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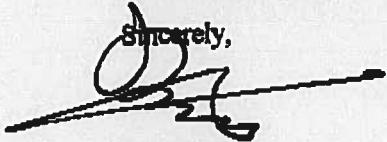
Mr. Jerry Wickham  
Alameda County Environmental Health  
1131 Harbor Bay Parkway, Suite 250  
Alameda, CA 94502-6577

RE: B&C Gas Mini Mart, 2011 Second Semi-Annual Groundwater Monitoring Report, 2008  
First Street, Livermore, California  
Fuel Leak Case RO0000278

Dear Mr. Wickham:

"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."

Sincerely,

  
Balaji Angle



# MONITORING REPORT

## B&C GAS MINI MART

### 2011 Second Semi-Annual Groundwater Monitoring Report

**Prepared for:** Mr. Balaji Angle  
B&C Gas Mini Mart  
2008 First Street  
Livermore, CA 94005

**Prepared by:** Golder Associates Inc.  
425 Lakeside Drive  
Sunnyvale, CA 94085

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**GOLDER ASSOCIATES INC.**



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## 1.0 INTRODUCTION

Golder Associates Inc. has compiled the second semi-annual 2011 groundwater monitoring results for B&C Gas Mini Mart (B&C) [currently named Valley Gas and Mini Mart], 2008 First Street, Livermore, California (Figure 1). This report includes groundwater elevation data, groundwater sampling methods, and results of groundwater chemical analyses.

Six wells and four zones in the multi-level wells were successfully sampled for field monitoring and laboratory analysis for a total of ten monitoring points. Well MW-6 is obstructed above the water level and was not sampled.

### 1.1 Site Description

The B&C property is located on the northeast corner of First and South L Streets in Livermore, California, and currently serves as a gasoline station and mini market called Valley Gas. From at least 1988 until 1994, Desert Petroleum (DP) owned and operated the site. In January 1994, DP sold the site to the current owner, Mr. Balaji Angle. The following site description has been compiled from reports on file with Alameda County Environmental Health Services (ACEHS) and information provided by the site owner.

The site is located in the Livermore Valley groundwater basin, an area of sedimentary deposition containing braided channel systems with complex interfingering. Subsurface investigations conducted to the west of the B&C site have found an upper unconfined water-bearing zone consisting primarily of gravels with sand and clay. A low-permeability clayey unit is found at depths of approximately 75 to 110 feet below ground surface (bgs). Below the clayey unit, the top of a lower, semi-confined aquifer is found at depths ranging from 110 to 145 feet bgs.<sup>1</sup>

Subsurface work conducted in the B&C area has found predominantly sandy clay, silty sand, silty gravel, and sandy gravel. Over the last 19 years, static water levels have ranged from a low of 69 feet bgs (January 1992) to a high of 17 feet bgs (February 1997). The groundwater flow generally ranges from west of north during the summer and fall months, to north of west during the winter and spring months.

### 1.2 Previous Work Performed at Site

A preliminary site assessment was conducted in September 1988. Three soil borings were completed; one of which was converted to a monitoring well (MW-1). In March 1994, a 280-gallon waste oil underground storage tank (UST) and 25 cubic yards of soil were removed as part of closing the auto repair shop at the station. Three months later in June, wells MW-2, MW-3, and MW-4 were installed (Figure 2).<sup>2</sup>

In August 1994, free product was encountered in well MW-2, and product removal commenced twice a month. By the end of January 1995 no measurable thickness of product remained, only sheen could be detected.<sup>3</sup> In March 1995, a release was reported to have occurred from the union between a tank subpump and product line. The quantity of the release is unknown.

One gasoline UST at the B&C site failed an integrity test in September 1995. The tank was immediately taken out of commission and ACEHS was notified. In July 1996, further source removal was conducted. Two more gasoline USTs were removed and new double-walled fiberglass USTs and fiberglass piping with automated leak detection were installed (Figure 2). Other remedial activities included the removal of

<sup>1</sup> H<sup>+</sup>GCL, Inc. Deep Groundwater Conduit Study, Livermore Arcade Shopping Center, First Street and South P Street, Livermore, California. December 6, 1993.

<sup>2</sup> Remediation Service Int'l. Soil & Groundwater Investigation Report for 2008 First Street, Livermore, California. July 22, 1994.

<sup>3</sup> Product thickness information from Remediation Service, Int'l field records, "Free Product Removal Logs."

two hydraulic lifts and approximately 700 cubic yards of impacted soil. Also, one 1,000-gallon UST discovered during excavation activities was closed in place with approval from ACEHS and the Livermore Fire Department by grouting with cement sand slurry. In October 1995, two additional monitoring wells (off-site well MW-5 and well MW-6) were installed (Figure 2).

Nine downgradient wells (MW-7, MW-8, MW-9, MW-10, MW-11, MW-12, MW-13, D-1, and D-2) were installed during June and July 1999 to define the downgradient and lateral extent of the plume and provide long-term monitoring locations (Figure 2).<sup>4</sup> Two of the wells, D-1 and D-2, are installed in the semi-confined aquifer below the aquitard. The other wells are installed in the upper water-bearing zone.

In July and August 2003, four multi-level wells were installed (CMT-1, CMT-2, CMT-3, and CMT-4). Each was constructed using continuous multi-channel tubing (CMT) and completed with seven sampling ports to monitor groundwater both in the upper water-bearing zone and in the semi-confined aquifer below the aquitard. CMT-4 was installed at the B&C site while CMT-1, CMT-2, and CMT-3 were installed downgradient of the site to better define the lateral extent of the plume in the northwest direction.

Table 1a summarizes the well construction details for all single-screen wells installed on- and off-site, and Table 1b summarizes the well construction details for the four multi-level wells. Onsite well MW-1 was destroyed on November 26, 2007.

The primary constituents of concern are total petroleum hydrocarbons as gasoline (TPH-G); the aromatic compounds benzene, toluene, ethylbenzene, and xylenes (collectively referred to as BTEX); and methyl tertiary-butyl ether (MTBE). Since 1994, concentrations of TPH-G in groundwater have decreased.

Groundwater monitoring was temporarily suspended after first quarter 2009 due to California State Underground Storage Tank Cleanup Fund budget issues.

### 1.3 Interim Remedial Action at Well MW-5

Floating product first was observed in well MW-5 in October 1998. The well is screened from 15 to 40 feet bgs, and the depth to groundwater has historically ranged from 18 to 33 feet bgs, well within the screened interval of the well. A passive bailer or absorbent sock was selected to remove product from well MW-5 based on well access, the thickness of the product, and the rate at which the product enters the well as it is removed. The absorbent socks removed sufficient product to reduce the free product thickness to sheen or less. Since September 2002, product sheen has periodically been observed in the purge water from well MW-5 even though no product thickness can be measured.

### 1.4 Ozone Sparging

During August 2007, Golder installed six dual-completion sparge wells, SP-1 (A, B) through SP-6 (A, B), two deeper screened sparge wells, SP-5C and SP-6C, and a soil vapor extraction (SVE) well.<sup>5</sup> In general the A and B sparge well screens were installed across the source zone at depths between 36 and 48 feet bgs to monitor the source zone, and the C screens were installed at approximately 54 feet bgs to assess vertical migration. The SVE screen was installed from 15 to 25 feet bgs for additional assessment and remediation if warranted.

Golder performed a pilot test using groundwater and vapor samples to evaluate the effectiveness of the sparge system. While the pilot test showed a positive effect on VOC concentrations onsite, the significant decline in the water table limited the ability to monitor the ozone sparging test and provide ozone to the source zone. Golder recommended discontinuing the ozone sparging pilot test until the water table

<sup>4</sup> Einarson, Fowler & Watson, November 5, 1999, Report of Downgradient Investigation, B&C Gas Mini Mart, 2008 First Street, Livermore, California.

<sup>5</sup> Golder Associates Inc. Pilot Test Report, B&C Gas Mini Mart, 2008 First Street, Livermore, California. December 7, 2007.

increased to above the source zone. A significant increase in the water table occurred in January 2008. The rise in groundwater levels was sufficient to re-saturate the source zone and both sparge point depth zones. As a result, Golder recommended continuing the air-sparging pilot test with the revised implementation schedule.<sup>6</sup> The air-sparging pilot test re-started on March 5, 2008.

Additional sparge points (SP-2A and B and SP-4A and B) were hooked up to the system on July 3, 2008. Recommendations for the final remedial approach for on-site and downgradient areas were presented in a corrective action plan (CAP), which was submitted on January 21, 2009.<sup>7</sup> Because of the low groundwater levels at the end of 2008, the CAP recommended implementing a combination of SVE and ozone sparging. By letters dated May 10, 2010 and January 13, 2011, ACEH accepted the proposed corrective actions in the 2009 CAP. However, groundwater levels have increased and SVE is not currently viable. The ozone sparging system is operating and is the primary corrective action.

## 2.0 GROUNDWATER SAMPLING AND ANALYSIS

The groundwater monitoring program for single screen and multi-level wells is summarized in Tables 2a and 2b. Sampling activities are summarized below. Groundwater sampling methods and results are presented and a discussion of historical analytical trends for site monitoring wells is included.

During this sampling event, Golder personnel checked for free-product in well MW-5. No measurable free product was observed in MW-5 during this monitoring event.

### 2.1 Groundwater Elevations

On September 27, 2011, Golder personnel measured the depth to water in the groundwater monitoring wells scheduled for sampling. Water levels were measured to the nearest 0.01-foot using a water level meter, according to standard measuring protocol,<sup>8</sup> and were recorded on a water level data sheet (Appendix A). Groundwater elevations are calculated by subtracting depth-to-water measurements from the top of well casing elevations.

Tables 3a and 3b summarize the groundwater elevations from the current monitoring event (historical groundwater elevations are included in Appendix C). A groundwater contour map, based on the current water level measurements, is presented in Figure 3. Water levels measured in Zone 1, or the next deeper zone if Zone 1 was dry, of the multi-level wells were used to complete the equipotential contours on Figure 3. Compared to groundwater level measurements conducted in February 2011, current groundwater elevations above the regional aquitard are approximately between 0.4 to 3.6 feet lower. Groundwater flow is slightly north of west and the hydraulic gradient is approximately 0.018 foot per foot. The flow direction and gradient are similar to previous results.

### 2.2 Sampling Methods

Golder personnel sampled groundwater in the single-screen and multi-level monitoring wells on September 27, 2011. All single-screen wells sampled during this quarter were purged with a one-use weighted disposable polyethylene bailer. Samples were collected from each well using a disposable bailer.

<sup>6</sup> Golder Associates, Inc. Letter to D. Drogos, ACEH re: "Pilot Test Continuation Schedule Update, Fuel Leak Case No. R00000278, Former Desert Petroleum, 2008 1<sup>st</sup> Street, Livermore, California." January 31, 2008.

<sup>7</sup> Golder Associates, Inc. Corrective Action Plan, Valley Gas (Formerly B&C Mini Mart), 2008 1<sup>st</sup> Street, Livermore, California. January 21, 2009.

<sup>8</sup> Einarson, Fowler & Watson. Third Quarter 1998 Groundwater Monitoring Results, B&C Gas Mini Mart, Livermore, California, Appendix A. September 10, 1998.

The shallowest water-bearing zone in the multi-level wells were purged and sampled using inertial lift methods with dedicated ¼-inch diameter tubing fitted with a check valve. Unless there was insufficient water present, two casing volumes were removed to purge each zone prior to collecting a groundwater sample. Groundwater samples were collected using the inertial lift method.

Field measurements of temperature, pH, turbidity, and electrical conductivity were taken when sufficient water was present; field measured values were recorded on water sample field data sheets (Appendix A). All samples were properly stored (on ice and in coolers) on the day of sampling. Chain-of-custody documentation accompanied the samples through collection and delivery to the analytical laboratory (Appendix B).

Purge water from the multi-level and monitoring wells was contained in 55-gallon drums stored at the B&C site. Purge water was not discharged to the sewer system during this event.

## 2.3 Analytical Program

BC Laboratories, Inc. of Bakersfield, California, a state-certified laboratory, performed all analyses. Groundwater samples were analyzed for TPH-G, benzene, toluene, ethylbenzene, total xylenes (collectively referred to as BTEX compounds), methyl tertiary-butyl ether (MTBE), and tert-butyl alcohol (TBA) by the U.S. Environmental Protection Agency Method 8260. In addition, tert-amyl methyl ether (TAME) and ethanol were analyzed in well CMT-4.

### 2.3.1 Laboratory Quality Control

Laboratory analyses occurred within specified holding times. Based on the laboratory QA/QC summaries, the method blanks, laboratory control samples (LCS), matrix spikes (MS), and matrix spike duplicates (MSD) were within laboratory control limits. Where exceptions were noted batches were generally accepted based on supporting LCS recovery data.

## 2.4 Analytical Results

Analytical results for the third quarter 2011 are summarized in Tables 4a and 4b (for the single-screen wells and the multi-level wells, respectively). Benzene and MTBE concentrations are presented on Figure 4, and are used to define the greater than 0.5 µg/L concentration plume outlines shown on the figure for these two compounds. Tables of historical analytical results are included in Appendix C.

Concentrations of benzene have steadily decreased in all single-screen site wells (Appendix C). Analysis for MTBE in site groundwater samples began in June 1995. Since then, concentrations of MTBE have decreased significantly; impacted wells from the source area to the distal end of the plume are now showing fairly steady results over time. Seasonal changes in hydrocarbon concentrations are evident in other wells, probably a reflection of seasonal water level fluctuations.

### 2.4.1 Detections in On-Site Wells

CMT-4 has the highest hydrocarbon concentrations, but are within historical ranges. For wells near the source area, BTEX and MTBE concentrations detected during this most recent sampling event are within historical ranges. No hydrocarbons were detected in samples from upgradient monitoring well MW-4.

MW-2 had slightly higher concentrations of TPH-G (100 µg/l), benzene (1.0 µg/l), and ethyl benzene (0.66 µg/l) compared to the last sampling event, February 2011. MW-3 had slightly higher concentrations of TPH-G (490 µg/l), benzene (2.0 µg/l), ethyl benzene (1.4 µg/l), and MTBE (19 µg/l) compared to the last sample. For the first time since 2005, MTBE was not detected in well MW-5. MW-5 had lower

concentrations of TPH-G, benzene, and ethylbenzene, but slightly higher concentrations of toluene (1.9 µg/l) and total xylenes (2.2 µg/l) compared to the last sample, but all are within historical ranges.

#### **2.4.2 *Detections in Downgradient Wells***

Downgradient of the site, TPH-G and MTBE were detected in single-screen wells MW-7 and MW-13. Monitoring well MW-7 also had a detection of benzene. MW-7 had slightly higher concentrations of TPH-G (690 µg/l), benzene (13 µg/l), and MTBE (23 µg/l) compared to the last sample, but were within historical ranges. The TPH-G concentration in MW-13 (74 µg/l) was slightly higher than the previous results in February 2011 but was also within historical ranges. TBA was detected at 25 µg/l in well CMT-3 for the first time. No other hydrocarbons, BTEX or MTBE were detected in samples from downgradient multi-level wells CMT-1, CMT-2 and CMT-3.

For the single screen wells near the source area, BTEX and MTBE concentrations detected during this most recent sampling event are within historical ranges and generally lower than those previously detected in each well. Downgradient wells will continue to be monitored for changes in water quality.

#### **2.4.3 *Monitored Natural Attenuation***

Five wells, MW-4 (upgradient), MW-2 (source area), MW-5 (distal source), MW-13 (mid-plume), and CMT-2 are used to assess indicators of continued natural attenuation (Table 4c). There is an indication of reduced dissolved oxygen, more negative ORP, and reduced pH within the plume, indicating ongoing natural attenuation. The parameters typically recover to near upgradient levels at the distal end of the plume, indicating that natural attenuation appears to be a viable mechanism for controlling the plume.

### **2.5 Ozone Sparging System Operation**

The ozone system was serviced in May 2011 (oil and filter replacement). Later, the ozone generator was found to be defective and was replaced in July 2011; operation of the system resumed. The system was down during site monitoring on September 27, 2011, due to an electrical breaker failure. The breaker is scheduled to be replaced. Vapor monitoring using a photo-ionization detector was conducted at MW-2, MW-6, and SV-MW2 while the system was not operating. No vapors were detected (see Appendix A). Field measurements of groundwater in non-operating sparge points (SP-3, SP-5, and SP-6) were obtained during the monitoring event. All measured sparge points showed elevated DO and relatively high negative ORP. The elevated DO may have been the result of the sampling process, while the negative ORP is indicative of anaerobic conditions.

## **3.0 SUMMARY**

Six single-screen monitoring wells and the shallowest water-bearing zone from multi-level monitoring wells CMT-1, CMT-2, CMT-3, and CMT-4 were sampled during the third quarter 2011. Analytical results indicate TPH-G, BTEX, and MTBE concentrations are within historical ranges in the wells in proximity to and immediately downgradient of the original source location. Multi-level monitoring well CMT4-Z2 had the lowest concentrations of TPH-G, BTEX, and MTBE at the site since 2003.

In general, concentrations of BTEX and MTBE have declined throughout the last several years and show shrinking or stable plume conditions. Declining concentrations appear to be due to natural attenuation based on the shrinking and/or stable BTEX and MTBE plumes, and on-going positive indicators of natural attenuation.

Hydrocarbon concentrations at the source area also appear to be declining, aided by the ozone sparging system operation. However, fluctuations in hydrocarbon concentrations (below historical maximums) are observed on occasion at and near the source area. No free product thickness was measured in any well.

First quarter 2012 groundwater monitoring is scheduled for February 2012. Sampling and analysis will be conducted in accordance with the monitoring program shown on Tables 2a and 2b.

#### **4.0 LIMITATIONS**

Golder Associates Inc.'s services on this project were performed in accordance with current generally accepted environmental consulting principles and practices. This warranty is in lieu of all others, be it expressed or implied. Environmental conditions may exist at the site that could not be observed. Where the scope of services was limited to observations made during site reconnaissance, interviews, and/or review of readily available reports and literature, our conclusions and recommendations are necessarily based largely on information supplied by others, the accuracy and sufficiency of which may not have been independently reviewed by us. Our professional analyses are based in part on interpretation of data from discrete sampling locations that may not represent actual conditions between such sampling points. Additional data from future work or changing conditions may lead to modifications to our professional opinions and recommendations. Any reliance on this report, or portions thereof, by a third party shall be at such party's sole risk.

