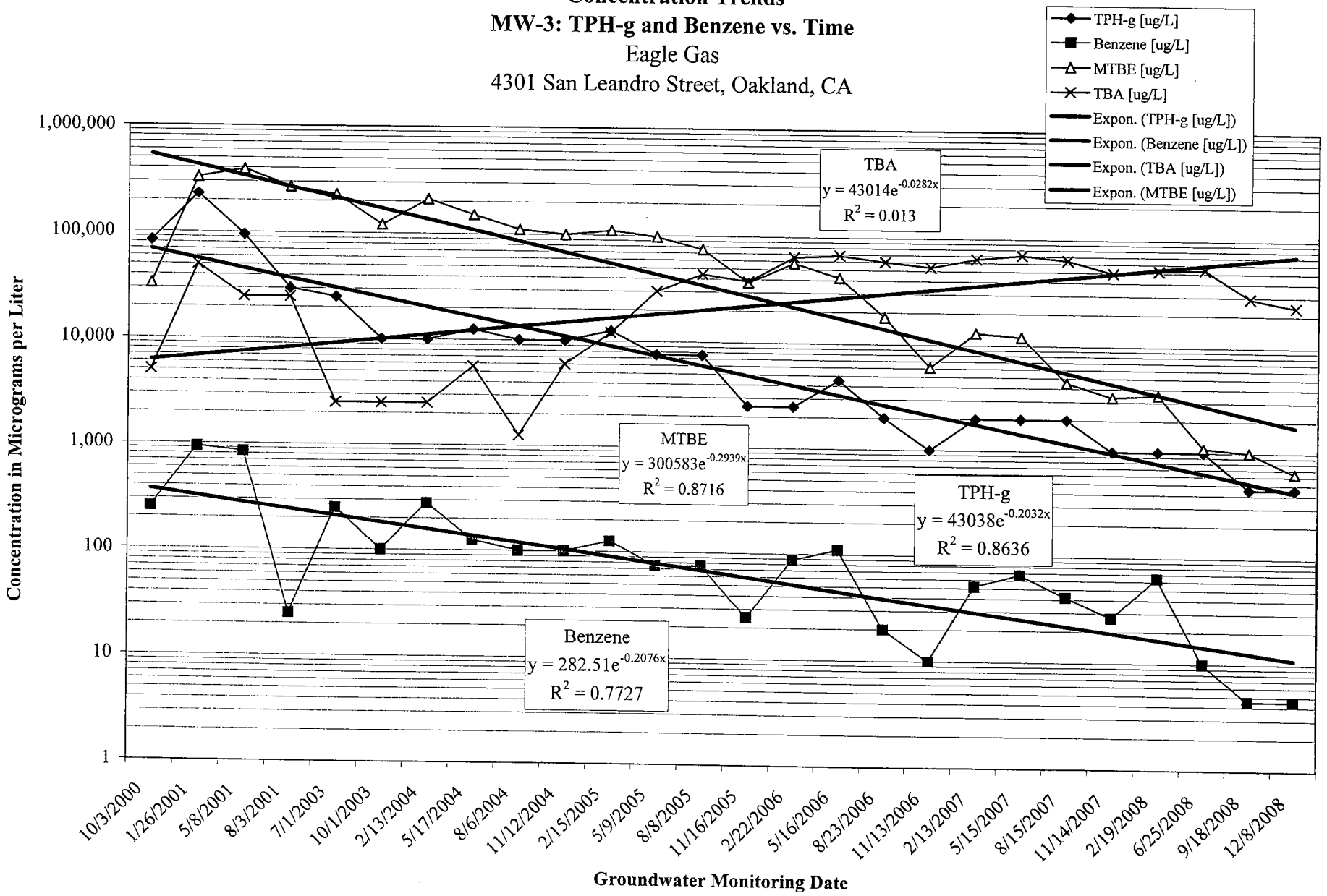


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Figure 4
Concentration Trends
MW-4: TPH-g and Benzene vs. Time
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4301 