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Alameda County Environmental Health

Fiesta Beverages 7150 Island Queen Dr. Sparks, NV 89436

3/4/07

Mr. Barney Chan Alameda County Health Care Services Agency Environmental Protection Division 1131 Harbor Bay Parkway, Suite 250 Alameda, CA 94502-6577

Re: Perjury Statement

Former Fiesta Beverages Facility

966 89th Avenue Oakland, California

ACDEH Fuel Leak Site # RO0000314

Dear Mr Chan,

"I declare under penalty of perjury, that the information and / or recommendations contained in the attached proposal or report is true and correct to the best of my knowledge."

Ted Walbey, Owner

First Quarter 2007 Groundwater Monitoring Event

Former Fiesta Beverages Facility 966 89th Avenue Oakland, California 94621 ACHCSA Fuel Leak Site # RO0000314

> March 8, 2007 BEI Job No. 203004

> > Prepared for:

Mr. Ted Walbey Fiesta Beverages 7150 Island Queen Dr. Sparks, NV 89436

Prepared by:

Blymyer Engineers, Inc. 1829 Clement Avenue Alameda, CA 94501-1395 (510) 521-3773

Limitations

Services performed by Blymyer Engineers, Inc. have been provided in accordance with generally accepted professional practices for the nature and conditions of similar work completed in the same or similar localities, at the time the work was performed. The scope of work for the project was conducted within the limitations prescribed by the client. This report is not meant to represent a legal opinion. No other warranty, expressed or implied, is made. This report was prepared for the sole use of the client, Fiesta Beverages.

Blymyer Engineers, Inc.

No. 1788

Mark E. Detterman, CEG Senior Geologist

And: Michael S. Lewis, REA

Vice President, Technical Services

Table of Contents

1.0 In	ntroduction and Background	1
2.0 G	Groundwater Sample Collection and Analytical Methods	7
3.0 G	Groundwater Flow Data and Groundwater Sample Analytical Results	8
4.0 In	ntrinsic Bioremediation Groundwater Sample Analytical Results	10
5.0 C	Conclusions and Recommendations	12
	Tables	
Table I:S	ummary of Groundwater Elevation Measurements	
Table II:	Summary of Groundwater Sample Hydrocarbon Analytical Results	
Table III:	Summary of Groundwater Sample Fuel Oxygenate Analytical Results	
Table IV:	: Summary of Groundwater Intrinsic Bioremediation Field Results	
Table V:	Summary of Groundwater Intrinsic Bioremediation Analytical Results	
	Figures	
Figure 1:	Site Location Map	
Figure 2:	•	
Figure 3:		
Figure 4:		
	Appendix	
A a d':	A. Standard On writing Dungs have Diving Took Services In-	
Appendix Appendix		, Inc., Dated
Appendix	•	27, 2007

1.0 Introduction and Background

In August 1990, one 500-gallon and one 1,000-gallon gasoline underground storage tanks (USTs) were removed from the subject site (Figures 1 and 2). Soil and groundwater were reported to be impacted from releases from one or both USTs. Overexcavation of the former UST basins occurred in January 1991. The excavations were reported to have reached approximately 15 feet by 8 feet by 14 feet deep and 12 feet by 7 feet by 14 feet deep, respectively, on January 14, 1991. Beginning in April 1991, aeration of the soil occurred onsite. In April 1993, 74.28 tons of soil were transported to the Remco recycling facility.

In June 1993, groundwater monitoring wells MW-1, MW-2, and MW-3 were installed. In general, the wells encountered black to grey to light brown clay to a depth of approximately 15 below grade surface (bgs). At 15 feet bgs, the three bores encountered a 0.5- to 2.0-foot-thick clayey sand. Below this unit a light brown to grey clay was present to a depth of 18 to 21 feet bgs. Underneath this unit, a 1- to 3-foot-thick sand was encountered in bores MW-1 and MW-2, while a clayey silt was encountered in bore MW-3. Below approximately 21 feet bgs, a green-grey or black clay was encountered to the full explored depth of 26.5 feet bgs in bore MW-1 and to 25 feet bgs in bores MW-2 and MW-3. Saturated soil was encountered below a depth of approximately 13 feet bgs (in clay overlaying the uppermost sand unit). The wells were installed with a screened interval between 10 and 25 feet bgs. Groundwater from the three wells was sampled six times between August 1993 and December 1998.

In November 1999, after obtaining appropriate permits, AllCal Property Services, Inc. (AllCal) installed four Geoprobe⁷ soil bores downgradient from the former location of the two USTs. The bores were installed in the public right-of-way across 89th Avenue from the subject site, in an unpaved portion of the roadway. Soil bores SB-1 and SB-2 were logged to a depth of 16 feet bgs. Silty clay was encountered to a depth of approximately 13 to 14 feet bgs. Below that depth, soil consisted of clayey silt that alternated between moist and saturated for several vertical feet. Bore SB-1 also encountered a poorly graded sand at 16 feet bgs. Hydrocarbon odors were present in both bores at a depth of approximately 6 feet bgs and green discolored soil was present at 10 feet bgs in bore SB-1. Discolored soil and gasoline odors were noted in both bores throughout the clayey silt, while brownish colored clay was present in both

bores just above the silt. The groundwater interface appears to have been encountered at an approximate depth of 16 feet bgs in the sand. A sheen was noted at that depth in SB-1. Groundwater samples were obtained from bores SB-1 and SB-2 after pushing the Geoprobe⁷ system to a total depth of 18 feet bgs. Soil bores SB-3 and SB-4 were directly pushed to a total depth of 18 feet bgs in order to obtain grab groundwater samples. Groundwater samples from bores SB-1 and SB-2 contained elevated concentrations of Total Petroleum Hydrocarbons (TPH) as gasoline, and benzene, toluene, ethylbenzene, and total xylenes (BTEX). Significantly lower concentrations of TPH as gasoline and total xylenes were encountered in the groundwater sample from soil bore SB-3, while all analytes were nondetectable in groundwater collected from soil bore SB-4. No soil samples were submitted for laboratory analysis from the four Geoprobe⁷ bores.

After the review of the January 2001 groundwater monitoring report, the Alameda County Health Care Services Agency (ACHCSA) approved the application of a 7% solution of hydrogen peroxide to the wells in an attempt to remediate dissolved constituents. On March 7, 2001, the solution was applied by AllCal and on April 25, 2001, a groundwater monitoring event was conducted to determine if a reduction in dissolved constituents had occurred. Based on the analytical data, a reduction was seen in wells MW-1 and MW-2, with some reductions also seen in well MW-3. This sampling event and subsequent interpretation was complicated by the presumed mis-marking of samples from wells MW-1 and MW-3. No further work at the site is known to have occurred between April 2001 and the March 2003 groundwater monitoring event.

On January 16, 2003, a new case manager, Mr. Amir Gholami, was appointed by the ACHCSA. On September 17, 2003, a workplan for a Geoprobe⁷ investigation of the site was submitted to the ACHCSA. The intent was to attempt to determine the lateral and vertical extent of impacted soil and groundwater in order to better target the residual contamination in future remedial actions to be determined. Due to the lack of a response from the ACHCSA, on February 17, 2004, Blymyer Engineers issued a *Letter of Intent to Proceed: Geoprobe Investigation*.

The Fourth Quarter 2003 Groundwater Monitoring Event report, dated January 6, 2004, recommended that analysis for fuel oxygenates by EPA Method 8260B be eliminated from the analytical

program. It was reasoned that the data generated to date had been very consistent, and further quantification would not significantly add to the level of understanding at the site. Additionally, the concentration of methyl *tert*-butyl ether (MTBE) can be monitored using EPA Method 8021B for no additional cost, and the resultant concentration of MTBE can be used as a proxy for the approximate concentration of the remaining fuel oxygenates. Based on the lack of response from the ACHCSA, it has been presumed that this was found reasonable and acceptable.

On March 15, 2004, Blymyer Engineers issued a letter entitled *Recommendation for Reduction of Groundwater Monitoring* that provided additional rationale for decreasing the groundwater sampling interval from quarterly to semi-annually. It argued that generation of quarterly analytical data would not significantly improve the level of understanding of impacts to the subsurface at the site, and recommended a reduction of the sampling interval to semi-annual. Based on the lack of response from the ACHCSA, it has been presumed that this was found reasonable and acceptable.

On December 14, 2004, Blymyer Engineers issued to the ACHCSA the *Report on a Geoprobe® Subsurface Investigation* which documented the installation of nine Geoprobe® soil bores at the site. The work further refined the known lateral and vertical extent of soil impacted by the petroleum release at the site. Grab groundwater samples in the upgradient and the eastern cross-gradient directions defined all petroleum compounds in groundwater to concentrations below the San Francisco Bay Regional Water Quality Control Board (RWQCB) Environmental Screening Levels (ESLs). Grab groundwater samples in the downgradient and western cross-gradient directions were unable to define most petroleum compounds to concentrations below the RWQCB ESLs. The installation of additional permanent groundwater monitoring wells was recommended as appropriate at the site in order to allow for groundwater sampling from a "repeatedly accessed location". It was reasoned that data generated from these locations will assist in determining appropriate remedial actions, and in monitoring remedial progress.

On July 6, 2005, the new case manager for the ACHCSA, Mr. Barney Chan, issued the letter *Fuel Leak Case R00000314* commenting on the December 14, 2004 report. The ACHCSA determined that the collection of additional data is needed to progress the site towards closure. The letter requested a workplan to clear well MW-1 of several feet of sediment due to the potential for groundwater gradient

biasing, requested further definition of the groundwater and soil plumes through the installation of additional wells and soil bores, requested a conduit study, and requested a Feasibility Study and Remedial Action Plan.

Blymyer Engineers submitted the *Workplan for Remedial Investigation / Feasibility Study*, on October 10, 2005. The Workplan detailed the procedures for the collection of Remediation by Natural Attenuation (RNA) analytical parameters from existing wells as an initial phase of a Remedial Investigation / Feasibility Study (RI/FS), as well as the installation of four additional groundwater monitoring wells, and the destruction and reinstallation of groundwater monitoring well MW-1. On November 18, 2005, the ACHCSA issued the letter *Fuel Leak Case RO0000314* commenting on the Workplan. The ACHCSA requested the following:

- The addition of two wells at specified locations for further plume characterization,
- Use of a maximum of 10 feet of screen in the wells,
- Confirmation of the presence of MTBE by EPA Method 8260 if MTBE concentrations rose significantly, and
- Collection of the RNA parameters.

The ACHCSA requested confirmation that the additional wells would be added by December 19, 2005, and that a RI/FS report would be submitted by February 19, 2006. Confirmation that the additional wells would be included was provided by telephone in December 2005; however, permitting issues delayed installation of the wells. The *Remedial Investigation / Feasibility Study Report* (RI/FS Report), dated September 8, 2006, was submitted to ACHCSA on October 6, 2006.

The RI/FS report documented the destruction of well MW-1, the installation of replacement well MW-1R, and the installation of wells MW-4 through MW-9. The soil and groundwater data collected in the effort achieved vertical delineation, as well as upgradient, lateral, and downgradient delineation of all hydrocarbon compounds in soil and groundwater, with the exception of MTBE in groundwater. MTBE was delineated to below the MCL and the *non-drinking water* ESL goal for the compound, but was

slightly above the *drinking water* goal. Because the site is in an area that is not known to extensively use

groundwater as a drinking water source, the numeric remedial goals were predominantly compared to the

non-drinking water ESL goals; however, the ACHCSA may ultimately apply drinking water ESL goals

to remedial efforts at the site.

Higher concentrations of TPH as gasoline appear to be relatively isolated near the former source (MW-1,

MW-1R, GP-5, and GP-2; the latter based on PID results only). The presence of slightly higher

concentrations at GP-6 or GP-8 likely indicates lateral migration through the clay units in the vadose zone

in very thin, interbedded coarser grained deposits with more permeability and porosity. A conduit survey

indicated that, due to depth of burial, the utility corridors do not appear to be acting as significant conduits

in the site vicinity for groundwater movement and therefore contaminant migration. A notable decrease in

analyte concentrations in soil is apparent with increasing depth. Generic non-drinking water ESL goals

for soil were not exceeded for any compound beneath approximately 12 feet bgs.

The distribution of nitrate, methane and dissolved oxygen indicate that the TPH as gasoline groundwater

plume is undergoing anaerobic degradation. Specifically, the elevated concentrations of nitrate observed in

perimeter wells MW-4 through MW-9, in comparison to the concentration of nitrate in plume core wells

MW-1/1R, MW-2 and MW-3, where the concentration is reduced to essentially one-half of its perimeter

levels, and the correspondingly high methane concentrations in the plume core area suggest that active

anaerobic degradation is occurring. The source of nitrate is likely leaking sewer lines located along 89th

Avenue.

For the site as a whole, the limited area of hydrocarbon degradation suggested by the RNA data,

collectively with the laboratory notes indicating relatively unmodified gasoline range hydrocarbons are

present in soil and groundwater samples, and the continued recontamination of groundwater documented

by graphs depicted on Figures 10 through 13 of the RI/FS Report, appear to document a release that is

undergoing anaerobic microbial degradation, that RNA is oxygen limited, has reached stability with the

surrounding area, and will not progress significantly further without remedial efforts.