## **TABLES**

**Table 1a**  
**Single-Screen Monitoring Well Construction Details**  
**B&C Gas Mini Mart**  
**Livermore, California**

Well No.	Drilling Method	Date Installed	T.D. Boring (ft.-bgs)	T.D. Well (ft.-bgs)	Borehole Diameter (inches)	Casing Material (PVC)	Casing Diameter (inches)	Screen Size (inches)	Sand Pack Material	Screened Interval (ft.-bgs)	Sand Pack Interval (ft.-bgs)
Destroyed											
MW-1	HSA	Nov-07	77	77	8	PVC	2	0.020	#3 sand	27 - 77	25 - 77
MW-2	HSA	Jun-94	60	60	10	PVC	4	0.020	#2/20 sand	30 - 60	27 - 60
MW-3	HSA	Jun-94	60	60	10	PVC	4	0.020	#2/20 sand	30 - 60	27 - 60
MW-4	HSA	Jun-94	60	60	10	PVC	4	0.020	#2/20 sand	30 - 60	27 - 60
MW-5	HSA	Oct-95	42	40	10	PVC	4	0.020	#2 sand	15 - 40	12 - 40
MW-6	HSA	Oct-95	42	40	10	PVC	4	0.020	#2 sand	15 - 40	12 - 40
MW-7	HSA	Jun-99	62	49	8	PVC	2	0.020	#3 sand	29-49	27-51
MW-8	HSA	Jun-99	62	54	8	PVC	2	0.020	#3 sand	34-54	32-54
MW-9	HSA	Jun-99	45	45	8	PVC	2	0.020	#3 sand	25-45	23-45
MW-10	HSA	Jun-99	55	53.5	8	PVC	2	0.020	#3 sand	33.5-53.5	23-55
MW-11	HSA	Jun-99	50	49	8	PVC	2	0.020	#3 sand	29-49	27-49
MW-12	HSA	Jun-99	45	43.5	8	PVC	2	0.020	#3 sand	23.5-43.5	21-45
MW-13	HSA	Jul-99	55	55	8	PVC	2	0.020	#3 sand	35-55	32-55
D-1	HSA	Jun-99	125	125	8	PVC	2	0.020	#3 sand	110-125	104-125
D-2	HSA	Jun-99	115	114	8	PVC	2	0.020	#3 sand	99-114	94-114
(MS)MW-1	HSA	Apr-89	62	60	NA	PVC	2	NA	NA	30-60	NA

**Notes:**

HAS = Hollow-Stem Auger

T.D. = total depth

ft.-bgs = feet below ground surface

NA = not available

Well construction information for wells MW-2 through MW-6 collected from Remediation Service Int'l boring logs.

**Table 1b**  
**Multi-Level Monitoring Well Construction Details**  
**B&C Gas Mini Mart**  
**Livermore, California**

Well No.	Zone No.	Drilling Method	Date Installed	T.D. Boring (ft.-bgs)	T.D. CMT (ft.-bgs)	Borehole Diameter (inches)	Casing Material	Casing Diameter (inches)	Sand Pack Material	Port Depth (ft.-bgs)	Sand Pack Interval (ft.-bgs)
CMT-1	Z1	Sonic	7-Aug-03	147	146	6.0	CMT	1.7	#2/12	46	43 - 48.8
	Z2								#2/12	61	59 - 62
	Z3								#2/12	69	66.8 - 70.7
	Z4								#2/12	91	89 - 93.3
	Z5								#2/12	106	104 - 108.4
	Z6								#2/12	123	120.5 - 125.5
	Z7								#2/12	145	142 - 147
CMT-2	Z1	Sonic	11-Aug-03	147	144	6.0	CMT	1.7	#2/12	49	46 - 50.5
	Z2								#2/12	59	57.1 - 60.5
	Z3								#2/12	68	66 - 70
	Z4								#2/12	88	86 - 89.9
	Z5								#2/12	106	104 - 107.5
	Z6								#2/12	125	123 - 126.5
	Z7								#2/12	144	142 - 147
CMT-3	Z1	Sonic	13-Aug-03	187	155	6.0	CMT	1.7	#2/16	44	41 - 46
	Z2								#2/16	55	53 - 58
	Z3								#2/16	65	61.5 - 67.5
	Z4								#2/16	88	86 - 90
	Z5								#2/16	108	104.5 - 110
	Z6								#2/16	132	128.5 - 134
	Z7								#2/16	155	152.5 - 157
CMT-4	Z1	Sonic	14-Aug-03	137	136	6.0	CMT	1.7	#2/16	26	24 - 28.5
	Z2								#2/16	38	35.5 - 40
	Z3								#2/16	52	48.6 - 55
	Z4								#2/16	62	60 - 65
	Z5								#2/16	72	69.6 - 73.5
	Z6								#2/16	107	104 - 110
	Z7								#2/16	136	132.5 - 137

*Notes:*

T.D. = total depth

ft.-bgs = feet below ground surface

CMT = continuous multi-channel tubing (7 discrete internal channels in a "honeycomb" pattern within the larger tubing)

faint line indicates approximate location of aquaclude in each well

**Table 2a**  
**Groundwater Monitoring Program for Single-Screen Wells**  
**B&C Gas Mini Mart**  
**Livermore, California**

Well Number	Sampling Frequency			Comments
	Semi-Annual	Annual	Inactive	
MW-2	SA	MNA		
MW-3	SA			
MW-4	SA	MNA		
MW-5	SA			
MW-6	SA			
MW-7	SA			
MW-8		A		
MW-9		A		
MW-10		A		
MW-11			I	
MW-12			I	
MW-13	SA	A		
D-1		MNA		
D-2	SA			
(MS)MW-1		A		

Notes:

SA - Semi-Annual

A - Annual (during first quarter).

I - Inactive (no sampling is proposed for wells MW-11 and D-1).

MNA - Monitored natural attenuation.

Annual (A) monitoring parameters: TPHg, BTEX compounds, and MTBE.

Annual sampling for MNA parameters: DO, ORP, dissolved iron and manganese, alkalinity series, nitrate and sulfate (during first quarter).

**Table 2b**  
**Groundwater Monitoring Program for Multi-Level Wells**  
**B&C Gas Mini Mart**  
**Livermore, California**

Well Number	Sampling Frequency			Comments
	Semi-Annual	Annual	Inactive	
CMT-1 Z1	SA		I	All compounds non-detect
CMT-1 Z2				All compounds non-detect
CMT-1 Z3				All compounds non-detect
CMT-1 Z4				All compounds non-detect
CMT-1 Z5				All compounds non-detect
CMT-1 Z6				All compounds non-detect
CMT-1 Z7				All compounds non-detect
CMT-2 Z1	SA	MNA	I	All compounds non-detect
CMT-2 Z2				All compounds non-detect
CMT-2 Z3				All compounds non-detect
CMT-2 Z4				All compounds non-detect
CMT-2 Z5				All compounds non-detect
CMT-2 Z6				All compounds non-detect
CMT-2 Z7				All compounds non-detect
CMT-3 Z1	SA		I	All compounds non-detect
CMT-3 Z2				All compounds non-detect
CMT-3 Z3				All compounds non-detect
CMT-3 Z4				All compounds non-detect
CMT-3 Z5				All compounds non-detect
CMT-3 Z6				All compounds non-detect
CMT-3 Z7				All compounds non-detect
CMT-4 Z1	SA		I	All compounds non-detect
CMT-4 Z2				All compounds non-detect
CMT-4 Z3				
CMT-4 Z4				
CMT-4 Z5				
CMT-4 Z6				
CMT-4 Z7				

*Notes:*

SA - Semi-Annual (Shallowest CMT zone with water to be sampled.)

A - Annual (during first quarter)

I - Inactive (no sampling is proposed for these zones)

MNA - Monitored natural attenuation

Annual (A) monitoring parameters: TPHg, BTEX compounds, and MTBE.

Annual sampling for MNA parameters: DO, ORP, dissolved iron and manganese, alkalinity series, nitrate and sulfate (during first quarter).

**Table 3a**  
**Groundwater Elevations in Single-Screen Wells - Third Quarter 2011**  
**B & C Gas Mini Mart**  
**Livermore, California**

Well Number	Top-of-Casing Elevation (feet, MSL)	Depth to Water (feet, TOC)	Groundwater Elevation (feet, MSL) <sup>1</sup>	Depth to Free product (feet, TOC)	Product Thickness (feet)
September 27, 2011				September 27, 2011	
MW-2	486.25	33.83	452.42	NM	NM
MW-3	486.39	32.79	453.60	NM	NM
MW-4	487.43	33.61	453.82	NM	NM
MW-5	484.33	33.62	450.71	NM	NM
MW-6	486.29	NM	NM	NM	NM
MW-7	480.54	33.59	446.95	NM	NM
MW-8	475.62	39.76	435.86	NM	NM
MW-9	479.48	38.34	441.14	NM	NM
MW-10	473.84	40.12	433.72	NM	NM
MW-11	467.32	36.35	430.97	NM	NM
MW-12	460.73	30.80	429.93	NM	NM
MW-13	477.18	35.86	441.32	NM	NM
D-1	467.10	38.36	428.74	NM	NM
D-2	460.01	31.46	428.55	NM	NM
(MS)MW-1	480.23	NM	NM	NM	NM

*Notes:*

feet, MSL = feet above mean sea level

feet, TOC = feet below top of casing

NM = not measured; no measurable free product thickness was present; well MW-6 was obstructed at a depth of 28.6 feet below TOC.

<sup>1</sup>All wells were resurveyed on 11/25/03 to adhere to Geotracker requirements

**Table 3b**  
**Groundwater Elevations in Multi-Level Wells - Third Quarter 2011**  
**B & C Gas Mini Mart**  
**Livermore, California**

Well No.	Zone No.	Top-of-Casing Elevation (feet, MSL)	Depth to Water (feet, TOC)	Groundwater Elevation (feet, MSL) <sup>1</sup>	Depth to Free product (feet, TOC)	Product Thickness (feet)
September 27, 2011					September 27, 2011	
CMT-1	Z1	471.96	41.31	430.65	NM	NM
	Z2		42.22	429.74	NM	NM
	Z3		42.26	429.70	NM	NM
	Z4		41.26	430.70	NM	NM
	Z5		41.22	430.74	NM	NM
	Z6		42.60	429.36	NM	NM
	Z7		NM	NM	NM	NM
CMT-2	Z1	472.53	40.59	431.94	NM	NM
	Z2		42.01	430.52	NM	NM
	Z3		42.02	430.51	NM	NM
	Z4		41.63	430.90	NM	NM
	Z5		41.49	431.04	NM	NM
	Z6		41.64	430.89	NM	NM
	Z7		NM	NM	NM	NM
CMT-3	Z1	476.28	40.64	435.64	NM	NM
	Z2		40.63	435.65	NM	NM
	Z3		42.01	434.27	NM	NM
	Z4		43.78	432.50	NM	NM
	Z5		44.01	432.27	NM	NM
	Z6		44.00	432.28	NM	NM
	Z7		43.93	432.35	NM	NM
CMT-4	Z1	485.82	NM	NM	NM	NM
	Z2		33.22	452.60	NM	NM
	Z3		33.00	452.82	NM	NM
	Z4		NM	NM	NM	NM
	Z5		NM	NM	NM	NM
	Z6		38.52	447.30	NM	NM
	Z7		NM	NM	NM	NM

*Notes:*

feet, MSL = feet above mean sea level

feet, TOC = feet below top of casing

CMT = Continuous multi-channel tubing.

NM = not measured; no measurable free product thickness was present

faint line indicates approximate location of aquitard in each well

<sup>1</sup>All wells were resurveyed on 11/25/03 to adhere to Geotracker requirements

**Table 4a**  
**Groundwater Analytical Results in Single-Screen Wells - Third Quarter 2011**  
**B&C Gas Mini Mart**  
**Livermore, California**

*All concentrations in micrograms per liter ( $\mu\text{g/L}$ )*

Well No.	Sample Date	TPH-G	Benzene	Toluene	Ethyl benzene	p- & m-Xylenes	o-Xylenes	Xylenes (total)	Methyl tert-butyl ether	Tert-butyl alcohol	Tert-amyl methyl ether	Ethanol
MW-2	9/27/2011	100	1.0	<0.50	0.66	NM	NM	<1.0	<0.50	<10	NM	NM
MW-3	9/27/2011	490	2.0	<0.50	1.4	NM	NM	<1.0	19	<10	NM	NM
MW-4	9/27/2011	<50	<0.50	<0.50	<0.50	NM	NM	<1.0	<0.50	<10	NM	NM
MW-5	9/27/2011	1,800	34	1.9	8.5	NM	NM	2.2	<0.50	<10	NM	NM
MW-6	NA	--	--	--	--	--	--	--	--	--	--	--
MW-7	9/27/2011	690	13	<0.50	<0.50	NM	NM	<1.0	23	<10	NM	NM
MW-8	NS	--	--	--	--	--	--	--	--	--	--	--
MW-9	NS	--	--	--	--	--	--	--	--	--	--	--
MW-10	NS	--	--	--	--	--	--	--	--	--	--	--
MW-11	NA	--	--	--	--	--	--	--	--	--	--	--
MW-12	NS	--	--	--	--	--	--	--	--	--	--	--
MW-13	9/27/2011	74	<0.50	<0.50	<0.50	NM	NM	<1.0	7.2	<10	NM	NM
D-1	NA	--	--	--	--	--	--	--	--	--	--	--
D-2	NS	--	--	--	--	--	--	--	--	--	--	--
MS(MW1)	NS	--	--	--	--	--	--	--	--	--	--	--
8K2	NS	--	--	--	--	--	--	--	--	--	--	--

*Notes:*

TPH-G = Total petroleum hydrocarbons as gasoline.

NA = Not applicable; well MW-6 is obstructed at 28.6' below TOC; MW-11 and D-1 are inactive.

NS = Not sampled

< = Less than the laboratory reporting limit.

**Table 4b**  
**Groundwater Analytical Results in Multi-Level Wells - Third Quarter 2011**  
**B&C Gas Mini Mart**  
**Livermore, California**

All concentrations in micrograms per liter (ug/L)

Well No.	Zone No.	Sample Date	TPH-G	Benzene	Toluene	Ethyl benzene	p- & m-Xylenes	o-Xylenes	Xylenes (total)	Methyl tert-butyl ether	Tert-butyl alcohol	Tert-amyl methyl ether	Ethanol
CMT-1	Z1	9/27/2011	>50	<0.50	<0.50	<0.50	NM	NM	<1.0	<0.50	<10	NM	NM
	Z2	NS	--	--	--	--	--	--	--	--	--	--	--
	Z3	NS	--	--	--	--	--	--	--	--	--	--	--
	Z4	NS	--	--	--	--	--	--	--	--	--	--	--
	Z5	NS	--	--	--	--	--	--	--	--	--	--	--
	Z6	NS	--	--	--	--	--	--	--	--	--	--	--
	Z7	NS	--	--	--	--	--	--	--	--	--	--	--
CMT-2	Z1	9/27/2011	<50	<0.50	<0.50	<0.50	NM	NM	<1.0	<0.50	<10	NM	NM
	Z2	NS	--	--	--	--	--	--	--	--	--	--	--
	Z3	NS	--	--	--	--	--	--	--	--	--	--	--
	Z4	NS	--	--	--	--	--	--	--	--	--	--	--
	Z5	NS	--	--	--	--	--	--	--	--	--	--	--
	Z6	NS	--	--	--	--	--	--	--	--	--	--	--
	Z7	NS	--	--	--	--	--	--	--	--	--	--	--
CMT-3	Z1	9/27/2011	<50	<0.50	<0.50	<0.50	NM	NM	<1.0	<0.50	25	NM	NM
	Z2	NS	--	--	--	--	--	--	--	--	--	--	--
	Z3	NS	--	--	--	--	--	--	--	--	--	--	--
	Z4	NS	--	--	--	--	--	--	--	--	--	--	--
	Z5	NS	--	--	--	--	--	--	--	--	--	--	--
	Z6	NS	--	--	--	--	--	--	--	--	--	--	--
	Z7	NS	--	--	--	--	--	--	--	--	--	--	--
CMT-4	Z1	NS	--	--	--	--	--	--	--	--	--	--	--
	Z2	9/27/2011	1400	210	10	66	NM	NM	140	150	<50	<2.5	<1200
	Z3*	NS	--	--	--	--	--	--	--	--	--	--	--
	Z4	NS	--	--	--	--	--	--	--	--	--	--	--
	Z5	NS	--	--	--	--	--	--	--	--	--	--	--
	Z6	NS	--	--	--	--	--	--	--	--	--	--	--
	Z7	NS	--	--	--	--	--	--	--	--	--	--	--

*Notes:*

CMT = Continuous multi-channel tubing.

TPH-G = Total petroleum hydrocarbons as gasoline.

NS = Not sampled during the First Quarter 2011 monitoring event.

NA = Not applicable; well dry.

\*Zone 3 sampled because zone 2 did not produce sufficient groundwater to sample.

< = Less than the laboratory reporting limit.