San Leandro Street, Oakland, CA

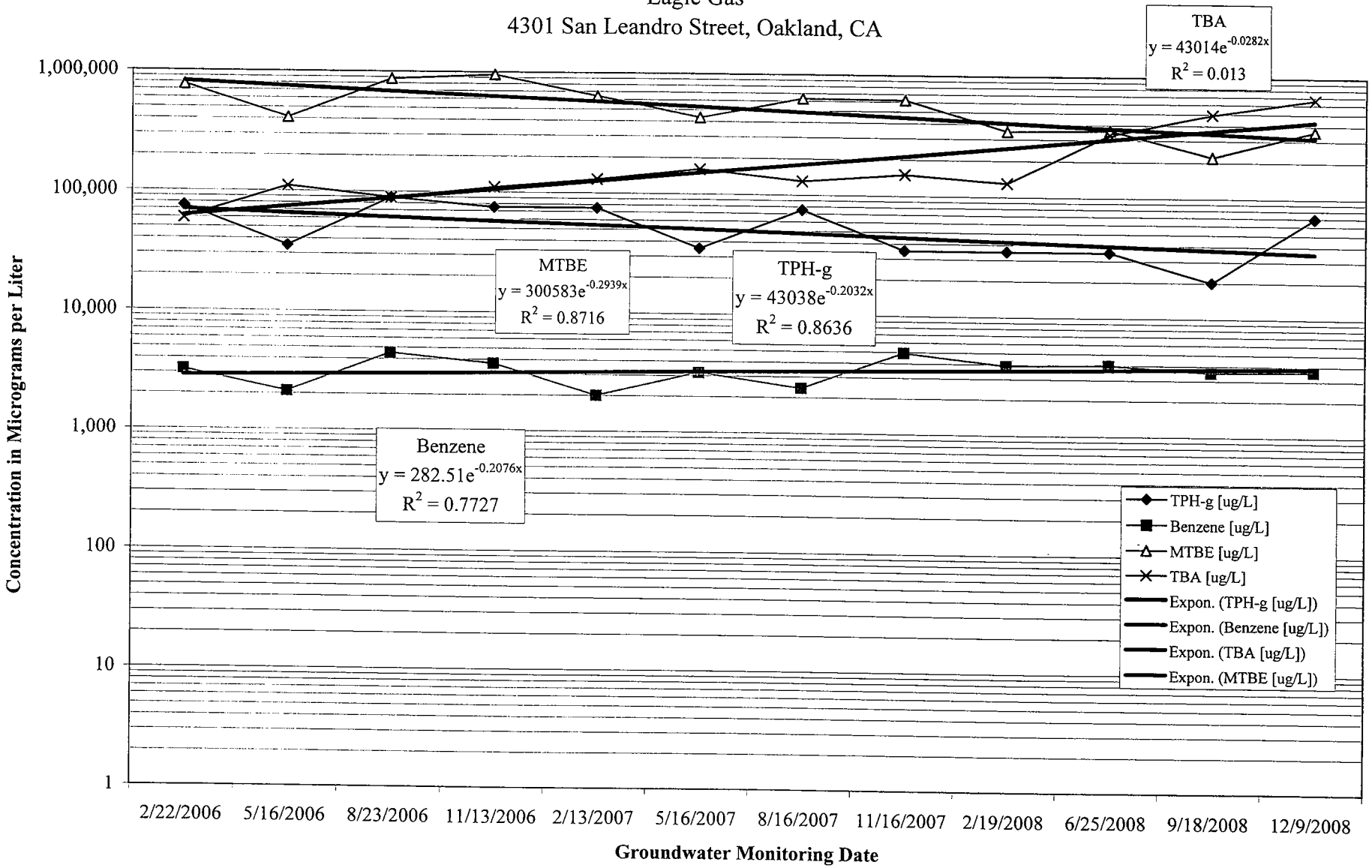

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Figure 5
Concentration Trends
MW-5: TPH-g and Benzene vs. Time