First Quarter 2007 Groundwater Monitoring Event

Former Fiesta Beverage Facility Fuel Leak Case RO0000314

March 8, 2007

Six potential remedial options were evaluated for appropriateness at the site; monitored natural attenuation (MNA), groundwater pump and treat, enhanced insitu bioremediation (EIB), air sparging-vapor recovery (ASVR), dual phase extraction, and insitu chemical oxidation (ISCO). A combination of EIB and ISCO was selected as the most appropriate remedial technology for the site due to multiple factors. ISCO was selected for the vicinity of the former tank excavation and would consist of the injection of the commercial oxidation product RegenOx. Chemical oxidation of residual source soil and groundwater containing higher hydrocarbon concentrations is anticipated to eliminate potential residual free-phase hydrocarbons in the tank vicinity. EIB using Oxygen Releasing Compound Advanced (ORC Advanced) was selected for the larger area around and downgradient of the former tank location. Petroleum hydrocarbon compounds are recognized to degrade favorably and rapidly under aerobic (oxygen rich) conditions. To stimulate aerobic bacterial activity and increase the rate of biodegradation within the hydrocarbon plume, non-toxic inorganic chemicals (bionutrients) can be added to the groundwater that release oxygen, nitrogen and phosphate, such as ORC Advanced and bionutrient compounds (typically, nitrogen/phosphorus/potassium (NPK) fertilizer). At sites where stagnant hydrocarbon plumes are present, one or more of the essential bionutrient elements is commonly depleted, and natural attenuation of the hydrocarbon plume due to microbial activity ceases. By determining a site's "bio-needs," the missing elements can be injected into the hydrocarbon plume to boost bioactivity.

At the site, dissolved oxygen in groundwater is depleted to less than 1 mg/L, and based on available information the lack of dissolved oxygen is the limiting factor retarding current biological activity. For EIB, the supply of bio-nutrients is assessed prior to and during remediation. During the course of remediation, if nutrient concentrations are found to be inadequate, then further nutrient addition is performed.

On December 18, 2006, the ACHCSA issued a letter indicating that it was in agreement with the proposed plan of action, namely EIB with localized ISCO, using a combination of ORC Advanced and RegenOx, respectively. The December 18, 2006 letter requested an interim corrective action plan (ICAP) by January 19, 2007, and quarterly monitoring reports by January 30, and April 30, 2007. A request for deadline extension was later submitted to, and approved by, the ACHCSA. The *Interim Corrective Action Plan* was submitted on February 7, 2007, and is pending review by the ACHCSA.

2.0 Groundwater Sample Collection and Analytical Methods

This report documents the First Quarter 2007 groundwater monitoring event at the subject site (Figure 1). This is the first quarterly groundwater monitoring event conducted by Blymyer Engineers, Inc. at the former Fiesta Beverage site in Oakland, California since the ACHCSA requested that the groundwater monitoring interval return to a quarterly interval in their January 2, 2007 letter.

Groundwater samples were collected from monitoring wells MW-1R and MW-2 through MW-9 on February 19, 2007. The groundwater samples were collected by Blaine Tech Services, Inc. (Blaine) in accordance with Blaine *Standard Operating Procedures* for groundwater gauging, purging, and sampling. A copy is included as Appendix A. Depth to groundwater was measured in all wells at the site. Temperature, pH, conductivity, and turbidity were measured initially, and then after removal of each of three well casing volumes for each well. Dissolved Oxygen (DO) and the Oxygen-Reduction Potential (ORP) were measured prior to purging groundwater. These measurements are generally useful in determining if an adequate supply of oxygen is present in groundwater to allow microbial growth. The groundwater depth measurements and details of the monitoring well purging and sampling are presented on the *Well Monitoring Data Sheets* and *Well Gauging Data Sheets* generated by Blaine and included as Appendix B. Depth-to-groundwater measurements are presented in Table I. All purge and decontamination water was temporarily stored in a Department of Transportation-approved 55-gallon drum for future disposal by the owner.

The groundwater samples were analyzed by McCampbell Analytical, Inc., a California-certified laboratory, on a 5-day turnaround time. Groundwater samples were analyzed for Total Petroleum Hydrocarbons (TPH) as gasoline by Modified EPA Method 8015; and benzene, toluene, ethylbenzene, and total xylenes (BTEX) and MTBE by EPA Method 8021B. Tables II to V summarize current and previous analytical results for groundwater samples. The laboratory analytical report for the current sampling event is included as Appendix C.

3.0 Groundwater Flow Data and Groundwater Sample Analytical Results

Previously surveyed top-of-casing (TOC) elevations were used to construct a groundwater gradient map

(Figure 2). Groundwater depths during this monitoring event ranged between 7.77 to 8.61 feet below the

top of the casings. Depth to groundwater decreased an average of 0.43 feet. Groundwater predominantly

appears to flow to the west during this event, and is generally consistent with historical data, although

apparent southern and eastern flow directions have been observed previously. The average groundwater

gradient was calculated to be at 0.01 feet/foot for the current monitoring event.

Concentrations of all of the chemical compounds related to gasoline were present in wells MW-1R, MW-

2, and MW-3 during the current quarter. Except for MTBE in well MW-5, wells MW-5 through MW-9

did not yield detectable concentrations of petroleum hydrocarbons. With respect to the previous

groundwater sampling event in June 2006, concentrations in well MW-2 were generally lower,

concentrations in MW-3 were generally higher, and concentrations in MW-1R were generally higher,

although more mixed than in comparison to concentrations in well MW-3. Each contained TPH as

gasoline and BTEX. While concentrations in each of these wells has increased or decreased, the

concentrations are within the range of previous concentrations obtained from groundwater samples

collected from wells MW-2 and MW-3. The continued fluctuation in results in the wells suggests a

mobilization of residual contamination from soil to groundwater at the site. This is only the second sampling

of well MW-1R.

Plots of TPH-G or benzene and groundwater elevation vs. time were generated for well MW-3 (Figures 3

and 4). There is a generally good correlation between a rise in groundwater elevation and a rise in the

concentration of both TPH-G and benzene. Previously generated graphs for well MW-1 have

documented a good correlation between a rise in groundwater elevation and a decrease in the

concentration of both TPH-G and benzene. Consequently there appears to be both recontamination of

groundwater upon rise up into contaminated soil as well as drainage from soil to groundwater as

groundwater drops in elevation at the site and in the different wells.

The concentration of TPH as gasoline ranged from nondetectable to 280 micrograms per liter (Fg/L) in

First Quarter 2007 Groundwater Monitoring Event

Former Fiesta Beverage Facility Fuel Leak Case RO0000314

March 8, 2007

well MW-3. Benzene ranged between a concentration of nondetectable and 49 Fg/L (well MW-3). Toluene was present up to a concentration of 11 Fg/L, ethylbenzene up to 18 Fg/L, and total xylenes to up 23 Fg/L (all in well MW-3).

As is typical, the concentration of benzene in groundwater exceeded the drinking water Maximum Contaminant Level (MCL) in plume core wells MW-1R, MW-2, and MW-3 during the current monitoring and sampling event; however, Blymyer Engineers does not believe that groundwater at this location should be considered as drinking water. Consequently, Blymyer Engineers also references the Environmental Screening Levels (ESL) promulgated by the RWQCB in Table II. Only the RWQCB provides a look-up value for TPH, and for a non-drinking water designation of groundwater.

At the request of the ACHCSA, four quarters of groundwater samples have previously been analyzed for the fuel oxygenates di-isopropyl ether (DIPE), ethyl *tert*-butyl ether (ETBE), methyl *tert*-butyl ether (MTBE), *tert*-amyl methyl ether (TAME), and *tert*-butyl alcohol (TBA), by EPA Method 8260B. Ethanol and methanol have also been analyzed since, and were nondetectable. Due to the consistency of the data, analysis by this EPA method was eliminated as an unnecessary expense. Using EPA Method 8021B, MTBE was detected in wells MW-2 and MW-5, and at a concentration of 7.1 and 5.6 Fg/L, respectively. Although not detected, it is likely that TAME is also present, such as was documented in the June 2003 sampling event (Table III). Of the fuel oxygenates, only MTBE has an MCL, listed at 13 Fg/L.

4.0 Intrinsic Bioremediation Groundwater Sample Analytical Results

Intrinsic bioremediation laboratory analytical parameters were not collected during the current quarter; however, pre-purge field parameters were collected. Tables IV and V present the analytical results of current and previous RNA indicator parameters. Microbial use of petroleum hydrocarbons as a food source is affected by the concentration of a number of chemical compounds dissolved in groundwater at a site. RNA monitoring parameters were established by research conducted by the Air Force Center for Environmental Excellence. The research results were used to develop a technical protocol for documenting RNA in groundwater at petroleum hydrocarbon release sites (Wiedemeier, Wilson, Kampbell, Miller and Hansen, 1995, *Technical Protocol for Implementing the Intrinsic Remediation with Long Term Monitoring for Natural Attenuation of Fuel Contamination Dissolved in Groundwater, Volumes I and II*, U.S. Air Force Center for Environmental Excellence, Brooks Air Force Base, Texas). The protocol focuses on documenting both aerobic and anaerobic degradation processes whereby indigenous subsurface bacteria use various dissolved electron acceptors to degrade dissolved petroleum hydrocarbons.

In the order of preference, the following electron acceptors and metabolic by-products are used and generated, respectively, by the subsurface microbes (aerobes, Mn – Fe reducers, and methanogens) to degrade petroleum hydrocarbons: oxygen to carbon dioxide, nitrate to nitrogen, insoluble manganese (Mn⁴⁺) to soluble manganese (Mn²⁺), insoluble ferric iron (Fe³⁺) to soluble ferrous iron (Fe²⁺), sulfate to hydrogen sulfide, and carbon dioxide to methane. With the exception of oxygen, the use of all other electron acceptor pathways by microbes indicates increasingly anaerobic degradation. Aerobic degradation takes place first, and oxygen inhibits anaerobic degradation. As oxygen is consumed and an anoxic zone develops, the Mn – Fe reducers and methanogens begin to grow and release dissolved Mn, dissolved Fe, and methane (Commission on Geosciences, Environment and Resources, *Natural Attenuation for Groundwater Remediation*, 2000). Investigation of each of these electron acceptor pathways was conducted in selected wells at the site as part of the evaluation of RNA chemical parameters. Previous analytical results appear to have documented oxygen and nutrient (nitrate) limited natural biodegradation at the site.

Microbial use of petroleum hydrocarbons as a food source is principally affected by the concentration of dissolved oxygen (DO) in the groundwater present at a site; it is the preferred electron acceptor for the biodegradation of hydrocarbons. DO was present in pre-purge groundwater in concentrations ranging from 0.08 milligrams per liter (mg/L) to 1.98 mg/L. Because standard purge and sample techniques were used in the current quarter in order to decrease labor and equipment costs, only pre-purge DO concentrations were collected due to the elevated potential to entrain oxygen in groundwater during sampling. There is not a reasonable correlation between plume core and plume perimeter wells with respect to DO with the pre-purge readings; however, based on available information the lack of dissolved oxygen is the limiting factor retarding current biological activity.

ORP is another measure of the supply and use of oxygen at a site. The higher the reading in millivolts (mV), the more oxygenated the subsurface environment is, and the lower the readings, the more anaerobic or reducing the subsurface environment is. Due to the pre-purge collection of ORP, a strong correlation is again not observed between plume interior or plume perimeter wells.

For a more in-depth review of recent RNA parameters, please refer to the *Remedial Investigation / Feasibility Study Report*, dated September 8, 2006.

5.0 Conclusions and Recommendations

The following conclusions were generated from the available data discussed above:

- Concentrations of hydrocarbons were present in plume core wells MW-1R, MW-2, and MW-3 this monitoring period. Concentrations generally increased in wells MW-1R and MW-3 and generally decreased in well MW-2. Except for MTBE, detected below the MCL in well MW-5, all fuel petroleum hydrocarbons were not detected above the limits of detection in wells MW-4 through MW-9. Concentrations in the wells are within historic concentration ranges.
- TPH as gasoline and benzene, were over the generic RWQCB ESLs for groundwater (non-drinking water) in wells MW-1R and MW-3, and benzene was over the ESL in well MW-2.
- MTBE was detected in wells MW-2 and MW-5, at a concentrations of 7.1 and 5.6 Fg/L, respectively. TAME has previously been detected in groundwater at the site, thus it is likely that it is present beneath the site. Of fuel oxygenates, only MTBE has an MCL, listed at 13 Fg/L.
- Only DO and ORP of the RNA chemical parameters suite were investigated in order to help
 determine if biological degradation of the petroleum hydrocarbons at the site is present. Because
 they were collected prior to well purging due to the use of standard well purging and sampling
 techniques, good correlations were not observed. Previously, natural degradation of the fuel
 hydrocarbons beneath the site has been observed to be oxygen limited.
- Groundwater flow appears to be towards the west and the average groundwater gradient was calculated at 0.01 feet/foot for this monitoring event.

The following recommendations were generated from the available data discussed above:

- \$ The next quarterly groundwater sampling event should occur in May 2007.
- \$ Collection of all RNA indicator data should be discontinued as a modest cost saving measure.

 The collection of additional data is unlikely to contribute to the understanding of biodegradation beneath the site. Collection of RNA indicator data could be resumed thereafter should a need be

documented.

