FIRST QUARTER 1999
GROUNDWATER MONITORING RESULTS
B&C Gas Mini Mart
Livermore, California

Prepared by
CONOR PACIFIC/EFW
2650 East Bayshore Road
Palo Alto, California 94303
April, 1999

Project BNC103

EVA CHU,
HAZARDOUS MATERIALS SPECIALIS
AL COUNTY HEALTH DEPT
ENVIRONMENTAL HEALTH Dept
ALAMEDA CA -

B.S ANGLE, DBA
B & C GAS MINI MART
2008 FIRST St livermore
CA 94550
Dated 4/26/99

Dear ms Eva, First Quarter 99 - Gr. water monitoring Results - B & C Gas MINI MART

I ENCLOSE FOR YOUR REVIEW & FILES THE CAPTIONED REPORT FROM CONOR PACIFIC. THE CONTENTS ARE SELF EXPLICIT.

YOUR REVIEW WILL DISCLOSE THAT THERE HAS BEEN CONSIDERABLE AND PERCEPTABLE IMPROVEMENTS IN THE QUANTITY OF VARIOUS ITEMS OF HAZARDOUS MATERIALS AND THE TREND OF IMPROVEMENT HAS BEEN CONSISTENT AND PRECIPITOUS EVIDENCING THAT THE NATURAL BIOREMEDIATION PROCESS IS EFFECTIVE. I SHALL BE GRATEFUL TO KNOW OF YOUR CONCLUSIONS.

Thanks in advance,

Sincerely,

B.S Angle

Encl: 1

ENVIRONMENTAL PROTECTION
99 APR 30 PM 1:42

Conor Pacific | EFW

April 22, 1999
Project No. BNC103

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

Re: First Quarter 1999 Groundwater Monitoring Results, B&C Gas Mini Mart, 2008 First Street, Livermore, California

Dear Mr. Angle:

Conor Pacific/EFW (formerly Einarson, Fowler & Watson) has compiled first quarter 1999 groundwater monitoring results for B&C Gas Mini Mart (B&C), 2008 First Street, Livermore, California (Figure 1). This report includes first quarter 1999 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.

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] Table 2 summarizes all B&C monitoring well constructions.

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 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).

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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."

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.

Interim Remedial Action at Well MW-5

Well MW-5 was installed in October 1995. Hydrocarbon odor was noted at the water table, encountered at a depth of 40 feet bgs during drilling. The groundwater sampled from the well following well installation was found to contain high concentrations of TPH-G, BTEX, and MTBE (Table 3). However, floating product was not observed until July 30, 1998 (Table 1). The well is screened from 15 feet to 40 feet, below ground surface. The depth to groundwater has historically ranged from 18 to 33 feet, well within the screened interval of the well.

Due to the presence of floating free product in well MW-5, interim remedial actions were taken to remove the floating product from the well. Several methods can be used to remove product from a well:

- Active - bailing or pumping
- Passive - passive bailer or absorbent sock.

The decision on which method to use is governed by well access, the thickness of the product, and the rate at which the product enters the well as it is removed.

Well MW-5 is located in North L Street, across from the B & C Gas Mini Mart. Because the well is located in a public right-of-way, a passive product removal method was selected. The layer of floating product in well MW-5 was determined to be thin, varying between a sheen to 0.22 feet (Table 4). After the product was bailed from the well on both July 30, 1998 and January 18, 1999, only a sheen returned. Because the product recharge rate appeared to be slow and the product layer was relatively thin, the hydrocarbon-absorbent sock method for product removal was selected.

A summary of the free product removal and thickness of free product are presented in Table 4. A thin layer of free product was first observed in July 1998. This product was bailed from the well and a grab groundwater sample was obtained. No measurable product returned to the well that day. The well was next monitored in November 1998 and a 0.22-foot thick layer of free product was observed. No action was taken at this time. In January 1999, the product was removed from the well by bailing and a hydrocarbon absorbent SoakEase™ sock was installed across the groundwater-free product interface. At intervals of approximately two weeks from January to April 1999, the sock was replaced in the well and the thickness of floating product was measured. Over the time period monitored, the absorbent socks have removed sufficient product to reduce the free product thickness to a sheen or less.

A recent test was performed to determine whether free product would re-enter the well over an extended period of time. On April 13, 1999, the sock was raised above the water table. No floating product was measured on the water surface. Two days later, on April 15, 1999, no floating product was measured. The sock was left above the water table, and will again be checked for floating product after approximately two weeks.

Groundwater and free product removed from well MW-5, along with used absorbent socks were placed in lined drums and stored on site prior to proper disposal.

GROUNDWATER SAMPLING AND ANALYSIS

First 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 first quarter 1999 sampling event, EFW checked for free product in all site wells. 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 first quarter event, the well did not contain free product. 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 during purging and a groundwater sample was not collected from this well.

