FOURTH QUARTER 1998
GROUNDWATER MONITORING RESULTS
B&C Gas Mini Mart
Livermore, California

Prepared by
EINARSON, FOWLER & WATSON
2650 East Bayshore Road
Palo Alto, California 94303
December 1998

Project BNC103

EINARSON
FOWLER & WATSON
Consultants In Environmental Hydrogeology & Engineering

December 22, 1998
Project No. BNC103

Mr. Balaji Angle
Angle Enterprises
5131 Shattuck Avenue
Oakland, California 94609

Re: Fourth Quarter 1998 Groundwater Monitoring Results, B&C Gas Mini Mart, 2008 First Street, Livermore, California

Dear Mr. Angle:

Einarson, Fowler & Watson (EFW) has compiled fourth quarter 1998 groundwater monitoring results for B&C Gas Mini Mart (B&C), 2008 First Street, Livermore, California (Figure 1). This report includes fourth quarter 1998 groundwater elevation data, groundwater sampling methods, and results of groundwater chemical analyses.

SITE INFORMATION

Site Name

B&C Gas Mini Mart
2008 First Street
Livermore, California 94550

Site Contact

Mr. Balaji Angle
Angle Enterprises
5131 Shattuck Avenue
Oakland, California 94609
(510) 654-3461

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. 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.

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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 aquifer 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.[1]

Subsurface work conducted at the B&C site has found the soil to be predominantly sandy clay, silty sand, silty gravel, and sandy gravel to a maximum explored depth of 77 feet.[2] Over the last nine years, static water levels have ranged from 68.7 feet bgs (January 1992) to 17.0 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. Table 1 presents historical site groundwater elevations.[3]

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).[4]

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.[5] 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. Other remedial activities included the removal of 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

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[1] H⁺GCL, Inc. *Deep Groundwater Conduit Study, Livermore Arcade Shopping Center, First Street and South P Street, Livermore, California.* December 6, 1993.

[2] Remediation Service Int'l. *Soil & Groundwater Investigation Report for 2008 First Street, Livermore, California.* July 22, 1994.

[3] Groundwater elevation and flow direction data from Remediation Service Int'l quarterly reports.

[4] Remediation Service Int'l. *Soil & Groundwater Investigation Report for 2008 First Street, Livermore, California.* July 22, 1994.

[5] Product thickness information from Remediation Service, Int'l field records, "Free Product Removal Logs."

Livermore Fire Department by grouting with a cement sand slurry. In October 1995, two additional monitoring wells (off-site well MW-5 and well MW-6) were installed for the B&C site (Figure 2). Table 2 summarizes all B&C monitoring well constructions.

Historical Site Groundwater Chemistry

Table 3 presents a summary of historical groundwater chemistry results from the B&C site. 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 generally decreased. In 1994, concentrations in groundwater ranged from 810 to 41,000 micrograms per liter (µg/l). By 1997, concentrations in groundwater ranged from non-detectable to 28,000 µg/l. Over the last four years of monitoring at the site, concentrations of benzene have steadily decreased in all site wells.

Analysis of site groundwater samples for MTBE began in June 1995. Since then, concentrations of MTBE have decreased significantly. Initial analysis for MTBE from site wells in June 1995 detected concentrations ranging from 4,200 µg/l in well MW-3 to 47,000 µg/l in well MW-6. By February 1997, site wells contained significantly lower concentrations of MTBE. Well MW-3 contained 900 µg/l and well MW-6 contained 790 µg/l.

GROUNDWATER SAMPLING AND ANALYSIS

Fourth quarter activities are reviewed below. Groundwater sampling methods and results are presented and a discussion of historical analytical trends for site monitoring wells is included.

Free Product

During the fourth quarter 1998 sampling event, EFW checked for free product in all site wells. Free product was detected in well MW-5 and was measured to be approximately 0.22 feet thick. Well MW-2, which previously has been reported to contain free product, did not contain a measurable thickness of product this quarter. Well MW-6 also previously has been reported to contain free product; however, during the fourth quarter event, the well was blocked at a depth of approximately 28.4 feet and could not be checked. Off-site well MW-01, located approximately 800 feet downgradient from the B&C site on the Mill Springs Park property (MSP), was also checked for product (Figure 1). MSP well MW-01 did not contain a measurable thickness of product. However, a product sheen was observed on the water samples collected from this well.

Any product removal scheduled?

Groundwater Elevations

On November 5, 1998, EFW measured the depth to water in all groundwater monitoring wells. Water levels were measured to the nearest 0.01 foot using a float-activated product

probe, according to EFW's standard measuring protocol,[6] 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, for those wells that have been surveyed to mean sea level (MSL). Two wells, MW-5 and MW-6, have not been surveyed. (The surveying of these wells is included in the scope of work for the additional downgradient groundwater investigation that is scheduled to commence this winter.)

Table 1 summarizes available groundwater elevations from August 1990 to November 1998. A comparison of well screen elevations (Table 2) and fourth quarter measurements shows that water levels intercepted the screened intervals of the site wells at the time of groundwater sampling. A groundwater contour map, based on November 1998 measurements, is shown in Figure 2. Fourth quarter groundwater elevations are generally 7.0 feet lower than the previous quarter. Groundwater flow at the site is slightly west of north. Based on fourth quarter measurements, the hydraulic gradient is approximately 0.02 foot per foot. The flow direction and gradient are in accordance with previous results and reflect the seasonal flow direction that has been observed at the site.

Sampling Methods

EFW sampled monitoring wells (MW-1, MW-2, MW-3, and MW-4) on November 5, 1998, following EFW's standard protocol. Wells were purged using either a submersible pump or a polyvinyl chloride (PVC) bailer. Samples were collected from each well using disposable PVC bailers. Field measurements of temperature, pH, turbidity, and electrical conductivity were taken and recorded on water sample field data sheets (Appendix B). All purge water was contained in 55-gallon drums and has been disposed of properly consistent with analytical results. All samples were properly stored on the day of sampling. Chain-of-custody documentation accompanied the samples through collection and delivery to the analytical laboratory.

Analytical Program

All groundwater analyses were performed by Clayton Laboratory Services (Clayton) of Pleasanton, a state-certified laboratory. All groundwater samples were analyzed for TPH-G by Modified Environmental Protection Agency (EPA) Method 8015 and BTEX by EPA Method 8020. MTBE was analyzed for in all samples by EPA Method 8020. MTBE was confirmed in the sample from well MW-4 by EPA Method 8260. Laboratory analyses occurred within specified holding times and within laboratory quality control standards. The certified analytical report is located in Appendix A.

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[6] Einarson, Fowler & Watson. *Third Quarter 1998 Groundwater Monitoring Results, B&C Gas Mini Mart, Livermore, California,* Appendix A. September 10, 1998.

Analytical Results

Table 3 presents a historical summary of groundwater analytical results from the B&C site. Fourth quarter 1998 analytical results for TPH-G, benzene, and MTBE are also presented on Figure 3.

Upgradient Well

Well MW-4 did not contain detectable concentrations of TPH-G. Benzene was detected at a low concentration of 0.7 µg/l. MTBE was detected at a concentration of 27 µg/l by EPA Method 8020 and 26 µg/l by EPA Method 8260. Since June 1995, concentrations of petroleum hydrocarbons have been very low to non-detectable in this well.

Tank Area Wells

TPH-G was detected at a concentration 6,000 µg/l in well MW-1. BTEX concentrations ranged from 230 to 1,060 µg/l. MTBE was non-detectable with a detection limit of 100 µg/l.

In well MW-2, TPH-G was detected at a concentration of 40,000 µg/l. Concentrations of BTEX compounds ranged from 2,100 to 7,200 µg/l. MTBE was detected at 1,200 µg/l.

TPH-G was detected at a concentration of 26,000 µg/l in well MW-3. Benzene was detected at 400 µg/l and the other aromatic compounds ranged from 820 to 3,600 µg/l. MTBE was detected at a concentration of 300 µg/l, equal to the lowest result to date.