- \$ Interim corrective actions should be conducted in accordance with the approved ICAP (approval pending). Future quarterly monitoring events should be used to gauge the effectiveness of corrective actions.
- \$ A copy of this letter report should be forwarded to:

Mr. Barney Chan Alameda County Health Care Services Agency Environmental Protection Division 1131 Harbor Bay Parkway, Suite 250 Alameda, CA 94502-6577

Table I, Summary of Groundwater Elevation Measurements BEI Job No. 203004, Former Fiesta Beverage 966 89th Avenue, Oakland, California **TOC** Elevation Depth to Water Water Surface Elevation Well ID Date (feet) (feet) (feet) MW-1 18.72 9.76 8/6/1993 8.96 1/12/1996 8.55 10.17 4/16/1996 7.65 11.07 7/15/1996 8.76 9.96 9.04 9.68 10/16/1996 12/15/1998 8.38 10.34 1/18/2001 8.49 10.23 4/25/2001 8.24 10.48 3/17/03* 8.08 10.64 6/23/2003 8.63 10.09 9/18/2003 8.90 9.82 12/15/2003 8.15 10.57 6/15/2004 8.67 10.05 12/15/2004 7.99 10.73 7.88 10.84 6/29/2005 21.70 5/8/2006 Destroyed Destroyed 2/19/2007 Destroyed Destroyed

Table I, Summary of Groundwater Elevation Measurements BEI Job No. 203004, Former Fiesta Beverage 966 89th Avenue, Oakland, California **TOC** Elevation Depth to Water Water Surface Elevation Well ID Date (feet) (feet) (feet) MW-2 18.44 9.76 8/6/1993 8.68 1/12/1996 8.24 10.20 4/16/1996 7.41 11.03 7/15/1996 8.45 9.99 8.73 9.71 10/16/1996 12/15/1998 8.05 10.39 1/18/2001 8.24 10.20 4/25/2001 7.88 10.56 3/17/03* 7.08 11.36 8.90 6/23/2003 9.54 9/18/2003 9.83 8.61 7.97 10.47 12/15/2003 6/15/2004 8.42 10.02 8.00 10.44 12/15/2004 8.93 6/29/2005 9.51 21.45 6/12/2006 8.25 13.20 2/19/2007 8.12 13.33

Table I, Summary of Groundwater Elevation Measurements BEI Job No. 203004, Former Fiesta Beverage 966 89th Avenue, Oakland, California **TOC** Elevation Depth to Water Water Surface Elevation Well ID Date (feet) (feet) (feet) MW-3 19.01 9.94 8/6/1993 9.07 8.65 10.36 1/12/1996 7.82 4/16/1996 11.19 7/15/1996 8.88 10.13 9.16 9.85 10/16/1996 12/15/1998 8.45 10.56 1/18/2001 8.57 10.44 4/25/2001 8.29 10.72 3/17/03* 8.50 10.51 6/23/2003 9.05 9.96 9/18/2003 9.11 9.90 8.03 10.98 12/15/2003 6/15/2004 8.85 10.16 8.84 12/15/2004 10.17 9.00 6/29/2005 10.01 22.02 6/12/2006 8.62 13.40 2/19/2007 8.12 13.90

Table I, Summary of Groundwater Elevation Measurements BEI Job No. 203004, Former Fiesta Beverage 966 89th Avenue, Oakland, California									
Well ID	Date	TOC Elevation (feet)	Depth to Water (feet)	Water Surface Elevation (feet)					
MW-1R	6/12/2006	21.73	8.49	13.24					
	2/19/2007		7.94	13.79					
MW-4	6/12/2006	21.34	8.37	12.97					
	2/19/2007		7.77	13.57					
MW-5	6/12/2006	22.53	8.75	13.78					
	2/19/2007		8.61	13.92					
MW-6	6/12/2006	21.97	8.59	13.38					
	2/19/2007		7.93	14.04					
MW-7	6/12/2006	21.21	8.31	12.90					
	2/19/2007		7.85	13.36					
MW-8	6/12/2006	20.97	8.37	12.60					
	2/19/2007		7.99	12.98					
MW-9	6/12/2006	20.98	8.50	12.48					
	2/19/2007	20.98	8.08	12.90					

Notes: TOC = Top of Casing

* = Initial data set collected under direction of Blymyer Engineers, Inc.

NM = Not measured

= Resurveyed on February 7, or June 22, 2006 by CSS Environmental Services, Ir

Elevations in feet above mean sea level

900 89th Avenue, Oakianu, Camornia									
Well ID Sample Date		Modified EPA Method 8015 (μg/L)	EPA Method 8020 or 8021B (μg/L)						
		TPH as Gasoline	Benzene	Toluene	Ethylbenzene	Total Xylenes	MTBE		
1	MCL	N/A	1	150	700	1,750	13		
	Water Source 1	100	1	40	30	20	5		
	nking Water urce ²	500	46	130	290	100	1,800		
MW-1	8/6/1993	17,000	7.1	8.4	9.2	53	NA		
	1/12/1996	12,000	1,900	840	370	1,100	NA		
	4/16/1996	3,500	700	55	100	180	NA		
	7/15/1996	11,000	2,300	450	350	910	NA		
	10/16/1996	21,000	4,200	2,200	650	2,600	NA		
	12/15/1998	10,000	1,800	520	270	1,100	<350		
	1/18/2001	11,000 ^a	2,000	320	320	1,100	<120		
	4/25/2001	2,100 ^{a, c}	270	46	59	130	<5.0		
	3/17/2003*	2,200 ^a	260	19	36	54	NA ^d		
	6/23/2003	6,100 ^a	930	53	99	200	NA		
	9/18/2003	3,800 ^a	660	13	24	34	NA		
	12/15/2003	260 ^a	19	1.1	< 0.5	1.5	NA		
	6/15/2004	5,200 ^a	520	13	38	39	<50		
	12/15/2004	2,400 ^a	370	8.2	13	14	<15		
	6/29/2005	5,500 ^a	750	27	94	140	<100		
	5/8/2006	Destroyed	Destroyed	Destroyed	Destroyed	Destroyed	Destroyed		
	2/19/2007	Destroyed	Destroyed	Destroyed	Destroyed	Destroyed	Destroyed		

700 67th Avenue, Cambrina									
Well ID Sample Date		Modified EPA Method 8015 (µg/L)	EPA Method 8020 or 8021B (µg/L)						
		TPH as Gasoline	Benzene	Toluene	Ethylbenzene	Total Xylenes	MTBE		
]	MCL	N/A	1	150	700	1,750	13		
	Vater Source 1	100	1	40	30	20	5		
So	nking Water urce ²	500	46	130	290	100	1,800		
MW-2	8/6/1993	2,700	1	2	2	8	NA		
	1/12/1996	2,700	600	310	94	220	NA		
	4/16/1996	190	39	11	10	14	NA		
	7/15/1996	700	160	33	34	48	NA		
	10/16/1996	190	48	8	10	13	NA		
	12/15/1998	200	62	17	5	14	4.4 ^b		
	1/18/2001	300 ^a	74	26	7	21	7.3		
	4/25/2001	<50°	5	2	1	2	< 5.0		
	3/17/2003*	78 ^a	26	3	2	4	NA ^d		
	6/23/2003	160 ^a	51	2	1	2	NA		
	9/18/2003	<50	2	<0.5	<0.5	<0.5	NA		
	12/15/2003	<50	12	< 0.5	<0.5	<0.5	NA		
	6/15/2004	95 ^a	15	1.3	2	1	<30		
	12/15/2004	<50	11	0.97	1	1	7.8		
	6/29/2005	130	29	2	3	3	6.7		
	6/13/2006	150 ^a	59	3	3.4	2.7	11		
	2/19/2007	51 ^a	8	1.6	1	2.8	7.1		

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Well ID Sample Date		Modified EPA Method 8015 (µg/L)	EPA Method 8020 or 8021B (μg/L)					
		TPH as Gasoline	Benzene	Toluene	Ethylbenzene	Total Xylenes	MTBE	
I	MCL	N/A	1	150	700	1,750	13	
Drinking V	Vater Source 1	100	1	40	30	20	5	
	nking Water urce ²	500	46	130	290	100	1,800	
MW-3	8/6/1993	5,200	2.1	2.9	3.6	17	NA	
	1/12/1996	4,500	280	180	120	470	NA	
	4/16/1996	5,400	370	340	160	580	NA	
	7/15/1996	1,800	200	220	66	250	NA	
	10/16/1996	2,000	340	140	100	300	NA	
	12/15/1998	1,400	200	39	72	150	<22	
	1/18/2001	1,800 ^a	240	41	86	120	<10	
	4/25/2001	8,300 ^{a, c}	300	330	200	1,100	<20	
	3/17/2003*	2,100 ^a	240	78	10	280	NA d	
	6/23/2003	<50	2.5	0.6	0.69	1.4	NA	
	9/18/2003	<50	< 0.5	< 0.5	<0.5	<0.5	NA	
	12/15/2003	2,400	300	120	140	260	NA	
	6/15/2004	<50	1.1	< 0.5	<0.5	< 0.5	6.2	
	12/15/2004	1,600 ^a	140	83	83	230	<15	
	6/29/2005	230 ^a	27	6.1	7.2	15	<15	
	6/13/2006	68 ^a	3.1	1.8	<0.5	<0.5	< 5.0	
	2/19/2007	280 ^a	49	11	18	23	< 5.0	

900 oyu Avenue, Cakianu, Camorina									
Well ID Sample Date		Modified EPA Method 8015 (μg/L)	EPA Method 8020 or 8021B (µg/L)						
		TPH as Gasoline	Benzene	Toluene	Ethylbenzene	Total Xylenes	MTBE		
1	MCL	N/A	1	150	700	1,750	13		
Drinking V	Vater Source 1	100	1	40	30	20	5		
	nking Water urce ²	500	46	130	290	100	1,800		
MW-1R	6/13/2006	90 ^a	24	< 0.5	<0.5	1.9	7.0		
	2/19/2007	200 ^a	8	0.80	12	8.7	< 5.0		
MW-4	6/12/2006	<50	< 0.5	< 0.5	<0.5	< 0.5	5.7		
	2/19/2007	<50	< 0.5	< 0.5	<0.5	<0.5	< 5.0		
MW-5	6/12/2006	<50	< 0.5	< 0.5	<0.5	< 0.5	<5.0		
	2/19/2007	<50	< 0.5	< 0.5	<0.5	<0.5	5.6		
MW-6	6/13/2006	<50	< 0.5	< 0.5	<0.5	<0.5	< 5.0		
	2/19/2007	<50	< 0.5	< 0.5	<0.5	< 0.5	< 5.0		
MW-7	6/12/2006	<50	< 0.5	< 0.5	<0.5	< 0.5	< 5.0		
	2/19/2007	<50	< 0.5	< 0.5	<0.5	<0.5	< 5.0		
MW-8	6/12/2006	<50	< 0.5	< 0.5	<0.5	< 0.5	<5.0		
	2/19/2007	<50	< 0.5	< 0.5	<0.5	< 0.5	<5.0		
MW-9	6/12/2006	<50	< 0.5	< 0.5	<0.5	< 0.5	5.6		
	2/19/2007	<50	< 0.5	< 0.5	<0.5	<0.5	< 5.0		

Table II, Summary of Groundwater Sample Hydrocarbon Analytical Results BEI Job No. 203004, Former Fiesta Beverage 966 89th Avenue, Oakland, California										
Well ID	Sample Date	Modified EPA Method 8015 (µg/L)	EPA Method 8020 or 8021B (µg/L)							
		TPH as Gasoline	Benzene	Toluene	Ethylbenzene	Total Xylenes	MTBE			
N	MCL	N/A	1	150	700	1,750	13			
Drinking Water Source 1		100	1 40 30		30	20	5			
Non-Drinking Water Source ²		500	46	130	290	100	1,800			

Notes: ug/L = micrograms per liter

TPH = Total Petroleum Hydrocarbons

EPA = Environmental Protection Agency

MTBE = Methyl *tert* -Butyl Ether

RWQCB = California Regional Water Quality Control Board, San Francisco Bay Region

ESL = Environmental Screening Level

N/A = Not applicable

NA = Not analyzed

RBSL = Risk Based Screening Level

 $\langle x \rangle$ = Analyte not detected at reporting limit x

Bold results indicate detectable analyte concentrations.

Note: Shaded cell indicates that detected concentration exceeds ESL

¹ = From Table A; RWQCB Environmental Screening Levels (ESLs); Groundwater IS a Current or Potential Source of Drinking Water

² = From Table B; RWQCB Environmental Screening Levels (ESLs); Groundwater IS NOT a Current or Potential Source of Drinking Water

^{* =} Initial data set collected under direction of Blymyer Engineers, Inc.

^a = Laboratory note indicates the unmodified or weakly modified gasoline is significant.

^b = Confirmed with EPA Method 8260.

^c = Groundwater samples for MW-1 and MW-3 suspected to have been switched (mismarked) in field. First collection of groundwater samples after application of Hydrogen Peroxide on March 7, 2001.

^d = Analysis conducted by EPA Method 8260. See Table III.

W 11 ID	G 1.D.	EPA Method 8260B (ug/L)									
Well ID	Sample Date	TAME	TBA	EBD	1,2-DCA	DIPE	Ethanol	ETBE	Methanol	MTBE	
Drinking	Water Source 1	NV	12	0.05	0.5	NV	50,000	NV	NV	5	
	rinking Water Source ²	NV	18,000	152	204	NV	50,000	NV	NV	1,800	
	3/17/2003	8.3	< 5.0	NA	NA	< 0.50	NA	< 0.50	NA	10.0	
MW-1	6/23/2003	6.4	<25	NA	NA	<2.5	NA	<2.5	NA	8.0	
101 00 - 1	9/18/2003	5.3	<25	NA	NA	<2.5	NA	<2.5	NA	8.5	
	12/15/03 ³	9.0	<5.0	NA	NA	< 0.5	NA	< 0.5	NA	12.0	
	3/17/2003	2.1	6.0	NA	NA	< 0.50	NA	< 0.50	NA	13.0	
	6/23/2003	4.5	<5.0	NA	NA	< 0.50	NA	< 0.50	NA	11.0	
MW-2	9/18/2003	0.7	<25	NA	NA	<2.5	NA	<2.5	NA	5.0	
	12/15/03 ³	3.2	5.2	NA	NA	< 0.5	NA	< 0.5	NA	13.0	
	6/13/2006	4.5	6.5	<5.0	<5.0	< 5.0	<50	< 0.5	< 500	7.6	
	3/17/2003	4.3	8.6	NA	NA	< 0.50	NA	< 0.50	NA	10.0	
MW-3	6/23/2003	2.6	<5.0	NA	NA	< 0.50	NA	< 0.50	NA	5.6	
1V1 VV - 3	9/18/2003	3.6	<25	NA	NA	<2.5	NA	<2.5	NA	10.0	
	12/15/03 ³	2.7	<5.0	NA	NA	< 0.5	NA	< 0.5	NA	13.0	

Table III, Summary of Groundwater Sample Fuel Oxygenate Analytical Results BEI Job No. 203004, Former Fiesta Beverage 966 89th Avenue, Oakland, California EPA Method 8260B (ug/L) Well ID Sample Date **TAME EBD** 1,2-DCA DIPE TBA **ETBE** Methanol **MTBE** Ethanol Drinking Water Source 1 0.05 0.5 NV 50,000 NV 5 NV 12 NV Non-Drinking Water NV 204 NV 50,000 NV 1,800 18,000 152 NV Source ² 6/12/2006 MW-4 NA NA NA NA NA NA NA NA 6.1

Notes: TAME = Methyl tert-Amyl Ether

TBA = tert-Butyl Alcohol

EDB = 1,2-Dibromoethane

1,2-DCA = 1,2-Dichloroethane

DIPE = Di-isopropyl ether

ETBE = Ethyl tert-butyl ether

MTBE = Methly tert-butyl ether

 $(\mu g/L) = Micrograms per liter$

NV = No value

NA = Not analyzed

Bold results indicate detectable analyte concentrations.

