FIRST QUARTER 2000
GROUNDWATER MONITORING RESULTS
B&C Gas Mini Mart
Livermore, California

Prepared by

Conor Pacific/EFW
2650 East Bayshore Road
Palo Alto, California 94303

March 2000

Project BNC 103

Conor Pacific

EFW

ENVIRONMENTAL PROTECTION

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Transmittal

To: Ms. Eva Chu
Hazardous Materials Specialist
Alameda County Environmental
Health Services
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577

From: Katrin Schliewen

Date: May 4, 2000

Proj. No.: BNC 103

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1	First Quarter 2000 Groundwater Monitoring Results, B&C Gas Mini Mart, Livermore, California	☒ *Regular Mail* ☐ *FedEx* ☐ *Courier* ☐ *Other*

Comments:

cc:

Copies	Name & Address	Sent by:
2	Mr. Balaji Angle, Angle's AM-PM Mini Mart	☒ *Regular Mail*
1	Ms. Eva Chu, Alameda County Env. Health Services	☐ *FedEx*
1	Mr. Matt Katen, Alameda County Zone 7	☐ *Courier*
1	Regional Water Quality Control Board, LUFT	☐ *Other*

Conor Pacific | EFW

May 3, 2000
Project No. BNC103

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

Re: First Quarter 2000 Groundwater Monitoring Results, B&C Gas Mini Mart, 2008 First Street, Livermore, California (Station ID 1689)

Dear Mr. Angle:

Conor Pacific/EFW has compiled first quarter 2000 groundwater monitoring results for B&C Gas Mini Mart (B&C), 2008 First Street, Livermore, California (Figure 1). This report includes first quarter 2000 groundwater elevation data, groundwater sampling methods, and results of groundwater chemical analyses. All site wells and off-site wells, with one exception, were sampled during the first quarter 2000 monitoring.

SITE INFORMATION

Site Name & Contact

Mr. Balaji Angle
B&C Gas Mini Mart
2008 First Street
Livermore, California 94550
(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 and is 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.[1]

Subsurface work conducted in the B&C area has found predominantly sandy clay, silty sand, silty gravel, and sandy gravel. Over the last eleven 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.[2] 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).[3]

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

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

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

Nine new 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 lateral extent of the plume and provide long-term monitoring locations (Figure 2).[5] 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.

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

Floating product was first observed in well MW-5 on July 30, 1998 (Table 1). The well is screened from 15 feet 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. 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. 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.

Over the time period monitored, the absorbent socks have removed sufficient product to reduce the free product thickness to a sheen or less. In April 1999, the absorbent sock was raised above the water table. In December 1999, 0.07 feet of free product was measured in well MW-5 and the absorbent sock was replaced in the well. In March 2000, no free product was measured or visible in the well. The absorbent sock was removed from the water and the well was sampled.

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 2000 sampling event, Conor Pacific/EFW checked for free product in all site wells. Of the wells which previously have been reported to contain free product (Wells MW-2, MW-5, and MW-6), none contained a measurable thickness of product this quarter. Off-site well (MS)MW-1, located approximately 800 feet downgradient from the B&C site on the Mill Springs Park property, was also checked for product (Figure 1). (MS)MW-1 did not contain a measurable thickness of product

[5] Einarson, Fowler & Watson, November 5, 1999, Report of Downgradient Investigation, B&C Gas Mini Mart, 2008 First Street, Livermore, California.

although globules of product were observed in the bailer during the 3rd and 4th bails. No sample was collected from (MS)MW-1 during this quarter.

Groundwater Elevations

On March 21, 2000, Conor Pacific/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 Conor Pacific/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, surveyed to Livermore City datum, mean sea level (MSL).

Table 1 summarizes available groundwater elevations from August 1990 to March 2000. A comparison of well screen elevations (Table 2) and fourth quarter measurements shows that the water levels were above the well screens in all wells except MW-9. The water level in MW-9 intercepted the well screen interval at the time of groundwater sampling. A groundwater contour map, based on March 2000 measurements, is shown in Figure 2. First quarter groundwater elevations are generally nine feet higher than the fourth quarter 2000. Groundwater flow was generally due west during first quarter 2000. Based on first quarter measurements, the hydraulic gradient is approximately 0.0102 foot per foot. The flow direction and gradient are in accordance with previous results.