Groundwater Elevations

On March 23, 1999, 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 March 1999. A comparison of well screen elevations (Table 2) and first quarter measurements shows that the water levels were above the well screens in wells MW-1, MW-2, MW-3, and MW-4. The water levels in wells MW-5 and MW-6 intercepted the screened intervals of

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

the site wells at the time of groundwater sampling. A groundwater contour map, based on March 1999 measurements, is shown in Figure 2. First quarter groundwater elevations are generally over seven feet higher than the fourth quarter 1998 levels, which are roughly equal to the third quarter 1998 water levels. Groundwater flow at the site was slightly west of north during first quarter 1999. Based on first 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 six monitoring wells (MW-1, MW-2, MW-3, MW-4, MW-5, and MW-6) on March 23, 1999, following EFW's standard protocol. Well MSP MW-01 was not sampled due to the presence of free product in the groundwater during well purging. Wells were purged using either a submersible pump or a polyvinyl chloride (PVC) bailer. Samples were collected from each well using a disposable PVC bailer. 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 stored on site pending proper disposal. 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-1 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.

Analytical Results

Over the last five 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. Table 3 presents a historical summary of groundwater analytical results from the B&C site. First quarter 1999 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, BTEX or MTBE. Since June 1995, concentrations of petroleum hydrocarbons have been very low to non-detectable in this well.

Tank Area Wells

Concentrations in well MW-1 were similar to the results from the previous quarter. TPH-G was detected at a concentration 6,600 micrograms per liter (µg/l) in well MW-1. BTEX concentrations ranged from 240 to 990 µg/l. MTBE was detected at 60 µg/l.

Well MW-2 concentrations were much lower than the previous quarter. In well MW-2, TPH-G was detected at a concentration of 22,000 µg/l. Concentrations of BTEX compounds ranged from 780 to 1,730 µg/l. MTBE was detected at 300 µg/l.

The hydrocarbon concentrations in well MW-3 were the lowest concentrations detected to date in the well. TPH-G was detected at a concentration of 6,900 µg/l in well MW-3. Benzene was detected at 100 µg/l and the other aromatic compounds ranged from 100 to 265 µg/l. MTBE was detected at a concentration of 220 µg/l.

Groundwater was above the obstruction in well MW-6 and the well was purged and sampled. The well is located adjacent to well MW-1 and yielded hydrocarbon concentrations similar to those in well MW-1. The similarity in groundwater concentrations in wells located so close to each other indicate that the results from well MW-6 are valid. The obstruction appears to be gravel that has entered the well. This well may need to be abandoned, as it appears to be damaged. Because the groundwater concentrations are similar to those found in well MW-1, replacing the well is not necessary.

Downgradient Wells

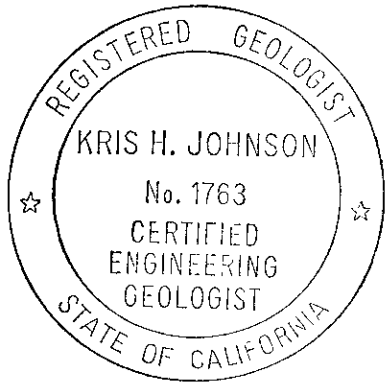
Well MW-5, located 75 feet downgradient of the site, has recently contained free petroleum product. Removal of the free product has been performed since January 1999 and has resulted in no measurable product during the first quarter sampling. The well was purged and sampled, with a hydrocarbon sheen observed during purging. Petroleum hydrocarbons were detected at concentrations similar to the previous sampling events.

MSP well MW-01, located approximately 800 feet downgradient from the B&C site, was not sampled during the first quarter event, due to the presence of free product during well purging. Because there was more than a hydrocarbon sheen present in the groundwater purged from well MSP MW-01, the well was not sampled.

FUTURE MONITORING

Second quarter 1999 groundwater monitoring is currently scheduled for June 1999. 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. Second quarter 1999 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
Table 4 - Summary of Well MW-5 Product Removal

Figures

Figure 1 - Site Location
Figure 2 - Groundwater Elevation Contours (March 1999)
Figure 3 - Petroleum Hydrocarbons in Groundwater (March 1999)

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		
		03/23/99	25.49	458 58		
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		
		03/23/99	25.51	458.35		
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		
		03/23/99	24.49	459.75		
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		
		03/23/99	25.09	459 95		
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
		03/23/99	25.15			
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			
		03/23/99	25.43			
MSP MW-01	477 79	07/30/98	30.37	447 42	30 35	0 02
		11/05/98	38.01	439.78	(1)	
		03/23/99	29.44	448 35	(1)	

Notes
Data prior to 1998 from RSI quarterly reports February 1997 date unknown
MSL = mean sea level
NM - not measured, NS - not surveyed, NA - well not accessible, blocked at 28 4 feet
MSP - Mill Springs Park
* - see Table 1a for well MW-5 monitoring during interim remedial action
(1) - free product visible in purge or sample water

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
	Mar-99	6,600	280	420	240	990	60
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
	Mar-99	22,000	780	880	780	1,730	300
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
	Mar-99	6,900	100	160	110	265	220
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
	Mar-99	<50	<0.4	<0.3	<0 3	<0.8	<5
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**
	Mar-99	36,000	1,500	2,400	1,500	5,500	900
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*
	Mar-99	5,700	240	260	120	440	150
MSP MW-01	Aug-95	11,000	190	260	110	900	210
	Jul-98	NS**	NS**	NS**	NS**	NS**	NS**
	Nov-98	10,000	260	120	500	1,100	200
	Mar-99	NS**	NS**	NS**	NS**	NS**	NS**