Note: Shaded cell indicates that detected concentration exceeds ESL

¹ = From Table A; Environmental Screening Levels (ESLs); Groundwater IS a Current or Potential Source of Drinking Water

² = From Table B; RWQCB Environmental Screening Levels (ESLs); Groundwater IS NOT a Current or Potential Source of Drinking Water

³ = In general after this date, fuel oxygenates were monitored using MTBE detected by EPA Method 8020B, as a proxy for the approximate concentration of the remaining fuel oxygenates.

Table IV, Summary of Groundwater Intrinsic Bioremediation Field Results BEI Job No. 203004, Former Fiesta Beverage 966 89th Avenue, Oakland, California Field Meter Field Meter Field Test Kit Field Meter Field Meter Dissoved Oxidation Ferrous Iron Field Field pH Sample Date Well ID Oxygen Reduction Temperature Potential (mg/L)(mV) (Fe 2+)(o F / o C)pH units MW-1 3/17/2003 NA NA NA 60.4 / 60.0 * 7.1 / 7.36/23/2003 0.4 NA NA 61.0 / 61.0 * 6.9 / 6.9 9/18/2003 0.4 NA NA 65.1 / 62.9 * 7.1 / 6.912/15/2003 1.1 NA NA 13.1 / 13.4 6.8 / 6.7 0.1 NA 64.5 / 63.4 * 6.9 / 7.0 6/15/2004 NA NA 15.4 / 17.5 7.0 / 6.912/15/2004 NA NA 6/29/2005 0.24 / 0.171.0 4.5 19.78 / 21.63 7.15 / 7.08 5/8/2006 Destroyed Destroyed Destroyed Destroyed Destroyed 2/19/2007 Destroyed Destroyed Destroyed Destroyed Destroyed MW-2 3/17/2003 NA 66.0 / 64.2 * 7.4 / 7.9NA NA 0.6 62.1 / 61.8 * 6.8 / 7.16/23/2003 NA NA 9/18/2003 1.3 NA NA 66.7 / 63.7 * 6.7 / 6.912/15/2003 1.6 NA NA 13.2 / 13.4 6.6 / 6.664.5 / 65.0 * 6/15/2004 0.1 NA NA 6.3 / 7.1NA 16.9 / 17.0 7.1 / 7.112/15/2004 NA NA 0.19 / 0.240.7 0.7 18.58 / 21.18 7.12 / 7.136/29/2005 6/13/2006 0.80 / 0.42168.0 / 168.0 0 / 017.49 / 17.70 6.97 / 6.98 2/19/2007 0.2 80 NA 13.6 / 16.3 7.24 / 7.06 MW-3 3/17/2003 NA NA 63.3 / 60.9 * 7.4 / 7.6NA 6/23/2003 0.7 NA NA 66.4 / 66.9 * 7.3 / 7.29/18/2003 0.4 NA NA 63.7 / 62.6 * 7.1 / 7.112/15/2003 1.6 NA NA 14.7 / 15.1 6.5 / 6.46/15/2004 0.0 NA NA 63.1 / 62.3 * 7.5 / 7.112/15/2004 NA NA NA 15.4 / 16.7 7.2 / 7.06/29/2005 0.72 / 0.78141.7 / -67.6 0.9 17.65 / 18.79 6.94 / 7.02 1.01 / 0.41 170.0 / 168.5 0 / 06/13/2006 17.30 / 17.15 7.02 / 6.982/19/2007 0.08 81 NA 13.7 / 15.6 7.10 / 6.95

Table IV, Summary of Groundwater Intrinsic Bioremediation Field Results BEI Job No. 203004, Former Fiesta Beverage 966 89th Avenue, Oakland, California Field Meter Field Meter Field Test Kit Field Meter Field Meter Dissoved Oxidation Ferrous Iron Field Field pH Well ID Sample Date Temperature Oxygen Reduction Potential (oF/oC)pH units (mg/L)(mV) (Fe 2+)MW-1R 0.87 / 0.37172.9 / 172.9 6.90 / 6.92 6/13/2006 0 / 017.31 / 17.36 2/19/2007 0.48 8.0 NA 12.2 / 15.8 6.95 / 6.86 MW-4 0.67 / 0.33 164.3 / 161.0 0.5 / 06/12/2006 16.90 / 16.79 6.82 / 6.79 2/19/2007 0.21 98 NA 13.7 / 15.0 7.14 / 7.03 MW-5 6/12/2006 0.61 / 0.31175.2 / 169.0 0 / 018.40 / 18.01 7.01 / 6.94 2/19/2007 1.98 -114 NA 12.7 / 14.1 6.93 / 6.73 MW-6 181.2 / 174.8 0 / 06/13/2006 3.10 / 0.8117.25 / 17.32 6.94 / 6.83 2/19/2007 0.21 -30 NA 14.6 / 15.6 6.58 / 6.74 MW-7 0.59 / 0.27172.5 / 171.8 0.5 / 0.218.14 / 18.00 6/12/2006 6.90 / 6.87 2/19/2007 0.10 110 NA 16.2 / 17.2 7.69 / 7.21 MW-8 0.37 / 0.33186.1 / 180.4 0 / 018.55 / 18.39 6/12/2006 6.85 / 6.85 2/19/2007 0.11 102 NA 15.2 / 16.6 7.23 / 7.07 MW-9 6/12/2006 2.01 / 1.87 206.0 / 191.0 0 / 016.88 / 16.91 6.63 / 6.66 2/19/2007 0.08 101 NA 15.8 / 16.3 7.56 / 7.23

Notes: mV = Millivolts

mg/L = Milligrams per liter

^o F / ^o C = degrees Fahrenheit / degrees Centigrade

* = degrees Fahrenheit

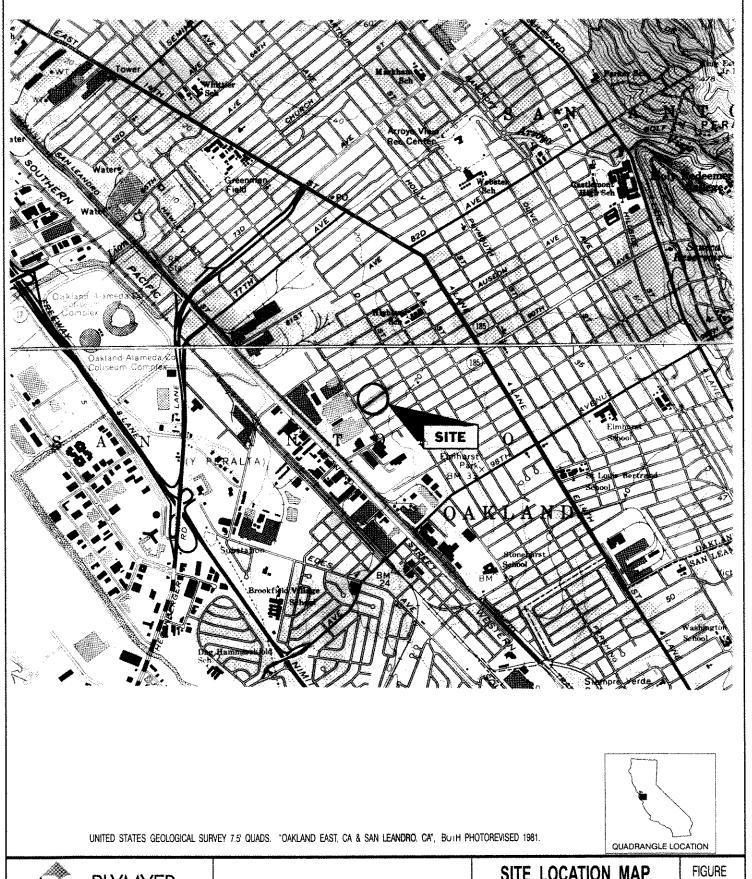
2.6 / 2.2 = Initial reading (pre-purge) / Final reading (post-purge)

NA = Not analyzed

Table V, Summary of Groundwater Intrinsic Bioremediation Analytical Results BEI Job No. 203004, Former Fiesta Beverage 966 89th Avenue, Oakland, California									
		Method SM 5310B Method E300.1							
Well ID	Sample Date	CO ₂	Nitrate (as N)	Sulfate	Methane				
			mg/L						
MW-1	6/29/2005	490	<0.1	5	5,900				
	5/8/2006	Destroyed	Destroyed	Destroyed	Destroyed				
MW-2	6/29/2005	250	4.1	42	68				
	6/13/2006	290	3.2	44	45				
MW-3	6/29/2005	230	3.5	33	370				
	6/13/2006	220	3.5	33	55				
MW-1R	6/13/2006	290	4.3	46	24				
MW-4	6/12/2006	260	8.6	44	1.1				
MW-5	6/12/2006	240	6.8	45	1.5				
MW-6	6/13/2006	290	7.2	50	<0.5				
MW-7	6/12/2006	260	6	51	<0.5				
MW-8	6/12/2006	330	7.3	46	<0.5				
MW-9	6/12/2006	240	8.3	44	1.1				

Notes: SM = Standard Method

mg/L = Milligrams per liter $<math>\mu g/L = Micrograms per liter$ $<math>CO_2 = Carbon \ Dioxide$



BEI JOB NO.