A greater, potentially downward, vertical gradient was observed between the upper water-bearing zone (MW-11 and MW-12) and the semi-confined aquifer (D-1 and D-2), than in previous quarters. This may be the result of the effects of slower recharge to the deeper, semi-confined aquifer compared with more rapid recharge to the upper water-bearing zone.

Sampling Methods

Conor Pacific/EFW sampled 15 monitoring wells between March 21 and March 23, 2000, following EFW's standard protocol. Only off-site well (MS)MW-1 was not sampled due to the presence of free product globules observed 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, dissolved oxygen, turbidity, and electrical conductivity were taken and recorded on water sample field data sheets (Appendix A). All purge water was contained in 55-gallon drums and stored on-site pending proper disposal. Purge water with low hydrocarbon concentrations is pumped to the sanitary sewer under City of Livermore Groundwater Discharge Permit # 1514. 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.

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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 Program

All groundwater analyses were performed by Sequoia Analytical of Petaluma, California, a state-certified laboratory. All groundwater samples were analyzed for total petroleum hydrocarbons as gasoline (TPH-G) by U.S. Environmental Protection Agency (EPA) Method 8015M and benzene, toluene, ethylbenzene, and xylenes (BTEX) and Methyl tertiary-butyl ether (MTBE) by EPA Method 8020M. 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 2000 analytical results for benzene and MTBE are also presented on Figure 3.

Site Wells

All five wells located on the B&C Gas Mini Mart property were sampled during the first quarter 2000. Hydrocarbon concentrations in all wells were lower during this quarter, with the exception of MW-3 where the concentration of total xylenes (7.45 µg/L) was slightly higher than in June 1999, and MW-6 where TPH-G (10,100 µg/L), benzene (276 µg/L), and total xylenes (673 µg/L) were somewhat higher than in June 1999.

Downgradient Wells

In general, hydrocarbon concentrations in all downgradient wells were significantly lower during the first quarter 2000 sampling event compared to the previous sampling event, with the notable exception of TPH-G in MW-10.

Well MW-5, located 75 feet downgradient of the site, was sampled this quarter since no free product was measured in the well. All hydrocarbon concentrations were lower than in September 1999, that last time this well was sampled.

Well MW-7, located on the Mill Springs Park Apartments property approximately 550 feet downgradient from the site, had lower hydrocarbon concentrations during this quarter. The ethylbenzene concentration was below the reporting limit (<2.5 µg/L) for the first time since sampling began in July 1999.

Well MW-8, located on Railroad Avenue at the Bank of America building contained only a low concentration of MTBE (4.65 µg/L) during this quarter.

Well MW-10, located on Railroad Avenue at the Granada Bowling Alley building, contained only TPH-G at a concentration of 52.7 µg/L. TPH-G was detected for the first time since sampling began in June 1999. MTBE was again below the reporting limit

(<2.5 µg/L) during this quarter after being detected for the first time during the fourth quarter 1999 sampling event.

Well MW-13, located on Railroad Avenue at the southwest corner of the City's vacant property, contained low concentrations only of benzene (2.32 µg/L) and MTBE (53.5 µg/L). TPH-G and ethylbenzene, detected during the fourth quarter 1999, were not detected during this quarter.

Well (MS)MW-1, located approximately 800 feet downgradient from the B&C site, was not sampled during the first quarter 2000 since globules of free product were observed in the PVC bailer during well purging.

No TPH-G, BTEX, or MTBE were detected in downgradient wells MW-9, MW-11, MW-12, D-1, and D-2. These results are consistent with results from the fourth quarter sampling event for these wells (December 1999). Previously, low hydrocarbon concentrations in well MW-11 were attributed to the Beacon Gasoline Station located at the intersection of P and First Streets (Conor Pacific/EFW, November 1999).