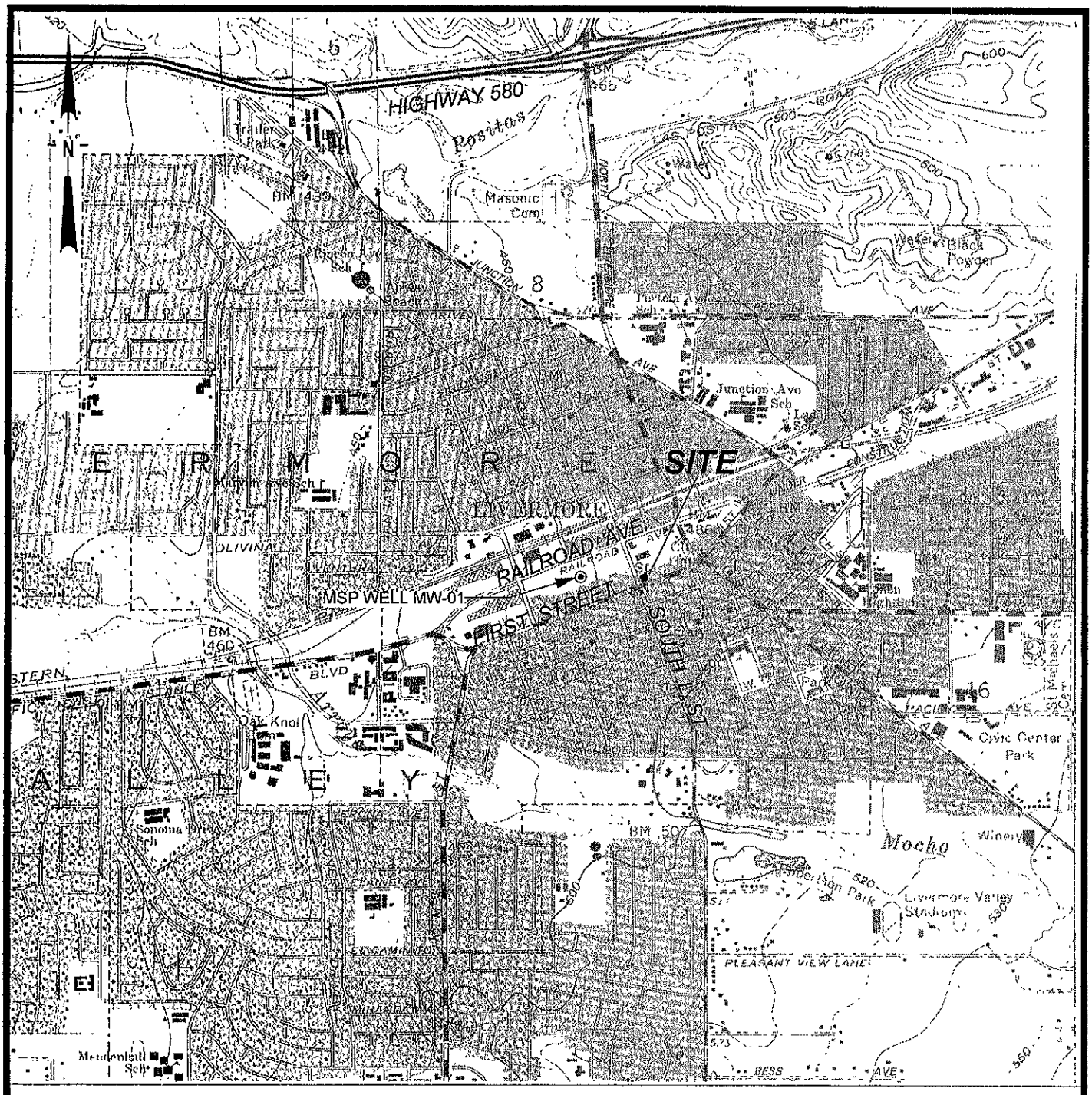
ug/l = micrograms per liter
TPH-G = total petroleum hydrocarbons as gasoline
MTBE = methyl tertiary-butyl ether
MSP = Mill Springs Park

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

Table 4
Summary of Well MW-5 Product Removal
B & C Gas Mini Mart
Livermore, California

Date Measured	Depth to Water (feet)	Depth to Free product (feet)	Product Thickness (feet)	Comments
02/29/96	19.35	None	0	
Feb-97	18.19	None	0	
07/30/98	25.25	25.24	0.01	Bailed product from well. Approximately 5 gallons of water mixed with product removed from well. Grab groundwater sample obtained.
11/05/98	32.70	32.48	0.22	
01/18/99	31.65	31.60	0.05	Bailed product from well. Approximately 0.5 gallons of water mixed with about 10% product removed from well. Sheen present following bailing. Installed 3-foot long, 3.5-inch diameter SoakEase™ absorbent sock in well.
01/22/99	30.93	sheen	sheen	Replaced SoakEase™ sock.
01/29/99	29.80	sheen	sheen	Replaced SoakEase™ sock.
02/05/99	29.64	sheen	sheen	Replaced SoakEase™ sock.
02/23/99	26.26	sheen	sheen	Replaced SoakEase™ sock.
03/12/99	25.29	sheen	sheen	Replaced SoakEase™ sock.
03/23/99	25.19	None	0	Bailed about 5 gallons of water from well and sheen returned. No measureable product present. Obtained groundwater sample after standard well purge. Replaced sock.
04/13/99	25.05	None	0	Raised SoakEase™ sock above groundwater level in well.
04/15/99	24.85	None	0	No sheen observed, left sock above groundwater level in well.