3-19-03

203004

SCALE IN FEET

1000

2000



SITE LOCATION MAP

FORMER FIESTA BEVERAGE 966 89TH AVE. OAKLAND, CA

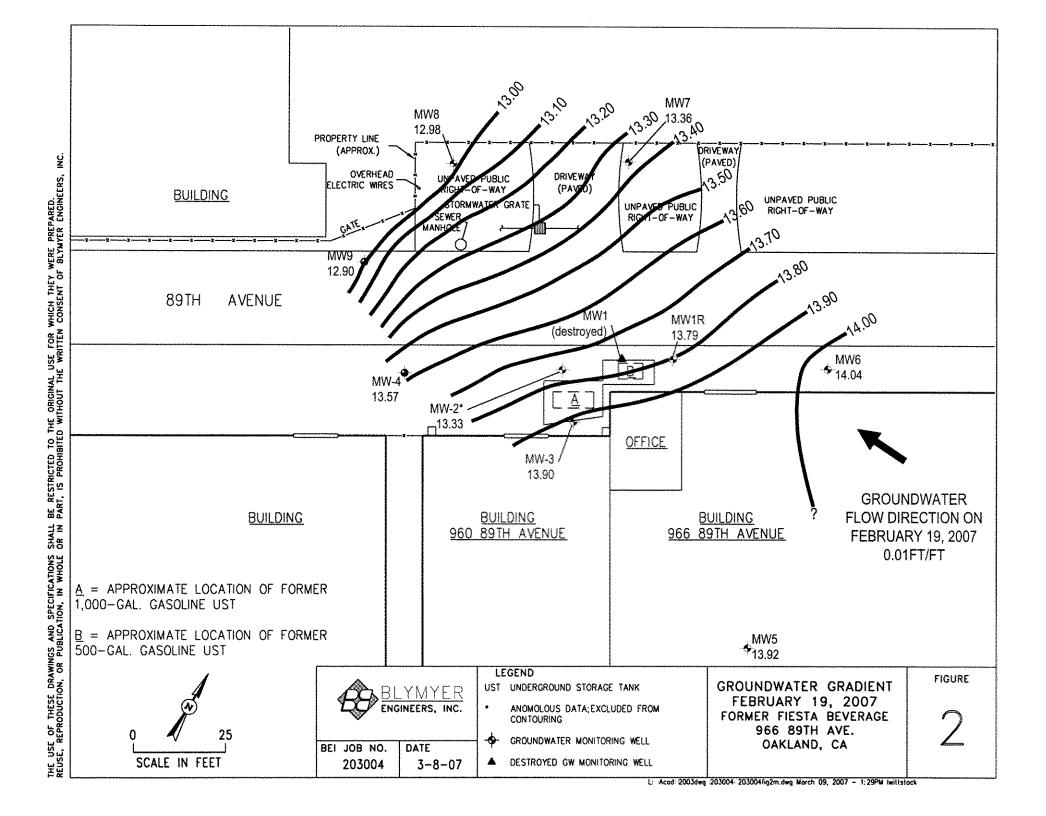


Figure 3: TPH as Gasoline & Groundwater Elevation vs. TIme in Well MW-3

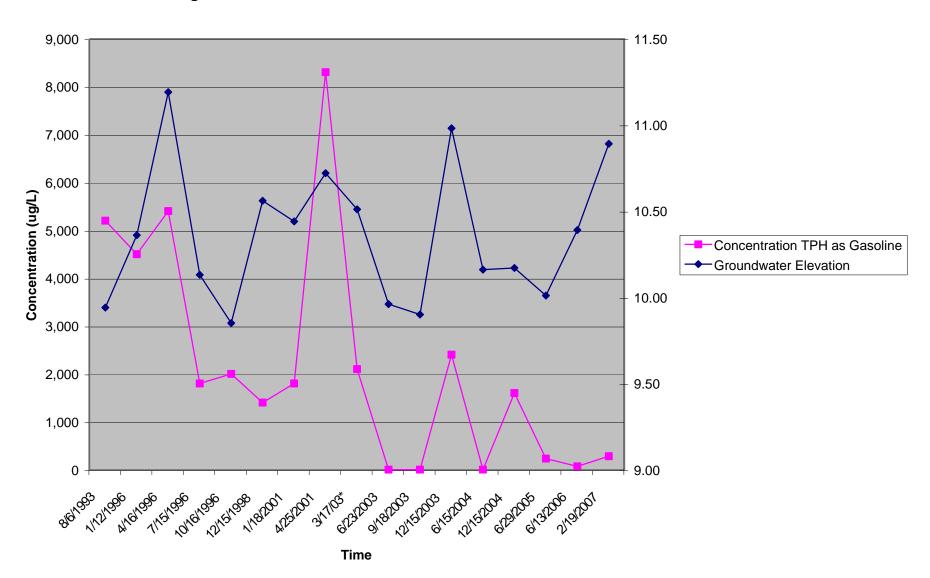
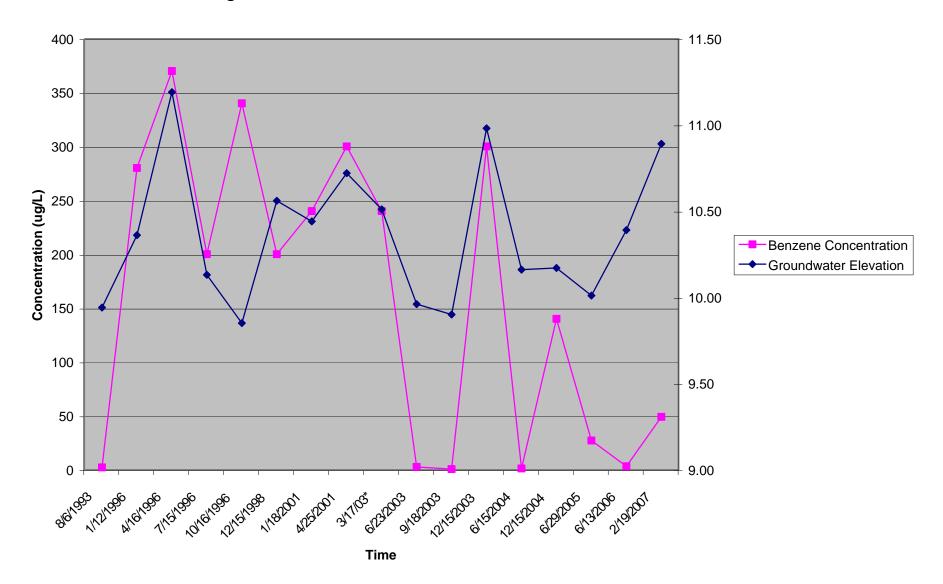


Figure 4: Benzene & Groundwater Elevation vs. Tlme in Well MW-3



Appendix A

Standard Operating Procedures
Blaine Tech Services, Inc.

GAUGING SOP Page 1 of 3

Blaine Tech Services, Inc. Standard Operating Procedure

WATER LEVEL, SEPARATE PHASE LEVEL AND TOTAL WELL DEPTH MEASUREMENTS (GAUGING)

Routine Water Level Measurements

- 1. Establish that water or debris will not enter the well box upon removal of the cover.
- 2. Remove the cover using the appropriate tools.
- 3. Inspect the wellhead (see Wellhead Inspections).
- 4. Establish that water or debris will not enter the well upon removal of the well cap.
- 5. Unlock and remove the well cap lock (if applicable). If lock is not functional cut it off.
- 6. Loosen and remove the well cap. CAUTION: DO NOT PLACE YOUR FACE OR HEAD DIRECTLY OVER WELLHEAD WHEN REMOVING THE WELL CAP. WELL CAP MAY BE UNDER PRESSURE AND/OR MAY RELEASE ACCUMULATED AND POTENTIALLY HARMFULL VAPORS.
- 7. Verify and identify survey point as written on S.O.W.
 - TOC: If survey point is listed as Top of Casing (TOC), look for the exact survey point in the form of a notch or mark on the top of the casing. If no mark is present, use the north side of the casing as the measuring point.
 - TOB: If survey point is listed as Top of Box (TOB), the measuring point will be established manually. Place the inverted wellbox lid halfway across the wellbox opening and directly over the casing. The lower edge of the inverted cover directly over the casing will be the measuring point.
- 8. Put new Latex or Nitrile gloves on your hands.
- 9. Slowly lower the Water Level Meter probe into the well until it signals contact with water with a tone and/or flashing a light.
- 10. Gently raise the probe tip slightly above the water and hold it there. Wait momentarily to see if the meter emits a tone, signaling rising water in the casing. Gently lower the probe tip slightly below the water. Wait momentarily to see if the meter stops emitting a tone, signaling dropping water in the casing. Continue process until water level stabilizes indicating that the well has equilibrated.
- 11. While holding the probe at first contact with water and the tape against the measuring point, note depth. Repeat twice to verify accuracy. Write down measurement on Well Gauging Sheet under Depth to Water column.
- 12. Recover probe, replace and tighten well cap, replace lock (if applicable), replace well box cover and tighten hardware (if applicable)

Water Level and Separate Phase Thickness Measurements in Wells Suspected of Containing Separate Phase

- 1. Establish that water or debris will not enter the well box upon removal of the cover.
- 2. Remove the cover using the appropriate tools.
- 3. Inspect the wellhead (see Wellhead Inspections).
- 4. Establish that water or debris will not enter the well upon removal of the well cap.

GAUGING SOP Page 2 of 3

5. Unlock and remove the well cap lock (if applicable). If lock is not functional cut it off.

- 6. Loosen and remove the well cap. CAUTION: DO NOT PLACE YOUR FACE OR HEAD DIRECTLY OVER WELLHEAD WHEN REMOVING THE WELL CAP. WELL CAP MAY BE UNDER PRESSURE AND/OR MAY RELEASE ACCUMULATED AND POTENTIALLY HARMFULL VAPORS.
- 7. Verify and identify survey point as written on S.O.W.
 - TOC: If survey point is listed as Top of Casing (TOC), look for the exact survey point in the form of a notch or mark on the top of the casing. If no mark is present, use the north side of the casing as the measuring point.
 - TOB: If survey point is listed as Top of Box (TOB), the measuring point will be established manually. Place the inverted well box lid halfway across the well box opening and directly over the casing. The lower edge of the inverted cover directly over the casing will be the measuring point.
- 8. Put new Nitrile gloves on your hands.
- Slowly lower the tip of the Interface Probe into the well until it emits either a solid or broken tone.

BROKEN TONE: Separate phase layer is not present. Go to Step 8 of Routine Water Level Measurements shown above to complete gauging process using the Interface probe as you would a Water Level Meter.

SOLID TONE: Separate phase layer is present. Go to the next step.

- 10. Gently raise the probe tip slightly above the separate phase layer and hold it there. Wait momentarily to see if the meter emits a tone, signaling rising water in the casing. Gently lower the probe tip slightly below the separate phase layer. Wait momentarily to see if the meter stops emitting a tone, signaling dropping water in the casing. Continue process until water level stabilizes indicating that the well has equilibrated.
- 11. While holding the probe at first contact with the separate phase layer and the tape against the measuring point, note depth. Repeat twice to verify accuracy. Write down measurement on Well Gauging Sheet under Depth to Product column.
- 12. Gently lower the probe tip until it emits a broken tone signifying contact with water. While holding the probe at first contact with water and the tape against the measuring point, note depth. Repeat twice to verify accuracy. Write down measurement on Well Gauging Sheet under Depth to Water column.
- 13. Recover probe, replace and tighten well cap, replace lock (if applicable), replace well box cover and tighten hardware (if applicable).

Routine Total Well Depth Measurements

- 1. Lower the Water Level Meter probe into the well until it lightens in your hands, indicating that the probe is resting at the bottom of well.
- 2. Gently raise the tape until the weight of the probe increases, indicating that the probe has lifted off the well bottom.
- 3. While holding the probe at first contact with the well bottom and the tape against the well measuring point, note depth. Repeat twice to verify accuracy. Write down measurement on Well Gauging Sheet under Total Well Depth column.

GAUGING SOP Page 3 of 3

4. Recover probe, replace and tighten well cap, replace lock (if applicable), replace well box cover and tighten hardware (if applicable).

Blaine Tech Services, Inc. Standard Operating Procedure

WELL WATER EVACUATION (PURGING)

Purpose

Evacuation of a predetermined minimum volume of water from a well (purging) while simultaneously measuring water quality parameters is typically required prior to sampling. Purging a minimum volume guarantees that actual formation water is drawn into the well. Measuring water quality parameters either verifies that the water is stable and suitable for sampling or shows that the water remains unstable, indicating the need for continued purging. Both the minimum volume and the stable parameter qualifications need to be met prior to sampling. This assures that the subsequent sample will be representative of the formation water surrounding the well screen and not of the water standing in the well.

Defining Casing Volumes

The predetermined minimum quantity of water to be purged is based on the wells' casing volume. A casing volume is the volume of water presently standing within the casing of the well. This is calculated as follows:

Casing Volume = (TD - DTW) VCF

- 1. Subtract the wells' depth to water (DTW) measurement from its total depth (TD) measurement. This is the height of the water column in feet.
- Determine the well casings' volume conversion factor (VCF). The VCF is based on the diameter of the well casing and represents the volume, in gallons, that is contained in one (1) foot of a particular diameter of well casing. The common VCF's are listed on our Well Purge Data Sheets.
- 3. Multiply the VCF by the calculated height of the water column. This is the casing volume, the amount of water in gallons standing in the well.

Remove Three to Five Casing Volumes

Prior to sampling, an attempt will be made to purge all wells of a minimum of three casing volumes and a maximum of five casing volumes except where regulations mandate the minimum removal of four casing volumes.

Choose the Appropriate Evacuation Device Based on Efficiency

In the absence of instructions on the SOW to the contrary, selection of evacuation device will be based on efficiency.

Measure Water Quality Parameters at Each Casing Volume

At a minimum, water quality measurements include pH, temperature and electrical conductivity (EC). Measurements are made and recorded at least once every casing volume. They are considered stable when all parameters are within 10% of their previous measurement.

Note: The following instructions assume that well has already been properly located, accessed, inspected and gauged.

Prior to Purging a Well

- 1. Confirm that the well is to be purged and sampled per the SOW.
- 2. Confirm that the well is suitable based on the conditions set by the client relative to separate phase.
- 3. Calculate the wells' casing volume.
- 4. Put new Latex or Nitrile gloves on your hands.

Purging With a Bailer (Stainless Steel, Teflon or Disposable)

- 1. Attach bailer cord or string to bailer. Leave other end attached to spool.
- 2. Gently lower empty bailer into well until well bottom is reached.
- 3. Cut cord from spool. Tie end of cord to hand.
- 4. Gently raise full bailer out of well and clear of well head. Do not let the bailer or cord touch the ground.
- 5. Pour contents into graduated 5-gallon bucket or other graduated receptacle.
- 6. Repeat purging process.
- 7. Upon removal of first casing volume, fill clean parameter cup with purgewater, empty the remainder of the purgewater into the bucket, lower the bailer back into the well and secure the cord on the Sampling Vehicle.
- 8. Use the water in the cup to collect and record parameter measurements.
- 9. Continue purging until second casing volume is removed.
- 10. Collect parameter measurements.
- 11. Continue purging until third casing volume is removed.
- 12. Collect parameter measurements. If parameters are stable, stop purging. If parameters remain unstable, continue purging until stabilization occurs or the fifth casing volume is removed.

Purging With a Pneumatic Pump

- 1. Position Pneumatic pump hose reel over the top of the well.
- 2. Gently unreel and lower the pump into the well. Do not contact the well bottom.
- 3. Secure the hose reel.
- 4. Begin purging into graduated 5-gallon bucket or other graduated receptacle.
- 5. Adjust water recharge duration and air pulse duration for maximum efficiency.
- 6. Upon removal of first casing volume, fill clean parameter cup with water.
- 7. Use the water in the cup to collect and record parameter measurements.
- 8. Continue purging until second casing volume is removed.

- 9. Collect parameter measurements.
- 10. Continue purging until third casing volume is removed.
- 11. Collect parameter measurements. If parameters are stable, stop purging. If parameters remain unstable, continue purging until stabilization occurs or the fifth casing volume is removed.
- 12. Upon completion of purging, gently recover the pump and secure the reel.

Purging With a Fixed Speed Electric Submersible Pump

- 1. Position Electric Submersible hose reel over the top of the well.
- 2. Gently unreel and lower the pump to the well bottom.
- 3. Raise the pump 5 feet off the bottom.
- 4. Secure the hose reel.
- 5. Begin purging.
- 6. Verify pump rate with flow meter or graduated 5-gallon bucket
- 7. Upon removal of first casing volume, fill clean parameter cup with water.
- 8. Use the water in the cup to collect and record parameter measurements.
- 9. Continue purging until second casing volume is removed.
- 10. Collect parameter measurements.
- 11. Continue purging until third casing volume is removed.
- 12. Collect parameter measurements. If parameters are stable, stop purging. If parameters remain unstable, continue purging until stabilization occurs or the fifth casing volume is removed.
- 13. Upon completion of purging, gently recover the pump and secure the reel.