Concentrations of petroleum hydrocarbons detected in source area wells were within historical ranges. No significant trends in TPH-G concentrations over time are apparent. Concentrations of benzene and MTBE generally appear to be decreasing in most site wells.

Downgradient Wells

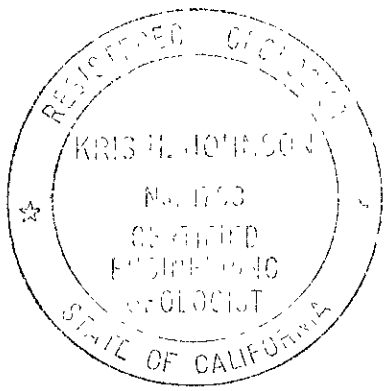
Well MW-5, located 75 feet downgradient of the site, contained free petroleum product, approximately 0.22 feet thick. No groundwater samples were collected from this well.

MSP well MW-01, located approximately 800 feet downgradient from the B&C site, was sampled during the fourth quarter event (Figure 1). Product sheen was visible on the water samples collected from the well. TPH-G was detected at a concentration of 10,000 µg/l. Benzene was detected at 260 µg/l and the other aromatic compounds ranged from 120 to 1,100 µg/l. MTBE was detected at a concentration of 200 µg/l. These fourth quarter 1998 results are similar to the results from August 1995, when the well was last sampled. At that time, benzene was detected at a concentration of 190 µg/l and MTBE at 210 µg/l.

FUTURE MONITORING

First quarter 1999 groundwater monitoring is currently scheduled for February. EFW will measure depth to water in all site wells. All wells without a measurable thickness of product will be sampled for TPH-G, BTEX, and MTBE. First quarter 1998 monitoring results will be reported to ACEHS.

If you have any questions regarding this report, please call us at (650) 843-3828.



Sincerely,
Einarson, Fowler & Watson

Kris H. Johnson
Senior Engineering Geologist
C.E.G. 1763

Martha J. Watson
Principal Environmental Engineer

Attachments:

Tables

Table 1 - Summary of Groundwater Elevations
Table 2 - Monitoring Well Constructions
Table 3 - Historical Groundwater Analytical Results

Figures

Figure 1 - Site Location
Figure 2 - Groundwater Elevation Contours (November 1998)
Figure 3 - Petroleum Hydrocarbons in Groundwater (November 1998)

Appendices

Appendix A - Water Sample Field Data Sheets and Certified Analytical Reports

cc: Eva Chu, ACEHS
Regional Water Quality Control Board, USTCF

Table 1
Summary of Groundwater Elevations
B & C Gas Mini Mart
Livermore, California

Well No.	Top-of-Casing Elevation (feet, MSL)	Date Measured	Depth to Water (feet)	Groundwater Elevation (feet, MSL)	Depth to Free product (feet)	Product Thickness (feet)
MW-1	487.00	09/22/88	60.50	426.50		
		08/02/90	43.10	443.90		
		10/10/91	66.39	420.61		
		01/08/92	68.72	418.28		
		05/11/93	34.76	452.24		
		09/21/93	38.70	448.30		
		05/22/94	33.57	453 43		
	484.07	06/19/94	37.51	446.56		
		08/25/94	43.27	440.80		
		11/22/94	40.58	443.49		
		03/13/95	28.06	456.01		
		06/01/95	21.76	462.31		
		02/29/96	18.86	465 21		
		Feb-97	NM	NM		
		07/30/98	25.90	458.17		
		11/05/98	33.23	450.84		
MW-2	483.86	06/19/94	38.15	445.71		
		08/25/94	44.13	-	43.47	0.66
		11/22/94	40.96	-	40.92	0.04
		03/09/95	29.28	-	28.47	0 81
		03/13/95	28.71	-	28.29	0.42
		06/01/95	22.61	461.25		
		02/29/96	20.05	463.81		
		Feb-97	18.30	465.56		
		07/30/98	25.75	-	25 74	0.01
		11/05/98	33.31	450.55		
MW-3	484 24	06/19/94	37.15	447.09		
		08/25/94	42.31	441.93		
		11/22/94	40.07	444 17		
		03/13/95	27.94	456.30		
		06/01/95	21.31	462 93		
		02/29/96	18 78	465 46		
		Feb-97	16.97	467.27		
		07/30/98	24.88	459 36		
		11/05/98	32.09	452.15		
MW-4	485.04	06/19/94	37.49	447.55		
		08/25/94	42.25	442.79		
		11/22/94	40.59	444.45		
		03/13/95	28.00	457.04		
		06/01/95	21.51	463.53		
		02/29/96	18.42	466.62		
		Feb-97	17.47	467.57		
		07/30/98	25.47	459.57		
		11/05/98	32.67	452.37		
MW-5	NS	02/29/96	19.35			
		Feb-97	18.19			
		07/30/98	25.25		25.24	0.01
		11/05/98	32.70		32.48	0.22
MW-6	NS	02/29/96	20.32			
		Feb-97	18.92			
		07/30/98	25 59		25.58	0.01
		11/05/98	NA			
MSP MW-01	477.79	07/30/98	30.37	447.42	30.35	0.02
		11/05/98	38.01	439.78		

Notes.
Data prior to 1998 from RSI quarterly reports February 1997 date unknown.
NM - not measured, NS - not surveyed, NA - well not accessible, blocked at 28.4 feet.
MSP - Mill Springs Park

Table 2
Monitoring Well Constructions
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 (in.)	Casing Material (PVC)	Casing Diameter (in.)	Screen Size (in.)	Sand Pack Material	Screened Interval (ft.-bgs)	Sand Pack Interval (ft.-bgs)
MW-1	HSA	Sep-88	77.0	77.0	8	PVC	2	0.020	#3 sand	27 - 77	25 - 77
MW-2	HSA	Jun-94	60.0	60.0	10	PVC	4	0.020	#2/20 sand	30 - 60	27 - 60
MW-3	HSA	Jun-94	60.0	60.0	10	PVC	4	0.020	#2/20 sand	30 - 60	27 - 60
MW-4	HSA	Jun-94	60.0	60.0	10	PVC	4	0.020	#2/20 sand	30 - 60	27 - 60
MW-5	HSA	Oct-95	42.0	40.0	10	PVC	4	0.020	#2 sand	15 - 40	12 - 40
MW-6	HSA	Oct-95	42.0	40.0	10	PVC	4	0.020	#2 sand	15 - 40	12 - 40