Eagle Gas
4301 San Leandro Street, Oakland, CA

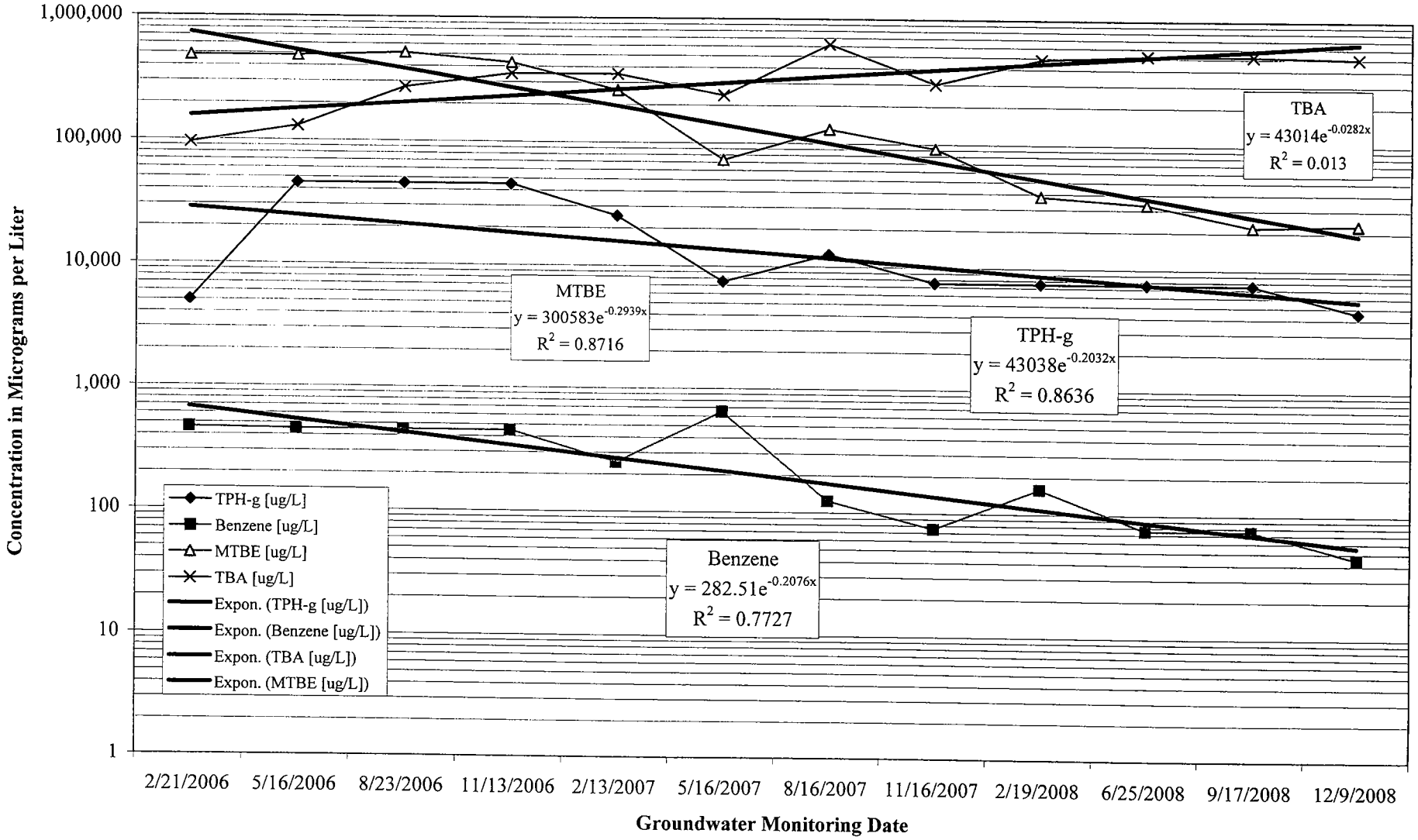

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Figure 6
Concentration Trends