REVISION TO SAMPLING PLAN

The monitoring program is revised following one year of quarterly sampling of the wells installed in July 1999 (MW-7, MW-8, MW-9, MW-10, MW-11, MW-12, MW-13, D-1, and D-2), as recommended in the well installation report.[7] Wells MW-7, MW-8, MW-10, and MW-13 will be sampled on a quarterly basis, because groundwater samples from these wells have had detectable hydrocarbon concentrations during the past year. Wells MW-12 and D-2 will be sampled on a quarterly basis to provide frequent monitoring downgradient of the hydrocarbon plume. Wells MW-9, MW-11, and D-1 will be sampled annually because hydrocarbons have not been detected in these wells during the last three sampling events. Hydrocarbon concentrations appear to be highest during the spring and summer, when water levels are low. Therefore, annual monitoring will occur during the third quarter sampling event. Annual monitoring of site wells (MW-1, 3, 4, and 6) will also be sampled during third quarter. Wells MW-2, MW-5, and (MS)MW-1 will continue to be sampled quarterly.

SUMMARY

The first quarter 2000 groundwater monitoring results are consistent with previous monitoring results. It should be noted that hydrocarbon concentrations were generally significantly lower during this quarter than measured in the previous two quarters. These lower concentrations may be the result of seasonally high groundwater levels that effectively dilute the concentrations of hydrocarbons detected. The most significant results from this quarter sampling event are that TPH-G was detected for the first time in well MW-10, the furthest detection of THP-G downgradient from the site, and that

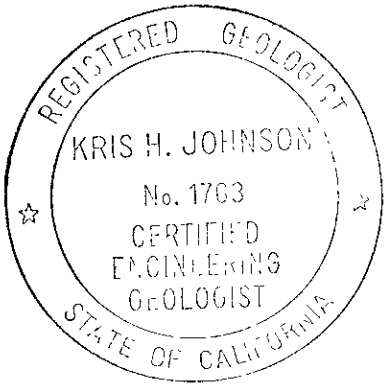
[7] Conor Pacific/EFW. *Report of Downgradient Investigation, B&C Gas Mini Mart, Livermore, California.* November 5, 1999.

MTBE was not detected in MW-10 during this quarter. Second quarter 2000 groundwater monitoring is currently scheduled for June 2000.

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

Sincerely,
Conor Pacific/EFW

Katrin Schliewen
Project Hydrogeologist



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

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 - Well Locations and Groundwater Contours (March 2000)
Figure 3 - Groundwater Chemistry (March 2000)

Appendices

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

cc: Eva Chu, Alameda County Environmental Health Services
Mr. Matt Katen, Alameda Co. Flood Control and Water Cons. District Zone 7
Regional Water Quality Control Board, San Francisco Bay Region LUFT
State Water Resources Control board, UST Fund

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

Well Number	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		
		06/08/99	27.78	456.29		
		09/27/99	30.65	453.42		
		12/20/99	32.99	451.08		
		03/21/00	23.95	460.12		
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		
		06/08/99	27.54	456.32		
		09/27/99	30.73	453.13		
		12/20/99	33.02	450.84		
		03/21/00	24.13	459.73		
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		
		06/08/99	26.77	457.47		
		09/27/99	29.52	454.72		
		12/20/99	31.85	452.39		
		03/21/00	22.95	461.29		