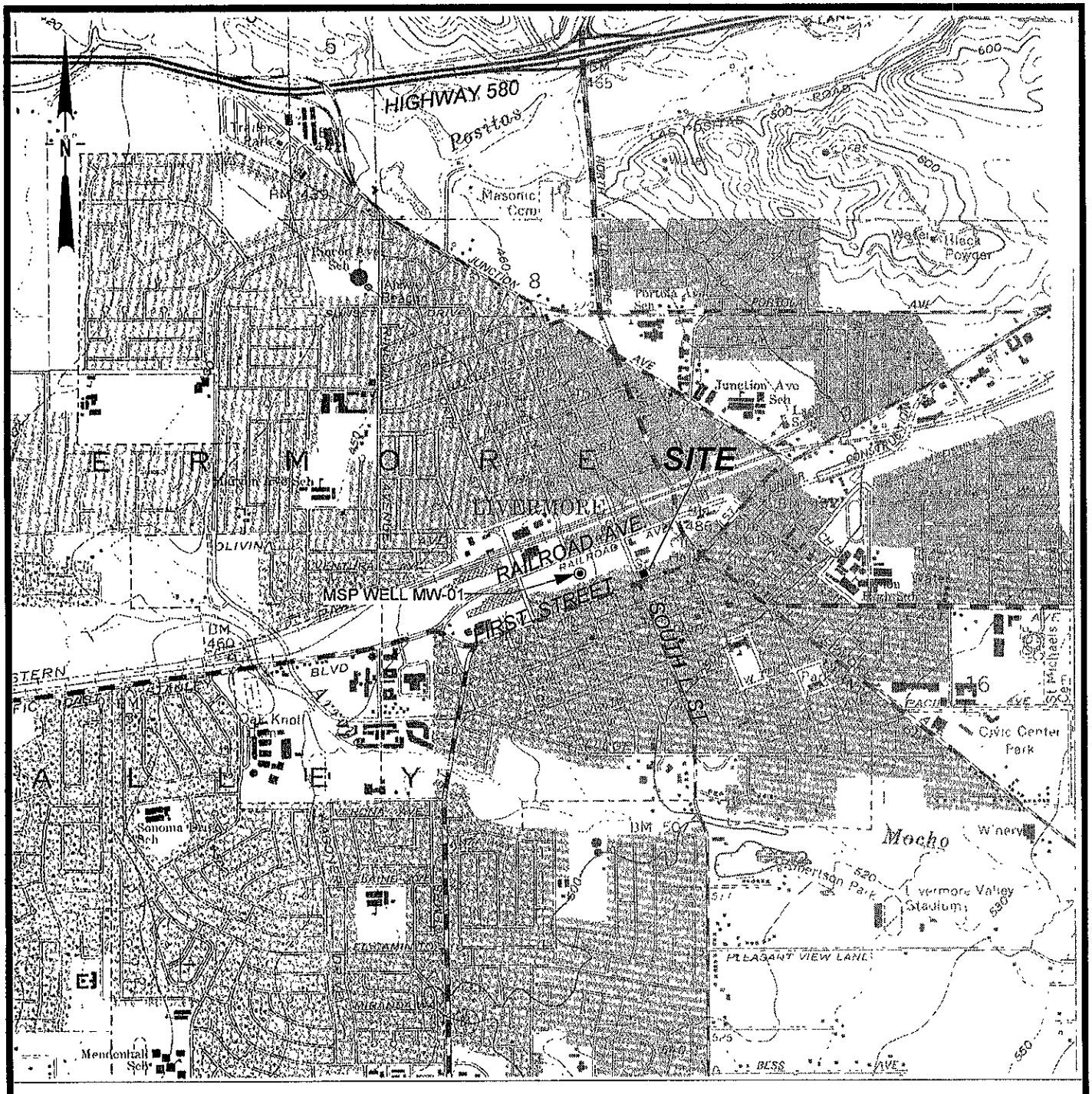
HSA Hollow-Stem Auger
T.D. Total Depth
ft.-bgs feet below ground surface
Well construction information for wells MW-2 through MW-6 collected from Remediation Service Int'l boring logs.

Table 3
Historical Groundwater Analytical Results
B&C Gas Mini Mart
Livermore, California

Well No.	Sample Date	TPH-G (ug/l)	Benzene (ug/l)	Toluene (ug/l)	Ethylbenzene (ug/l)	Xylenes (ug/l)	MTBE (ug/l)
MW-1	Aug-90	24,000	1,300	1,300	400	2,700	NA
	Oct-91	2,000	430	170	100	290	NA
	Jan-92	1,000	200	120	30	150	NA
	May-93	960	66	8	41	90	NA
	Sep-93	1,900	311	118	34	112	NA
	May-94	10,000	690	1,100	340	1,200	NA
	Aug-94	13,000	290	690	120	670	NA
	Nov-94	19,000	400	770	230	130	NA
	Mar-95	6,000	900	100	980	740	NA
	Jun-95	2,400	210	380	53	280	13,000
	Sep-95	7,800	69	1,300	220	1,200	2,000
	Feb-96	120	4.2	1.4	4.7	5.6	14
	Feb-97	NS*	NS*	NS*	NS*	NS*	NS*
	Jul-98	1,400	26	110	57	243	5
	Nov-98	6,000	230	330	240	1,060	<100
MW-2	Jun-94	290,000	18,000	36,000	4,600	26,000	NA
	Aug-94	NS**	NS**	NS**	NS**	NS**	NA
	Nov-94	NS**	NS**	NS**	NS**	NS**	NA
	Mar-95	NS**	NS**	NS**	NS**	NS**	NA
	Jun-95	25,000	2,300	3,400	720	3,100	16,000
	Sep-95	NS**	NS**	NS**	NS**	NS**	NS**
	Feb-96	57,000	2,500	650	3,700	3,100	6,500
	Feb-97	20,000	860	1,500	480	1,000	1,300
	Jul-98	NS**	NS**	NS**	NS**	NS**	NS**
	Nov-98	40,000	2,400	2,500	2,100	7,200	1,200
MW-3	Jun-94	11,000	640	580	270	790	NA
	Aug-94	41,000	1,600	2,300	330	1,800	NA
	Nov-94	18,000	8,000	10,000	900	5,000	NA
	Mar-95	44,000	1,600	1,300	5,000	6,600	NA
	Jun-95	15,000	600	1,900	490	2,600	4,200
	Sep-95	8,000	710	1,100	180	870	2,700
	Feb-96	13,000	260	200	200	1,100	1,500
	Feb-97	11,000	260	550	170	600	900
	Jul-98	25,000	330	1,200	490	1,860	300
	Nov-98	26,000	400	2,100	820	3,600	300
MW-4	Jun-94	810	12	25	<0.5	22	NA
	Aug-94	850	37	51	9.5	35	NA
	Nov-94	1,700	110	110	5.8	58	NA
	Mar-95	1,300	180	8	52	77	NA
	Jun-95	ND	3	1	ND	1	ND
	Sep-95	<50	0.69	<0.5	<0.5	<0.5	<2.5
	Feb-96	87	<0.5	<0.5	<0.5	<0.5	<0.5
	Feb-97	<50	<0.5	<0.5	<0.5	<0.5	2.9
	Jul-98	<50	<0.4	0.60	<0.3	0.80	<5
	Nov-98	<50	0.7	<0.3	<0.3	<0.8	27
MW-5	Oct-95	120,000	16,000	26,000	3,100	15,000	39,000
	Feb-96	47,000	3,400	4,200	860	4,100	20,000
	Feb-97	28,000	1,300	1,500	480	1,000	2,200
	Jul-98	47,000	1,400	4,000	2,000	8,500	600
	Nov-98	NS**	NS**	NS**	NS**	NS**	NS**
MW-6	Oct-95	110,000	9,900	22,000	3,200	17,000	47,000
	Feb-96	23,000	2,000	460	2,900	2,600	6,300
	Feb-97	12,000	450	780	200	590	790
	Jul-98	NS**	NS**	NS**	NS**	NS**	NS**
	Nov-98	NS*	NS*	NS*	NS*	NS*	NS*
MSP MW-01	Aug-95	11,000	190	260	110	900	210
	Nov-98	10,000	260	120	500	1,100	200

ug/l = micrograms per liter
TPH-G = Total Petroleum Hydrocarbons as Gasoline
MTBE = methyl tertiary-butyl ether
MSP = Mill Springs Park

NA= not analyzed
NS= not sampled * = well inaccessible ** = floating hydrocarbon present
ND = not detected above reporting limit, limit not available