Sampling SOP Page 1 of 1

Blaine Tech Services, Inc. Standard Operating Procedure

SAMPLE COLLECTION FROM GROUNDWATER WELLS USING BAILERS

Sampling with a Bailer (Stainless Steel, Teflon or Disposable)

- 1. Put new Latex or Nitrile gloves on your hands.
- 2. Determine required bottle set.
- 3. Fill out sample labels completely and attach to bottles.
- 4. Arrange bottles in filling order and loosen caps (see Determine Collection Order below).
- 5. Attach bailer cord or string to bailer. Leave other end attached to spool.
- 6. Gently lower empty bailer into well until water is reached.
- 7. As bailer fills, cut cord from spool and tie end of cord to hand.
- 8. Gently raise full bailer out of well and clear of well head. Do not let the bailer or cord touch the ground. If a set of parameter measurements is required, go to step 9. If no additional measurements are required, go to step 11.
- 9. Fill a clean parameter cup, empty the remainder contained in the bailer into the sink, lower the bailer back into the well and secure the cord on the Sampling Vehicle. Use the water in the cup to collect and record parameter measurements.
- 10. Fill bailer again and carefully remove it from the well.
- 11. Slowly fill and cap sample bottles. Fill and cap volatile compounds first, then semivolatile, then inorganic. Return to the well as needed for additional sample material.

Fill 40-milliliter vials for volatile compounds as follows: Slowly pour water down the inside on the vial. Carefully pour the last drops creating a convex or positive meniscus on the surface. Gently screw the cap on eliminating any air space in the vial. Turn the vial over, tap several times and check for trapped bubbles. If bubbles are present, repeat process.

Fill 1 liter amber bottles for semi-volatile compounds as follows: Slowly pour water into the bottle. Leave approximately 1 inch of headspace in the bottle. Cap bottle.

Field filtering of inorganic samples using a stainless steel bailer is performed as follows: Attach filter connector to top of full stainless steel bailer. Attach 0.45 micron filter to connector. Flip bailer over and let water gravity feed through the filter and into the sample bottle. If high turbidity level of water clogs filter, repeat process with new filter until bottle is filled. Leave headspace in the bottle. Cap bottle.

Field filtering of inorganic samples using a disposable bailer is performed as follows: Attach 0.45 micron filter to connector plug. Attach connector plug to bottom of full disposable bailer. Water will gravity feed through the filter and into the sample bottle. If high turbidity level of water clogs filter, repeat process with new filter until bottle is filled. Leave headspace in the bottle. Cap bottle.

- 12. Bag samples and place in ice chest.
- 13. Note sample collection details on well data sheet and Chain of Custody.

BLAINE TECH SERVICES, INC. SAN JOSE SACRAMENTO LOS ANGELES SAN DIEGO

Appendix B

Well Monitoring Data Sheets and Well Gauging Data,
Dated February 19, 2007
Blaine Tech Services, Inc.

SPH or Purge Water Drum Log Blymer Eng. @ Former Fresta Beverage Client: Site Address: 966 B9th Ave Oakland STATUS OF DRUM(S) UPON ARRIVAL 10/12/00 6/05/06 6/206 6 29/04 Date 000 Number of drum(s) empty: Number of drum(s) 1/4 full: Number of drum(s) 1/2 full: Number of drum(s) 3/4 full: Number of drum(s) full: 30 2 315 15 BTS Total drum(s) on site: Are the drum(s) properly labeled? Varie Hat Drum ID & Contents: If any drum(s) are partially or totally 6/09/06 filled, what is the first use date: - If you add any SPH to an empty or partially filled drum, drum must have at least 20 gals. of Purgewater or DI Water. -If drum contains SPH, the drum MUST be steel AND labeled with the appropriate label. -All BTS drums MUST be labeled appropriately. STATUS OF DRUM(S) UPON DEPARTURE 6/13/06 6/29/05 6/02/06 6/05/06 Date Number of drums empty: Number of drum(s) 1/4 full: Number of drum(s) 1/2 full: Number of drum(s) 3/4 full: Number of drum(s) full: 2015 Z ₹0 Total drum(s) on site: Are the drum(s) properly labeled? Springer Rune Hap Runge Hat Drum ID & Contents: LOCATION OF DRUM(S) Describe location of drum(s): Hear mad 3 against wall recipion (see map / hear at mai 5)

=) outer, 'Gary', intends to move to so. of Property (Dehind boilding) FINAL STATUS Number of new drum(s) left on site this event 6/02/06 6/05/0b 6/21/05 Date of inspection:

DE PC

Ur

Drum(s) labelled properly:

Logged by BTS Field Tech:

Office reviewed by:

TEST EQUIPMENT CALIBRATION LOG

PROJECT NAM	1E			PROJECT NUM	//BER		
EQUIPMENT NAME	EQUIPMENT NUMBER	DATE/TIME OF TEST,	STANDARDS USED	EQUIPMENT READING	CALIBRATED TO: OR WITHIN 10%:	TEMP.	INITIALO
Myron L	617603	21907	H 40:	43.98	10/0.	12.20	INITIALS (SQ)
		0750	3900ws	386Z4	>	13.12	(4)
1 0 1		0757	244/10/2	243MV		39c	(50)
TUND NOTE	,4500.00	0800	70/100/800 NTV	21/103/81Z		- Carrier Marie A	90
D.O. YSI	OHEOGIL	0630 .	100%	973%			
,							

WELLHEAD INSPECTION CHECKLIST

Date 3 / 19	100			A)	7.		
Date <u>2</u> / 1	0/	Client		1 for		A CONTRACTOR OF THE PARTY OF TH	<u> </u>	
Site Address	166	87	Ave		CAL	(fro		
Job Number 💍	10219-	54		Tec	chnician	$\leq \mathcal{L}$		· · · · · · · · · · · · · · · · · · ·
	Well Inspected -	Water Bailed		ı	Debns	. .	Other Action	Well Not
Well ID	No Corrective Action Required	From Wellbox	Wellbox Components Cleaned	Cap Replaced	Removed From	Lock Replaced	Laken (explain	Inspected (explain
MW-172	X		,		Wellbox		helow)	below)
MW-2 (DX			·			~	
MW3	X							
MW-4	X							
MWS	X		,					
MW-6	X							
MW-7	X				·			
NW-8	X							
MW9	X			-				
							•	
				· ·				
NOTES: 1/	111/-2	Abb	aH		7-2-	arzet k	1 (2)	
NOTES: M	10 P	700 De	<u>//(></u>		071	CAIT	((3)	JC
411		MAIS				and the second s		
			<u> </u>		···			

11449

WELL GAUGING DATA

Project #070219-91/ Date 2/19/07 Client By myses Site 966 89th Ase Ogkland

		· · · · · ·	<u> </u>		Thickness	Volume of			Survey	
		Well		Depth to	of	Immiscibles			Point:	
Wall ID	T'	Size	Sheen /	Immiscible			Depth to water	Depth to well	TOB or	
Well ID	Time	(in.)	Odor	Liquid (ft.)	Liquid (ft.)	(ml)	(ft.)	bottom (ft.)	₹100°	Notes
MW-IR	033						7.94	21.55		
MW-2	0840	2					8.12	2396		
MW3	0836	2	Odar				8.12	2491		
mw4	0820	2					7.77	2/80		
MW-5	0845	2	·				861	19.75		
MWG	0825	2					7.93	1981		
MW.7	0405	2					7.85	2177		
MNB	0811	2					7.99	2002		
MWG	0814	2					SDS	2207		
									V	
										·

W _L MONITORING DATA SHL _

Project #:	0703	2 /29 =	to I	Client:	1	111110		N.
Sampler:			· ·	Date:	2//	967	7	
Well I.D.:	MW-1			Well E	Diameter	(2) 3	3 4	6 8
Total Well	Depth (TI	D): Z/	155	Depth	to Wate	r (DTW)	: 7	74
Depth to Fr	ree Produc	t:		Thickr	ess of F	ree Prod	uct (fee	et):
Referenced	to:	PVC	Grade	D.O. M	leter (if	req'd):	Č	YSI HACH
DTW with	80% Rech	arge [(H	leight of Water	Colum	n x 0.20) + DTW	']: /C	266
Purge Method:	Bailer Sisposable E Positive Air Electric Subi	Displaceme	nt Extrac Other	Waterra Peristaltic tion Pump		Sampling	g Method: Other:	Bailer Disposable Bailer Extraction Port Dedicated Tubing
22 ₍₀		3 ified Volum	_ = 66 6 Calculated Vo	Gals.	Well Diamete 1" 2" 3"	er <u>Multiplica</u> 0.04 0.16 0.37	Well D 4" 6" Other	0.65 1.47 radius ² * 0.163
Time	Temp (°F of °C)	рH	Cond. (mS or (μS)	ı	oidity ΓUs)	Gals. Re	emoved	Observations
0955	122	6.95	677	71	100	2.	2	Brown
1000	15.6	695	676	210	00	4.4		Sight Obox
1005	15.8	686	677	Zll	16O	66	>	70
			·					
Did well de	water?	Yes (No	Gallon	s actuall	y evacua	ited:	56
Sampling D	ate: Z	907	Sampling Time	e: 101	10	Depth to	o Water	:: 10.10
Sample I.D.	: MW	1-172		Labora	tory:	Kiff Ca	alScience	Othe Mc Graph
Analyzed fo	or: (PH-G	BTEX (MTBE TPH-D	Oxygena	ates (5)	Other:		
EB I.D. (if a	applicable	<u> </u>	@ Time	Duplica	ate I.D.	(if applic	able):	
Analyzed fo	or: TPH-G	BTEX	MTBE TPH-D	Oxygena	, ,	Other:		
D.O. (if req	'd):	re-purge:	048	mg/L	P	ost-purge:		mg _{/L}
O.R.P. (if re	eq'd):	re-purge:	8	mV	P	ost-purge:		m∨

W _L MONITORING DATA SHE .

,	·								
Project #:¿	0702		3/ /	Client	:75%	inger	Eine	<u>.</u> :	
Sampler: <				Date:	2/16	167	Sugar at the	,	
Well I.D.:	11111-2			Well [Diameter	2 3	4 6	8	
Total Well	Depth (TE)): 'Z{	396	Depth	to Wate	r (DTW): 与	3.12		
Depth to Fi	ree Produc	t:		Thick	ness of F	ree Product	(feet):		
Referenced	to:	PVC	Grade	D.O. N	Meter (if	req'd):	YSI	НАСН	
DTW with	80% Rech	arge [(H	eight of Water	Colum	n x 0.20) + DTW]:	11.20	7	
Purge Method:	Bailer Sposable B Positive Air I Electric Subr	Displaceme	nt Extrac Other	Waterra Peristaltic etion Pump	:	Sampling Meth	لمسك	Bailer Sposable Bailer Extraction Port Dedicated Tubing	
7.5 (I Case Volume	Gals.) XSpeci	<u>J</u>	= 7.5 es Calculated Vo	_ Gals.	Well Diamete 1" 2" 3"	0.04 4 0.16 6	Vell Diameter " - - - -	Multiplier 0.65 1.47 radius ² * 0.163	
Time	Temp	рН	Cond. (mS or uS)	i	bidity TUs)	Gals. Remov	ed	Observations	
1020	13.6	724	642	7/0	100	25	र्	3,000	·
1025	16.1	713	636	7/0	CO	50		1	
1030	163	7.06	679	ZK	200	7.5			
·····									
Did well de	water?	Yes (No	Gallon	s actuall	y evacuated:	70	<u></u>	
Sampling D	ate: 2/1	9/01	Sampling Time	e:[15	0	Depth to W	ater:	1.11	
Sample I.D.	: MV	1-2		Labora	itory:	Kiff CalScie	ence C	the Mc Fr	mpl
Analyzed fo	or: PH-G	ETEX	МТВЕ ТРН-D	Oxygen	ates (5)	Other:			
EB I.D. (if a	applicable)): 	Time	Duplic	ate I.D.	(if applicable	e):		•
Analyzed fo	or: TPH-G	ВТЕХ	MTBE TPH-D	Oxygen	ates (5)	Other:			
D.O. (if req	'd): P1	e-purge:	02	mg/ _L	Р	ost-purge:			mg/L
O.R.P. (if re	eg'd):	e-purger	780	mV	P	ost-purge:			mV

W LLMONITORING DATA SHE.