**Table 4c**  
**Natural Attenuation Parameters - Third Quarter 2011**  
**B&C Gas Mini Mart**  
**Livermore, California**

Well No.	Zone No.	Description	Sample Date	Dissolved Oxygen (mg/L)	Oxidation-Reduction Potential (mV)	Dissolved Iron (mg/L)	Dissolved Manganese (mg/L)	Total Alkalinity (mg/L)	Nitrate as N (mg/L)	Sulfate as SO <sub>4</sub> (mg/L)	pH (s.u.) (field)
MW-4	NA	Upgradient	9/27/11	6.61	-30.2	NM	NM	NM	NM	NM	7.22
MW-2	NA	Source	9/27/11	2.04	-30.9	NM	NM	NM	NM	NM	6.96
MW-5	NA	Distal Source	9/27/11	2.85	-70.8	NM	NM	NM	NM	NM	7.19
MW-13	NA	Mid Plume	9/27/11	2.53	-27.4	NM	NM	NM	NM	NM	7.03
CMT-2	Z1	Distal Plume	9/27/11	3.90	-29.3	NS	NS	NS	NS	NS	7.64

*Notes:*

mg/L = milligrams per liter

s.u. = standard units

mV = millivolt

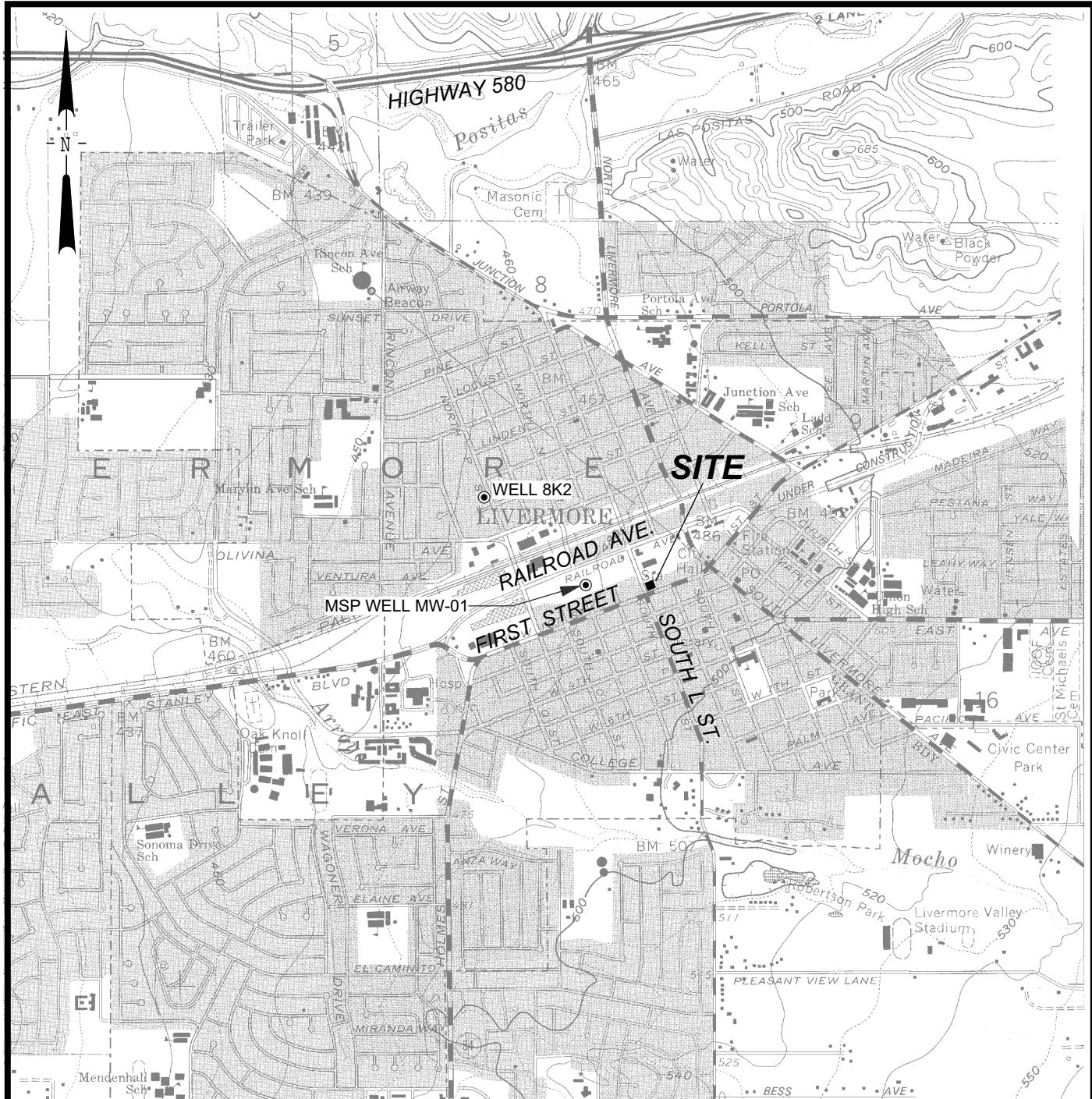
< = less than the laboratory reporting limit

CMT = continuous multi-channel tubing

NA = Not applicable

NM = Not Measured

## **FIGURES**



Base map: USGS 7.5' topography, Livermore, California (1961; photorevised 1980)

SCALE: 0 2,000 4,000 FEET



G:\053-7466\103\FIGURES\SITELOC.DSF 7/9/05



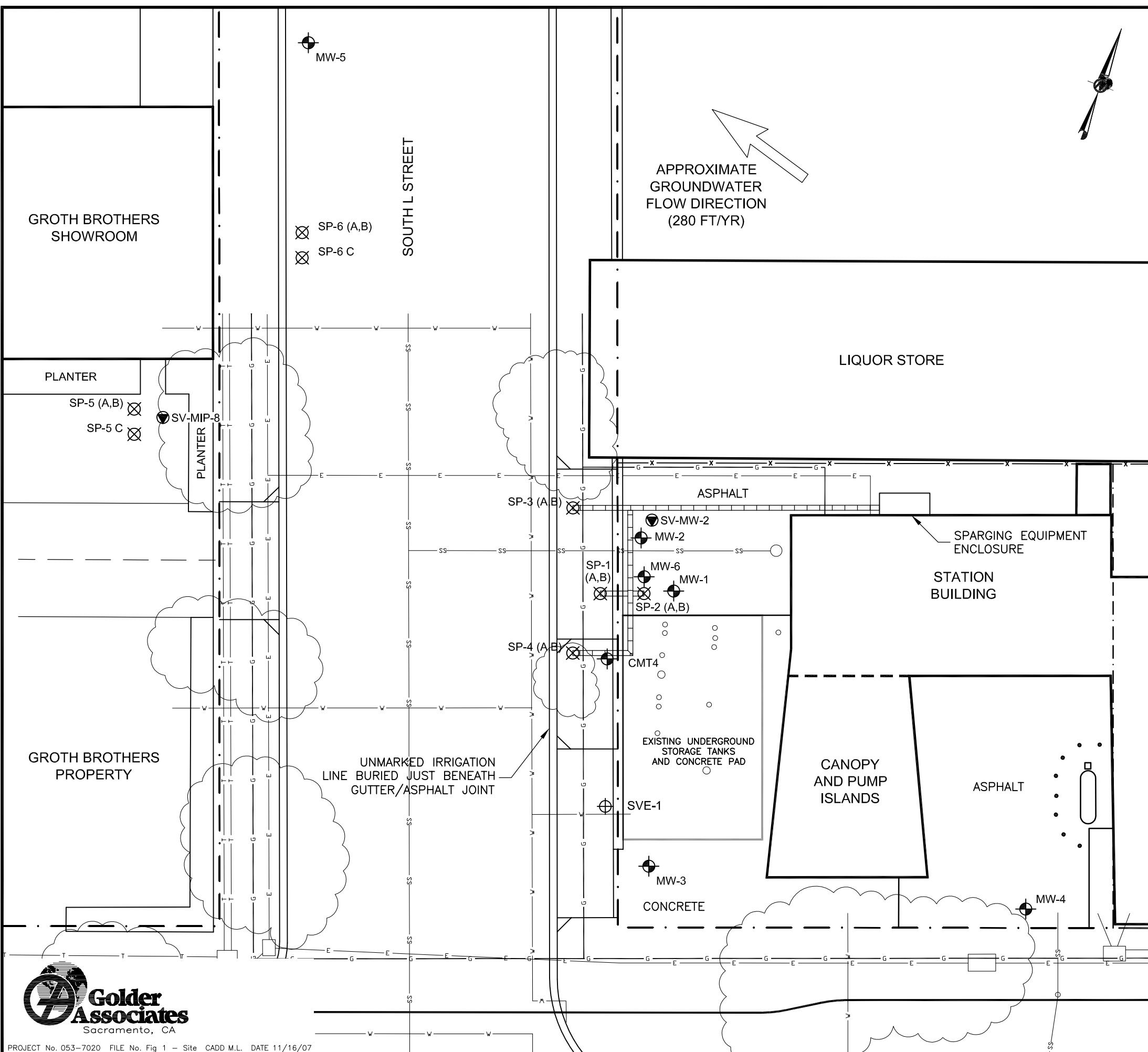
GROUNDWATER MONITORING  
B & C GAS MINI MART  
LIVERMORE, CALIFORNIA

SITE LOCATION MAP

FIGURE

1

PROJECT NO.  
053-7466

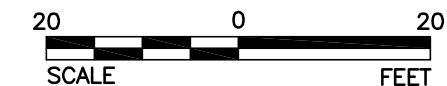


## LEGEND

	RIGHT-OF-WAY LIMIT
	GAS LINE
	SANITARY SEWER LINE
	WATER LINE
	ELECTRIC LINE
	TELEPHONE LINE
	PROPOSED OZONE SPARGE/ MONITORING WELL
	PROPOSED SOIL VAPOR EXTRACTION/ MONITORING WELL
	GROUNDWATER MONITORING WELL
	SOIL VAPOR EXTRACTION WELL
	SPARGE CONVEYANCE LINES (UNDERGROUND)
	TREE (TYP.)

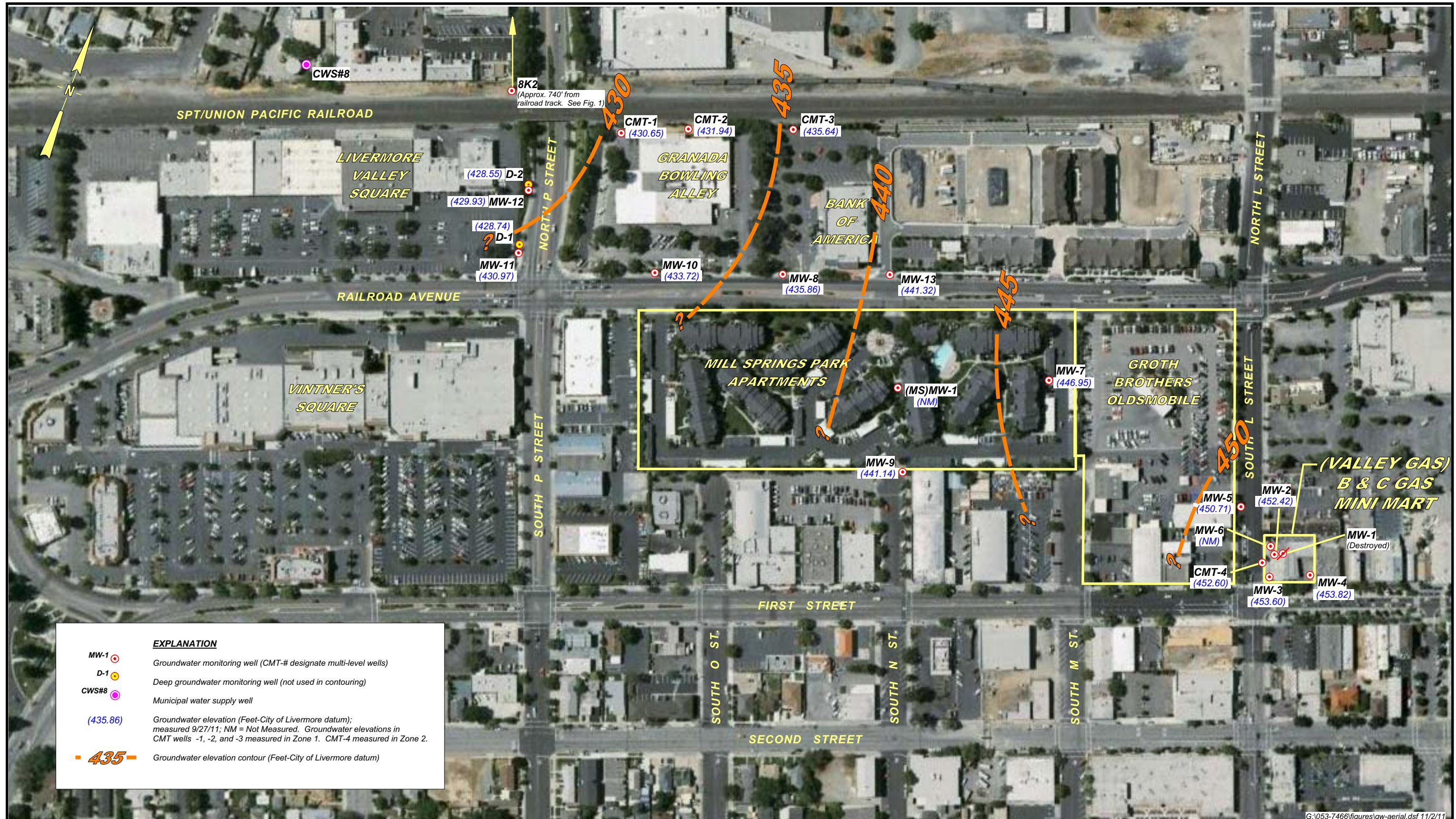
## NOTES

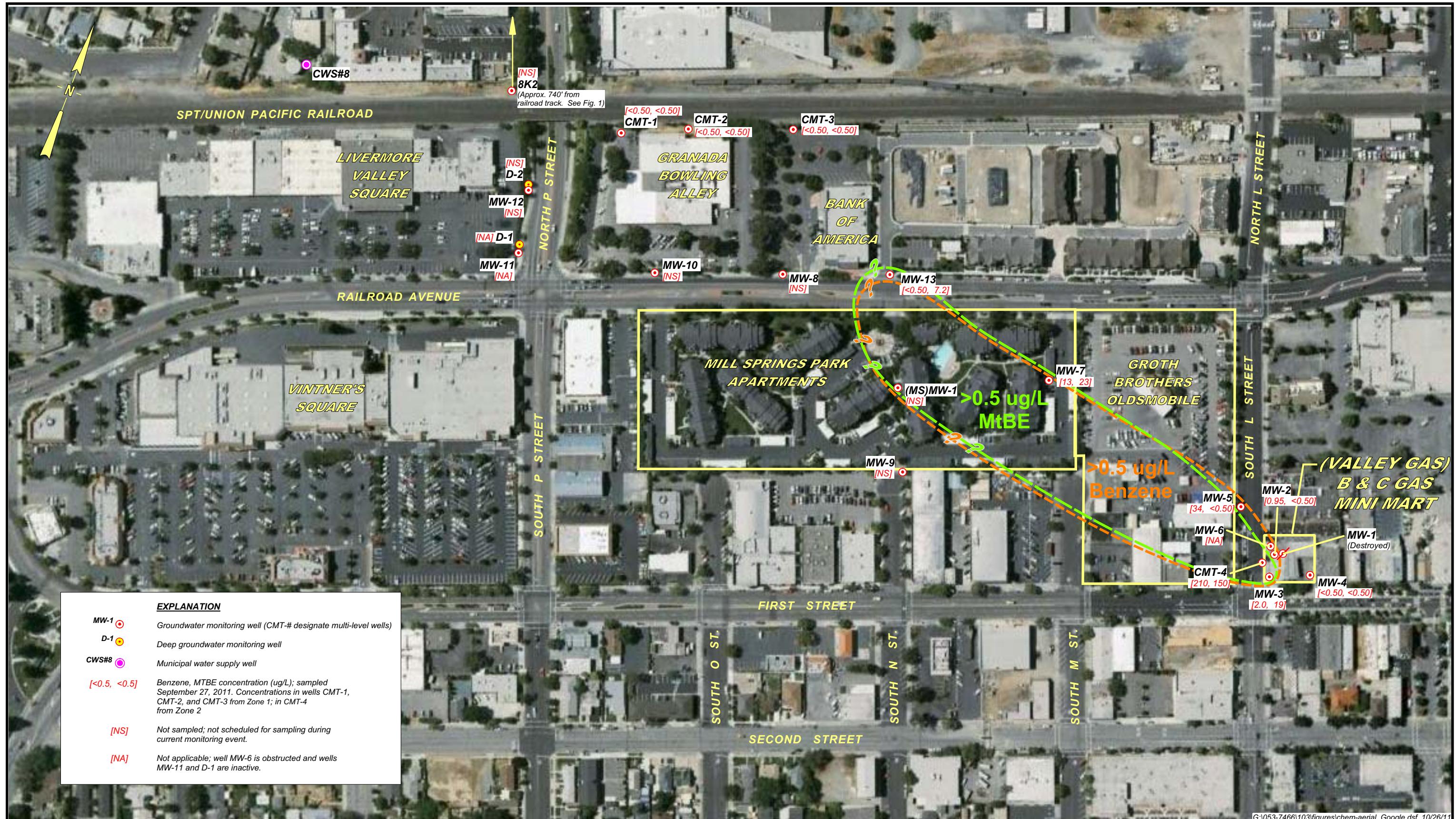
1. APPROXIMATE LOCATIONS OF UTILITY LINES AND SURFACE FEATURES BASED FROM CITY OF LIVERMORE DRAWING TITLED FIRST STREET STREETScape IMPROVEMENTS. DATE OF DRAWING: FEBRUARY 9, 2005.