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

I/BNC/103/FIGURES/SITELOC.DSF 12/23/98

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GROUNDWATER MONITORING
B & C GAS MINI MART
LIVERMORE, CALIFORINA

SITE LOCATION MAP

FIGURE 1

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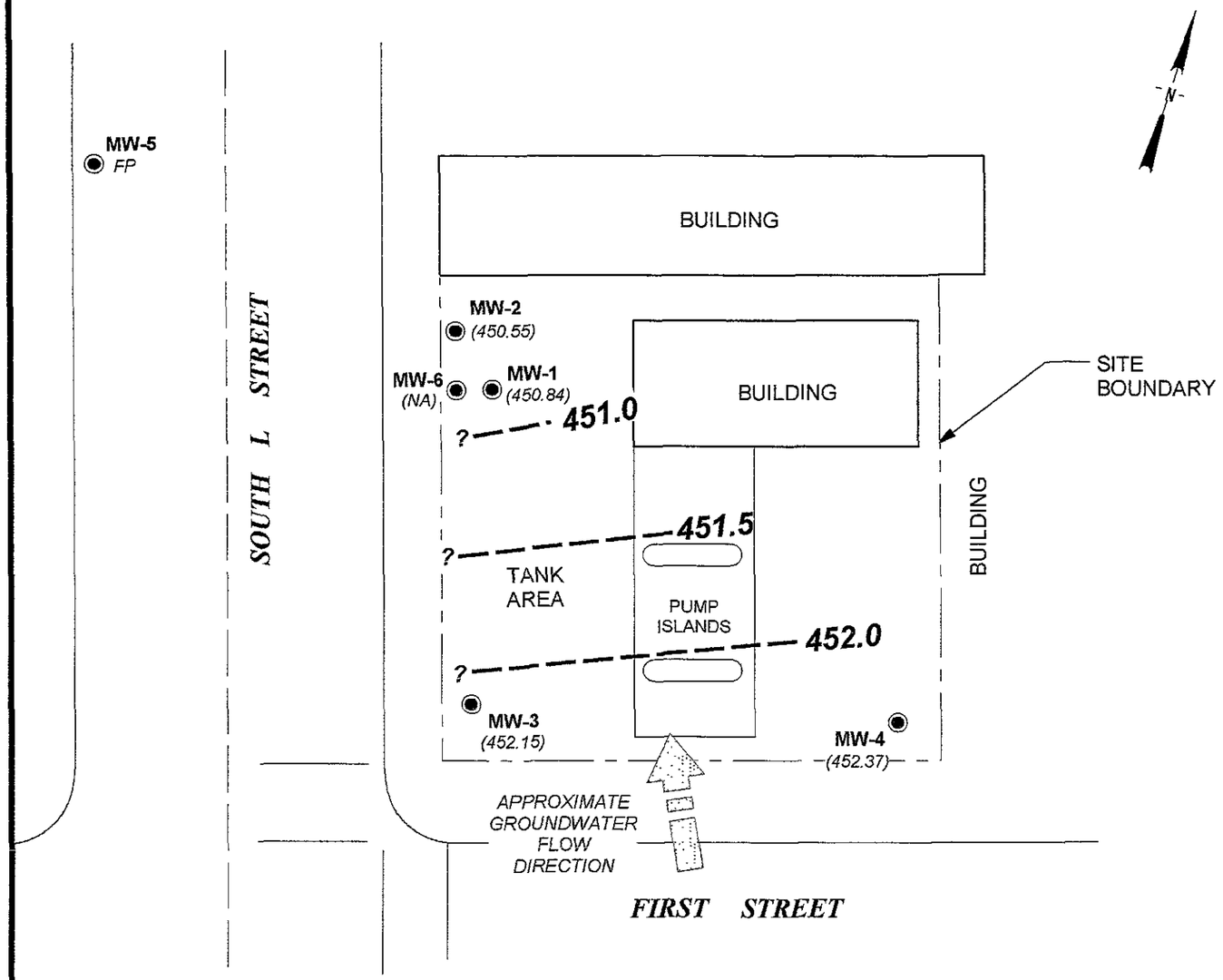

EXPLANATION

MW-6 ◉	Groundwater monitoring well
(450.84)	Groundwater elevation (Ft.-MSL), measured 11/5/98
451.5	Groundwater elevation contour (feet, MSL)
FP	Free product detected in well
(NA)	Not accessible; well blocked at 28.4 feet below top of casing

Base map from Remediation Service International First Quarter 1997 Report of Groundwater Sampling and Monitoring

I:\BNC\103\FIGURES\BASE-GW.DSF 12/23/98

EINARSON FOWLER & WATSON

SCALE 0 25 50 75 FEET

(APPROXIMATE - NOT SURVEYED)

GROUNDWATER MONITORING
B & C GAS MINI MART
LIVERMORE, CALIFORNIA

GROUNDWATER ELEVATION CONTOURS (NOVEMBER 1998)

FIGURE 2

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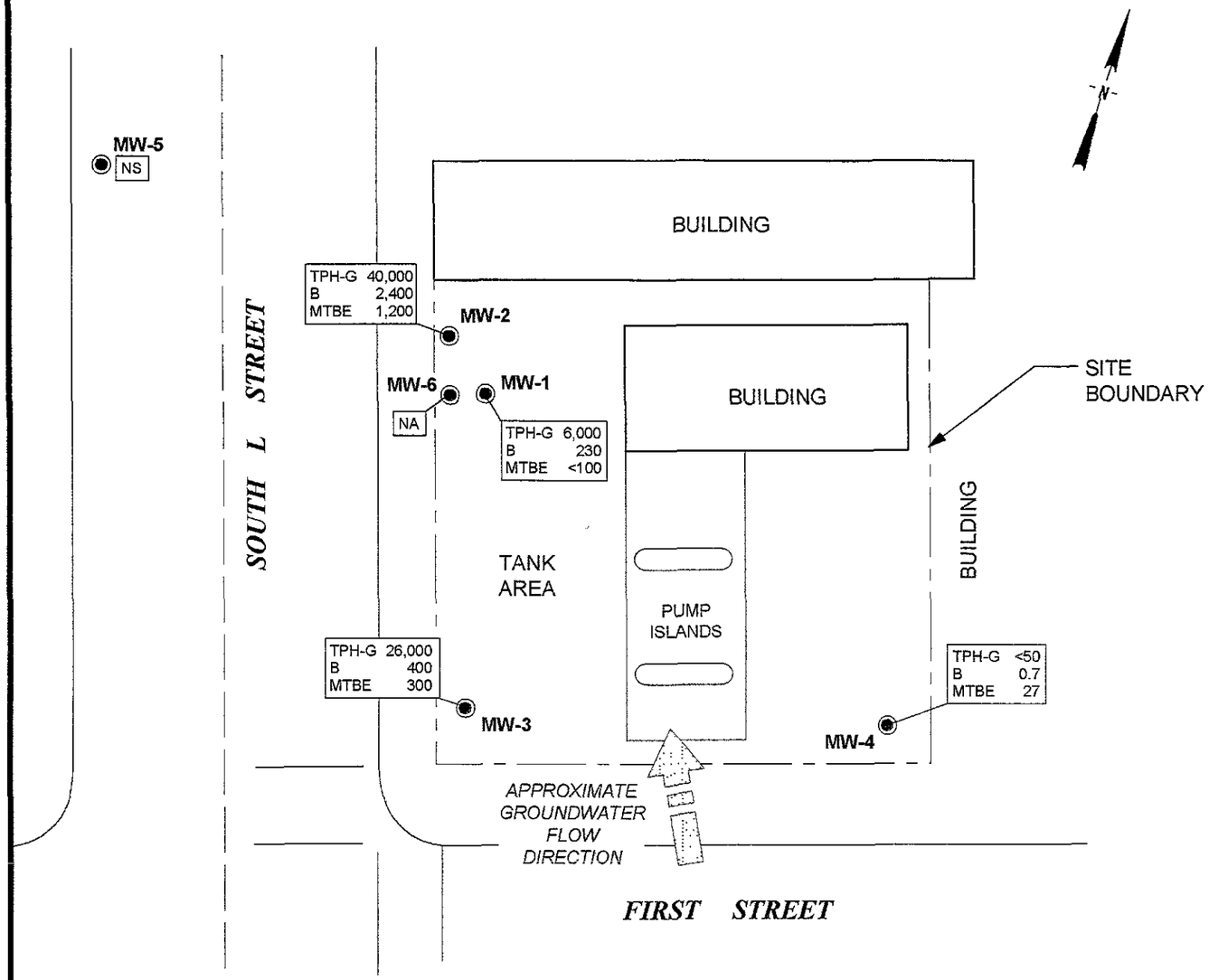

EXPLANATION

MW-6 ◉ Groundwater monitoring well

TPH-G <50
B <0.4
MTBE <5

Concentration detected
Analytical parameter

All concentrations are reported in micrograms per liter (µg/l); sampling occurred 11/5/98.