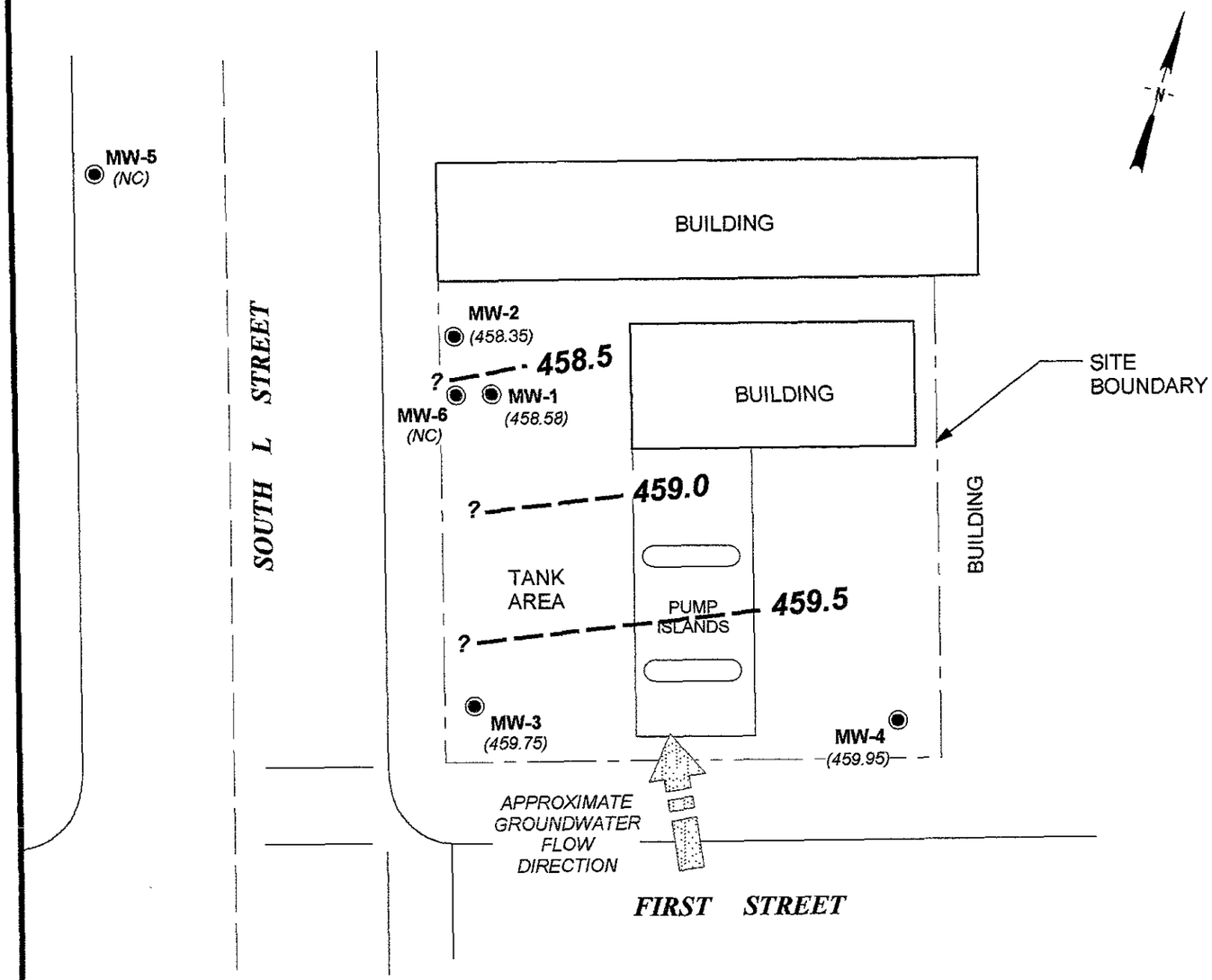
Notes: sheen = product present, but too thin to measure accurately (<0.01 feet)



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

I/BNC/103/FIGURES/SITELOC.DSF 4/22/99

Conor Pacific EFW	GROUNDWATER MONITORING B & C GAS MINI MART LIVERMORE, CALIFORINA SITE LOCATION MAP	FIGURE 1 PROJECT NO. BNC103



EXPLANATION

MW-6 ◉	Groundwater monitoring well
(459.75)	Groundwater elevation (Ft.-MSL), measured 3/23/99
459.5	Groundwater elevation contour (feet, MSL)
(NA)	Not calculated, top of well casing not surveyed