## SITE PLAN

FIGURE 2





**APPENDIX A**  
**WATER SAMPLE FIELD DATA SHEETS**

# WATER LEVEL DATA SHEET

Golder Associates

Project: B & C gas Mini Mart

Project No. 0537466100

Date(s): 09/27/11

Name: Michael Pierce

Weather: Sunny, warm

Sounder #:

Well	Date	Time	DTW (TOC)	Well Depth	Meas By	Comments
MW-1	09/27/11					
MW-2						
MW-3						
MW-4						
MW-5						
MW-6						
MW-7						
MW-8		1226	39.76	mop	mop	
MW-9		1245	38.34		MT	
MW-10		1232	40.12	mop	mop	
MW-11		1240	36.35			
MW-12		1251	30.80			
MW-13						
D-1		1244	38.36		mop	
D-2		1256	31.46		mop	
MSMW01					MT	
CMT1-Z1		0921	41.31		mop	
CMT1-Z2		0929	42.22			
CMT1-Z3		0932	42.26			
CMT1-Z4		0936	41.26			
CMT1-Z5		0940	41.22			
CMT1-Z6		0943	42.60			
CMT1-Z7		0950				Bucker.
CMT2-Z1		1030	40.59		mop	
CMT2-Z2		1031	42.01			
CMT2-Z3		1033	42.02			
CMT2-Z4		1034	41.63			
CMT2-Z5		1034	41.49			
CMT2-Z6		1035	41.64			
CMT2-Z7						
CMT3-Z1		1122	40.64		mop	NRA, Bucker @ 55.0
CMT3-Z2		1128	40.63			
CMT3-Z3		1133	42.01			
CMT3-Z4		1137	43.78			
CMT3-Z5		1143	44.01			
CMT3-Z6		1152	43.00			
CMT3-Z7		1154	43.93			
CMT4-Z1						
CMT4-Z2			33.22		38.	
CMT4-Z3			33.00			
CMT4-Z4						
CMT4-Z5						
CMT4-Z6						
CMT4-Z7			28.52			

SP-3 32.64 46.80  
MIFORMSISAMPLING\TRLV1.XLS





**Golder  
Associates**

## WATER SAMPLE FIELD DATA

LOCATION: B + C gas mini mart

PROJECT NO: 053 7466 100

## CLIENT:

SAMPLE TYPE: Groundwater  Surface Water

CASING DIAMETER (OD-inches): 3/4      GALLONS PER LINEAR FOOT : (0.02)      (0.04)

SAMPLE ID: CMT2-Z1

SAMPLED BY: MDP

REGULATORY AGENCY: ACEHS

### Leachate Treatment System Other

Well Total Depth (ft): 49.

$$\text{Volume in Casing (gal)}: 0.08 \times 3785 = 318 \text{ gal}$$

Depth to Water (ft): 40.59

Calculated Purge (volumes / gal.): 63.6 ml

Height of Water Column (ft): 8.41

Actual Pre-Sampling Purge (gal): 636 ml

## PURGE;

Device (Depth of Intake from TOC): S.S. Bailer      Teflon Bailer      PVC Bailer      Disp. Bailer

PVC Hand Pump \_\_\_\_\_ Peristaltic Pump \_\_\_\_\_ Centrifugal Pump \_\_\_\_\_ Bladder Pump \_\_\_\_\_ Disp. Pump \_\_\_\_\_

Pneumatic Displacement Pump \_\_\_\_\_ Electric Submersible Pump \_\_\_\_\_ Dedicated \_\_\_\_\_ Other \_\_\_\_\_

Purge Water Containment: Drum or site

Field QC Samples Collected at this Well (Equipment or Field Blank): EB-\_\_\_\_\_ FB-\_\_\_\_\_ Other \_\_\_\_\_

### SAMPLE:

Device (Depth of Intake from TOC): S.S. Bailer      Teflon Bailer      PVC Bailer      Disp. Bailer

PVC Hand Pump \_\_\_\_\_ Peristaltic Pump  Centrifugal Pump \_\_\_\_\_ Bladder Pump \_\_\_\_\_

Pneumatic Displacement Pump \_\_\_\_\_ Electric Submersible Pump \_\_\_\_\_ Dedicated \_\_\_\_\_ Other \_\_\_\_\_

Time (2400 Hr)	Temp. (°C)	Electrical Conductivity (μmhos/cm)	pH (std. units)	Dissolved Oxygen (mg/l)	Color (visual)	Turbidity (NTU)	ORP Other
1101	25.4	1180	7.20	3.6	+n	127	108.5
Sheen:	✓	Odor:	✓	Sample Date:	09/27/11		

Field Measurement Devices: Horiba: \_\_\_\_\_ YSI:  Oakton Turbidity:  D.O. Test Kit: \_\_\_\_\_

**REMARKS:** \_\_\_\_\_

**SIGNATURE:**  **DATE:** 29/2/11





## WATER SAMPLE FIELD DATA

LOCATION: B + C gas mini MartPROJECT NO: 053 7466100

CLIENT:

SAMPLE TYPE: Groundwater  Surface Water CASING DIAMETER (OD-inches): 3/4 1 2 4 4.5 6 8GALLONS PER LINEAR FOOT: (0.02) (0.04) (0.17) (0.66) (0.83) (1.5) (2.6)Well Total Depth (ft): 38 \_\_\_\_\_ 00Depth to Water (ft): 33.22Height of Water Column (ft): 4.78SAMPLE ID: CMT4 - Z 32SAMPLER BY: mop

REGULATORY AGENCY: \_\_\_\_\_

Leachate \_\_\_\_\_ Treatment System \_\_\_\_\_ Other \_\_\_\_\_

Other cmtVolume in Casing (gal): 0.48 x 3785 = 181 galCalculated Purge (volumes / gal.): 362Actual Pre-Sampling Purge (gal): 362

## PURGE:

Device (Depth of Intake from TOC): S.S. Bailer \_\_\_\_\_ Teflon Bailer \_\_\_\_\_ PVC Bailer \_\_\_\_\_ Disp. Bailer \_\_\_\_\_

PVC Hand Pump \_\_\_\_\_ Peristaltic Pump  Centrifugal Pump \_\_\_\_\_ Bladder Pump \_\_\_\_\_Pneumatic Displacement Pump \_\_\_\_\_ Electric Submersible Pump \_\_\_\_\_ Dedicated  Other \_\_\_\_\_Purge Water Containment: Drum on site

Field QC Samples Collected at this Well (Equipment or Field Blank): EB- \_\_\_\_\_ FB- \_\_\_\_\_ Other \_\_\_\_\_

Time (2400 Hr)	Volume (gallons)	Temp. (°C)	Elec. Conductivity (μmhos/cm)	pH (std. units)	Color (visual)	Turbidity (visual)	D.O. Other	OPP Observation
1349	181	30.3	2144	7.35	clear	low	4.0	-41.4
1355	362	28.3	1962	7.11	↓	↓	3.5	-63.8
Purge Date: <u>09/27/11</u>								

## SAMPLE:

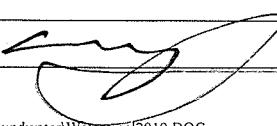
Device (Depth of Intake from TOC): S.S. Bailer \_\_\_\_\_ Teflon Bailer \_\_\_\_\_ PVC Bailer \_\_\_\_\_ Disp. Bailer \_\_\_\_\_

PVC Hand Pump \_\_\_\_\_ Peristaltic Pump  Centrifugal Pump \_\_\_\_\_ Bladder Pump \_\_\_\_\_Pneumatic Displacement Pump \_\_\_\_\_ Electric Submersible Pump \_\_\_\_\_ Dedicated  Other \_\_\_\_\_

Time (2400 Hr)	Temp. (°C)	Electrical Conductivity (μmhos/cm)	pH (std. units)	Dissolved Oxygen (mg/l)	Color (visual)	Turbidity (NTU)	OPP Other
1421	27.9	1940	6.98	3.3	clear	19	-71.4
Sheen:	Odor:	—	—	—	Sample Date:	07/27/11	

Field Measurement Devices: Horiba: \_\_\_\_\_ YSI:  Oakton Turbidity:  D.O. Test Kit: \_\_\_\_\_

REMARKS: \_\_\_\_\_

SIGNATURE: DATE: 09/27/11



## WATER SAMPLE FIELD DATA

LOCATION: B and C Gas Mini mart \_\_\_\_\_

SAMPLE ID: MW-2

PROJECT NO: 0537466100 \_\_\_\_\_

SAMPLED BY: \_\_\_\_\_

CLIENT: B and C Gas Mini mart \_\_\_\_\_

REGULATORY AGENCY: ACEHS \_\_\_\_\_

SAMPLE TYPE: Groundwater \_\_\_\_\_ Surface Water \_\_\_\_\_

Leachate \_\_\_\_\_ Treatment System \_\_\_\_\_ Other \_\_\_\_\_

CASING DIAMETER (OD-inches): 3/4 \_\_\_\_\_ 1 \_\_\_\_\_ 2 \_\_\_\_\_

4  4.5 \_\_\_\_\_ 6 \_\_\_\_\_ 8 \_\_\_\_\_ Other \_\_\_\_\_

GALLONS PER LINEAR FOOT : (0.02) (0.04) (0.17) (0.66) (0.83) (1.5) (2.6)

Well Total Depth (ft): 33.93 56.00Volume in Casing (gal): 14.6Depth to Water (ft): 56.00 33.83Calculated Purge (volumes / gal.): 15Height of Water Column (ft): 22.17Actual Pre-Sampling Purge (gal): 15**PURGE:**Device (Depth of Intake from TOC): S.S. Bailer \_\_\_\_\_ Teflon Bailer \_\_\_\_\_ PVC Bailer \_\_\_\_\_ Disp. Bailer 3"

PVC Hand Pump \_\_\_\_\_ Peristaltic Pump \_\_\_\_\_ Centrifugal Pump \_\_\_\_\_ Bladder Pump \_\_\_\_\_

Pneumatic Displacement Pump \_\_\_\_\_ Electric Submersible Pump \_\_\_\_\_ Dedicated \_\_\_\_\_ Other \_\_\_\_\_

Purge Water Containment: Drum on site

Field QC Samples Collected at this Well (Equipment or Field Blank): EB- \_\_\_\_\_ FB- \_\_\_\_\_ Other \_\_\_\_\_

Time (2400 Hr)	Volume (gallons)	Temp. (°C)	Elec. Conductivity (μmhos/cm)	pH (std. units)	Color (visual)	Turbidity (visual)	Other	Observation
<u>1052</u>	<u>5.0</u>	<u>22.0</u>	<u>813</u>	<u>7.37</u>	<u>clear</u>	<u>low</u>		
<u>1059</u>	<u>10.0</u>	<u>20.9</u>	<u>786</u>	<u>7.22</u>	<u>11</u>	<u>11</u>		
<u>1108</u>	<u>15.0</u>	<u>20.7</u>	<u>784</u>	<u>7.19</u>	<u>11</u>	<u>11</u>		
Purge Date: <u>9/27/11</u>								

**SAMPLE:**Device (Depth of Intake from TOC): S.S. Bailer \_\_\_\_\_ Teflon Bailer \_\_\_\_\_ PVC Bailer \_\_\_\_\_ Disp. Bailer X

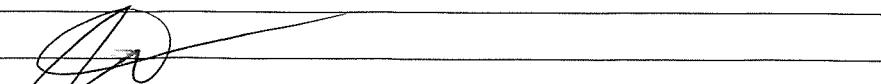
PVC Hand Pump \_\_\_\_\_ Peristaltic Pump \_\_\_\_\_ Centrifugal Pump \_\_\_\_\_ Bladder Pump \_\_\_\_\_

Pneumatic Displacement Pump \_\_\_\_\_ Electric Submersible Pump \_\_\_\_\_ Dedicated \_\_\_\_\_ Other \_\_\_\_\_

Time (2400 Hr)	Temp. (°C)	Electrical Conductivity (μmhos/cm)	pH (std. units)	Dissolved Oxygen (mg/l)	Color (visual)	Turbidity (NTU)	Other
<u>1120</u>	<u>21.0</u>	<u>759</u>	<u>6.96</u>	<u>2.04</u>	<u>clear</u>	<u>52</u>	<u>-30.9</u>
Sheen: <u>none</u>	Odor: <u>none</u>						Sample Date: <u>9/27/11</u>

Field Measurement Devices: Horiba \_\_\_\_\_ Omega \_\_\_\_\_ QuickCheck \_\_\_\_\_ D.O. Test Kit \_\_\_\_\_ YSI/Oakton X

REMARKS: \_\_\_\_\_

SIGNATURE:  DATE: 9/27/11













## WATER SAMPLE FIELD DATA

LOCATION: B&C GAS MINI MART

PROJECT NO: 053-7466-100

CLIENT: \_\_\_\_\_

SAMPLE TYPE: Groundwater  Surface Water \_\_\_\_\_

CASING DIAMETER (OD-inches): 3/4 1 2  4 4.5 6 8 Other \_\_\_\_\_

GALLONS PER LINEAR FOOT : (0.02) (0.04) (0.17) (0.66) (0.83) (1.5) (2.6)

SAMPLE ID: MW-13

SAMPLED BY: M. Todi

REGULATORY AGENCY: \_\_\_\_\_

Leachate \_\_\_\_\_ Treatment System \_\_\_\_\_ Other \_\_\_\_\_

Well Total Depth (ft): 54.20

Volume in Casing (gal): 3.11

Depth to Water (ft): 35.86

Calculated Purge (volumes / gal.): 3.5

Height of Water Column (ft): 18.34

Actual Pre-Sampling Purge (gal): \_\_\_\_\_

### PURGE:

Device (Depth of Intake from TOC): S.S. Bailer \_\_\_\_\_ Teflon Bailer \_\_\_\_\_ PVC Bailer \_\_\_\_\_ Disp. Bailer

PVC Hand Pump \_\_\_\_\_ Peristaltic Pump \_\_\_\_\_ Centrifugal Pump \_\_\_\_\_ Bladder Pump \_\_\_\_\_

Pneumatic Displacement Pump \_\_\_\_\_ Electric Submersible Pump \_\_\_\_\_ Dedicated \_\_\_\_\_ Other \_\_\_\_\_

Purge Water Containment: Drum on site

Field QC Samples Collected at this Well (Equipment or Field Blank): EB- \_\_\_\_\_ FB- \_\_\_\_\_ Other \_\_\_\_\_

Time (2400 Hr)	Volume (gallons)	Temp. (°C)	Elec. Conductivity (μmhos/cm)	pH (std. units)	Color (visual)	Turbidity (visual)	Other	Observation
1144	1.5	20.1	743	7.07	Brown	High		
1150	3.0	19.6	727	7.15	CC	CC		
1154	3.5	19.6	731	7.16	CC	CC		
Purge Date: <u>9/27/11</u>								

### SAMPLE:

Device (Depth of Intake from TOC): S.S. Bailer \_\_\_\_\_ Teflon Bailer \_\_\_\_\_ PVC Bailer \_\_\_\_\_ Disp. Bailer

PVC Hand Pump \_\_\_\_\_ Peristaltic Pump \_\_\_\_\_ Centrifugal Pump \_\_\_\_\_ Bladder Pump \_\_\_\_\_

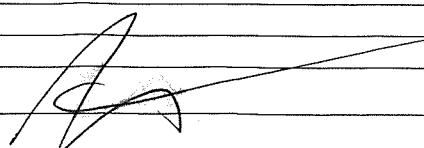
Pneumatic Displacement Pump \_\_\_\_\_ Electric Submersible Pump \_\_\_\_\_ Dedicated \_\_\_\_\_ Other \_\_\_\_\_

Time (2400 Hr)	Temp. (°C)	Electrical Conductivity (μmhos/cm)	pH (std. units)	Dissolved Oxygen (mg/l)	Color (visual)	Turbidity (NTU)	Other
1205	20.1	745	7.03	2.53	Brown	71000	-27.4
Sheen: <u>No</u>	Odor: <u>No</u>						

Sample Date: 9/27/11

Field Measurement Devices: Horiba: \_\_\_\_\_ YSI:  Oakton Turbidity  D.O. Test Kit: \_\_\_\_\_

REMARKS: \_\_\_\_\_

SIGNATURE: 

DATE: 9/27/11



**APPENDIX B**  
**LABORATORY CERTIFIED ANALYTICAL REPORTS**



**Laboratories, Inc.**

Environmental Testing Laboratory Since 1949

Date of Report: 10/05/2011

Kris Johnson

Golder Associates  
425 Lakeside Drive  
Sunnyvale, CA 94085

Project: B&C Gas Mini Mart

BC Work Order: 1115882

Invoice ID: B108802

Enclosed are the results of analyses for samples received by the laboratory on 9/30/2011. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Contact Person: Linda Phoudamneun  
Client Service Rep



Authorized Signature

Certifications: CA ELAP #1186; NV #CA00014

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*  
All results listed in this report are for the exclusive use of the submitting party. BC Laboratories, Inc. assumes no responsibility for report alteration, separation, detachment or third party interpretation.

4100 Atlas Court Bakersfield, CA 93308 (661) 327-4911 FAX (661) 327-1918 [www.bclabs.com](http://www.bclabs.com)

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## Executive Summary - Detections

Constituent	Result	PQL	Units	Method	Lab Quals
<b>1115882-01</b>	<b>B&amp;C Gas Mini Mart, MW-2, MW-2, 9/27/2011 11:20:00AM</b>				
Benzene	0.95	0.50	ug/L	EPA-8260	
Ethylbenzene	0.66	0.50	ug/L	EPA-8260	
Total Purgeable Petroleum Hydrocarbons	100	50	ug/L	Luft-GC/MS	
<b>1115882-02</b>	<b>B&amp;C Gas Mini Mart, MW-3, MW-3, 9/27/2011 10:10:00AM</b>				
Benzene	2.0	0.50	ug/L	EPA-8260	
Ethylbenzene	1.4	0.50	ug/L	EPA-8260	
Methyl t-butyl ether	19	0.50	ug/L	EPA-8260	
Total Purgeable Petroleum Hydrocarbons	490	50	ug/L	Luft-GC/MS	
<b>1115882-04</b>	<b>B&amp;C Gas Mini Mart, MW-5, MW-5, 9/27/2011 1:55:00PM</b>				
Benzene	34	0.50	ug/L	EPA-8260	
Ethylbenzene	8.5	0.50	ug/L	EPA-8260	
Toluene	1.9	0.50	ug/L	EPA-8260	
Total Xylenes	2.2	1.0	ug/L	EPA-8260	
Total Purgeable Petroleum Hydrocarbons	1800	50	ug/L	Luft-GC/MS	
<b>1115882-05</b>	<b>B&amp;C Gas Mini Mart, MW-7, MW-7, 9/27/2011 12:35:00PM</b>				
Benzene	13	0.50	ug/L	EPA-8260	
Methyl t-butyl ether	23	0.50	ug/L	EPA-8260	
Total Purgeable Petroleum Hydrocarbons	690	50	ug/L	Luft-GC/MS	
<b>1115882-06</b>	<b>B&amp;C Gas Mini Mart, MW-13, MW-13, 9/27/2011 12:05:00PM</b>				
Methyl t-butyl ether	7.2	0.50	ug/L	EPA-8260	
Total Purgeable Petroleum Hydrocarbons	74	50	ug/L	Luft-GC/MS	
<b>1115882-09</b>	<b>B&amp;C Gas Mini Mart, CMT3-Z1, CMT3-Z1, 9/27/2011 12:21:00PM</b>				
t-Butyl alcohol	25	10	ug/L	EPA-8260	
<b>1115882-10</b>	<b>B&amp;C Gas Mini Mart, CMT4-Z2, CMT4-Z2, 9/27/2011 2:21:00PM</b>				
Benzene	210	2.5	ug/L	EPA-8260	A01
Ethylbenzene	66	2.5	ug/L	EPA-8260	A01
Methyl t-butyl ether	150	2.5	ug/L	EPA-8260	A01
Toluene	10	2.5	ug/L	EPA-8260	A01
Total Xylenes	140	5.0	ug/L	EPA-8260	A01
Total Purgeable Petroleum Hydrocarbons	1400	250	ug/L	Luft-GC/MS	A01
<b>1115882-11</b>	<b>B&amp;C Gas Mini Mart, Drum, Drum, 9/27/2011 2:48:00PM</b>				
Benzene	4.0	0.50	ug/L	EPA-8260	
n-Butylbenzene	1.2	0.50	ug/L	EPA-8260	
sec-Butylbenzene	0.84	0.50	ug/L	EPA-8260	
cis-1,2-Dichloroethene	5.1	0.50	ug/L	EPA-8260	
Total 1,2-Dichloroethene	5.1	1.0	ug/L	EPA-8260	
Isopropylbenzene	1.6	0.50	ug/L	EPA-8260	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

All results listed in this report are for the exclusive use of the submitting party. BC Laboratories, Inc. assumes no responsibility for report alteration, separation, detachment or third party interpretation.