Project #: /	1021	9-	21	Client:	羽沙	uver Er	19.	
Sampler:	L	<i>y</i>	•	Date: [2//6	107		
Well I.D.:	MW-Z	,)		Well D	iameteri	(2) 3 4	6 8	
Total Well	Depth (TD): 24	191	Depth	to Water	·(DTW):	.12	
Depth to Fr	ee Product	:		Thickn	ess of Fi	ree Product (f	eet):	
Referenced	to:	PVC	Grade	D.O. M	leter (if	req'd): (YSI	НАСН
DTW with	80% Rech	arge [(H	eight of Water	Colum	ı x 0.20)	+ DTW]:		11.48
Purge Method:	Bailer Positive Air I Electric Subm	Displaceme		Waterra Peristaltic tion Pump		Sampling Metho	Extr Dedic	Bailer sable Bailer action Port sated Tubing
2.7 (0 1 Case Volume	Gals.) XSpeci	J fied Volum	es Calculated Vo	Gals.	Well Diamete 1" 2" 3"	0.04 4" 0.16 6"	0.6 1.4	I
Time	Temp	pН	Cond. (mS of μS)	h .	oidity ΓUs)	Gals. Remove	d Obs	servations
1050	13.7	710	638	7K	00	27	Boi	un Odar
1055	154	70%	640	>/	000	54	1	/
1100	15-6	6.95	644	Zil	100	8.1	<u></u>)
•								
Did well de	water?	Yes C	No	Gallon	s actuall	y evacuated:	8.1	
Sampling D	ate: 7/1	9/07	Sampling Time	e: 121	\mathcal{L}	Depth to Wa	ter:8	2
Sample I.D.	: MW	3		Labora	tory:	Kiff CalScie	nce Other	May be
Analyzed fo	or: aphsq	BTEX (МТВВ ТРН-D	Oxygen	ates (5)	Other:	<u></u>	
EB I.D. (if	applicable));	@ Time	Duplic	ate I.D.	(if applicable):	
Analyzed fo	or: TPH-G	BTEX	MTBE TPH-D	Oxygen	ates (5)	Other:		······································
D.O. (if req	'd): (P	re-purge:	0.0%	mg/L	P	ost-purge:		$^{ m mg}/_{ m L}$
O.R.P. (if re	eg'd):	re-purge:	91	mV	P	ost-purge:		mV

W _L MONITORING DATA SHL

Project #: C707 H Client: Fly My Fly Sampler: Date: 2 G O 7 Well I.D.: MW - Fly Well Diameter 3 4 6 8 Total Well Depth (TD): Depth to Water (DTW): 7.77 Depth to Free Product: Thickness of Free Product (feet): Referenced to: PVC Grade D.O. Meter (if req'd): YS HACH DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: Depth of Water and Sampling Method: Depth of Sampling Method: Depth						
Sampler: Well I.D.: Well Diameter 3 4 6 8 Total Well Depth (TD): Depth to Water (DTW): Thickness of Free Product (feet): Referenced to: PVC Grade D.O. Meter (if req'd): YST HACH DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: Purge Method: Bailer Positive Air Displacement Electric Submersible Other Other: Well Diameter Multiplier Well Diameter Multipl						
Total Well Depth (TD): 7 Depth to Free Product: Thickness of Free Product (feet): Referenced to: PVC Grade D.O. Meter (if req'd): YST HACH DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: Purge Method: Bailer						
Total Well Depth (TD): 7 Depth to Free Product: Thickness of Free Product (feet): Referenced to: PVC Grade D.O. Meter (if req'd): YST HACH DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: Purge Method: Bailer Sampling Method: Bailer Peristaltic Positive Air Displacement Electric Submersible Other Other Value of Column x 0.20 DTW						
Referenced to: PVC Grade D.O. Meter (if req'd): YST HACH DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: Purge Method: Bailer Waterra Sampling Method: Bailer Peristaltic Positive Air Displacement Extraction Pump Other Other Flectric Submersible Other Other Other Other Temp Cond. Turbidity Time (°F of Column x 0.20) + DTW]: Time Cond. Turbidity (Materra Sampling Method: Bailer Peristaltic Peristaltic Pump Other Other Other Total Dedicated Tubin Other Turbidity (NTUs) Gals. Removed Observations						
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: Purge Method: Bailer	Thickness of Free Product (feet):					
Purge Method: Bailer	D.O. Meter (if req'd): YSI HACH					
Disposable Bailer Positive Air Displacement Electric Submersible Other Other Other: Well Diameter Multiplier Well Diameter Multiplier Other	Ì					
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$						
Time (°F o C) pH (mS or uS) (NTUs) Gals. Removed Observations						
1125 13.1 1.14 675 71000 22 FIOWA						
1130 14.7 7.08 657 71000 4.4 1						
1135 150 703 649 71000 66						
Did well dewater? Yes No Gallons actually evacuated:						
Sampling Date: 2/9/07 Sampling Time: 1/40 Depth to Water: 8.03						
Sample I.D.: MW-4 Laboratory: Kiff CalScience Other UCA	virla					
Analyzed for: TPH-B BTEX MTBE TPH-D Oxygenates (5) Other:						
EB I.D. (if applicable): © Time Duplicate I.D. (if applicable):						
Analyzed for: TPH-G BTEX MTBE TPH-D Oxygenates (5) Other:						
D.O. (if req'd): Pre-purge: O.Z. Post-purge:	mg/L					
O.R.P. (if req'd): Pre-purge: mV Post-purge:	mV					

W _L MONITORING DATA SHŁ

Project #: Z	2702	19-9	721	Client	Blu	Mys	ITA		
Sampler:	90			Date:	2/1	1107			
Well I.D.:	MW-5			Well [) Diameter	2) 3	4	6 8	
Total Well	Depth (TI	D): 19	15	Depth	to Water	r (DTW):	86	j	
Depth to Fr	ee Produc	t:		Thickr	ness of F	ree Produ	ıct (fee	t):	
Referenced	to:	PVO	Grade	D.O. Meter (if req'd): YSI HACH					
DTW with	80% Rech	arge [(H	leight of Water	Colum	n x 0.20)) + DTW]: /0:	84	
Purge Method:	Bailer Sposable B Positive Air i Electric Subr	Displaceme	nt Extrac Other	Waterra Peristaltic tion Pump		Sampling	Method:	Bailer Disposable Bailer Extraction Port Dedicated Tubing	
Case Volume	Gals.) X Spec	B ified Volum	= 5.4 Calculated Vo	_Gals.	Well Diamete 1" 2" 3"	0.04 0.16 0.37	Well Di 4" 6" Other	ameter <u>Multiplier</u> 0.65 1.47 rachus² * 0.163	
Time	Temp	рН	Cond (mS φτμS)		bidity TUs)	Gals. Re	moved	Observations	
0400	12.7	6.93	713	7/	000	1.8	·	Brown	
9905	139	682	679	>10	00	3.t	>		
0910	14.1	6.73	610	>K	000	54	<u>-</u> .		
			· · · · · · · · · · · · · · · · · · ·				<u>.</u>	<u> </u>	
Did well de	water?	Yes (No .	Gallon	s actuall	 y evacua	ted: 4	-4	
Sampling D	ate: 2/1	01	Sampling Time		15	Depth to		08.59	
Sample I.D.	: MW	5		Labora	itory:	Kiff Ca	IScience	Other Many	
Analyzed fo	or: TPH-G	BTEX	МТВЕ) ТРН-D	Oxygen	ates (5)	Other:			
EB I.D. (if a	applicable)):	(i) Time	Duplic	ate I.D.	if applic	able):		
Analyzed fo	or: TPH-G	BTEX	МТВЕ ТРН-D	Oxygen		Other:			
D.O. (if req	'd): (Pi	re purge.	1.98	mg/ _L	Р	ost-purge:		nng/L	
O.R.P. (if re	eq'd):	re-purge	-114	mV	Р	ost-purge:		mV	

W LL MONITORING DATA SHE

ے: Project #	7702	19 <	541	Client: Ziymyer Eng.					
Sampler:	51-	· · · · į		Date: 2	1910	7			
Well I.D.:	MW-6	,	1 t - 11	Well Diame	tep. 2 3	4	6 8		
Total Well	Depth (TD	D): 19°	31	Depth to Wa	Depth to Water (DTW): 7.93				
Depth to Fr	ee Product	t:		Thickness of Free Product (feet):					
Referenced	to:	(PVC)	Grade	D.O. Meter	(if req'd):	Y	SI HACH		
DTW with	80% Rech	arge [(H	eight of Water	Column x 0.20) + DTW]: 0.31					
Purge Method:	Bailer Disposable B Positive Air I Electric Subn	Displaceme	nt Extrac Other	Waterra Peristaltic etion Pump Well Die	Sampling	Other:	Bailer Disposable Bailer Extraction Port Dedicated Tubing		
l Case Volume	Gals.) XSpeci	5 fied Volum	es Calculated Vo	Gals.	0.04 0.16 0.37	4" 6" Other	0.65 1.47 radius ² * 0.163		
Time	Temp	рН	Cond. (mS or (4S))	Turbidity (NTUs)	Gals. Re	moved	Observations		
0930	14.6	658	699	7000	5 1.°	1	Bown		
9935	149	673	737	2100	0 35	3			
940	15.6	6.74	740	>1000	5 5	7	$ \bigvee$		
Did well de	water?	Yes C	No	Gallons actu	ally evacua	ited: 5	7		
Sampling D	ate: 2 / F	7107	Sampling Time	e: ///9	Depth to	Water:	1025		
Sample I.D.	: NW.	6_		Laboratory:	Kiff Ca	alScience	Othe Mc Ground		
Analyzed fo	r: (PH-C	BTEX (MTBE TPH-D	Oxygenates (5) Other:		•		
EB I.D. (if a	applicable)): 	@ Time	Duplicate I.I	D. (if applic	able):			
Analyzed fo	r: TPH-G	ВТЕХ	MTBE TPH-D	Oxygenates (5) Other:				
D.O. (if req	'd): (Pr	e-purge:	0.21	mg/L	Post-purge:		mg/		
O.R.P. (if re	eq'd): Pr	e-purge:	-30	mV	Post-purge:		m۷		

W _L MONITORING DATA SHE

Project #:	7021	9	>11	Client:	131	INVE	2/ 7	na.
Sampler: 5		į		Date:	1	9/07	"	in a second
Well I.D.:	N:11-7	7		Well D)iamet e r	2) 3	4	6 8
Total Well De	epth (TD): 21	7-7	Depth	to Wate	r (DTW)	: 75	3-3
Depth to Free	Product					ree Prod		(P.
Referenced to		PVC	Grade		leter (if			YSP HACH
DTW with 80	% Recha	arge [(H	eight of Water	Colum	1 x 0.20) + DTW]: <i>K</i>	063
Po	ailer Isposable Ba ositive Air D lectric Subm) isplacemer	nt Extrac Other	Waterra Peristaltic tion Pump		Sampling	Method:	Bailer Sposable Bailer Extraction Port Dedicated Tubing
Z-Z(Gal I Case Volume		Jied Volume	= 66 Calculated Vo	_Gals.	Well Diameter I" 2" 3"	0.04 0.16 0.37	Well Di 4" 6" Other	meter <u>Multiplier</u> 0.65 1.47 radius ² * 0.163
Time (Temp °F or C)	рН	Cond (mS o(uS)		oidity [Us]	Gals. Re	moved	Observations
12/5	6.2	7.69	703	7/0	00	2.7	2	Erown
200	17.1	736	702	710	00	4.4	-	
1715 1	7.2	721	703	>/0	00	6k	>	1/
							_	
Did well dewa	iter?	Yes	Vo	Gallons	actuall	y evacua	ted: 6	6
Sampling Date	e:2/19	107	Sampling Time	123	0	Depth to	Water	8.16
Sample I.D.:	MW-	7		Labora	tory:	Kiff Ca	lScience	Othe Cample
Analyzed for:	(PH-C	BTEX)	МТВИ ТРН-D	Oxygena	ites (5)	Other;		
EB I.D. (if app	olicable):		@ Time	Duplica	ite I.D.	(if applic	able):	
Analyzed for:	ТРН-G	BTEX	MTBE TPH-D	Oxygena		Other:	<u> </u>	
D.O. (if req'd)	: Pre	e-purge:	0.10	mg/ _L	P	ost-purge:		^{mg} /L
O.R.P. (if req'o	d): Py	-purge:	110	mV	P	ost-purge:		mV

V. LL MONITORING DATA SHL

Project #	702	19-5	341	Client	BIV	MY		NA.		
Sampler:	51	 ,		Date:	2/10	3/07				
Well I.D.:	MW-8	? }		Well Di	ameter	3	4	6 8		
Total Well	Depth (TD)): Z4	0.02	Depth to) Water	r (DTW):	70	39		
Depth to Fr	ee Product	.,		Thickne	ss of F	ree Produ	ıct (fee	<u>//</u> t <u>)</u> :		
Referenced	to:	PVC	Grade	D.O. Me			- Aller	YSI	НАСН	
DTW with	80% Rech	arge [(H	eight of Water	Column	x 0.20)) + DTW]: /C) 40)	
Purge Method:	Bailer Sposable B Positive Air I Electric Subm	Displacemei	nt Extrac Other	Waterra Peristaltic ction Pump		Sampling	Method:	ispos Extra	Bailer sable Bailer action Port ated Tubing	
l Case Volume	Gals.) XSpeci	5 fied Volum	= 5.7 es Calculated Vo	_ Gals.	Vell Diamete 1" 2" 3"	0.04 0.16 0.37	Well Di 4" 6" Other	0.65 1.47		
Time	Temp (°F or °C)	рН	Cond (mS of µS)	Turbi (NTI	•	Gals. Re	noved	Obse	ervations	
1200	152	7.23	702	7/0	00	1.9		Bro	own	
1240	16.7	7.13	711	710	00	3.8	>			
1245	16.6	7.07	712	710	00	5.1	7		1	
							.	<u> </u>		
Did well de	water?	Yes (Ng	Gallons	actuall	y evacua	ted:			
Sampling D	ate: 7/10	107	Sampling Time	e: 125	0	Depth to	Water	8.7	7.2	
Sample I.D.	: MW	8		Laborate	ory:	Kiff Ca	Science	Other	Uc Carry	FL
Analyzed fo	or: 19H-C	BTEX (МТВЕ ТРН-D	Oxygenat	es (5)	Other:				
EB I.D. (if a	applicable)	:	Time Time	Duplicat	te I.D. ((if applic	able):			
Analyzed fo	or: TPH-G	BTEX	МТВЕ ТРН-D	Oxygenate	es (5)	Other:		-	New Action of Control	
D.O. (if req	'd):	e-purge:	0.11	mg/L	P	ost-purge:		. <u>. </u>	mg _/	/L
O.R.P. (if re	eq'd): Fr	e-purge.	102	mV	P	ost-purge:		- 	m\	$\sqrt{}$

W LL MONITORING DATA SHE

Project #:)70Z	219-	341	Client:	BN	Myer	E	19.	
Sampler:	50			Date:	2//	7/07			
Weil I.D.:	MW	7		Well D	iameter	2) 3	4	6 8	
Total Well	Depth (TD): 77	2.67	Depth	to Water	·(DTW):	80	K	
Depth to Fr	ee Product		y	Thickn	ess of F	ree Produ	ct (feet):	
Referenced	to:	PVC	Grade	D.O. M	leter (if	req'd):		YS) HACH	
DTW with	80% Rech	arge [(H	eight of Water	Colum	n x 0.20)	+ DTW]	: 10.	88	
Purge Method:	Bailer Deposable B Positive Air I Electric Subn	Displaceme	nt Extrac Other	Waterra Peristaltic ction Pump	Well Diamete	Sampling I	Method: Other: Well Dia	Bailer Sposable Bailer Extraction Port Dedicated Tubing Ameter Multiplier 0.65	
222(C) 1 Case Volume	Gals.) X Speci	3 fied Volum	es Calculated Vo	_ Gals. olume	2" 3"	0.16 0.37	6" Other	1,47 radrus ² * 0.163	
Time	Temp	pН	Cond. (mS or µS)	1	oidity TUs)	Gals. Rer	noved	Observations	
1315	15.8	756	646	710	00	7.0	2	BOWN	(
1370	160	730	644	710	00	4.4			
1325	163	7.23	646	7K	200	66	,		
		-	·						
								<u>, </u>	
Did well de	water?	Yes C	No	Gallon	s actuall	y evacuat	ed: C	>.6	
Sampling D	ate: Z /1	907	Sampling Tim	e: 133	30	Depth to	Water	9.32	
Sample I.D.	: M'u	1-9		Labora	itory:	Kiff Ca	Science	Othe McC 7	mF
Analyzed fo	or: (TPH-C	BTEX	МТВЕ ТРН-D	Oxygen	ates (5)	Other:			`
EB I.D. (if	applicable):	@ Time	Duplic	ate I.D.	(if applic	able):		
Analyzed fo	or: TPH-G	BTEX	MTBE TPH-D	Oxygen	ates (5)	Other:			
D.O. (if req	'd):	re-purge:	0.08	mg/L	F	ost-purge:			mg/
O.R.P. (if re	eg'd): 🎢	re-purge:	101	mV	F	ost-purge:			mV

Appendix C

Analytical Laboratory Report
Dated February 27, 2007
McCampbell Analytical, Inc.