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

I:\BNC\103\FIGURES\BASE-GW.DSF 4/22/99

SCALE 0 25 50 75 FEET

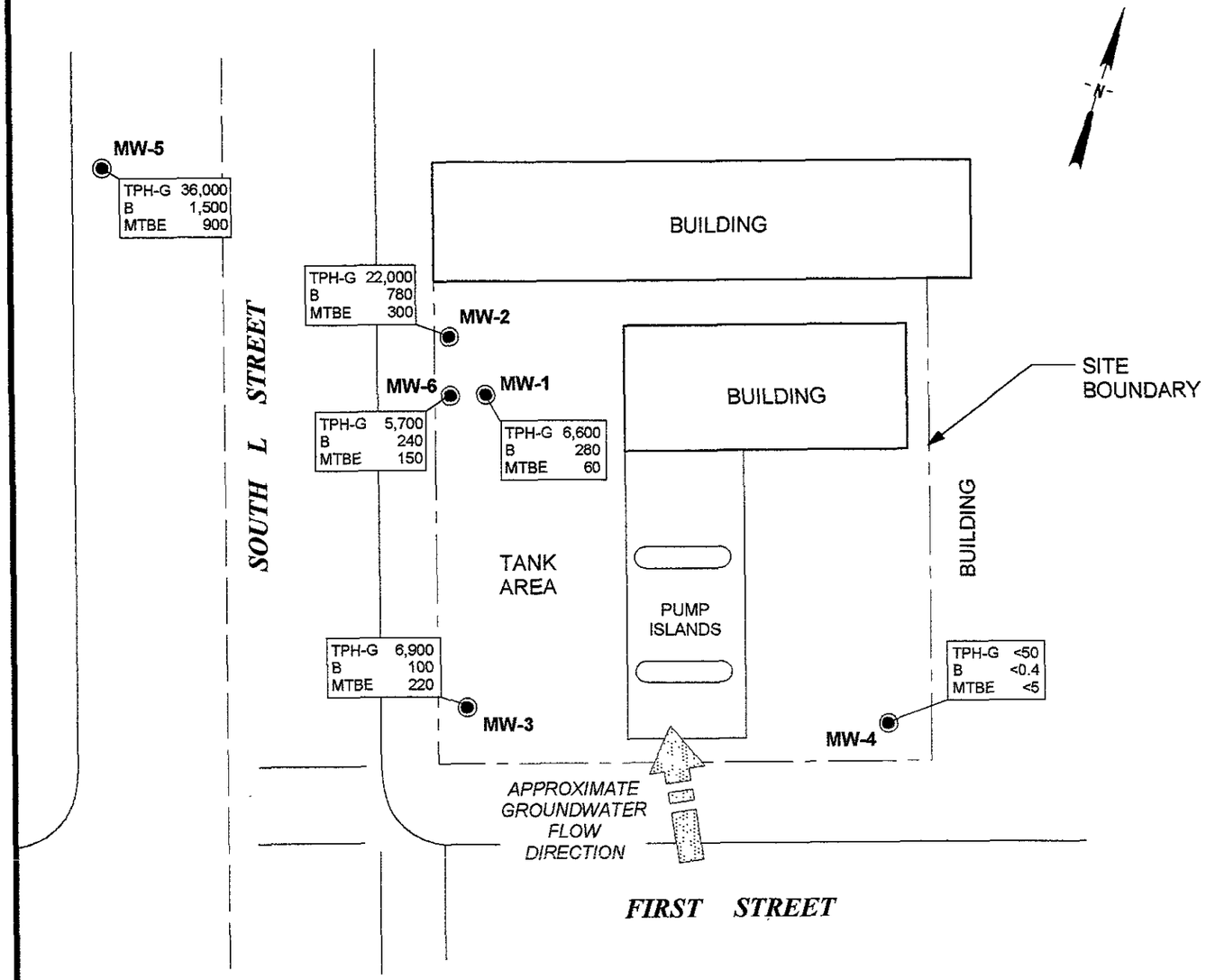
(APPROXIMATE - NOT SURVEYED)

GROUNDWATER MONITORING
B & C GAS MINI MART
LIVERMORE CALIFORNIA

GROUNDWATER ELEVATION CONTOURS (MARCH 1999)

FIGURE 2

PROJECT NO BNC103



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 3/23/99.

ABBREVIATIONS:

TPH-G	Total Petroleum Hydrocarbons Gasoline range
B	Benzene
MTBE	Methyl tertiary-butyl ether
NS	Not sampled, free product present

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

I:\BNC\103\FIGURES\BASE-CHEM DSF 4/22/99

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

GROUNDWATER MONITORING
B & C GAS MINI MART
LIVERMORE, CALIFORNIA

PETROLEUM HYDROCARBONS IN GROUNDWATER (MARCH 1999)

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): 3/23/99
Name: RFarr
Weather: cloudy, drizzle Sounder #: KECK

Well	Date	DTFP (TOC)	DTW (TOC)	Total Depth	Meas. By	Comments
MW-1	3/23/99		25.49	75.9		
MW-2			25.51	56.0		
MW-3			24.49	56.9		9/16"
MW-4			25.09	60.0		
MW-5			25.15	39.7		15/16"
MW-6			25.43	20.5*		* obstructed
MS MW01	"		29.94	59.6		9/16"