**Executive Summary - Detections**

Constituent	Result	PQL	Units	Method	Lab Quals
1115882-11      B&C Gas Mini Mart, Drum, Drum, 9/27/2011 2:48:00PM					
Methyl t-butyl ether	11	0.50	ug/L	EPA-8260	
n-Propylbenzene	2.0	0.50	ug/L	EPA-8260	
Tetrachloroethene	19	0.50	ug/L	EPA-8260	
Toluene	33	0.50	ug/L	EPA-8260	
Trichloroethene	1.9	0.50	ug/L	EPA-8260	

BC

Laboratories, Inc.

Environmental Testing Laboratory Since 1949

## Chain of Custody and Cooler Receipt Form for 1115882 Page 1 of 3



# 11-15882

**Golder Associates  
CHAIN OF CUSTODY**

Page 1 of 1

Quotation No. \_\_\_\_\_

EDD required?  
 Yes  No

EDF required?  
 Yes  No

PROJECT NO.:		SITE NAME:		ANALYSES									
053746611		B + C gas mini Mart											
SAMPLER(S): Michael Pierce (printed)													
CONTRACT LABORATORY: BC 1965		Container Info											
TURN-AROUND TIME: Standard													
Sample I.D.	Lab I.D.	Collection		Matrix	Depth	Type/Vol.	Analyses		Cont. Qty.	Remarks			
		Date	Time			Filter							
						Preserv.							
MW-2	-1	09/27/11	1120	gw			3		3				
MW-3	-2		1010				3		3				
MW-4	-3		1049				3		3				
MW-5	-4		1355				3		3				
MW-7	-5		1235				3		3				
MW-13	-6		1205				3		3				
CMT1-Z1	-7		1021				3		3				
CMT2-Z1	-8		1101				3		3				
CMT3-Z1	-9		1221				3		3				
CMT4-Z2	-10		1421				3		3				
Drum	-11		1448	down complete			3		3				
CHK BY		DISTRIBUTION											
SUB-OUT													
Relinquished by: (signature)		Received by: (signature) 9/29/11 1535		Date/Time: 09/29/11 1535 +1916:13		SEND RESULTS TO:							
		T-BNS BCL		Date/Time: 09/29/11 +319:15		Attn: Kris Johnson							
Relinquished by: (signature)		Received by: (signature)		Date/Time: 9/29/11 8:00		Golder Associates Inc. 425 Lakeside Drive Sunnyvale, CA 94085 Phone (408) 220-9223 Fax (408) 220-9224							
Relinquished by: (signature)		Received by: (signature)		Date/Time:									

white: lab copy yellow: project file

BC

## Laboratories, Inc.

Environmental Testing Laboratory Since 1949

## Chain of Custody and Cooler Receipt Form for 1115882 Page 2 of 3

BC LABORATORIES INC.		SAMPLE RECEIPT FORM		Rev. No. 12	06/24/08	Page 1 Of 2				
Submission #: 11-15882										
SHIPPING INFORMATION			SHIPPING CONTAINER							
Federal Express <input type="checkbox"/>	UPS <input type="checkbox"/>	Hand Delivery <input type="checkbox"/>	Ice Chest <input checked="" type="checkbox"/>	None <input type="checkbox"/>	BC Lab Field Service <input type="checkbox"/> Other <input checked="" type="checkbox"/> (Specify) GSO					
			Box <input type="checkbox"/>	Other <input type="checkbox"/> (Specify)						
Refrigerant: Ice <input checked="" type="checkbox"/> Blue Ice <input type="checkbox"/> None <input type="checkbox"/> Other <input type="checkbox"/> Comments:										
Custody Seals		Ice Chest <input type="checkbox"/>	Containers <input type="checkbox"/>	None <input checked="" type="checkbox"/> Comments:						
		Intact? Yes <input type="checkbox"/> No <input type="checkbox"/>	Intact? Yes <input type="checkbox"/> No <input type="checkbox"/>							
All samples received? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		All samples containers intact? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		Description(s) match COC? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>						
COC Received <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	Emissivity: 0.98	Container: Amber	Thermometer ID: 177	Date/Time: 9/30 8:00						
	Temperature: A 1.4 °C / C 1.6 °C			Analyst Init: MAM						
SAMPLE CONTAINERS	SAMPLE NUMBERS									
	1	2	3	4	5	6	7	8	9	10
QT GENERAL MINERAL/GENERAL PHYSICAL										
PT PE UNPRESERVED										
PT INORGANIC CHEMICAL METALS										
PT INORGANIC CHEMICAL METALS										
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
20g NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT TOX										
PT CHEMICAL OXYGEN DEMAND										
PTA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK	A 1.3	A 1.3	A 1.3	A 1.3	A 1.3	A 1.3	A 1.3	A 1.3	A 1.3	A 1.3
40ml VOA VIAL										
QT EPA 413.1, 413.2, 415.1										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 508608/8088										
QT EPA 515.1/8140										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
100ml EPA 547										
100ml EPA 531.1										
QT EPA 548										
QT EPA 549										
QT EPA 632										
QT EPA 8015M										
QT AMBER										
8 OZ. JAR										
32 OZ. JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
FERROUS IRON										
ENCORE										

Comments:

Sample Numbering Completed By: BLT Date/Time: 9-30-11 @ 0845

A = Actual / C = Corrected

[H:\DOCS\WP80\LAB\_DOCS\FORMS\ISAMREC2.WPD]

BC

## Laboratories, Inc.

Environmental Testing Laboratory Since 1949

## Chain of Custody and Cooler Receipt Form for 1115882 Page 3 of 3

BC LABORATORIES INC.		SAMPLE RECEIPT FORM		Rev. No. 12	06/24/08	Page 2 Of 2				
Submission #: 11-15882										
SHIPPING INFORMATION			SHIPPING CONTAINER							
Federal Express <input type="checkbox"/> UPS <input type="checkbox"/> Hand Delivery <input type="checkbox"/> BC Lab Field Service <input type="checkbox"/> Other <input checked="" type="checkbox"/> (Specify) GSO			Ice Chest <input checked="" type="checkbox"/> None <input type="checkbox"/> Box <input type="checkbox"/> Other <input type="checkbox"/> (Specify)							
Refrigerant: Ice <input checked="" type="checkbox"/> Blue Ice <input type="checkbox"/> None <input type="checkbox"/> Other <input type="checkbox"/> Comments:										
Custody Seals	Ice Chest <input type="checkbox"/>	Containers <input type="checkbox"/>	None <input checked="" type="checkbox"/> Comments:							
Intact? Yes <input type="checkbox"/> No <input type="checkbox"/>		Intact? Yes <input type="checkbox"/> No <input type="checkbox"/>		Description(s) match COC? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>						
COC Received <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO		Emissivity: 0.98	Container: Amber	Thermometer ID: 177	Date/Time: 9/30 8:00	Analyst Init: MAM				
Temperature: A 1.4 °C / C 1.6 °C										
SAMPLE CONTAINERS	SAMPLE NUMBERS									
	1	2	3	4	5	6	7	8	9	10
QT GENERAL MINERAL GENERAL PHYSICAL										
PT PE UNPRESERVED										
OT INORGANIC CHEMICAL METALS										
PT INORGANIC CHEMICAL METALS										
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz. NITRATE/NITRITE										
PT TOTAL ORGANIC CARBON										
PT TOX										
PT CHEMICAL OXYGEN DEMAND										
PTA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK	A 3									
40ml VOA VIAL										
OT EPA 413.1, 413.2, 418.1										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
OT EPA 508/608/3090										
OT EPA 515.1/8150										
OT EPA 525										
OT EPA 525 TRAVEL BLANK										
100ml EPA 547										
100ml EPA 531.1										
OT EPA 548										
OT EPA 549										
OT EPA 632										
OT EPA 8015M										
OT AMBER										
8 OZ. JAR										
32 OZ. JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
FERROUS IRON										
ENCORE										

Comments:

Sample Numbering Completed By: BLT Date/Time: 9-30-11 @ 0845

A = Actual / C = Corrected

[H:\DOCS\INPEGLAB\DOCS\FORMS\1SAMR\REC2.WPD]



Golder Associates  
425 Lakeside Drive  
Sunnyvale, CA 94085

**Reported:** 10/05/2011 15:49  
**Project:** B&C Gas Mini Mart  
**Project Number:** 053-746611  
**Project Manager:** Kris Johnson

## Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information				
1115882-01	<b>COC Number:</b> --- <b>Project Number:</b> B&C Gas Mini Mart <b>Sampling Location:</b> MW-2 <b>Sampling Point:</b> MW-2 <b>Sampled By:</b> GAMV		<b>Receive Date:</b> 09/30/2011 08:00 <b>Sampling Date:</b> 09/27/2011 11:20 <b>Sample Depth:</b> --- <b>Lab Matrix:</b> Water <b>Sample Type:</b> Groundwater		
1115882-02	<b>COC Number:</b> --- <b>Project Number:</b> B&C Gas Mini Mart <b>Sampling Location:</b> MW-3 <b>Sampling Point:</b> MW-3 <b>Sampled By:</b> GAMV		<b>Receive Date:</b> 09/30/2011 08:00 <b>Sampling Date:</b> 09/27/2011 10:10 <b>Sample Depth:</b> --- <b>Lab Matrix:</b> Water <b>Sample Type:</b> Groundwater		
1115882-03	<b>COC Number:</b> --- <b>Project Number:</b> B&C Gas Mini Mart <b>Sampling Location:</b> MW-4 <b>Sampling Point:</b> MW-4 <b>Sampled By:</b> GAMV		<b>Receive Date:</b> 09/30/2011 08:00 <b>Sampling Date:</b> 09/27/2011 10:49 <b>Sample Depth:</b> --- <b>Lab Matrix:</b> Water <b>Sample Type:</b> Groundwater		
1115882-04	<b>COC Number:</b> --- <b>Project Number:</b> B&C Gas Mini Mart <b>Sampling Location:</b> MW-5 <b>Sampling Point:</b> MW-5 <b>Sampled By:</b> GAMV		<b>Receive Date:</b> 09/30/2011 08:00 <b>Sampling Date:</b> 09/27/2011 13:55 <b>Sample Depth:</b> --- <b>Lab Matrix:</b> Water <b>Sample Type:</b> Groundwater		
1115882-05	<b>COC Number:</b> --- <b>Project Number:</b> B&C Gas Mini Mart <b>Sampling Location:</b> MW-7 <b>Sampling Point:</b> MW-7 <b>Sampled By:</b> GAMV		<b>Receive Date:</b> 09/30/2011 08:00 <b>Sampling Date:</b> 09/27/2011 12:35 <b>Sample Depth:</b> --- <b>Lab Matrix:</b> Water <b>Sample Type:</b> Groundwater		
1115882-06	<b>COC Number:</b> --- <b>Project Number:</b> B&C Gas Mini Mart <b>Sampling Location:</b> MW-13 <b>Sampling Point:</b> MW-13 <b>Sampled By:</b> GAMV		<b>Receive Date:</b> 09/30/2011 08:00 <b>Sampling Date:</b> 09/27/2011 12:05 <b>Sample Depth:</b> --- <b>Lab Matrix:</b> Water <b>Sample Type:</b> Groundwater		
1115882-07	<b>COC Number:</b> --- <b>Project Number:</b> B&C Gas Mini Mart <b>Sampling Location:</b> CMT1-Z1 <b>Sampling Point:</b> CMT1-Z1 <b>Sampled By:</b> GAMV		<b>Receive Date:</b> 09/30/2011 08:00 <b>Sampling Date:</b> 09/27/2011 10:21 <b>Sample Depth:</b> --- <b>Lab Matrix:</b> Water <b>Sample Type:</b> Groundwater		



Golder Associates  
425 Lakeside Drive  
Sunnyvale, CA 94085

**Reported:** 10/05/2011 15:49

**Project:** B&C Gas Mini Mart

**Project Number:** 053-746611

**Project Manager:** Kris Johnson

## Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1115882-08	<b>COC Number:</b> --- <b>Project Number:</b> B&C Gas Mini Mart <b>Sampling Location:</b> CMT2-Z1 <b>Sampling Point:</b> CMT2-Z1 <b>Sampled By:</b> GAMV	<b>Receive Date:</b> 09/30/2011 08:00 <b>Sampling Date:</b> 09/27/2011 11:01 <b>Sample Depth:</b> --- <b>Lab Matrix:</b> Water <b>Sample Type:</b> Groundwater		
1115882-09	<b>COC Number:</b> --- <b>Project Number:</b> B&C Gas Mini Mart <b>Sampling Location:</b> CMT3-Z1 <b>Sampling Point:</b> CMT3-Z1 <b>Sampled By:</b> GAMV	<b>Receive Date:</b> 09/30/2011 08:00 <b>Sampling Date:</b> 09/27/2011 12:21 <b>Sample Depth:</b> --- <b>Lab Matrix:</b> Water <b>Sample Type:</b> Groundwater		
1115882-10	<b>COC Number:</b> --- <b>Project Number:</b> B&C Gas Mini Mart <b>Sampling Location:</b> CMT4-Z2 <b>Sampling Point:</b> CMT4-Z2 <b>Sampled By:</b> GAMV	<b>Receive Date:</b> 09/30/2011 08:00 <b>Sampling Date:</b> 09/27/2011 14:21 <b>Sample Depth:</b> --- <b>Lab Matrix:</b> Water <b>Sample Type:</b> Groundwater		
1115882-11	<b>COC Number:</b> --- <b>Project Number:</b> B&C Gas Mini Mart <b>Sampling Location:</b> Drum <b>Sampling Point:</b> Drum <b>Sampled By:</b> GAMV	<b>Receive Date:</b> 09/30/2011 08:00 <b>Sampling Date:</b> 09/27/2011 14:48 <b>Sample Depth:</b> --- <b>Lab Matrix:</b> Water <b>Sample Type:</b> Groundwater		



Golder Associates  
425 Lakeside Drive  
Sunnyvale, CA 94085

**Reported:** 10/05/2011 15:49  
**Project:** B&C Gas Mini Mart  
**Project Number:** 053-746611  
**Project Manager:** Kris Johnson

## Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID:	1115882-01	Client Sample Name: B&C Gas Mini Mart, MW-2, MW-2, 9/27/2011 11:20:00AM					
Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
Benzene	0.95	ug/L	0.50	EPA-8260	ND		1
Ethylbenzene	0.66	ug/L	0.50	EPA-8260	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	EPA-8260	ND		1
Toluene	ND	ug/L	0.50	EPA-8260	ND		1
Total Xylenes	ND	ug/L	1.0	EPA-8260	ND		1
t-Butyl alcohol	ND	ug/L	10	EPA-8260	ND		1
<b>Total Purgeable Petroleum Hydrocarbons</b>	<b>100</b>	<b>ug/L</b>	<b>50</b>	<b>Luft-GC/MS</b>	<b>ND</b>		<b>1</b>
1,2-Dichloroethane-d4 (Surrogate)	87.6	%	76 - 114 (LCL - UCL)	EPA-8260			1
Toluene-d8 (Surrogate)	99.6	%	88 - 110 (LCL - UCL)	EPA-8260			1
4-Bromofluorobenzene (Surrogate)	97.1	%	86 - 115 (LCL - UCL)	EPA-8260			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260	10/03/11	10/04/11 01:21	JCC	MS-V4	1	BUI1959



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**Project:** B&C Gas Mini Mart  
**Project Number:** 053-746611  
**Project Manager:** Kris Johnson

## Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID:	1115882-02	Client Sample Name: B&C Gas Mini Mart, MW-3, MW-3, 9/27/2011 10:10:00AM					
Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
Benzene	2.0	ug/L	0.50	EPA-8260	ND		1
Ethylbenzene	1.4	ug/L	0.50	EPA-8260	ND		1
Methyl t-butyl ether	19	ug/L	0.50	EPA-8260	ND		1
Toluene	ND	ug/L	0.50	EPA-8260	ND		1
Total Xylenes	ND	ug/L	1.0	EPA-8260	ND		1
t-Butyl alcohol	ND	ug/L	10	EPA-8260	ND		1
<b>Total Purgeable Petroleum Hydrocarbons</b>	<b>490</b>	<b>ug/L</b>	<b>50</b>	<b>Luft-GC/MS</b>	<b>ND</b>		<b>1</b>
1,2-Dichloroethane-d4 (Surrogate)	87.0	%	76 - 114 (LCL - UCL)	EPA-8260			1
Toluene-d8 (Surrogate)	104	%	88 - 110 (LCL - UCL)	EPA-8260			1
4-Bromofluorobenzene (Surrogate)	100	%	86 - 115 (LCL - UCL)	EPA-8260			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260	10/03/11	10/04/11 01:50	JCC	MS-V4	1	BUI1959



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**Project:** B&C Gas Mini Mart  
**Project Number:** 053-746611  
**Project Manager:** Kris Johnson

## Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID:	1115882-03	Client Sample Name: B&C Gas Mini Mart, MW-4, MW-4, 9/27/2011 10:49:00AM					
Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	EPA-8260	ND		1
Ethylbenzene	ND	ug/L	0.50	EPA-8260	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	EPA-8260	ND		1
Toluene	ND	ug/L	0.50	EPA-8260	ND		1
Total Xylenes	ND	ug/L	1.0	EPA-8260	ND		1
t-Butyl alcohol	ND	ug/L	10	EPA-8260	ND		1
Total Purgeable Petroleum Hydrocarbons	ND	ug/L	50	Luft-GC/MS	ND		1
1,2-Dichloroethane-d4 (Surrogate)	81.9	%	76 - 114 (LCL - UCL)	EPA-8260			1
Toluene-d8 (Surrogate)	97.6	%	88 - 110 (LCL - UCL)	EPA-8260			1
4-Bromofluorobenzene (Surrogate)	93.5	%	86 - 115 (LCL - UCL)	EPA-8260			1

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC Batch ID
			Date/Time	Analyst				
1	EPA-8260	10/03/11	10/04/11 02:18	JCC	MS-V4	1	BUI1959	



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**Project Manager:** Kris Johnson

## Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID:	1115882-04	Client Sample Name: B&C Gas Mini Mart, MW-5, MW-5, 9/27/2011 1:55:00PM					
Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
Benzene	34	ug/L	0.50	EPA-8260	ND		1
Ethylbenzene	8.5	ug/L	0.50	EPA-8260	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	EPA-8260	ND		1
Toluene	1.9	ug/L	0.50	EPA-8260	ND		1
Total Xylenes	2.2	ug/L	1.0	EPA-8260	ND		1
t-Butyl alcohol	ND	ug/L	10	EPA-8260	ND		1
<b>Total Purgeable Petroleum Hydrocarbons</b>	<b>1800</b>	<b>ug/L</b>	<b>50</b>	<b>Luft-GC/MS</b>	<b>ND</b>		<b>1</b>
1,2-Dichloroethane-d4 (Surrogate)	89.6	%	76 - 114 (LCL - UCL)	EPA-8260			1
Toluene-d8 (Surrogate)	108	%	88 - 110 (LCL - UCL)	EPA-8260			1
4-Bromofluorobenzene (Surrogate)	107	%	86 - 115 (LCL - UCL)	EPA-8260			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260	10/03/11	10/04/11 12:12	JCC	MS-V4	1	BUI1959



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**Project Manager:** Kris Johnson

## Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID:	1115882-05	Client Sample Name: B&C Gas Mini Mart, MW-7, MW-7, 9/27/2011 12:35:00PM					
Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
Benzene	13	ug/L	0.50	EPA-8260	ND		1
Ethylbenzene	ND	ug/L	0.50	EPA-8260	ND		1
Methyl t-butyl ether	23	ug/L	0.50	EPA-8260	ND		1
Toluene	ND	ug/L	0.50	EPA-8260	ND		1
Total Xylenes	ND	ug/L	1.0	EPA-8260	ND		1
t-Butyl alcohol	ND	ug/L	10	EPA-8260	ND		1
<b>Total Purgeable Petroleum Hydrocarbons</b>	<b>690</b>	<b>ug/L</b>	<b>50</b>	<b>Luft-GC/MS</b>	<b>ND</b>		<b>1</b>
1,2-Dichloroethane-d4 (Surrogate)	86.0	%	76 - 114 (LCL - UCL)	EPA-8260			1
Toluene-d8 (Surrogate)	102	%	88 - 110 (LCL - UCL)	EPA-8260			1
4-Bromofluorobenzene (Surrogate)	94.4	%	86 - 115 (LCL - UCL)	EPA-8260			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260	10/03/11	10/04/11 02:47	JCC	MS-V4	1	BUI1959



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**Project:** B&C Gas Mini Mart  
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**Project Manager:** Kris Johnson

## Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID:	1115882-06	Client Sample Name:	B&C Gas Mini Mart, MW-13, MW-13, 9/27/2011 12:05:00PM				
Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	EPA-8260	ND		1
Ethylbenzene	ND	ug/L	0.50	EPA-8260	ND		1
<b>Methyl t-butyl ether</b>	<b>7.2</b>	<b>ug/L</b>	<b>0.50</b>	<b>EPA-8260</b>	ND		1
Toluene	ND	ug/L	0.50	EPA-8260	ND		1
Total Xylenes	ND	ug/L	1.0	EPA-8260	ND		1
t-Butyl alcohol	ND	ug/L	10	EPA-8260	ND		1
<b>Total Purgeable Petroleum Hydrocarbons</b>	<b>74</b>	<b>ug/L</b>	<b>50</b>	<b>Luft-GC/MS</b>	ND		1
1,2-Dichloroethane-d4 (Surrogate)	82.0	%	76 - 114 (LCL - UCL)	EPA-8260			1
Toluene-d8 (Surrogate)	98.7	%	88 - 110 (LCL - UCL)	EPA-8260			1
4-Bromofluorobenzene (Surrogate)	93.9	%	86 - 115 (LCL - UCL)	EPA-8260			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260	10/03/11	10/04/11 03:16	JCC	MS-V4	1	BUI1959



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**Project Manager:** Kris Johnson

## Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID:	1115882-07	Client Sample Name: B&C Gas Mini Mart, CMT1-Z1, CMT1-Z1, 9/27/2011 10:21:00AM					
Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	EPA-8260	ND		1
Ethylbenzene	ND	ug/L	0.50	EPA-8260	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	EPA-8260	ND		1
Toluene	ND	ug/L	0.50	EPA-8260	ND		1
Total Xylenes	ND	ug/L	1.0	EPA-8260	ND		1
t-Butyl alcohol	ND	ug/L	10	EPA-8260	ND		1
Total Purgeable Petroleum Hydrocarbons	ND	ug/L	50	Luft-GC/MS	ND		1
1,2-Dichloroethane-d4 (Surrogate)	83.6	%	76 - 114 (LCL - UCL)	EPA-8260			1
Toluene-d8 (Surrogate)	99.3	%	88 - 110 (LCL - UCL)	EPA-8260			1
4-Bromofluorobenzene (Surrogate)	94.0	%	86 - 115 (LCL - UCL)	EPA-8260			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260	10/03/11	10/04/11 03:45	JCC	MS-V4	1	BUI1959



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**Project:** B&C Gas Mini Mart  
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## Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID:	1115882-08	Client Sample Name: B&C Gas Mini Mart, CMT2-Z1, CMT2-Z1, 9/27/2011 11:01:00AM					
Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	EPA-8260	ND		1
Ethylbenzene	ND	ug/L	0.50	EPA-8260	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	EPA-8260	ND		1
Toluene	ND	ug/L	0.50	EPA-8260	ND		1
Total Xylenes	ND	ug/L	1.0	EPA-8260	ND		1
t-Butyl alcohol	ND	ug/L	10	EPA-8260	ND		1
Total Purgeable Petroleum Hydrocarbons	ND	ug/L	50	Luft-GC/MS	ND		1
1,2-Dichloroethane-d4 (Surrogate)	88.0	%	76 - 114 (LCL - UCL)	EPA-8260			1
Toluene-d8 (Surrogate)	102	%	88 - 110 (LCL - UCL)	EPA-8260			1
4-Bromofluorobenzene (Surrogate)	97.0	%	86 - 115 (LCL - UCL)	EPA-8260			1

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC Batch ID
			Date/Time					
1	EPA-8260	10/03/11	10/04/11	10:45	JCC	MS-V4	1	BUI1959



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## Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID:	1115882-09	Client Sample Name: B&C Gas Mini Mart, CMT3-Z1, CMT3-Z1, 9/27/2011 12:21:00PM					
Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	EPA-8260	ND		1
Ethylbenzene	ND	ug/L	0.50	EPA-8260	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	EPA-8260	ND		1
Toluene	ND	ug/L	0.50	EPA-8260	ND		1
Total Xylenes	ND	ug/L	1.0	EPA-8260	ND		1
t-Butyl alcohol	25	ug/L	10	EPA-8260	ND		1
Total Purgeable Petroleum Hydrocarbons	ND	ug/L	50	Luft-GC/MS	ND		1
1,2-Dichloroethane-d4 (Surrogate)	88.9	%	76 - 114 (LCL - UCL)	EPA-8260			1
Toluene-d8 (Surrogate)	99.7	%	88 - 110 (LCL - UCL)	EPA-8260			1
4-Bromofluorobenzene (Surrogate)	92.7	%	86 - 115 (LCL - UCL)	EPA-8260			1

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC Batch ID
			Date/Time					
1	EPA-8260	10/03/11	10/04/11	11:14	JCC	MS-V4	1	BUI1959



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## Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID:	1115882-10	Client Sample Name: B&C Gas Mini Mart, CMT4-Z2, CMT4-Z2, 9/27/2011 2:21:00PM					
Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
Benzene	210	ug/L	2.5	EPA-8260	ND	A01	1
Ethylbenzene	66	ug/L	2.5	EPA-8260	ND	A01	1
Methyl t-butyl ether	150	ug/L	2.5	EPA-8260	ND	A01	1
Toluene	10	ug/L	2.5	EPA-8260	ND	A01	1
Total Xylenes	140	ug/L	5.0	EPA-8260	ND	A01	1
t-Amyl Methyl ether	ND	ug/L	2.5	EPA-8260	ND	A01	1
t-Butyl alcohol	ND	ug/L	50	EPA-8260	ND	A01	1
Ethanol	ND	ug/L	1200	EPA-8260	ND	A01	1
<b>Total Purgeable Petroleum Hydrocarbons</b>	<b>1400</b>	<b>ug/L</b>	<b>250</b>	<b>Luft-GC/MS</b>	<b>ND</b>	<b>A01</b>	<b>1</b>
1,2-Dichloroethane-d4 (Surrogate)	89.3	%	76 - 114 (LCL - UCL)	EPA-8260			1
Toluene-d8 (Surrogate)	100	%	88 - 110 (LCL - UCL)	EPA-8260			1
4-Bromofluorobenzene (Surrogate)	92.7	%	86 - 115 (LCL - UCL)	EPA-8260			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260	10/03/11	10/04/11 04:42	JCC	MS-V4	5	BUI1959



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**Project:** B&C Gas Mini Mart  
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**Project Manager:** Kris Johnson

## Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID:	1115882-11	Client Sample Name:	B&C Gas Mini Mart, Drum, Drum, 9/27/2011 2:48:00PM				
Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
Benzene	4.0	ug/L	0.50	EPA-8260	ND		1
Bromobenzene	ND	ug/L	0.50	EPA-8260	ND		1
Bromochloromethane	ND	ug/L	0.50	EPA-8260	ND		1
Bromodichloromethane	ND	ug/L	0.50	EPA-8260	ND		1
Bromoform	ND	ug/L	0.50	EPA-8260	ND		1
Bromomethane	ND	ug/L	1.0	EPA-8260	ND		1
n-Butylbenzene	1.2	ug/L	0.50	EPA-8260	ND		1
sec-Butylbenzene	0.84	ug/L	0.50	EPA-8260	ND		1
tert-Butylbenzene	ND	ug/L	0.50	EPA-8260	ND		1
Carbon tetrachloride	ND	ug/L	0.50	EPA-8260	ND		1
Chlorobenzene	ND	ug/L	0.50	EPA-8260	ND		1
Chloroethane	ND	ug/L	0.50	EPA-8260	ND		1
Chloroform	ND	ug/L	0.50	EPA-8260	ND		1
Chloromethane	ND	ug/L	0.50	EPA-8260	ND		1
2-Chlorotoluene	ND	ug/L	0.50	EPA-8260	ND		1
4-Chlorotoluene	ND	ug/L	0.50	EPA-8260	ND		1
Dibromochloromethane	ND	ug/L	0.50	EPA-8260	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	EPA-8260	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	EPA-8260	ND		1
Dibromomethane	ND	ug/L	0.50	EPA-8260	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	EPA-8260	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	EPA-8260	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	EPA-8260	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	EPA-8260	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	EPA-8260	ND		1
1,2-Dichloroethane	ND	ug/L	0.50	EPA-8260	ND		1
1,1-Dichloroethene	ND	ug/L	0.50	EPA-8260	ND		1
cis-1,2-Dichloroethene	5.1	ug/L	0.50	EPA-8260	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	EPA-8260	ND		1
<b>Total 1,2-Dichloroethene</b>	<b>5.1</b>	<b>ug/L</b>	<b>1.0</b>	<b>EPA-8260</b>	<b>ND</b>		<b>1</b>
1,2-Dichloropropane	ND	ug/L	0.50	EPA-8260	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	EPA-8260	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	EPA-8260	ND		1

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**Reported:** 10/05/2011 15:49  
**Project:** B&C Gas Mini Mart  
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**Project Manager:** Kris Johnson

## Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID:	1115882-11	Client Sample Name:	B&C Gas Mini Mart, Drum, Drum, 9/27/2011 2:48:00PM				
Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
1,1-Dichloropropene	ND	ug/L	0.50	EPA-8260	ND		1
cis-1,3-Dichloropropene	ND	ug/L	0.50	EPA-8260	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	EPA-8260	ND		1
Total 1,3-Dichloropropene	ND	ug/L	1.0	EPA-8260	ND		1
Ethylbenzene	ND	ug/L	0.50	EPA-8260	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	EPA-8260	ND		1
Isopropylbenzene	1.6	ug/L	0.50	EPA-8260	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	EPA-8260	ND		1
Methylene chloride	ND	ug/L	1.0	EPA-8260	ND		1
Methyl t-butyl ether	11	ug/L	0.50	EPA-8260	ND		1
Naphthalene	ND	ug/L	0.50	EPA-8260	ND		1
n-Propylbenzene	2.0	ug/L	0.50	EPA-8260	ND		1
Styrene	ND	ug/L	0.50	EPA-8260	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	EPA-8260	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	EPA-8260	ND		1
Tetrachloroethene	19	ug/L	0.50	EPA-8260	ND		1
Toluene	33	ug/L	0.50	EPA-8260	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	EPA-8260	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	EPA-8260	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	EPA-8260	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	EPA-8260	ND		1
Trichloroethene	1.9	ug/L	0.50	EPA-8260	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	EPA-8260	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	EPA-8260	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	EPA-8260	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	EPA-8260	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	EPA-8260	ND		1
Vinyl chloride	ND	ug/L	0.50	EPA-8260	ND		1
Total Xylenes	ND	ug/L	1.0	EPA-8260	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	EPA-8260	ND		1
t-Butyl alcohol	ND	ug/L	10	EPA-8260	ND		1
Diisopropyl ether	ND	ug/L	0.50	EPA-8260	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	EPA-8260	ND		1

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**Project:** B&C Gas Mini Mart  
**Project Number:** 053-746611  
**Project Manager:** Kris Johnson

## Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID:	1115882-11	Client Sample Name:	B&C Gas Mini Mart, Drum, Drum, 9/27/2011 2:48:00PM				
Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
p- & m-Xylenes	ND	ug/L	0.50	EPA-8260	ND		1
o-Xylene	ND	ug/L	0.50	EPA-8260	ND		1
1,2-Dichloroethane-d4 (Surrogate)	90.4	%	76 - 114 (LCL - UCL)	EPA-8260			1
Toluene-d8 (Surrogate)	100	%	88 - 110 (LCL - UCL)	EPA-8260			1
4-Bromofluorobenzene (Surrogate)	99.8	%	86 - 115 (LCL - UCL)	EPA-8260			1

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC	Batch ID
			Date/Time						
1	EPA-8260	10/03/11	10/04/11	11:43	JCC	MS-V4	1		BUI1959



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Sunnyvale, CA 94085

**Reported:** 10/05/2011 15:49  
**Project:** B&C Gas Mini Mart  
**Project Number:** 053-746611  
**Project Manager:** Kris Johnson

## Volatile Organic Analysis (EPA Method 8260)

### Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
<b>QC Batch ID: BUI1959</b>						
Benzene	BUI1959-BLK1	ND	ug/L	0.50		
Bromobenzene	BUI1959-BLK1	ND	ug/L	0.50		
Bromochloromethane	BUI1959-BLK1	ND	ug/L	0.50		
Bromodichloromethane	BUI1959-BLK1	ND	ug/L	0.50		
Bromoform	BUI1959-BLK1	ND	ug/L	0.50		
Bromomethane	BUI1959-BLK1	ND	ug/L	1.0		
n-Butylbenzene	BUI1959-BLK1	ND	ug/L	0.50		
sec-Butylbenzene	BUI1959-BLK1	ND	ug/L	0.50		
tert-Butylbenzene	BUI1959-BLK1	ND	ug/L	0.50		
Carbon tetrachloride	BUI1959-BLK1	ND	ug/L	0.50		
Chlorobenzene	BUI1959-BLK1	ND	ug/L	0.50		
Chloroethane	BUI1959-BLK1	ND	ug/L	0.50		
Chloroform	BUI1959-BLK1	ND	ug/L	0.50		
Chloromethane	BUI1959-BLK1	ND	ug/L	0.50		
2-Chlorotoluene	BUI1959-BLK1	ND	ug/L	0.50		
4-Chlorotoluene	BUI1959-BLK1	ND	ug/L	0.50		
Dibromochloromethane	BUI1959-BLK1	ND	ug/L	0.50		
1,2-Dibromo-3-chloropropane	BUI1959-BLK1	ND	ug/L	1.0		
1,2-Dibromoethane	BUI1959-BLK1	ND	ug/L	0.50		
Dibromomethane	BUI1959-BLK1	ND	ug/L	0.50		
1,2-Dichlorobenzene	BUI1959-BLK1	ND	ug/L	0.50		
1,3-Dichlorobenzene	BUI1959-BLK1	ND	ug/L	0.50		
1,4-Dichlorobenzene	BUI1959-BLK1	ND	ug/L	0.50		
Dichlorodifluoromethane	BUI1959-BLK1	ND	ug/L	0.50		
1,1-Dichloroethane	BUI1959-BLK1	ND	ug/L	0.50		
1,2-Dichloroethane	BUI1959-BLK1	ND	ug/L	0.50		
1,1-Dichloroethene	BUI1959-BLK1	ND	ug/L	0.50		
cis-1,2-Dichloroethene	BUI1959-BLK1	ND	ug/L	0.50		
trans-1,2-Dichloroethene	BUI1959-BLK1	ND	ug/L	0.50		
Total 1,2-Dichloroethene	BUI1959-BLK1	ND	ug/L	1.0		
1,2-Dichloropropane	BUI1959-BLK1	ND	ug/L	0.50		
1,3-Dichloropropane	BUI1959-BLK1	ND	ug/L	0.50		
2,2-Dichloropropane	BUI1959-BLK1	ND	ug/L	0.50		
1,1-Dichloropropene	BUI1959-BLK1	ND	ug/L	0.50		

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**Project Manager:** Kris Johnson