MW-6: TPH-g and Benzene vs. Time
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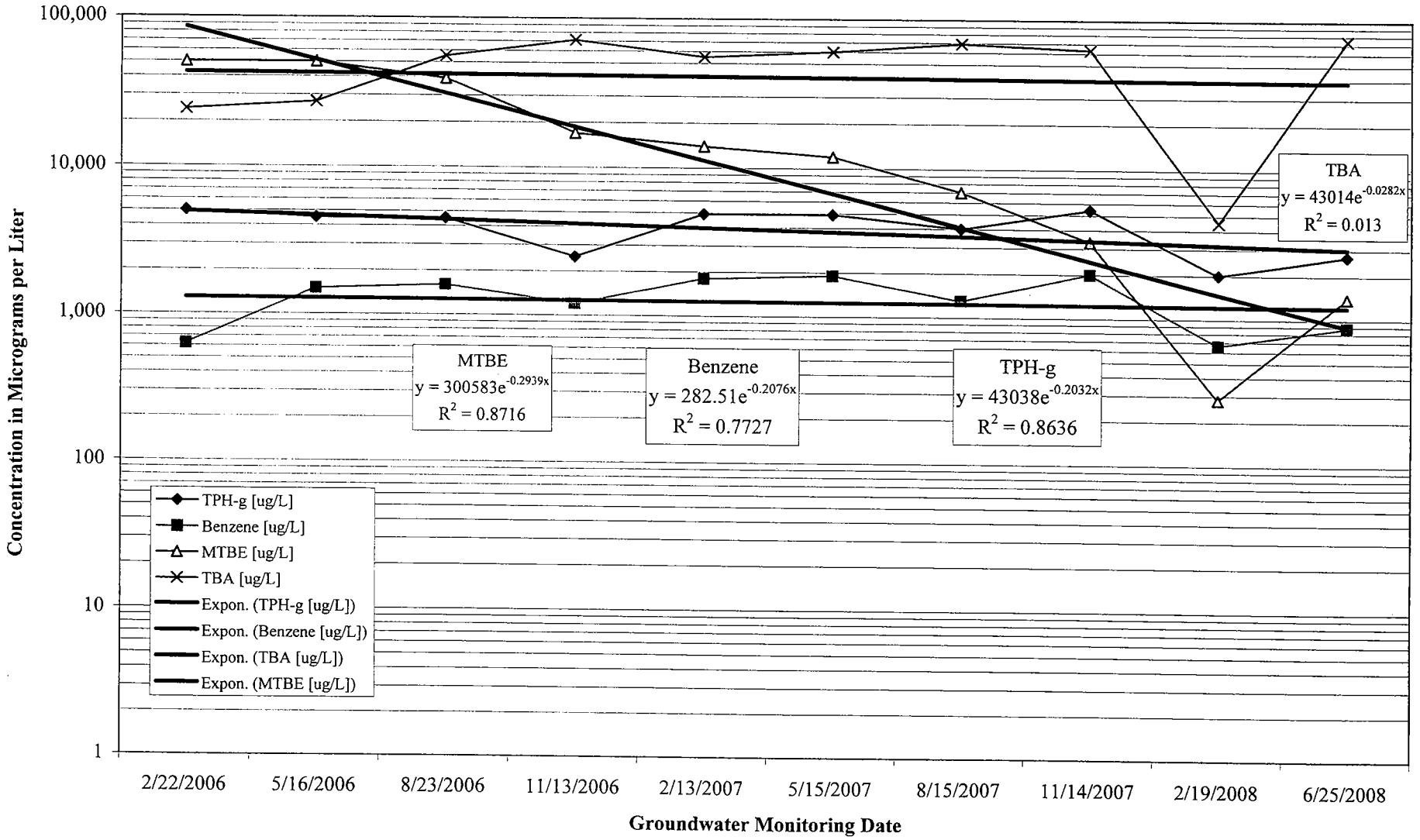

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Figure 7
Concentration Trends