EINARSON FOWLER & WATSON

WATER SAMPLE FIELD DATA

LOCATION: B&C Gas Mini Mart
SAMPLE ID: MW-1
PROJECT NO: BNC103
SAMPLED BY: RPark
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
Volume in Casing (gal): 8.6
Depth to Water (ft): 25.49
Calculated Purge (volumes / gal.): 25.0
Height of Water Column (ft): 50.41
Actual Pre-Sampling Purge (gal): 26.0

PURGE:
Device (Depth of Intake from TOC): 2" Submersible Pump (73') 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
1316	9.0	20.4	1110		7.23	lt.brown	high	
1321	18.0	20.5	1110		7.21	↓	moderate	
1325	26.0	20.4	1110		7.20	↓	low	

Purge Date: 3/23/99

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)
1331	19.8	1110		7.23	2.06	lt.brown	7999

Sheen: none Odor: moderate Sample Date: 3/23/99

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

REMARKS:

SIGNATURE: _____ **DATE:** 3/23/99

EINARSON FOWLER & WATSON

WATER SAMPLE FIELD DATA

LOCATION: B&C Gas Mini Mart
SAMPLE ID: MW-2
PROJECT NO: BNC103
SAMPLED BY: R Pauk
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): 20.2
Depth to Water (ft): 25.51
Calculated Purge (volumes / gal.): 60.4
Height of Water Column (ft): 30.49
Actual Pre-Sampling Purge (gal): 61.0

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
1233	21.0	20.2	1070		6.90	lt. brown	low	
1240	41.0	20.4	1060		6.92	colorless	trace	
1248	61.0	20.5	1060		6.93	↓	↓	

Purge Date: 3/23/99

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)
1254	19.9	1050		6.88	1.02	colorless	44

Sheen: none Odor: strong Sample Date: 3/23/99

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

REMARKS: _____

SIGNATURE: _____ **DATE:** 3/23/99

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): 56.9
Volume in Casing (gal): 21.4
Depth to Water (ft): 24.49
Calculated Purge (volumes / gal.): 64.2
Height of Water Column (ft): 32.41
Actual Pre-Sampling Purge (gal): 65.0

PURGE:
Device (Depth of Intake from TOC): Submersible Pump 2" (55') 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
1111	22.0	19.6	1060		7.14	lt.brown	low	
1120	44.0	20.1	1050		7.14	↓	↓	
1127	65.0	20.2	1050		7.15	↓	↓	

Purge Date: 3/23/99

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)
1133	19.8	1070		7.14	2.20	lt.brown	75

Sheen: none Odor: moderate Sample Date: 3/23/99

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

REMARKS:

SIGNATURE: _____ DATE: 3/23/99

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 ✓ 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): 60.0
Volume in Casing (gal): 23.1
Depth to Water (ft): 25.09
Calculated Purge (volumes / gal.): 69.2
Height of Water Column (ft): 34.91
Actual Pre-Sampling Purge (gal): 70.0

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
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
1019	24.0	19.4	1070		7.18	lt.brown/tint	low	
1029	47.0	19.7	1070		7.19	↓	↓	
1037	70.0	19.8	1070		7.20			

Purge Date: 3/23/99

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)
1042	19.3	1080		7.19	5.41	lt.brown	207

Sheen: none Odor: none Sample Date: 3/23/99

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

REMARKS:

Calibrated meter 1015, 3/23/99: pH: 7.05, 4.00; EC: 0, 2.06; TWB: 0; DO: auto; T: 11.9°C

SIGNATURE: [signature] **DATE:** 3/23/99

EINARSON FOWLER & WATSON

WATER SAMPLE FIELD DATA

LOCATION: B&C Gas Mini Mart
SAMPLE ID: MW-5
PROJECT NO: BNC 103
SAMPLED BY: RPW
CLIENT: B&C Gas Mini Mart
REGULATORY AGENCY:
SAMPLE TYPE: Groundwater 1 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): 39.7
Volume in Casing (gal): 9.7
Depth to Water (ft): 25.15
Calculated Purge (volumes / gal.): 29.9
Height of Water Column (ft): 14.55
Actual Pre-Sampling Purge (gal): 29.0

PURGE:
Device (Depth of Intake from TOC): Submersible Pump ____ Peristaltic Pump ____ PVC Hand Pump ____
S.S. Bailer ____ Teflon Bailer ____ PVC Bailer 1 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
1613	10.0	19.8	1060		7.06	lt gray	high	heavy sheen
1621	20.0	20.1	1080		6.99	↓	↓	↓
1625	29.0	20.0	1080		6.98	grey		

Purge Date: 3/23/99

SAMPLE:
Device (Depth of Intake from TOC): Submersible Pump ____ Peristaltic Pump ____ PVC Hand Pump ____
Teflon Bailer ____ PVC Bailer ____ Disposable Bailer 1 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)
1633	19.8	1070		7.00	1.46	grey	7999

Sheen: heavy Odor: strong Sample Date: 3/23/99

Field Measurement Devices: Horiba 1 Omega ____ QuickCheck ____ D.O. Test Kit ____

REMARKS:

SIGNATURE: _____ **DATE:** 3/23/99

EINARSON FOWLER & WATSON

WATER SAMPLE FIELD DATA

LOCATION: B&C Gas Mini Mart
SAMPLE ID: MW-6
PROJECT NO: BNC103
SAMPLED BY: RPaul
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): 40.0
Depth to Water (ft): 25.43
Height of Water Column (ft): 14.57
Volume in Casing (gal): 9.7
Calculated Purge (volumes / gal.): 29.9
Actual Pre-Sampling Purge (gal): 29.0

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
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
1410	10.0	19.9	1060		6.85	Hgry/brown	High	
1426	20.0	20.0	1050		6.85	↓	↓	
1433	29.0	20.1	1050		6.87			

Purge Date: 3/23/99

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)
1440	20.1	1050		6.85	1.93	Hgry/brown	>999

Sheen: light Odor: strong Sample Date: 3/23/99

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

REMARKS: Well obstructed at 28.5'. Purged/Sampled above obstruction. Water level did not drop.

SIGNATURE: [signature] **DATE:** 3/23/99

EINARSON FOWLER & WATSON

WATER SAMPLE FIELD DATA

LOCATION: B&C Gas Mini Mart
SAMPLE ID: MS MW01
PROJECT NO: BNC103
SAMPLED BY: RVan
CLIENT: B&C Gas Min. Mart
REGULATORY AGENCY:
SAMPLE TYPE: Groundwater 1 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
Volume in Casing (gal): 5.2
Depth to Water (ft): 29.44
Calculated Purge (volumes / gal.): 15.4
Height of Water Column (ft): 30.16
Actual ~~Pre-Sampling~~ Purge (gal): ~0.5

PURGE:
Device (Depth of Intake from TOC): Submersible Pump ____ Peristaltic Pump ____ PVC Hand Pump ____
S.S. Bailer ____ Teflon Bailer ____ PVC Bailer ____ Disposable Bailer 1 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 measurable product present during initial water level measurement. Began bailing. 2nd and 3rd bailer contained small brown product globules. End purge. NO Samples collected.

SIGNATURE: ____ **DATE:** 3/23/99

San Francisco Regional Office

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

Clayton
LABORATORY
SERVICES

April 14, 1999

Mr. Kris Johnson
CONOR PACIFIC
2680 East Bayshore Road
Palo Alto, CA 94303

Client Ref.: BNC103
Clayton Project No.: 99032.56

Dear Mr. Kris Johnson:

Attached is our analytical laboratory report for the samples received on March 23, 1999. Also enclosed is a copy of the Chain-of-Custody record acknowledging receipt of these samples.

As requested, one of the MTBE results was confirmed by GC/MS. The MTBE result for sample MW-1 was confirmed by GC/MS and this confirmation result is reported for this sample.

Please note that any unused portion of the samples will be discarded after May 14, 1999, 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
CONOR PACIFIC
Client Reference: BNC103
Clayton Project No. 99032.56

Sample Identification:	MW-1	Date Sampled:	03/23/99
Lab Number:	9903256-01A	Date Received:	03/23/99
Sample Matrix/Media:	WATER	Date Prepared:	04/06/99
Preparation Method:	EPA 5030	Date Analyzed:	04/06/99
Method Reference:	EPA 8015/8020	Analyst:	DTT

Analyte	CAS #	Concentration (ug/L)	Limit of Detection (ug/L)
BTEX/Gasoline			
Benzene	71-43-2	280	4
Ethylbenzene	100-41-4	240	3
Toluene	108-88-3	420	3
o-Xylene	95-47-6	350	4
p,m-Xylenes	--	640	4
Gasoline	--	6600	500
MTBE	--	60	50
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

Note: Detection limits increased due to dilution necessary for quantitation.
MTBE result is from GC/MS run

Analytical Results
for
CONOR PACIFIC
Client Reference: BNC103
Clayton Project No. 99032.56

Sample Identification:	MW-2	Date Sampled:	03/23/99
Lab Number:	9903256-02A	Date Received:	03/23/99
Sample Matrix/Media:	WATER	Date Prepared:	04/06/99
Preparation Method:	EPA 5030	Date Analyzed:	04/06/99
Method Reference:	EPA 8015/8020	Analyst:	DTT

Analyte	CAS #	Concentration (ug/L)	Limit of Detection (ug/L)
TEX/Gasoline			
Benzene	71-43-2	780	8
Ethylbenzene	100-41-4	780	6
Toluene	108-88-3	880	6
o-Xylene	95-47-6	730	8
p,m-Xylenes	--	1000	8
Gasoline	--	22000	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

Note: Detection limits increased due to dilution necessary for quantitation.

Analytical Results
for
CONOR PACIFIC
Client Reference: BNC103
Clayton Project No. 99032.56

Sample Identification:	MW-3	Date Sampled:	03/23/99
Lab Number:	9903256-03A	Date Received:	03/23/99
Sample Matrix/Media:	WATER	Date Prepared:	04/06/99
Preparation Method:	EPA 5030	Date Analyzed:	04/06/99
Method Reference:	EPA 8015/8020	Analyst:	DTT

Analyte	CAS #	Concentration (ug/L)	Limit of Detection (ug/L)
BTEX/Gasoline			
Benzene	71-43-2	100	4
Ethylbenzene	100-41-4	110	3
Toluene	108-88-3	160	3
o-Xylene	95-47-6	85	4
p,m-Xylenes	--	180	4
Gasoline	--	6900	500
MTBE	--	220	50
Surrogates		Recovery (%)	QC Limits (%)
a,a,a-Trifluorotoluene	98-08-8	105	50 - 150

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

Note: Detection limits increased due to dilution necessary for quantitation.