## Volatile Organic Analysis (EPA Method 8260)

### Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
<b>QC Batch ID: BUI1959</b>						
cis-1,3-Dichloropropene	BUI1959-BLK1	ND	ug/L	0.50		
trans-1,3-Dichloropropene	BUI1959-BLK1	ND	ug/L	0.50		
Total 1,3-Dichloropropene	BUI1959-BLK1	ND	ug/L	1.0		
Ethylbenzene	BUI1959-BLK1	ND	ug/L	0.50		
Hexachlorobutadiene	BUI1959-BLK1	ND	ug/L	0.50		
Isopropylbenzene	BUI1959-BLK1	ND	ug/L	0.50		
p-Isopropyltoluene	BUI1959-BLK1	ND	ug/L	0.50		
Methylene chloride	BUI1959-BLK1	ND	ug/L	1.0		
Methyl t-butyl ether	BUI1959-BLK1	ND	ug/L	0.50		
Naphthalene	BUI1959-BLK1	ND	ug/L	0.50		
n-Propylbenzene	BUI1959-BLK1	ND	ug/L	0.50		
Styrene	BUI1959-BLK1	ND	ug/L	0.50		
1,1,1,2-Tetrachloroethane	BUI1959-BLK1	ND	ug/L	0.50		
1,1,2,2-Tetrachloroethane	BUI1959-BLK1	ND	ug/L	0.50		
Tetrachloroethene	BUI1959-BLK1	ND	ug/L	0.50		
Toluene	BUI1959-BLK1	ND	ug/L	0.50		
1,2,3-Trichlorobenzene	BUI1959-BLK1	ND	ug/L	0.50		
1,2,4-Trichlorobenzene	BUI1959-BLK1	ND	ug/L	0.50		
1,1,1-Trichloroethane	BUI1959-BLK1	ND	ug/L	0.50		
1,1,2-Trichloroethane	BUI1959-BLK1	ND	ug/L	0.50		
Trichloroethene	BUI1959-BLK1	ND	ug/L	0.50		
Trichlorofluoromethane	BUI1959-BLK1	ND	ug/L	0.50		
1,2,3-Trichloropropane	BUI1959-BLK1	ND	ug/L	1.0		
1,1,2-Trichloro-1,2,2-trifluoroethane	BUI1959-BLK1	ND	ug/L	0.50		
1,2,4-Trimethylbenzene	BUI1959-BLK1	ND	ug/L	0.50		
1,3,5-Trimethylbenzene	BUI1959-BLK1	ND	ug/L	0.50		
Vinyl chloride	BUI1959-BLK1	ND	ug/L	0.50		
Total Xylenes	BUI1959-BLK1	ND	ug/L	1.0		
t-Amyl Methyl ether	BUI1959-BLK1	ND	ug/L	0.50		
t-Butyl alcohol	BUI1959-BLK1	ND	ug/L	10		
Diisopropyl ether	BUI1959-BLK1	ND	ug/L	0.50		
Ethanol	BUI1959-BLK1	ND	ug/L	250		
Ethyl t-butyl ether	BUI1959-BLK1	ND	ug/L	0.50		
p- & m-Xylenes	BUI1959-BLK1	ND	ug/L	0.50		

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Environmental Testing Laboratory Since 1949

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Project: B&C Gas Mini Mart  
Project Number: 053-746611  
Project Manager: Kris Johnson

## Volatile Organic Analysis (EPA Method 8260)

### Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
<b>QC Batch ID: BUI1959</b>						
o-Xylene	BUI1959-BLK1	ND	ug/L	0.50		
Total Purgeable Petroleum Hydrocarbons	BUI1959-BLK1	ND	ug/L	50		
1,2-Dichloroethane-d4 (Surrogate)	BUI1959-BLK1	90.9	%	76 - 114 (LCL - UCL)		
Toluene-d8 (Surrogate)	BUI1959-BLK1	98.2	%	88 - 110 (LCL - UCL)		
4-Bromofluorobenzene (Surrogate)	BUI1959-BLK1	92.4	%	86 - 115 (LCL - UCL)		



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**Project Manager:** Kris Johnson

## Volatile Organic Analysis (EPA Method 8260)

### Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	Control Limits		Lab Quals
							RPD	Percent Recovery	
<b>QC Batch ID: BUI1959</b>									
Benzene	BUI1959-BS1	LCS	23.200	25.000	ug/L	92.8	70 - 130		
Bromodichloromethane	BUI1959-BS1	LCS	20.350	25.000	ug/L	81.4	70 - 130		
Chlorobenzene	BUI1959-BS1	LCS	22.360	25.000	ug/L	89.4	70 - 130		
Chloroethane	BUI1959-BS1	LCS	21.850	25.000	ug/L	87.4	70 - 130		
1,4-Dichlorobenzene	BUI1959-BS1	LCS	20.910	25.000	ug/L	83.6	70 - 130		
1,1-Dichloroethane	BUI1959-BS1	LCS	23.120	25.000	ug/L	92.5	70 - 130		
1,1-Dichloroethene	BUI1959-BS1	LCS	22.490	25.000	ug/L	90.0	70 - 130		
Toluene	BUI1959-BS1	LCS	20.860	25.000	ug/L	83.4	70 - 130		
Trichloroethene	BUI1959-BS1	LCS	21.860	25.000	ug/L	87.4	70 - 130		
1,2-Dichloroethane-d4 (Surrogate)	BUI1959-BS1	LCS	8.0000	10.000	ug/L	80.0	76 - 114		
Toluene-d8 (Surrogate)	BUI1959-BS1	LCS	9.8100	10.000	ug/L	98.1	88 - 110		
4-Bromofluorobenzene (Surrogate)	BUI1959-BS1	LCS	9.3900	10.000	ug/L	93.9	86 - 115		



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## Volatile Organic Analysis (EPA Method 8260)

### Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Control Limits			
								Percent Recovery	RPD	Percent Recovery	Lab Quals
<b>QC Batch ID: BUI1959</b>		Used client sample: N									
Benzene	MS	1115418-31	ND	25.430	25.000	ug/L		102		70 - 130	
	MSD	1115418-31	ND	24.210	25.000	ug/L	4.9	96.8	20	70 - 130	
Bromodichloromethane	MS	1115418-31	ND	19.860	25.000	ug/L		79.4		70 - 130	
	MSD	1115418-31	ND	19.750	25.000	ug/L	0.6	79.0	20	70 - 130	
Chlorobenzene	MS	1115418-31	ND	22.520	25.000	ug/L		90.1		70 - 130	
	MSD	1115418-31	ND	22.420	25.000	ug/L	0.4	89.7	20	70 - 130	
Chloroethane	MS	1115418-31	ND	22.270	25.000	ug/L		89.1		70 - 130	
	MSD	1115418-31	ND	22.160	25.000	ug/L	0.5	88.6	20	70 - 130	
1,4-Dichlorobenzene	MS	1115418-31	ND	19.690	25.000	ug/L		78.8		70 - 130	
	MSD	1115418-31	ND	19.600	25.000	ug/L	0.5	78.4	20	70 - 130	
1,1-Dichloroethane	MS	1115418-31	ND	25.120	25.000	ug/L		100		70 - 130	
	MSD	1115418-31	ND	23.600	25.000	ug/L	6.2	94.4	20	70 - 130	
1,1-Dichloroethene	MS	1115418-31	ND	24.520	25.000	ug/L		98.1		70 - 130	
	MSD	1115418-31	ND	22.910	25.000	ug/L	6.8	91.6	20	70 - 130	
Toluene	MS	1115418-31	ND	21.280	25.000	ug/L		85.1		70 - 130	
	MSD	1115418-31	ND	20.650	25.000	ug/L	3.0	82.6	20	70 - 130	
Trichloroethene	MS	1115418-31	ND	22.230	25.000	ug/L		88.9		70 - 130	
	MSD	1115418-31	ND	22.040	25.000	ug/L	0.9	88.2	20	70 - 130	
1,2-Dichloroethane-d4 (Surrogate)	MS	1115418-31	ND	8.4200	10.000	ug/L		84.2		76 - 114	
	MSD	1115418-31	ND	8.0400	10.000	ug/L	4.6	80.4		76 - 114	
Toluene-d8 (Surrogate)	MS	1115418-31	ND	9.8200	10.000	ug/L		98.2		88 - 110	
	MSD	1115418-31	ND	9.6200	10.000	ug/L	2.1	96.2		88 - 110	
4-Bromofluorobenzene (Surrogate)	MS	1115418-31	ND	9.0900	10.000	ug/L		90.9		86 - 115	
	MSD	1115418-31	ND	8.6600	10.000	ug/L	4.8	86.6		86 - 115	



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## Notes And Definitions

MDL	Method Detection Limit
ND	Analyte Not Detected at or above the reporting limit
PQL	Practical Quantitation Limit
RPD	Relative Percent Difference
A01	PQL's and MDL's are raised due to sample dilution.

**APPENDIX C**  
**TABULAR SUMMARIES OF HISTORICAL ANALYTICAL DATA**

# Historical Groundwater Elevations and Analytical Results B C Gas Mini Mart, Livermore

# Historical Groundwater Elevations and Analytical Results B C Gas Mini Mart, Livermore

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## Historical Groundwater Elevations and Analytical Results B C Gas Mini Mart, Livermore

Historical Groundwater Elevations and Analytical Results  
B C Gas Mini Mart, Livermore

Well Number	Zone	Top of	Date	Depth	Ground-	Depth to	Product																
		Casing	Measured	to water	Free	Thickness																	
		Elevation (feet, MSL)		Water Elevation (feet, MSL)	Product (feet)			Ethyl-													m,p-	o-	
CMT-1	Z6		03/22/06	31.86	440.10			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
CMT-1	Z6		06/05/06	34.10	437.86			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
CMT-1	Z6		08/28/06	41.41	430.55			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
CMT-1	Z6		11/30/06	38.87	433.09			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
CMT-1	Z6		03/21/07	36.11	435.85			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
CMT-1	Z6		06/21/07	44.0	428.0			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
CMT-1	Z6		09/24/07	53.04	418.92			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
CMT-1	Z6		12/17/07	50.05	421.91			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
CMT-1	Z6		03/03/08	38.49	433.47			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
CMT-1	Z6		06/09/08	45.91	426.05			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
CMT-1	Z6		08/26/08	54.76	417.20			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
CMT-1	Z6		12/08/08	53.40	418.56			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
CMT-1	Z6		03/27/09	NM	NM			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
CMT-1	Z6		02/18/11	NM	NM			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
CMT-1	Z6		09/27/11	42.60	429.36			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
CMT-1	Z7	469.51	08/11/03	45.38	424.13			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CMT-1	Z7		08/12/03	45.51	424.00			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
CMT-1	Z7		08/13/03	45.55	423.96			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
CMT-1	Z7		08/13/03	NA	NA			<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<100	<1	<1	<20	
CMT-1	Z7		08/18/03	45.90	423.61			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
CMT-1	Z7		08/19/03	45.93	423.58			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
CMT-1	Z7		08/21/03	NM	NA			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
CMT-1	Z7		11/24/03	40.85	428.66			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
CMT-1	Z7		12/04/03	NA	NA			<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<100	<1	<1	<20	
CMT-1	Z7	471.96	02/16/04	34.18	437.78			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
CMT-1	Z7		06/21/04	43.72	428.24			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
CMT-1	Z7		09/07/04	47.79	424.17			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
CMT-1	Z7		12/13/04	41.13	430.83			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
CMT-1	Z7		03/02/05	33.57	438.39			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
CMT-1	Z7		03/17/05	NA	NA			<50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NA	NA	NA	NA	<0.5	<20	NA	NA	
CMT-1	Z7		06/13/05	37.02	434.94			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
CMT-1	Z7		06/21/05	NA	NA			<50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NA	NA	NA	NA	NA	NA	NA	NA	
CMT-1	Z7		09/15/05	41.86	430.10			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
CMT-1	Z7		09/16/05	NA	NA			<50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NA	NA	NA	NA	<20	NA	NA		
CMT-1	Z7		12/06/05	39.13	432.83			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
CMT-1	Z7		12/07/05	NA	NA			<50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NA	NA	NA	NA	<0.50	<20	NA	NA	
CMT-1	Z7		03/22/06	33.43	438.53			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
CMT-1	Z7		06/05/06	36.95	435.01			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
CMT-1	Z7		08/28/06	43.93	428.03			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
CMT-1	Z7		11/30/06	41.16	430.80			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
CMT-1	Z7		03/21/07	38.43	433.53			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
CMT-1	Z7		06/21/07	46.5	425.5			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
CMT-1	Z7		09/24/07	55.34	416.62			NA	NA	NA	NA	NA</											

Historical Groundwater Elevations and Analytical Results  
B C Gas Mini Mart, Livermore

Well Number	Zone	Top of	Date	Depth	Ground-	Depth to	Product																	
		Casing	Measured	to water	Free	Thickness																		
		Elevation		Water	Elevation	Product			Ethyl-											m,p-	o-			
		(feet, MSL)		(feet)	(feet, MSL)	(feet)	TPH-G	Benzene	Toluene	benzene	Xylenes	MTBE	EDB	EDC	DIPE	Ethanol	ETBE	TAME	TBA	Xylene	Xylene			
CMT-2	Z1		08/19/03	NA	NA			<50	<0.5	<0.5	<0.5	<b>2.8</b>	<0.5	<0.5	<1	<100	<1	<1	<20	NA	NA			
CMT-2	Z1		08/21/03	NM	NA			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
CMT-2	Z1		11/24/03	41.45	428.69			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
CMT-2	Z1		12/02/03	NA	NA			<50	<0.5	<0.5	<0.5	<b>1.1</b>	<0.5	<0.5	<1	<100	<1	<1	<20	NA	NA			
CMT-2	Z1	472.53	02/16/04	31.68	440.85			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
CMT-2	Z1		02/18/04	NA	NA			<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<100	<1	<1	<20	NA	NA		
CMT-2	Z1		06/21/04	39.55	432.98			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
CMT-2	Z1		09/07/04	Dry	NA			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
CMT-2	Z1		12/13/04	40.68	431.85			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
CMT-2	Z1		12/15/04	NA	NA			<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<100	<1	<1	<20	NA	NA		
CMT-2	Z1		03/02/05	30.12	442.41			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
CMT-2	Z1		03/16/05	NA	NA			<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	NA	NA	NA	NA	<0.50	<20	NA		
CMT-2	Z1		06/13/05	31.38	441.15			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
CMT-2	Z1		06/15/05	NA	NA			<50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NA	NA	NA	NA	NA	NA	NA		
CMT-2	Z1		09/15/05	38.04	434.49			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
CMT-2	Z1		09/16/05	NA	NA			<50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NA	NA	NA	NA	<20	NA	NA		
CMT-2	Z1		12/06/05	37.31	435.22			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
CMT-2	Z1		12/08/05	NA	NA			<50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NA	NA	NA	NA	<0.50	<20	NA		
CMT-2	Z1		03/22/06	29.73	442.80			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
CMT-2	Z1		06/05/06	29.93	442.60			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
CMT-2	Z1		08/28/06	39.84	432.69			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
CMT-2	Z1		11/30/06	37.95	434.58			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
CMT-2	Z1		12/20/06	NA	NA			<50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NA	NA	NA	NA	<0.50	<5.0	NA		
CMT-2	Z1		03/21/07	34.15	438.38			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
CMT-2	Z1		06/21/07	42.9	429.6			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
CMT-2	Z1		09/24/07	Dry	Dry			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
CMT-2	Z1		12/17/07	Dry	Dry			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
CMT-2	Z1		03/03/08	38.63	433.90			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
CMT-2	Z1		06/09/08	44.58	427.95			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
CMT-2	Z1		08/26/08	Dry	Dry			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
CMT-2	Z1		12/08/08	Dry	Dry			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
CMT-2	Z1		03/27/09	NM	NM			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
CMT-2	Z1		02/18/11	37.62	434.9			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
CMT-2	Z1		02/18/11	NA	NA			<50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NA	NA	NA	NA	<0.50	<0.50	NA		
CMT-2	Z1		09/27/11	40.59	431.94			<50	<0.50	<0.50	<0.50	<0.50	<1.0	<0.50	NA	NA	NA	NA	NA	<10	NA	NA		
CMT-2	Z2	470.14	08/11/03	NM	NM			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
CMT-2	Z2		08/12/03	40.80	429.34			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
CMT-2	Z2		08/13/03	42.37	427.77			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
CMT-2	Z2		08/18/03	43.20	426.94			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
CMT-2	Z2		08/18/03	NA	NA			<50	<0.5	<0.5	<0.5	<0.5	<b>38</b>	<0.5										

Historical Groundwater Elevations and Analytical Results  
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Well Number	Zone	Top of	Date	Depth	Ground-	Depth to	Product																
		Casing	Measured	to water	Free	Thickness																	
		Elevation (feet, MSL)		Water (feet)	Elevation (feet, MSL)	Product (feet)		TPH-G	Benzene	Toluene	benzene	Xylenes	MTBE	EDB	EDC	DIPE	Ethanol	ETBE	TAME	TBA	m,p-Xylene	o-Xylene	
CMT-2	Z2		09/16/05	NA	NA			<50	<0.50	<0.50	<0.50	<0.50	<b>0.90</b>	NA	NA	NA	NA	NA	NA	<20	NA	NA	
CMT-2	Z2		12/06/05	38.96	433.57			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
CMT-2	Z2		12/07/05	NA	NA			<50	<0.50	<0.50	<0.50	<0.50	<b>0.90</b>	NA	NA	NA	NA	NA	NA	<0.50	<20	NA	NA
CMT-2	Z2		03/22/06	32.31	440.22			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
CMT-2	Z2		03/31/06	NA	NA			<50	<0.50	<0.50	<0.50	<0.50	<0.50	NA	NA	NA	NA	NA	NA	<0.50	<20	NA	NA
CMT-2	Z2		06/05/06	32.93	439.60			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
CMT-2	Z2		06/07/06	NA	NA			<50	<0.50	<0.50	<0.50	<0.50	<b>3.0</b>	NA	NA	NA	NA	NA	NA	<20	NA	NA	
CMT-2	Z2		08/28/06	41.46	431.07			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
CMT-2	Z2		06/07/06	NA	NA			<50	<0.50	<0.50	<0.50	<0.50	<0.50	NA	NA	NA	NA	NA	NA	<0.50	<20	NA	NA
CMT-2	Z2		11/30/06	39.49	433.04			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
CMT-2	Z2		12/20/06	NA	NA			<50	<0.50	<0.50	<0.50	<0.50	<b>18</b>	NA	NA	NA	NA	NA	NA	<0.50	<5.0	NA	NA
CMT-2	Z2		03/21/07	36.26	436.27			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
CMT-2	Z2		03/27/07	NA	NA			<50	<0.50	<0.50	<0.50	<0.50	<b>0.6</b>	NA	NA	NA	NA	NA	NA	<5.0	NA	NA	
CMT-2	Z2		06/21/07	44.2	428.3			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
CMT-2	Z2		09/24/07	53.32	419.21			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
CMT-2	Z2		09/26/07	NA	NA			<50	<b>0.55</b>	<0.50	<0.50	<0.50	<0.50	NA	NA	NA	NA	NA	NA	<10	NA	NA	
CMT-2	Z2		12/17/07	51.91	420.62			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
CMT-2	Z2		12/19/07	NA	NA			<50	<0.50	<0.50	<0.50	<1.0	<0.50	NA	NA	NA	NA	NA	NA	<0.50	<10	NA	NA
CMT-2	Z2		03/03/08	40.03	432.50			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.50	<10	NA	NA
CMT-2	Z2		03/05/08	NA	NA			<50	<0.50	<0.50	<0.50	<1.0	<0.50	NA	NA	NA	NA	NA	NA	<0.50	<10	NA	NA
CMT-2	Z2		06/09/08	46.18	426.35			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
CMT-2	Z2		06/11/08	NA	NA			<50	<b>0.67</b>	<0.50	<0.50	<1.0	<0.50	NA	NA	NA	NA	NA	NA	<10	NA	NA	
CMT-2	Z2		08/26/08	54.99	417.54			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
CMT-2	Z2		08/28/08	NA	NA			<50	<0.50	<0.50	<0.50	<1.0	<0.50	NA	NA	NA	NA	NA	NA	<0.50	<10	NA	NA
CMT-2	Z2		12/08/08	54.92	417.61			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
CMT-2	Z2		03/27/09	45.70	426.83			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
CMT-2	Z2		03/27/09	NA	NA			<50	<0.50	<0.50	<0.50	<1.0	<0.50	NA	NA	NA	NA	NA	NA	<0.50	<10	NA	NA
CMT-2	Z2		02/18/11	NM	NM			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
CMT-2	Z2		09/27/11	42.01	430.52			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
CMT-2	Z3	470.14	08/11/03	NM	NM			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
CMT-2	Z3		08/12/03	NM	NM			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
CMT-2	Z3		08/13/03	43.34	426.80			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
CMT-2	Z3		08/18/03	43.55	426.59			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
CMT-2	Z3		08/18/03	NA	NA			<50	<0.5	<0.5	<0.5	<0.5	<b>1.1</b>	<0.5	<0.5	<1	<100	<1	<1	<20	NA	NA	
CMT-2	Z3		08/19/03	43.67	426.47			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
CMT-2	Z3		08/21/03	NM	NA			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
CMT-2	Z3		11/24/03	41.60	428.54			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
CMT-2	Z3		12/02/03	NA	NA			<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<100	<1	<1	<20	NA	NA
CMT-2	Z3	472.53	02/16/04	34.13	438.40			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
CMT-2	Z3		02/19/04	NA	NA			<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<100	<1	<1	<20	NA</