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

Well Number	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-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		
		06/08/99	27.43	457.61		
		09/27/99	30.16	454.88		
		12/20/99	32.52	452.52		
		03/21/00	23.43	461.61		
MW-5	481.97	02/29/96	19.35	462.62		
		Feb-97	18.19	463.78		
		07/30/98	25.25	456.72	25.24	0.01
		11/05/98	32.70	449.27	32.48	0.22
		03/23/99	25 15	456.82		
		06/08/99	27.27	454.70		
		09/27/99	30.00	451.97		
		12/20/99	32.30	449.67	32.23	0.07
		03/21/00	23.55	458.42		
MW-6	483.93	02/29/96	20.32	463.61		
		Feb-97	18.92	465.01		
		07/30/98	25.59	458.34	25.58	0.01
		11/05/98	NA	NA		
		03/23/99	25.43	458.50		
		06/08/99	27.43	456.50		
		09/27/99	NM >28.6	NM		
		12/20/99	NM >28.7	NM		
		03/21/00	24.02 *	459.91		
MW-7	478.14	7/12/99	28.37	449.77		
		09/27/99	30.20	447.94		
		12/20/99	32.44	445.70		
		03/21/00	24.18	453.96		
MW-8	473.23	7/12/99	34.29	438.94		
		09/27/99	37.11	436.12		
		12/20/99	39.79	433 44		
		03/21/00	29.10	444.13		
MW-9	477 08	7/12/99	30.71	446.37		
		09/27/99	32.61	444.47		
		12/20/99	34.99	442.09		
		03/21/00	26.75	450.33		
MW-10	471.42	7/12/99	34.60	436.82		
		09/27/99	37.62	433.80		
		12/20/99	40.04	431 38		
		03/21/00	29.50	441.92		
MW-11	464 93	7/12/99	31.00	433.93		
		09/27/99	33.83	431.10		
		12/20/99	35.91	429.02		
		03/21/00	26.41	438.52		

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

Well Number	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-12	458.34	7/12/99	25.50	432.84		
		09/27/99	28.28	430.06		
		12/20/99	30.26	428.08		
		03/21/00	20.70	437.64		
MW-13	474.79	7/12/99	30.65	444.14		
		09/27/99	32.74	442.05		
		12/20/99	34.98	439.81		
		03/21/00	26.03	448.76		
D-1	464.70	7/12/99	30.67	434.03		
		09/27/99	35.32	429.38		
		12/20/99	36.32	428.38		
		03/21/00	27.84	436.86		
D-2	457.61	7/12/99	25.72	431.89		
		09/27/99	28.44	429.17		
		12/20/99	29.40	428.21		
		03/21/00	20.91	436.70		
(MS)MW-1	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)	
		06/08/99	31.70	446.09	(1)	
		09/27/99	34.38	443.41		
		12/20/99	37.36	440.43		
		03/21/00	28.22	449.57		

Notes

Data prior to 1998 from RSI quarterly reports February 1997 date unknown.

MSL = mean sea level

NM = not measured; NA = not accessible, blocket at 28.4 feet.

MS = Mill Springs Park

* Obstruction in well at 28.7 feet below top of casing

(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 (inches)	Casing Material (PVC)	Casing Diameter (inches)	Screen Size (inches)	Sand Pack Material	Screened Interval (ft.-bgs)	Sand Pack Interval (ft.-bgs)
MW-1	HSA	Sep-88	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	HAS	Apr-89	62	60	NA	PVC	2	NA	NA	30-60	NA

HSA 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 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
	Jun-99	1,630	70	52	55	138	67
	Dec-99	NS	NS	NS	NS	NS	NS
	Mar-00	300	17.6	14.2	9.89	40.7	7.84
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
	Jun-99	11,200	352	454	540	639	343
	Sep-99	18,000	992	331	901	2,140	225
	Dec-99	19,200	1,340	818	1,050	2,130	579
	Mar-00	6,340	281	184	233	348	90.2
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
	Jun-99	1,210	5.4	9.0	6.9	4.3	53.3
	Dec-99	NS	NS	NS	NS	NS	NS
	Mar-00	465	4.56	1.87	6.20	7.45	15.5