Clayton
LABORATORY
SERVICES

Analytical Results
for
CONOR PACIFIC
Client Reference: BNC103
Clayton Project No. 99032.56

Sample Identification:	MW-4	Date Sampled:	03/23/99
Lab Number:	9903256-04A	Date Received:	03/23/99
Sample Matrix/Media:	WATER	Date Prepared:	04/06/99
Preparation Method:	EPA 5030	Date Analyzed:	04/06/99
Method Reference:	EPA 8015/8020	Analyst:	DTT

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	0.3	0.3
o-Xylene	95-47-6	ND	0.4
p,m-Xylenes	--	0.5	0.4
Gasoline	--	ND	50
MTBE	--	ND	5
Surrogates		**Recovery (%)**	**QC Limits (%)**
a,a,a-Trifluorotoluene	98-08-8	104	50 - 150

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

Analytical Results
for
CONOR PACIFIC
Client Reference: BNC103
Clayton Project No. 99032.56

Sample Identification:	MW-5	Date Sampled:	03/23/99
Lab Number:	9903256-05A	Date Received:	03/23/99
Sample Matrix/Media:	WATER	Date Prepared:	04/06/99
Preparation Method:	EPA 5030	Date Analyzed:	04/06/99
Method Reference:	EPA 8015/8020	Analyst:	DTT

Analyte	CAS #	Concentration (ug/L)	Limit of Detection (ug/L)
BTEX/Gasoline			
Benzene	71-43-2	1500	40
Ethylbenzene	100-41-4	1500	30
Toluene	108-88-3	2400	30
o-Xylene	95-47-6	2000	40
p,m-Xylenes	--	3500	40
Gasoline	--	36000	5000
MTBE	--	900	500
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

Note: Detection limits increased due to dilution necessary for quantitation.

Analytical Results
for
CONOR PACIFIC
Client Reference: BNC103
Clayton Project No. 99032.56

Sample Identification:	MW-6	Date Sampled:	03/23/99
Lab Number:	9903256-06A	Date Received:	03/23/99
Sample Matrix/Media:	WATER	Date Prepared:	04/06/99
Preparation Method:	EPA 5030	Date Analyzed:	04/06/99
Method Reference:	EPA 8015/8020	Analyst:	DTT

Analyte	CAS #	Concentration (ug/L)	Limit of Detection (ug/L)
BTEX/Gasoline			
Benzene	71-43-2	240	4
Ethylbenzene	100-41-4	120	3
Toluene	108-88-3	260	3
o-Xylene	95-47-6	170	4
p,m-Xylenes	--	270	4
Gasoline	--	5700	500
MTBE	--	150	50
Surrogates		**Recovery (%)**	**QC Limits (%)**
a,a,a-Trifluorotoluene	98-08-8	99	50 - 150

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

Note: Detection limits increased due to dilution necessary for quantitation.

Analytical Results
for
CONOR PACIFIC
Client Reference: BNC103
Clayton Project No. 99032.56

Sample Identification:	METHOD BLANK	Date Sampled:	--
Lab Number:	9903256-07A	Date Received:	--
Sample Matrix/Media:	WATER	Date Prepared:	04/06/99
Preparation Method:	EPA 5030	Date Analyzed:	04/06/99
Method Reference:	EPA 8015/8020	Analyst:	DTT

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	100	50 - 150

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

EINARSON FOWLER & WATSON

CHAIN OF CUSTODY

PO # [redacted]

CONTRACT LABORATORY: Clayton TURN-AROUND TIME: Standard

Project No.	Site Name
BNE103	B&C Gasmini Mart

Sampler(s): (printed) E Park (signature)

Sample I.D.	Lab I.D.	Collection Date	Collection Time	Matrix	Depth	Container Information Type/Volume	Qnty	Filt	Prsrv	Analyses: TPH GAS, BTEX, MTBE	Remarks
										VOA 40 HCl	Please provide Chromatograms with results.
mw-1		3/23/99	1331	water			4	N		4	
mw-2			1254				4			4	
mw-3			1133				4			4	
mw-4			1042				4			4	
mw-5			1433				4			4	
mw-6			1440				4			4	
VSMW01		no sample					—			—	

Please confirm MTBE in any (one) sample by EPA 8260.

Relinquished by: (signature)	Received by: (signature)	Date/Time
[signature]	Denise Harrington	3/23/99 @ 1800
Relinquished by: (signature)	Received by: (signature)	Date/Time:
Relinquished by: (signature)	Received by: (signature)	Date/Time:

Send Results To:
Attn: Kris Johnson
EINARSON, FOWLER & WATSON
2650 East Bayshore Road
Palo Alto, CA 94303
Phone (650) 843-3828
Fax (650) 843-3815

white lab copy yellow project file