# Historical Groundwater Elevations and Analytical Results B C Gas Mini Mart, Livermore

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B C Gas Mini Mart, Livermore

Well Number	Zone	Top of	Date	Depth	Ground-	Depth to	Product																
		Casing	Measured	to water	Free	Thickness																	
		Elevation (feet, MSL)		Water Elevation (feet, MSL)	Product (feet)			Ethyl-													m,p-	o-	
CMT-2	Z5		08/12/03	43.01	427.13			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
CMT-2	Z5		08/13/03	43.06	427.08			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
CMT-2	Z5		08/18/03	43.23	426.91			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
CMT-2	Z5		08/18/03	NA	NA			<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<100	<1	<1	<20	NA	NA	
CMT-2	Z5		08/19/03	43.71	426.43			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
CMT-2	Z5		08/21/03	NM	NA			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
CMT-2	Z5		11/24/03	39.89	430.25			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
CMT-2	Z5		12/02/03	NA	NA			<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<100	<1	<1	<20	NA	NA	
CMT-2	Z5	472.53	02/16/04	33.18	439.35			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CMT-2	Z5		06/21/04	41.29	431.24			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CMT-2	Z5		09/07/04	47.71	424.82			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CMT-2	Z5		12/13/04	40.07	432.46			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CMT-2	Z5		03/02/05	32.12	440.41			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CMT-2	Z5		03/16/05	NA	NA			<50	<0.5	<0.5	<0.5	<0.5	<0.5	NA	NA	NA	NA	<0.50	<20	NA	NA		
CMT-2	Z5		06/13/05	34.61	437.92			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CMT-2	Z5		06/15/05	NA	NA			<50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NA	NA	NA	NA	NA	NA	NA	NA	NA
CMT-2	Z5		09/15/05	39.66	432.87			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CMT-2	Z5		09/16/05	NA	NA			NA	<50	<0.50	<0.50	<0.50	<0.50	NA	NA	NA	NA	NA	<20	NA	NA		
CMT-2	Z5		12/06/05	38.02	434.51			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CMT-2	Z5		12/08/05	NA	NA			<50	<0.50	<0.50	<0.50	<0.50	<0.50	NA	NA	NA	NA	<0.50	<20	NA	NA		
CMT-2	Z5		03/22/06	31.99	440.54			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CMT-2	Z5		06/05/06	34.15	438.38			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CMT-2	Z5		08/28/06	41.47	431.06			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CMT-2	Z5		11/30/06	39.02	433.51			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CMT-2	Z5		03/21/07	36.21	436.32			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CMT-2	Z5		06/21/07	44.2	428.3			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CMT-2	Z5		09/24/07	53.14	419.39			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CMT-2	Z5		12/17/07	50.29	422.24			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CMT-2	Z5		03/03/08	38.71	433.82			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CMT-2	Z5		06/09/08	45.84	426.69			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CMT-2	Z5		08/26/08	54.82	417.71			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CMT-2	Z5		12/08/08	53.63	418.90			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CMT-2	Z5		03/27/09	NM	NM			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CMT-2	Z5		02/18/11	NM	NM			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CMT-2	Z5		09/27/11	41.49	431.04			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CMT-2	Z6	470.14	08/11/03	NM	NM			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CMT-2	Z6		08/12/03	43.10	427.04			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CMT-2	Z6		08/13/03	43.17	426.97			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CMT-2	Z6		08/18/03	43.31	426.83			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CMT-2	Z6		08/18/03	NA	NA			<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<100	<1	<1	<20	NA	NA
CMT-2	Z6		08/19/03	43.52	426.62			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CMT-2	Z6		08/21/03	NM	NA			NA	NA	NA	NA												

# Historical Groundwater Elevations and Analytical Results B C Gas Mini Mart, Livermore

Historical Groundwater Elevations and Analytical Results  
B C Gas Mini Mart, Livermore

Well Number	Zone	Top of	Date	Depth	Ground-	Depth to	Product																	
		Casing	Measured	to water	Free	Thickness																		
		Elevation		Water	Elevation	Product			Ethyl-											m,p-	o-			
		(feet, MSL)		(feet)	(feet, MSL)	(feet)	TPH-G	Benzene	Toluene	benzene	Xylenes	MTBE	EDB	EDC	DIPE	Ethanol	ETBE	TAME	TBA	Xylene	Xylene			
CMT-3	Z1		08/19/03	NA	NA			<100	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
CMT-3	Z1		08/21/03	NM	NA			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
CMT-3	Z1		11/24/03	40.92	432.52			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
CMT-3	Z1		12/04/03	NA	NA			<50	<0.5	<0.5	<0.5	<0.5	<b>7.6</b>	<0.5	<0.5	<1	<100	<1	<1	<20	NA	NA		
CMT-3	Z1	476.28	02/16/04	32.83	443.45			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
CMT-3	Z1		02/18/04	NA	NA			<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<100	<1	<1	<20	NA	NA	
CMT-3	Z1		06/21/04	39.85	436.43			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
CMT-3	Z1		09/07/04	Dry	NA			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
CMT-3	Z1		12/13/04	40.60	435.68			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
CMT-3	Z1		12/14/04	NA	NA			<50	<0.5	<0.5	<0.5	<0.5	<b>72*</b>	NS	NS	NS	<0.50	NS	NS	NS	NA	NA	NA	
CMT-3	Z1		03/02/05	30.95	445.33			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
CMT-3	Z1		03/15/05	NA	NA			<b>58</b>	<0.50	<0.50	<0.50	<0.50	<b>69</b>	NA	NA	NA	NA	NA	<0.50	<20	NA	NA		
CMT-3	Z1		06/13/05	32.00	444.28			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
CMT-3	Z1		06/21/05	NA	NA			<250	<2.5	<2.5	<2.5	<2.5	<b>140</b>	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
CMT-3	Z1		09/15/05	38.39	437.89			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
CMT-3	Z1		09/20/05	NA	NA			<b>67</b>	<0.5	<0.5	<0.5	<0.5	<b>72</b>	NA	NA	NA	NA	NA	NA	NA	<20	NA		
CMT-3	Z1		12/06/05	37.71	438.57			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
CMT-3	Z1		03/22/06	30.70	445.58			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
CMT-3	Z1		06/05/06	30.70	445.58			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
CMT-3	Z1		08/28/06	39.57	436.71			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
CMT-3	Z1		11/30/06	38.05	438.23			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
CMT-3	Z1		12/20/06	NA	NA			<50	<0.50	<0.50	<0.50	<0.50	<b>18</b>	NA	NA	NA	NA	<0.50	<5.0	NA	NA			
CMT-3	Z1		03/21/07	34.40	441.88			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
CMT-3	Z1		06/21/07	42.6	433.7			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
CMT-3	Z1		09/24/07	Dry	Dry			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
CMT-3	Z1		12/17/07	Dry	Dry			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
CMT-3	Z1		03/03/08	38.45	437.83			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
CMT-3	Z1		06/09/08	Dry	Dry			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
CMT-3	Z1		08/26/08	Dry	Dry			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
CMT-3	Z1		12/08/08	Dry	Dry			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
CMT-3	Z1		03/27/09	NM	NM			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
CMT-3	Z1		02/18/11	38.48	437.80			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
CMT-3	Z1		02/18/11	NA	NA			<50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NA	NA	NA	NA	NA	<0.50	<0.50		
CMT-3	Z1		09/27/11	40.64	435.64			<50	<0.50	<0.50	<0.50	<0.50	<1.0	<0.50	NA	NA	NA	NA	NA	<b>25.00</b>	NA	NA		
CMT-3	Z2	473.44	08/11/03	NM	NM			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
CMT-3	Z2		08/12/03	NM	NM			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
CMT-3	Z2		08/13/03	NM	NM			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
CMT-3	Z2		08/18/03	42.46	430.98			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
CMT-3	Z2		08/18/03	NA	NA			<50	<0.5	<0.5	<0.5	<0.5	<b>34</b>	<0.5	<0.5	<1	<100	<1	<1	<20	NA	NA		
CMT-3	Z2		08/19/03	42.49	430.95			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
CMT-3	Z2		08/21/03	NM</td																				

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Well	Zone	Top of	Date	Depth	Ground-	Depth to	Product																	
Number		Casing	Measured	to	water	Free	Thickness																	
		Elevation		Water	Elevation	Product							Ethyl-										m,p-	o-
		(feet, MSL)		(feet)	(feet, MSL)	(feet)	(feet)	TPH-G	Benzene	Toluene	benzene	Xylenes	MTBE	EDB	EDC	DIPE	Ethanol	ETBE	TAME	TBA	Xylene	Xylene		
CMT-4	Z1		09/07/04	Dry	Dry			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
CMT-4	Z1		12/13/04	25.54	460.28			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
CMT-4	Z1		03/02/05	25.40	460.42			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
CMT-4	Z1		06/13/05	25.17	460.65			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
CMT-4	Z1		09/15/05	25.70	460.12			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
CMT-4	Z1		12/06/05	25.60	460.22			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
CMT-4	Z1		03/22/06	25.35	460.47			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
CMT-4	Z1		06/05/06	24.57	461.25			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
CMT-4	Z1		08/28/06	Dry	Dry			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
CMT-4	Z1		11/30/06	Dry	Dry			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
CMT-4	Z1		03/21/07	25.38	460.44			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
CMT-4	Z1		06/21/07	Dry	Dry			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
CMT-4	Z1		09/24/07	Dry	Dry			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
CMT-4	Z1		12/17/07	Dry	Dry			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
CMT-4	Z1		03/03/08	Dry	Dry			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
CMT-4	Z1		06/09/08	Dry	Dry			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
CMT-4	Z1		08/26/08	Dry	Dry			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
CMT-4	Z1		12/08/08	Dry	Dry			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
CMT-4	Z1		03/27/09	NM	NM			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
CMT-4	Z1		02/18/11	25.40	460.42			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
CMT-4	Z1		09/27/11	NM	NM			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
CMT-4	Z2	483.38	08/11/03	NM	NM			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
CMT-4	Z2		08/12/03	NM	NM			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
CMT-4	Z2		08/13/03	NM	NM			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
CMT-4	Z2		08/18/03	NM	NM			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
CMT-4	Z2		08/19/03	NM	NM			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
CMT-4	Z2		08/21/03	33.10	450.28			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
CMT-4	Z2		08/21/03	NA	NA			<b>430</b>	<b>20</b>	<b>21</b>	<2.5	<b>9.1</b>	<b>12</b>	<2.5	<2.5	<5	<500	<5	<5	<100	NA	NA		
CMT-4	Z2		11/24/03	33.92	449.46			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
CMT-4	Z2		12/02/03	NA	NA			<b>32,000</b>	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
CMT-4	Z2	485.82	02/16/04	27.45	458.37			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
CMT-4	Z2		02/18/04	NA	NA			<b>7,100</b>	<b>3,000</b>	<b>1,200</b>	<b>180</b>	<b>690</b>	<b>3,300</b>	<5	<5	<10	<1,000	<10	<b>120</b>	<200	NA	NA		
CMT-4	Z2		06/21/04	31.96	453.86			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
CMT-4	Z2		09/07/04	35.94	449.88			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
CMT-4	Z2		12/13/04	33.74	452.08			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
CMT-4	Z2		12/15/04	NA	NA			<b>12,000</b>	<b>2,900</b>	<b>660</b>	<b>140</b>	<b>420</b>	<b>4,100</b>	NS	NS	NS	NS	NS	<50	NS	NA	NA		
CMT-4	Z2		03/02/05	25.59	460.23			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
CMT-4	Z2		03/17/05	NA	NA			<b>15,000</b>	<b>5,600</b>	<b>690</b>	<b>720</b>	<b>1,300</b>	<b>4,200</b>	NA	NA	NA	NA	NA	<b>170</b>	<2000	NA	NA		
CMT-4	Z2		06/13/05	25.81	460.01			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
CMT-4	Z2		06/15/05	NA	NA			<b>10,000</b>	<b>3,400</b>	<b>560</b>	<b>240</b>	<b>410</b>	<b>3,100</b>	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CMT-4	Z2		09/15/05	31.00	454.82			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
CMT-4	Z2		09/30/05	NA	NA			<b>5,700</b>	<b>1,500</b>	<b>470</b>	<b>320</b>	<b>590</b>	<b>2,000</b>	NA	NA	NA	NA	NA	<1000	NA	NA			
CMT-4	Z2		12/06/05	31.28	454.54			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
CMT-4	Z2		12/07/05	NA	NA			<b>11,000</b>	<b>4,900</b>	<b>950</b>	<b>530</b>	<b>780</b>	<b>3,300</b>	NA	NA	NA	NA	NA	<b>140</b>	<1000	NA	NA		
CMT-4	Z2		03/22/06	25.17	460.65			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
CMT-4	Z2		03/28/06	NA	NA			<b>9,000</b>	<b>3,400</b>	<b>400</b>	<b>380</b>	<b>390</b>	<b>1,233</b>	NA	NA	NA	<10,000	NA	NA	<2,000	NA	NA		
CMT-4	Z2		06/05/06	24.66	461.16			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
CMT-4	Z2		06/06/06	NA	NA			<b>7,900</b>	<b>3,600</b>	<b>390</b>	<b>420</b>	<b>440</b>	<b>2,000</b>	NA	NA									

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B C Gas Mini Mart, Livermore

Well	Zone	Top of	Date	Depth	Ground-	Depth to	Product																			
Number		Casing	Measured	to	water	Free	Thickness																			
	Elevation		Water	Elevation	Product				Ethyl-															m,p-	o-	
	(feet, MSL)		(feet)	(feet, MSL)	(feet)	(feet)	TPH-G	Benzene	Toluene	benzene	Xylenes	MTBE	EDB	EDC	DIPE	Ethanol	ETBE	TAME	TBA	Xylene	Xylene					
D-1			09/28/99	NA	NA			<50	<0.5	<0.5	<0.5	<0.5	<2.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
D-1			12/20/99	36.32	428.38			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
D-1			12/21/99	NA	NA			<50	<0.5	<0.5	<0.5	<0.5	<2.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
D-1			03/21/00	27.84	436.86			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
D-1			03/22/00	NA	NA			<50	<0.5	<0.5	<0.5	<0.5	<2.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
D-1			06/21/00	30.40	434.30			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
D-1			09/12/00	34.11	430.59			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
D-1			09/13/00	NA	NA			<50	<0.5	<0.5	<0.5	<0.5	<2.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
D-1			12/07/00	33.97	430.73			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
D-1			03/21/01	32.32	432.38			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
D-1			06/20/01	41.80	422.90			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
D-1			09/16/02	43.53	421.17			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
D-1			12/23/02	37.23	427.47			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
D-1			03/18/03	35.50	429.20			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
D-1			03/18/03	NA	NA			<50	<1	<1	<1	NA	<5	<0.5	<0.5	<1	<50	<1	<1	<50	<1	<1	<1	<1	<1	
D-1			06/09/03	36.20	428.50			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
D-1			06/10/03	NA	NA			<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<100	<1	<1	<1	<0.5	NA	NA	
D-1			08/04/03	39.53	425.17			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
D-1			08/05/03	NA	NA			<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<100	<1	<1	<1	<20	NA	NA	
D-1			11/24/03	35.13	429.57			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
D-1			11/25/03	NA	NA			<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<100	<1	<1	<1	<20	NA	NA	
D-1		467.10	02/16/04	29.36	437.74			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
D-1			02/17/04	NA	NA			<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<100	<1	<1	<1	<20	NA	NA	
D-1			06/21/04	38.28	428.82			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
D-1			09/07/04	42.30	424.80			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
D-1			12/13/04	35.82	431.28			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
D-1			03/02/05	29.30	437.80			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
D-1			06/13/05	32.08	435.02			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
D-1			09/15/05	36.49	430.61			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
D-1			12/06/05	34.05	433.05			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
D-1			03/22/06	28.75	438.35			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
D-1			06/05/06	31.84	435.26			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
D-1			08/28/06	38.72	428.38			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
D-1			11/30/06	35.72	431.38			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
D-1			03/21/07	33.32	433.78			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
D-1			06/21/07	41.3	425.8			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
D-1			09/24/07	50.49	416.61			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
D-1			12/17/07</td																							

## Historical Groundwater Elevations and Analytical Results B C Gas Mini Mart, Livermore

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