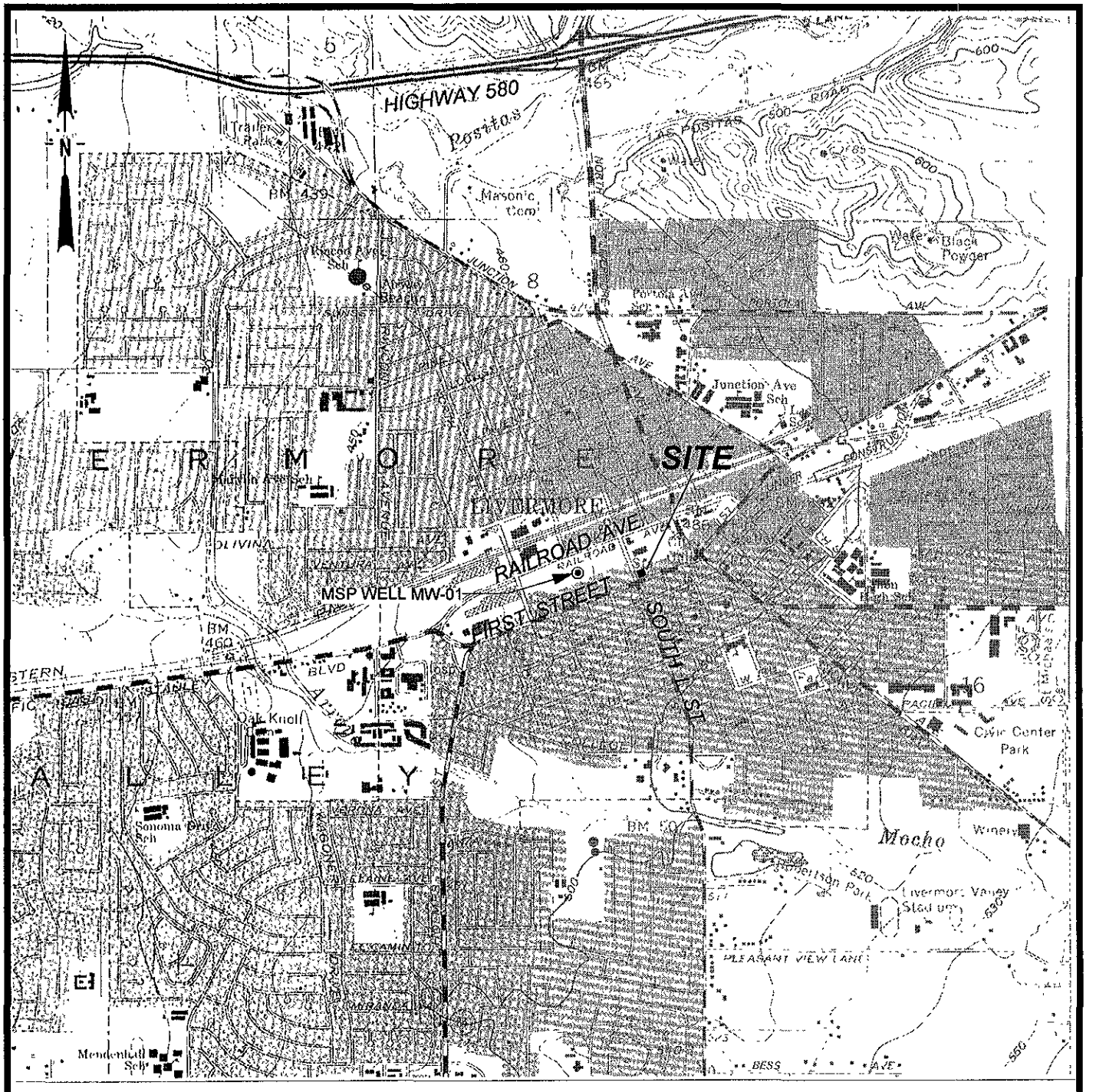
Table 3
Historical Groundwater Analytical Results
B&C Gas Mini Mart
Livermore, California