ABBREVIATIONS:

TPH-G	Total Petroleum Hydrocarbons Gasoline range
B	Benzene
MTBE	Methyl tertiary-butyl ether
NS	Not sampled, free product present
NA	Not accessible, well blocked at 28.4 feet below top of casing

Base map from Remediation Service International First Quarter 1997 Report of Groundwater Sampling and Monitoring

I:\BNC\103\FIGURES\BASE-CHEM DSF 12/23/98

EINARSON FOWLER & WATSON

SCALE 0 25 50 75 FEET
(APPROXIMATE - NOT SURVEYED)

GROUNDWATER MONITORING
B & C GAS MINI MART
LIVERMORE CALIFORNIA

PETROLEUM HYDROCARBONS IN GROUNDWATER (NOVEMBER 1998)

FIGURE 3

PROJECT NO BNC103

APPENDIX A

WATER SAMPLE FIELD DATA SHEETS
AND CERTIFIED ANALYTICAL REPORT

WATER LEVEL DATA SHEET
EINARSON, FOWLER & WATSON

Project: B&C Gas Mini Mart
Project No.: BNC103
Date(s): 11/5/98
Name: RPark
Weather: Partly Cloudy Sounder #: Keck

Well	Date	DTFP (TOC)	DTW (TOC)	Total Depth	Meas. By	Comments
MW-1	11/5/98	/	33.23	75.9		1" ϕ PVC pipe present
MW-2		/	33.31	56.0		1" ϕ PVC pipe present
MW-3		/	32.09	56.6		2"/1" 1" ϕ PVC pipe present
MW-4		/	32.67	~~59.9~~	m	
MW-5		32.40	32.70	NM		4"
MW-6		/	dry	~~27.0~~		one field book for additional comments
MS MW01		/	38.01	59.6		2"
				20.4		

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WATER SAMPLE FIELD DATA

LOCATION: B&C Gas Mini Mart
SAMPLE ID: MW-1
PROJECT NO: BNC103
SAMPLED BY: R Park
CLIENT: B&C Gas Mini Mart
REGULATORY AGENCY:
SAMPLE TYPE: Groundwater ✓ Surface Water ____ Leachate ____ Treatment Effluent ____ Other ____
CASING DIAMETER (OD-inches): 3/4 ____ 1 ____ 2 ✓ 4 ____ 4.5 ____ 6 ____ 8 ____
GALLONS PER LINEAR FOOT : (0.02) (0.04) (0.17) (0.66) (0.83) (1.5) (2.6)

Well Total Depth (ft): 75.9
Depth to Water (ft): 33.23
Height of Water Column (ft): 42.67
Volume in Casing (gal): 7.3
Calculated Purge (volumes / gal.): 21.0
Actual Pre-Sampling Purge (gal): 22.0

PURGE:
Device (Depth of Intake from TOC): Submersible Pump 2" 74' Peristaltic Pump ____ PVC Hand Pump ____
S.S. Bailer ____ Teflon Bailer ____ PVC Bailer ____ Disposable Bailer ____ Other ____
Purge Water Containment: drummed left on site
Field QC Samples Collected at this Well (Equipment or Field Blank): EB-___ FB-___ Other ____

Time (2400 Hr)	Volume (gallons)	Temp. (°C)	Specific Conductance Horiba (µmhos/cm)	Specific Conductance QuickCheck (µS)	pH (std. units)	Color (visual)	Turbidity (visual)	Observation
1149	7.5	20.3	1080		7.11	lt.brown	high	
1152	15.0	20.4	1090		7.14	↓	↓	
1157	22.0	20.3	1090		7.14	↓	moderate	

Purge Date: 11/5/98

SAMPLE:
Device (Depth of Intake from TOC): Submersible Pump ____ Peristaltic Pump ____ PVC Hand Pump ____
Teflon Bailer ____ PVC Bailer ____ Disposable Bailer ✓ Other ____

Time (2400 Hr)	Temp. (°C)	Specific Conductance Horiba (µmhos/cm)	Specific Conductance QuickCheck (µS)	pH (std. units)	Dissolved Oxygen (mg/l)	Color (visual)	Turbidity (NTU)
1201	20.2	1090		7.21	4.30	lt.brown	>999

Sheen: none Odor: moderate Sample Date: 11/5/98

Field Measurement Devices: Horiba ✓ Omega ____ QuickCheck ____ D.O. Test Kit ____

REMARKS: ____

SIGNATURE: ____ **DATE:** 11/5/98

EINARSON FOWLER & WATSON

WATER SAMPLE FIELD DATA

LOCATION: B&C Gas Mini Mart SAMPLE ID: MW-2
PROJECT NO: BNC103 SAMPLED BY: R Park
CLIENT: B&C Gas Mini Mart REGULATORY AGENCY:
SAMPLE TYPE: Groundwater ✓ Surface Water ____ Leachate ____ Treatment Effluent ____ Other ____

CASING DIAMETER (OD-inches):	3/4	1	2	4 ✓	4.5	6	8
GALLONS PER LINEAR FOOT :	(0.02)	(0.04)	(0.17)	(0.66)	(0.83)	(1.5)	(2.6)

Well Total Depth (ft): 56.0 Volume in Casing (gal): 15.0
Depth to Water (ft): 33.31 Calculated Purge (volumes / gal.): 45.0
Height of Water Column (ft): 22.69 Actual Pre-Sampling Purge (gal): 45.0

PURGE:
Device (Depth of Intake from TOC): Submersible Pump 2" 54' Peristaltic Pump ____ PVC Hand Pump ____
S.S. Bailer ____ Teflon Bailer ✓ PVC Bailer ____ Disposable Bailer ____ Other ____
Purge Water Containment: drummed
Field QC Samples Collected at this Well (Equipment or Field Blank): EB-___ FB-___ Other ____

Time (2400 Hr)	Volume (gallons)	Temp. (°C)	Specific Conductance Horiba (µmhos/cm)	Specific Conductance QuickCheck (µS)	pH (std. units)	Color (visual)	Turbidity (visual)	Observation
1319	15.0	20.6	1060		6.98	H.grey	moderate	
1325	30.0	20.6	1070		6.98	↓	↓	
1331	45.0	20.6	1060		6.97			

Purge Date: 11/5/98

SAMPLE:
Device (Depth of Intake from TOC): Submersible Pump ____ Peristaltic Pump ____ PVC Hand Pump ____
Teflon Bailer ____ PVC Bailer ____ Disposable Bailer ✓ Other ____

Time (2400 Hr)	Temp. (°C)	Specific Conductance Horiba (µmhos/cm)	Specific Conductance QuickCheck (µS)	pH (std. units)	Dissolved Oxygen (mg/l)	Color (visual)	Turbidity (NTU)
1340	20.5	1070		6.93	1.57	H.grey	122

Sheen: moderate Odor: Strong Sample Date: 11/5/98
Field Measurement Devices: Horiba ✓ Omega ____ QuickCheck ____ D.O. Test Kit ____

REMARKS: ____

SIGNATURE: ____ **DATE:** 11/5/98

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EINARSON FOWLER & WATSON

WATER SAMPLE FIELD DATA

LOCATION: B&C Gas Mini Mart SAMPLE ID: MW-3
PROJECT NO: BNC103 SAMPLED BY: RPark
CLIENT: B&C Gas Mini Mart REGULATORY AGENCY:
SAMPLE TYPE: Groundwater 4 Surface Water ___ Leachate ___ Treatment Effluent ___ Other ___