MW-7: TPH-g and Benzene vs. Time
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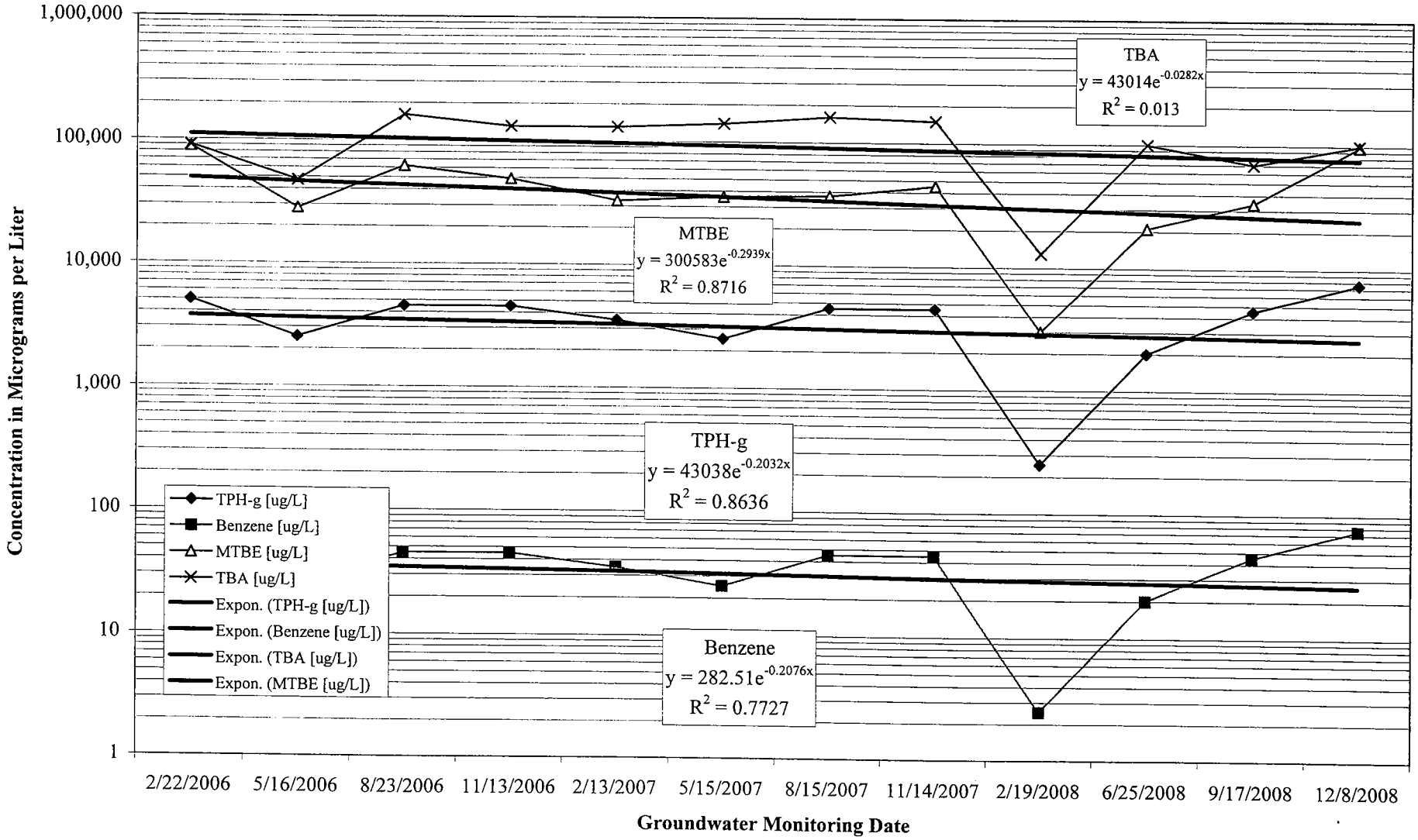

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Figure 8