Well No.	Sample Date	TPH-G (ug/l)	Benzene (ug/l)	Toluene (ug/l)	Ethylbenzene (ug/l)	Xylenes (ug/l)	MTBE (ug/l)
MW-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	0.7	<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	0.6	<0.3	0.8	<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
	Jun-99	<50	<0.5	<0.5	<0.5	<0.5	<2
	Dec-99	NS	NS	NS	NS	NS	NS
	Mar-00	<50	<0.5	<0.5	<0.5	<0.5	<2.5
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
	Jun-99	34,500	722	1,980	1,720	7,170	765
	Sep-99	49,100	540	2,500	1,730	8,040	255
	Dec-99	NS**	NS**	NS**	NS**	NS**	NS**
	Mar-00	10,700	217	300	332	1,480	160
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
	Jun-99	7,610	259	334	283	567	275
	Dec-99	NS	NS	NS	NS	NS	NS
	Mar-00	10,100	276	170	200	673	159
MW-7	Jul-99	5,090	31.9	4.8	60	219	43.6
	Sep-99	2,160	2.8	8.2	5.9	27.3	14.0
	Dec-99	2,630	<2.5	<2.5	13.8	44.9	26.3
	Mar-00	624	<0.5	<0.5	<0.5	1.61	3.87
MW-8	Jun-99	<50	<0.5	<0.5	<0.5	<0.5	88.5
	Sep-99	<50	<0.5	<0.5	<0.5	<0.5	52
	Dec-99	<50	<0.5	<0.5	<0.5	<0.5	47.3
	Mar-00	<50	<0.5	<0.5	<0.5	<0.5	4.65
MW-9	Jun-99	<50	<0.5	<0.5	<0.5	<0.5	<2
	Dec-99	NS	NS	NS	NS	NS	NS
	Mar-00	<50	<0.5	<0.5	<0.5	<0.5	<2.5
MW-10	Jun-99	<50	<0.5	<0.5	<0.5	<0.5	<2
	Sep-99	<50	<0.5	<0.5	<0.5	<0.5	<2.5
	Dec-99	<50	<0.5	<0.5	<0.5	<0.5	46.5
	Mar-00	52.7	<0.5	<0.5	<0.5	<0.5	<2.5

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-11	Jun-99	91	0.7	2.0	1.1	2.6	<2
	Sep-99	<50	<0.5	<0.5	<0.5	<0.5	<2.5
	Dec-99	<50	<0.5	<0.5	<0.5	<0.5	<2.5
	Mar-00	<50	<0.5	<0.5	<0.5	<0.5	<2.5
MW-12	Jun-99	<50	<0.5	<0.5	<0.5	<0.5	<2
	Sep-99	<50	<0.5	<0.5	<0.5	<0.5	<2.5
	Dec-99	<50	<0.5	<0.5	<0.5	<0.5	<2.5
	Mar-00	<50	<0.5	<0.5	<0.5	<0.5	<2.5
MW-13	Jul-99	214	42.8	<0.5	4.5	<0.5	332
	Sep-99	<100	5.8	<1	<1	<1	160
	Dec-99	71	6.7	<0.5	1.4	<0.5	132
	Mar-00	<50	2.32	<0.5	<0.5	<0.5	53.5
D-1	Jun-99	<50	<0.5	<0.5	<0.5	<0.5	<2
	Sep-99	<50	<0.5	<0.5	<0.5	<0.5	<2.5
	Dec-99	<50	<0.5	<0.5	<0.5	<0.5	<2.5
	Mar-00	<50	<0.5	<0.5	<0.5	<0.5	<2.5
D-2	Jun-99	<50	<0.5	<0.5	<0.5	<0.5	<2
	Sep-99	<50	<0.5	<0.5	<0.5	<0.5	<2.5
	Dec-99	<50	<0.5	<0.5	<0.5	<0.5	<2.5
	Mar-00	<50	<0.5	<0.5	<0.5	<0.5	<2.5
(MS)MW-1	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**
	Jun-99	NS**	NS**	NS**	NS**	NS**	NS**
	Dec-99	661	9.7	3.5	21.7	31.1	7.2
	Mar-00	NS**	NS**	NS**	NS**	NS**	NS**

ug/l = micrograms per liter
TPH-G = total petroleum hydrocarbons as gasoline
MTBE = methyl tertiary-butyl ether
MS = Mill Springs Park
NA= not analyzed NS= not sampled
* = well inaccessible ** = free product hydrocarbon present
ND = not detected above reporting limit, limit not available
< = less than method reporting limit