CASING DIAMETER (OD-inches):	3/4	1	2	4	4.5	6	8
GALLONS PER LINEAR FOOT :	(0.02)	(0.04)	(0.17)	(0.66)	(0.83)	(1.5)	(2.6)

Well Total Depth (ft): 56.6 Volume in Casing (gal): 16.2
Depth to Water (ft): 32.09 Calculated Purge (volumes / gal.): 48.6
Height of Water Column (ft): 24.51 Actual Pre-Sampling Purge (gal): 50.0

PURGE:
Device (Depth of Intake from TOC): Submersible Pump 2" 54' ___ Peristaltic Pump ___ PVC Hand Pump ___
S.S. Bailer ___ Teflon Bailer 4 PVC Bailer ___ Disposable Bailer ___ Other ___
Purge Water Containment: Drummed
Field QC Samples Collected at this Well (Equipment or Field Blank): EB-___ FB-___ Other ___

Time (2400 Hr)	Volume (gallons)	Temp. (°C)	Specific Conductance Horiba (µmhos/cm)	Specific Conductance QuickCheck (µS)	pH (std. units)	Color (visual)	Turbidity (visual)	Observation
1220	17.0	20.5	1040		7.10	H.brown	high	
1234	34.0	20.4	1050		7.10	↓	↓	
1240	50.0	20.4	1050		7.10	↓	moderate	

Purge Date: 11/5/98

SAMPLE:
Device (Depth of Intake from TOC): Submersible Pump ___ Peristaltic Pump ___ PVC Hand Pump ___
Teflon Bailer ___ PVC Bailer ___ Disposable Bailer 4 Other ___

Time (2400 Hr)	Temp. (°C)	Specific Conductance Horiba (µmhos/cm)	Specific Conductance QuickCheck (µS)	pH (std. units)	Dissolved Oxygen (mg/l)	Color (visual)	Turbidity (NTU)
1240	20.1	1060		7.09	2.64	H.brown	432

Sheen: moderate Odor: Strong Sample Date: 11/5/98

Field Measurement Devices: Horiba 4 Omega ___ QuickCheck ___ D.O. Test Kit ___

REMARKS:

SIGNATURE: **DATE:** 11/5/98

EINARSON FOWLER & WATSON

WATER SAMPLE FIELD DATA

LOCATION: B&C Gas Mini Mart
SAMPLE ID: MW-4
PROJECT NO: BNC103
SAMPLED BY: RPark
CLIENT: B&C Gas Mini Mart
REGULATORY AGENCY:
SAMPLE TYPE: Groundwater 4 Surface Water ____ Leachate ____ Treatment Effluent ____ Other ____

CASING DIAMETER (OD-inches):	3/4	1	2	4	4.5	6	8
GALLONS PER LINEAR FOOT :	(0.02)	(0.04)	(0.17)	(0.66)	(0.83)	(1.5)	(2.6)

Well Total Depth (ft): 59.9
Depth to Water (ft): 32.67
Height of Water Column (ft): 27.23
Volume in Casing (gal): 18.0
Calculated Purge (volumes / gal.): 54.0
Actual Pre-Sampling Purge (gal): 54.0

PURGE:
Device (Depth of Intake from TOC): Submersible Pump 2" 50' Peristaltic Pump ____ PVC Hand Pump ____
S.S. Bailer ____ Teflon Bailer ____ PVC Bailer ____ Disposable Bailer ____ Other ____
Purge Water Containment: drummed, left at site
Field QC Samples Collected at this Well (Equipment or Field Blank): EB-___ FB-___ Other ____

Time (2400 Hr)	Volume (gallons)	Temp. (°C)	Specific Conductance Horiba (µmhos/cm)	Specific Conductance QuickCheck (µS)	pH (std. units)	Color (visual)	Turbidity (visual)	Observation
1039	18.0	19.6	1060		7.09	lt. brown	low	
1050	36.0	20.2	1070		7.10	colorless	trace	
1057	54.0	20.1	1070		7.12	lt. brown tint	low	

Purge Date: 11/5/98

SAMPLE:
Device (Depth of Intake from TOC): Submersible Pump ____ Peristaltic Pump ____ PVC Hand Pump ____
Teflon Bailer ____ PVC Bailer ____ Disposable Bailer 4 Other ____

Time (2400 Hr)	Temp. (°C)	Specific Conductance Horiba (µmhos/cm)	Specific Conductance QuickCheck (µS)	pH (std. units)	Dissolved Oxygen (mg/l)	Color (visual)	Turbidity (NTU)
1105	19.7	1070		7.12	6.76	lt. brown tint	167

Sheen: none Odor: none Sample Date: 11/5/98

Field Measurement Devices: Horiba 4 Omega ____ QuickCheck ____ D.O. Test Kit ____

REMARKS:

Calibrated mtr 1015, 11/5/98: pH: 7.03, 10.00; EC: 0, 2.00; fw6: 0, DO: auto; T: 17.5°C

SIGNATURE: _____ **DATE:** 11/5/98

EINARSON FOWLER & WATSON

WATER SAMPLE FIELD DATA

LOCATION: B&C Gas Mini Mart
SAMPLE ID: MW-5
PROJECT NO: BNC 103
SAMPLED BY: RPaul
CLIENT: B&C Gas Mini Mart
REGULATORY AGENCY: _____

SAMPLE TYPE: Groundwater 2 Surface Water _____ Leachate _____ Treatment Effluent _____ Other _____

CASING DIAMETER (OD-inches):	3/4	1	2	4	4.5	6	8
GALLONS PER LINEAR FOOT :	(0.02)	(0.04)	(0.17)	(0.66)	(0.83)	(1.5)	(2.6)

~~Well Total Depth~~ (ft): 32.48
Depth to FP
Depth to Water (ft): 32.70
Height of Product ~~Water~~ Column (ft): 0.22

Volume in Casing (gal): _____
Calculated Purge (volumes / gal.): _____
Actual Pre-Sampling Purge (gal): _____

PURGE:
Device (Depth of Intake from TOC): Submersible Pump _____ Peristaltic Pump _____ PVC Hand Pump _____
S.S. Bailer _____ Teflon Bailer _____ PVC Bailer _____ Disposable Bailer _____ Other _____
Purge Water Containment: _____
Field QC Samples Collected at this Well (Equipment or Field Blank): EB-___ FB-___ Other _____

Time (2400 Hr)	Volume (gallons)	Temp. (°C)	Specific Conductance Horiba (µmhos/cm)	Specific Conductance QuickCheck (µS)	pH (std. units)	Color (visual)	Turbidity (visual)	Observation

Purge Date: _____

SAMPLE:
Device (Depth of Intake from TOC): Submersible Pump _____ Peristaltic Pump _____ PVC Hand Pump _____
Teflon Bailer _____ PVC Bailer _____ Disposable Bailer _____ Other _____

Time (2400 Hr)	Temp. (°C)	Specific Conductance Horiba (µmhos/cm)	Specific Conductance QuickCheck (µS)	pH (std. units)	Dissolved Oxygen (mg/l)	Color (visual)	Turbidity (NTU)

Sheen: _____ Odor: _____ Sample Date: _____

Field Measurement Devices: Horiba _____ Omega _____ QuickCheck _____ D.O. Test Kit _____

REMARKS: ~~FP~~ Floating product present, no samples collected.