Blymyer Engineers, Inc.	Client Project ID: Former Fiesta Beverages	Date Sampled: 02/19/07
1829 Clement Avenue		Date Received: 02/21/07
Alameda, CA 94501-1395	Client Contact: Mark Detterman	Date Reported: 02/27/07
7 Hainead, C/1 74301 1373	Client P.O.:	Date Completed: 02/27/07

WorkOrder: 0702471

February 27, 2007

Dear Mark:

Enclosed are:

- 1). the results of 9 analyzed samples from your Former Fiesta Beverages project,
- 2). a QC report for the above samples
- 3). a copy of the chain of custody, and
- 4). a bill for analytical services.

All analyses were completed satisfactorily and all QC samples were found to be within our control limits. If you have any questions please contact me. McCampbell Analytical Laboratories strives for excellence in quality, service and cost. Thank you for your business and I look forward to working with you again.

Best regards,

Angela Rydelius, Lab Manager

0102111 1680 ROGERS AVENUE CONDUCT ANALYSIS TO DETECT McCampbell DHS# **BLAINE** SAN JOSE, CALIFORNIA 95112-1105 ALL ANALYSES MUST MEET SPECIFICATIONS AND DETECTION FAX (408) 573-7771 LIMITS SET BY CALIFORNIA DHS AND TECH SERVICES, INC. PHONE (408) 573-0555 ☐ EPA RWQCB REGION ☐ LIA CHAIN OF CUSTODY ☐ OTHER BTS #070219561 (8021B) CLIENT SPECIAL INSTRUCTIONS Blymyer Engineers, Inc. SITE Former Fiesta Beverage Invoice and Report to: Blymyer Engineers, Inc. *MTBE TPH-G (8015M) 966 89th Avenue Attn: Mark Detterman EDF Format Required. Oakland, CA CONTAINERS 8 MATRIX *Run highest MTBE result a second time by EPA 8260B for all BTEX S = SOL W=H₂0 additives including EDB, 1,2-DCA, Ethanol and Methanol. ID TIME CONDITION ADD'L INFORMATION STATUS LAB SAMPLE # 1010 W MW-1R 3 HCL Χ Х MW-2 W 3 HCL Χ Χ 3 HCL Χ MW-3 W Χ W Χ MW-4 3 HCL Χ MW-5 0915 1w 3 HCL Χ Χ INLAB MW-6 W 3 HCL Χ Χ 1230 W 3 HCL Χ Χ MW-7 3 HCL Χ 8-WM Χ 1230 W 3 HCL MW-9 Χ Χ SAMPLING TIME SAMPLING RESULTS NEEDED PERFORMED BY COMPLETED NO LATER THAN As contracted TIME RELEASED BY RECEIVED BY TIME DATE 500 RELEASED BY TIME DATE RECEIVED BY 1100 RELEASED BY TIME DATE RECEIVED BY 1157 SHIPPED VIA DATE SENT TIME SENT COOLER#

McCampbell Analytical, Inc.

1534 Willow Pass Rd
Pittsburg, CA 94565-1701
(925) 252-9262

CHAIN-OF-CUSTODY RECORD

Page 1 of 1

WorkOrder: 0702471 ClientID: BEIA

			✓ EDF		□F	ax		✓ Emai	I	∏На	rdCopy		Third	Party		
Report to: Mark Detterma	an	Email: MDetterman	@blymyer.com			Bill to:	counts	Pavahl	۵			Requ	uested	TAT:	5	days
Blymyer Engineers, Inc. 1829 Clement Avenue Alameda, CA 94501-1395		TEL: (510) 521-37 ProjectNo: Former Fiest: PO:	Accounts Payable 594 Blymyer Engineers, Inc. 1829 Clement Avenue Alameda, CA 94501-1395				5		Date Received: Date Printed:			02/21/2007 02/22/2007				
Sample ID	ClientSampID	Matrix	Collection Date	Hold	1	2	3	Re 4	equested 5	Tests (S	iee legei 7	nd belo	ow) 9	10	11	12
0702471-001	MW-1R	Water	2/19/07 10:10:00		Α	Α										
0702471-002	MW-2	Water	2/19/07 11:50:00		Α							-				
0702471-003	MW-3	Water	2/19/07 12:10:00		Α											
0702471-004	MW-4	Water	2/19/07 11:40:00		Α											
0702471-005	MW-5	Water	2/19/07 9:15:00 AM		Α											
0702471-006	MW-6	Water	2/19/07 11:15:00		Α											
0702471-007	MW-7	Water	2/19/07 12:30:00		Α											
0702471-008	MW-8	Water	2/19/07 12:50:00		Α											
0702471-009	MW-9	Water	2/19/07 1:30:00 PM		Α											
<u>Test Legend</u> :																
1 G-MBTE	X_W 2	PREDF REPORT	3				4					[5			
6	7		8				9)				1	0			
11	12		<u>. 11</u>					п					ı			
											P	'repar	ed by:	Melis	sa Vall	es

Comments: Run highest MTBE result by 8260 for all oxys/additives

NOTE: Samples are discarded 60 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense.

Blymyer Engineers, Inc.	Client Project ID: Former Fiesta Beverages	Date Sampled: 02/19/07
1829 Clement Avenue		Date Received: 02/21/07
Alameda, CA 94501-1395	Client Contact: Mark Detterman	Date Extracted: 02/23/07-02/24/07
1 III	Client P.O.:	Date Analyzed: 02/23/07-02/24/07

Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline with BTEX and MTBE*

Extraction method: SW5030B Analytical methods: SW8021B/8015Cm Work Order: 0702471 Lab ID Client ID TPH(g) MTBE Toluene Ethylbenzene Xylenes DF % SS Matrix Benzene 001A MW-1R W ND 8.0 200.a.i 0.80 12 8.7 1 101 002A MW-2 W 51,a 7.1 8.0 1.6 1.0 2.8 1 91 003A MW-3 W 280.a ND 49 11 18 23 1 96 004A MW-4 W ND ND ND ND ND ND 105 W 005A MW-5 ND 5.6 ND ND ND ND 111 W ND 006A MW-6 ND ND ND ND ND 106 007A MW-7 W ND ND ND ND ND ND 115 008A MW-8 W ND,i ND ND ND ND ND 115 009A MW-9 W ND ND ND ND ND ND 109 Reporting Limit for DF = 1; 0.5 W 50 5.0 0.5 0.5 0.5 μg/L ND means not detected at or S NA NA NA mg/Kg NA NA NA above the reporting limit

⁺The following descriptions of the TPH chromatogram are cursory in nature and McCampbell Analytical is not responsible for their interpretation: a) unmodified or weakly modified gasoline is significant; b) heavier gasoline range compounds are significant(aged gasoline?); c) lighter gasoline range compounds (the most mobile fraction) are significant; d) gasoline range compounds having broad chromatographic peaks are significant; biologically altered gasoline?; e) TPH pattern that does not appear to be derived from gasoline (stoddard solvent / mineral spirit?); f) one to a few isolated non-target peaks present; g) strongly aged gasoline or diesel range compounds are significant; h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~1 vol. % sediment; j) reporting limit raised due to high MTBE content; k) TPH pattern that does not appear to be derived from gasoline (aviation gas). m) no recognizable pattern; n) TPH(g) range non-target isolated peaks subtracted out of the TPH(g) concentration at the client's request; p) see attached narrative.



^{*} water and vapor samples and all TCLP & SPLP extracts are reported in ug/L, soil/sludge/solid samples in mg/kg, wipe samples in µg/wipe, product/oil/non-aqueous liquid samples in mg/L.

[#] cluttered chromatogram; sample peak coelutes with surrogate peak.

QC SUMMARY REPORT FOR SW8021B/8015Cm

W.O. Sample Matrix: Water QC Matrix: Water WorkOrder: 0702471

EPA Method SW8021B/8015Cm	Extra	BatchID: 26382 Spiked Sample ID: 0702466						0702466-01	6A			
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acce	eptance	Criteria (%)	1
, wildly to	μg/L	μg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	RPD	LCS/LCSD	RPD
TPH(btex)	ND	60	98.4	96	2.44	95.5	94.9	0.625	70 - 130	30	70 - 130	30
MTBE	ND	10	88.6	91	2.65	106	105	0.916	70 - 130	30	70 - 130	30
Benzene	ND	10	107	111	3.79	100	107	6.94	70 - 130	30	70 - 130	30
Toluene	ND	10	98.8	96.4	2.48	91.6	98.2	6.96	70 - 130	30	70 - 130	30
Ethylbenzene	ND	10	109	99.7	8.74	102	106	4.09	70 - 130	30	70 - 130	30
Xylenes	ND	30	107	96.7	9.84	100	100	0	70 - 130	30	70 - 130	30
%SS:	90	10	102	98	3.50	94	103	9.27	70 - 130	30	70 - 130	30

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:

NONE

BATCH 26382 SUMMARY

Sample ID	Date Sampled	Date Extracted	Date Analyzed	Sample ID	Date Sampled	Date Extracted	Date Analyzed
0702471-001	2/19/07 10:10 AM	2/24/07	2/24/07 12:28 AM	0702471-002	2/19/07 11:50 AM	2/24/07	2/24/07 5:56 PM
0702471-003	2/19/07 12:10 PM	2/24/07	2/24/07 2:05 AM				

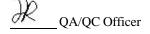
MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 * (MS-Sample) / (Amount Spiked); RPD = 100 * (MS - MSD) / ((MS + MSD) / 2).

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

£ TPH(btex) = sum of BTEX areas from the FID.

cluttered chromatogram; sample peak coelutes with surrogate peak.



QC SUMMARY REPORT FOR SW8021B/8015Cm

W.O. Sample Matrix: Water QC Matrix: Water WorkOrder: 0702471

EPA Method SW8021B/8015Cm Extraction SW5030B						BatchID: 26386 S				piked Sample ID: 0702472-003A			
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acce	eptance	Criteria (%)	1	
, wildly to	μg/L	μg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	RPD	LCS/LCSD	RPD	
TPH(btex [£]	ND	60	96.9	95.6	1.40	103	95.8	7.18	70 - 130	30	70 - 130	30	
MTBE	ND	10	92	93.4	1.44	83.1	104	22.4	70 - 130	30	70 - 130	30	
Benzene	ND	10	102	106	3.14	110	99.5	9.72	70 - 130	30	70 - 130	30	
Toluene	ND	10	94.4	96.8	2.52	102	92.6	10.1	70 - 130	30	70 - 130	30	
Ethylbenzene	ND	10	95.3	100	4.79	105	104	1.45	70 - 130	30	70 - 130	30	
Xylenes	ND	30	96	96.7	0.692	100	103	3.28	70 - 130	30	70 - 130	30	
%SS:	106	10	95	99	4.16	104	96	8.13	70 - 130	30	70 - 130	30	

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:

NONE

BATCH 26386 SUMMARY

Sample ID	Date Sampled	Date Extracted	Date Analyzed	Sample ID	Date Sampled	Date Extracted	Date Analyzed
0702471-004	2/19/07 11:40 AM	2/23/07	2/23/07 4:19 PM	0702471-005	2/19/07 9:15 AM	2/23/07	2/23/07 4:49 PM
0702471-006	2/19/07 11:15 AM	2/23/07	2/23/07 5:49 PM	0702471-007	2/19/07 12:30 PM	2/23/07	2/23/07 6:19 PM
0702471-008	2/19/07 12:50 PM	2/24/07	2/24/07 1:16 AM	0702471-009	2/19/07 1:30 PM	2/24/07	2/24/07 1:46 AM

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 * (MS-Sample) / (Amount Spiked); RPD = 100 * (MS - MSD) / ((MS + MSD) / 2).

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

£ TPH(btex) = sum of BTEX areas from the FID.

cluttered chromatogram; sample peak coelutes with surrogate peak.