Concentration Trends
MW-8: TPH-g and Benzene vs. Time
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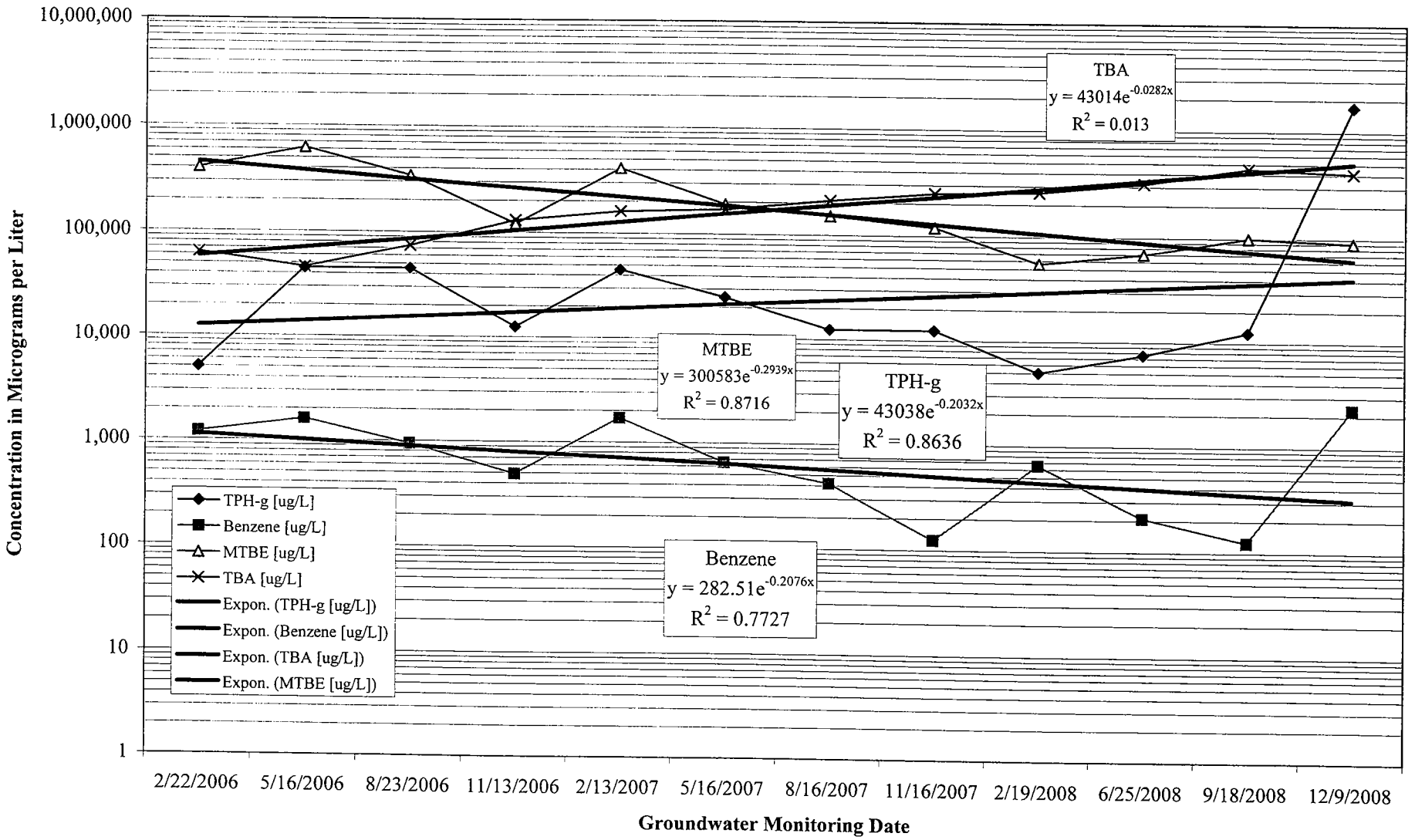

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