SIGNATURE: _____ **DATE:** 11/5/98

EINARSON FOWLER & WATSON

WATER SAMPLE FIELD DATA

LOCATION: B&C Gas Mini Mart
SAMPLE ID: MW-6
PROJECT NO: BNC 103
SAMPLED BY: PMW
CLIENT: B&C Gas Mini Mart
REGULATORY AGENCY: _____

SAMPLE TYPE: Groundwater 6 Surface Water _____ Leachate _____ Treatment Effluent _____ Other _____

CASING DIAMETER (OD-inches):	3/4	1	2	4	4.5	6	8
GALLONS PER LINEAR FOOT :	(0.02)	(0.04)	(0.17)	(0.66)	(0.83)	(1.5)	(2.6)

Well Total Depth (ft): 20.4
Depth to Water (ft): dry
Height of Water Column (ft): _____

Volume in Casing (gal): _____
Calculated Purge (volumes / gal.): _____
Actual Pre-Sampling Purge (gal): _____

PURGE:

Device (Depth of Intake from TOC): Submersible Pump _____ Peristaltic Pump _____ PVC Hand Pump _____
S.S. Bailer _____ Teflon Bailer _____ PVC Bailer _____ Disposable Bailer _____ Other _____
Purge Water Containment: _____
Field QC Samples Collected at this Well (Equipment or Field Blank): EB-___ FB-___ Other _____

Time (2400 Hr)	Volume (gallons)	Temp. (°C)	Specific Conductance Horiba (µmhos/cm)	Specific Conductance QuickCheck (µS)	pH (std. units)	Color (visual)	Turbidity (visual)	Observation

Purge Date: _____

SAMPLE:

Device (Depth of Intake from TOC): Submersible Pump _____ Peristaltic Pump _____ PVC Hand Pump _____
Teflon Bailer _____ PVC Bailer _____ Disposable Bailer _____ Other _____

Time (2400 Hr)	Temp. (°C)	Specific Conductance Horiba (µmhos/cm)	Specific Conductance QuickCheck (µS)	pH (std. units)	Dissolved Oxygen (mg/l)	Color (visual)	Turbidity (NTU)

Sheen: _____ Odor: _____ Sample Date: _____

Field Measurement Devices: Horiba ___ Omega ___ QuickCheck ___ D.O. Test Kit ___

REMARKS: No samples collected - see field book for details.

SIGNATURE: _____ **DATE:** 11/5/98

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EINARSON FOWLER & WATSON

WATER SAMPLE FIELD DATA

Mill Springs Park

LOCATION: B&C Gas Mini Mart
SAMPLE ID: MS MW01
PROJECT NO: BNC103
SAMPLED BY: R Pane
CLIENT: B&C Gas Mini Mart
REGULATORY AGENCY:
SAMPLE TYPE: Groundwater ✓ Surface Water ____ Leachate ____ Treatment Effluent ____ Other ____

CASING DIAMETER (OD-inches):	3/4	1	2 ✓	4	4.5	6	8
GALLONS PER LINEAR FOOT :	(0.02)	(0.04)	(0.17)	(0.66)	(0.83)	(1.5)	(2.6)

Well Total Depth (ft): 59.6
Depth to Water (ft): 38.01
Height of Water Column (ft): 21.59
Volume in Casing (gal): 3.7
Calculated Purge (volumes / gal.): 11.1
Actual Pre-Sampling Purge (gal): 11.5

PURGE:
Device (Depth of Intake from TOC): Submersible Pump ____ Peristaltic Pump ____ PVC Hand Pump ____
S.S. Bailer ____ Teflon Bailer ____ PVC Bailer ____ Disposable Bailer ✓ Other ____
Purge Water Containment: drummed, transport to Station
Field QC Samples Collected at this Well (Equipment or Field Blank): EB-___ FB-___ Other ____

Time (2400 Hr)	Volume (gallons)	Temp. (°C)	Specific Conductance Horiba (µmhos/cm)	Specific Conductance QuickCheck (µS)	pH (std. units)	Color (visual)	Turbidity (visual)	Observation
1529	4.0	19.1	1030		7.09	lt.brown	moderate	heavy sheen w/some small product globules
1529	8.0	18.7	1040		7.10	↓	↓	
1545	11.5	18.9	1040		7.10			

Purge Date: 11/5/98

SAMPLE:
Device (Depth of Intake from TOC): Submersible Pump ____ Peristaltic Pump ____ PVC Hand Pump ____
Teflon Bailer ____ PVC Bailer ____ Disposable Bailer ✓ Other ____

Time (2400 Hr)	Temp. (°C)	Specific Conductance Horiba (µmhos/cm)	Specific Conductance QuickCheck (µS)	pH (std. units)	Dissolved Oxygen (mg/l)	Color (visual)	Turbidity (NTU)
1553	18.8	1020		7.10	2.54	lt.brown	156

Sheen: heavy w/some small product globules Odor: strong Sample Date: 11/5/98

Field Measurement Devices: Horiba ✓ Omega ____ QuickCheck ____ D.O. Test Kit ____

REMARKS: NO product present when water level measured. Small product globules in bailer during purging - continued throughout purge.

SIGNATURE: [signature] **DATE:** 11/5/98

San Francisco Regional Office

1252 Quarry Lane
P.O. Box 9019
Pleasanton, CA 94566
(925) 426-2600
Fax (925) 426-0106

Clayton
LABORATORY
SERVICES

November 30, 1998

Ms. Jennifer Panders
EINARSON, FOWLER & WATSON
EINARSON, FOWLER & WATSON
2650 East Bayshore Road
Palo Alto, CA 94303

Final report
Client Ref.: BNC 103
Clayton Project No.: 98110.81

Dear Ms. Panders:

Attached is our final analytical laboratory report for the samples received on November 5, 1998. Also enclosed is a copy of the Chain-of-Custody record acknowledging receipt of these samples.

Please note that any unused portion of the samples will be discarded after December 19, 1998, unless you have requested otherwise.

We appreciate the opportunity to assist you. If you have any questions concerning this report, please contact Client Services at (925) 426-2657.

Sincerely,

Patricia Flynn
Client Services Representative
San Francisco Regional Office

PVF/pvf

Attachments

California DHS ELAP Certification Number 1196

Analytical Results
for
EINARSON, FOWLER & WATSON
Client Reference: BNC 103
Clayton Project No. 98110.81

Sample Identification:	MW-4	Date Sampled:	11/05/98
Lab Number:	9811081-04A	Date Received:	11/05/98
Sample Matrix/Media:	WATER	Date Prepared:	11/17/98
Preparation Method:	EPA 5030A	Date Analyzed:	11/17/98
Method Reference:	EPA 8260A	Analyst:	DTL

Analyte	CAS #	Concentration (ug/L)	Limit of Detection (ug/L)
Volatile Organic Compounds			
MTBE	1634-04-4	26	5
Surrogates		Recovery (%)	QC Limits (%)
Dibromofluoromethane	1868-53-7	95	86 - 118
1,2-Dichloroethane-d4	17060-07-0	90	80 - 120
Toluene-d8	2037-26-5	98	88 - 110
4-Bromofluorobenzene	460-00-4	97	86 - 115

ND: Not detected at or above limit of detection
--: Information not available or not applicable

Analytical Results
for
EINARSON, FOWLER & WATSON
Client Reference: BNC 103
Clayton Project No. 98110.81

Sample Identification:	METHOD BLANK	Date Sampled:	--
Lab Number:	9811081-06A	Date Received:	--
Sample Matrix/Media:	WATER	Date Prepared:	11/17/98
Preparation Method:	EPA 5030A	Date Analyzed:	11/17/98
Method Reference:	EPA 8260A	Analyst:	DTL

Analyte	CAS #	Concentration (ug/L)	Limit of Detection (ug/L)
Volatile Organic Compounds			
MTBE	1634-04-4	ND	5
Surrogates		**Recovery (%)**	**QC Limits (%)**
Dibromofluoromethane	1868-53-7	96	86 - 118
1,2-Dichloroethane-d4	17060-07-0	95	80 - 120
Toluene-d8	2037-26-5	100	88 - 110
4-Bromofluorobenzene	460-00-4	99	86 - 115

ND: Not detected at or above limit of detection
--: Information not available or not applicable

Analytical Results
for
EINARSON, FOWLER & WATSON
Client Reference: BNC 103
Clayton Project No. 98110.81

Sample Identification:	MW-1	Date Sampled:	11/05/98
Lab Number:	9811081-01A	Date Received:	11/05/98
Sample Matrix/Media:	WATER	Date Prepared:	11/16/98
Preparation Method:	EPA 5030	Date Analyzed:	11/16/98
Method Reference:	EPA 8015/8020	Analyst:	FHK

Analyte	CAS #	Concentration (ug/L)	Limit of Detection (ug/L)
BTEX/Gasoline			
Benzene	71-43-2	230	8
Ethylbenzene	100-41-4	240	6
Toluene	108-88-3	330	6
o-Xylene	95-47-6	340	8
p,m-Xylenes	--	720	8
Gasoline	--	6000	1000
MTBE	--	ND	100
Surrogates		Recovery (%)	QC Limits (%)
a,a,a-Trifluorotoluene	98-08-8	100	50 - 150

ND: Not detected at or above limit of detection
--: Information not available or not applicable

Analytical Results
for
EINARSON, FOWLER & WATSON
Client Reference: BNC 103
Clayton Project No. 98110.81

Sample Identification:	MW-2	Date Sampled:	11/05/98
Lab Number:	9811081-02A	Date Received:	11/05/98
Sample Matrix/Media:	WATER	Date Prepared:	11/16/98
Preparation Method:	EPA 5030	Date Analyzed:	11/16/98
Method Reference:	EPA 8015/8020	Analyst:	FHK

Analyte	CAS #	Concentration (ug/L)	Limit of Detection (ug/L)
BTEX/Gasoline			
Benzene	71-43-2	2400	20
Ethylbenzene	100-41-4	2100	20
Toluene	108-88-3	2500	20
o-Xylene	95-47-6	2100	20
p,m-Xylenes	--	5100	20
Gasoline	--	40000	3000
MTBE	--	1200	300
Surrogates		Recovery (%)	QC Limits (%)
a,a,a-Trifluorotoluene	98-08-8	95	50 - 150

ND: Not detected at or above limit of detection
--: Information not available or not applicable

Analytical Results
for
EINARSON, FOWLER & WATSON
Client Reference: BNC 103
Clayton Project No. 98110.81

Sample Identification:	MW-3	Date Sampled:	11/05/98
Lab Number:	9811081-03A	Date Received:	11/05/98
Sample Matrix/Media:	WATER	Date Prepared:	11/17/98
Preparation Method:	EPA 5030	Date Analyzed:	11/17/98
Method Reference:	EPA 8015/8020	Analyst:	FHK

Analyte	CAS #	Concentration (ug/L)	Limit of Detection (ug/L)
BTEX/Gasoline			
Benzene	71-43-2	400	8
Ethylbenzene	100-41-4	820	6
Toluene	108-88-3	2100	6
o-Xylene	95-47-6	1000	8
p,m-Xylenes	--	2600	8
Gasoline	--	26000	1000
MTBE	--	300	100
Surrogates		Recovery (%)	QC Limits (%)
a,a,a-Trifluorotoluene	98-08-8	111	50 - 150

ND: Not detected at or above limit of detection
--: Information not available or not applicable

Analytical Results
for
EINARSON, FOWLER & WATSON
Client Reference: BNC 103
Clayton Project No. 98110.81

Sample Identification:	MW-4	Date Sampled:	11/05/98
Lab Number:	9811081-04A	Date Received:	11/05/98
Sample Matrix/Media:	WATER	Date Prepared:	11/17/98
Preparation Method:	EPA 5030	Date Analyzed:	11/17/98
Method Reference:	EPA 8015/8020	Analyst:	FHK

Analyte	CAS #	Concentration (ug/L)	Limit of Detection (ug/L)
BTEX/Gasoline			
Benzene	71-43-2	0.7	0.4
Ethylbenzene	100-41-4	ND	0.3
Toluene	108-88-3	ND	0.3
o-Xylene	95-47-6	ND	0.4
p,m-Xylenes	--	ND	0.4
Gasoline	--	ND	50
MTBE	--	27	5
Surrogates		Recovery (%)	QC Limits (%)
a,a,a-Trifluorotoluene	98-08-8	106	50 - 150

ND: Not detected at or above limit of detection
--: Information not available or not applicable

Analytical Results
for
EINARSON, FOWLER & WATSON
Client Reference: BNC 103
Clayton Project No. 98110.81

Sample Identification:	MSMW01	Date Sampled:	11/05/98
Lab Number:	9811081-05A	Date Received:	11/05/98
Sample Matrix/Media:	WATER	Date Prepared:	11/18/98
Preparation Method:	EPA 5030	Date Analyzed:	11/18/98
Method Reference:	EPA 8015/8020	Analyst:	FHK

Analyte	CAS #	Concentration (ug/L)	Limit of Detection (ug/L)
BTEX/Gasoline			
Benzene	71-43-2	260	8
Ethylbenzene	100-41-4	500	6
Toluene	108-88-3	120	6
o-Xylene	95-47-6	250	8
p,m-Xylenes	--	850	8
Gasoline	--	10000	1000
MTBE	--	200	100
Surrogates		Recovery (%)	QC Limits (%)
a,a,a-Trifluorotoluene	98-08-8	97	50 - 150

ND: Not detected at or above limit of detection
--: Information not available or not applicable

Analytical Results
for
EINARSON, FOWLER & WATSON
Client Reference: BNC 103
Clayton Project No. 98110.81

Sample Identification:	METHOD BLANK	Date Sampled:	--
Lab Number:	9811081-06A	Date Received:	--
Sample Matrix/Media:	WATER	Date Prepared:	11/16/98
Preparation Method:	EPA 5030	Date Analyzed:	11/16/98
Method Reference:	EPA 8015/8020	Analyst:	FHK

Analyte	CAS #	Concentration (ug/L)	Limit of Detection (ug/L)
BTEX/Gasoline			
Benzene	71-43-2	ND	0.4
Ethylbenzene	100-41-4	ND	0.3
Toluene	108-88-3	ND	0.3
o-Xylene	95-47-6	ND	0.4
p,m-Xylenes	--	ND	0.4
Gasoline	--	ND	50
MTBE	--	ND	5
Surrogates		**Recovery (%)**	**QC Limits (%)**
a,a,a-Trifluorotoluene	98-08-8	91	50 - 150

ND: Not detected at or above limit of detection
--: Information not available or not applicable

9811081

EINARSON FOWLER & WATSON

CHAIN OF CUSTODY

Page 1 of 1

CONTRACT LABORATORY: Clayton

TURN-AROUND TIME: Standard

PO # ~

Project No.	Site Name
BNC103	B&C Gas Mini Mart

Sampler(s): (printed) RPark (signature)

Sample I.D.	Lab I.D.	Collection Date	Collection Time	Matrix	Depth	Container Information Type/Volume	Qnty	Filt	Prsrv.	Analyses TPHgas, BTEX, MTBE	Remarks
									N/A		
									40 HCl		
MW-1		11/5/98	1201	water	✓		4	N		4	Please confirm MTBE detection many 1 (one) Sample using EPA 8260
MW-2		↓	1340	↓			4			4	
MW-3			1240				4			4	
MW-4			1105				4			4	
MW-5		no sample					/			/	
MW-6		no sample					/			/	
MSMW01		11/5/98	1553	↓			4	↓		4	

average bottle temp 5.5°C - DSH

Relinquished by: (signature)	Received by: (signature)	Date/Time:	Send Results To:
RPark	Denise Harrington	11/5/98 1810	Attn: Jennifer Pardis
Relinquished by: (signature)	Received by: (signature)	Date/Time:	EINARSON, FOWLER & WATSON
			2650 East Bayshore Road
Relinquished by: (signature)	Received by: (signature)	Date/Time:	Palo Alto, CA 94303
			Phone (415) 843-3828
			Fax (415) 843-3815

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