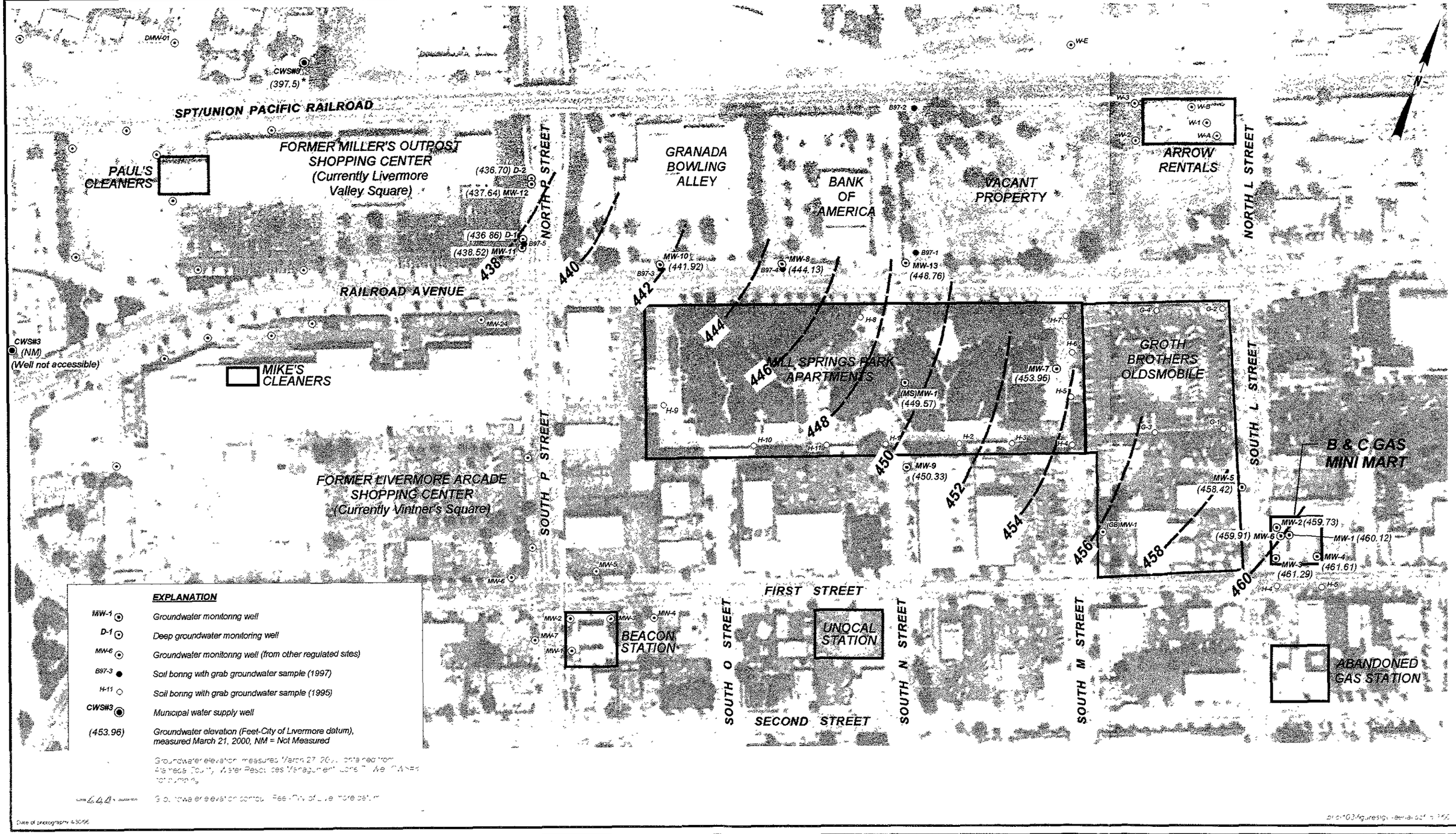


Base map: USGS 7.5' topography, Livermore, California (1961; photorevised 1980)

SCALE: 0 2,000 4,000 FEET

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

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



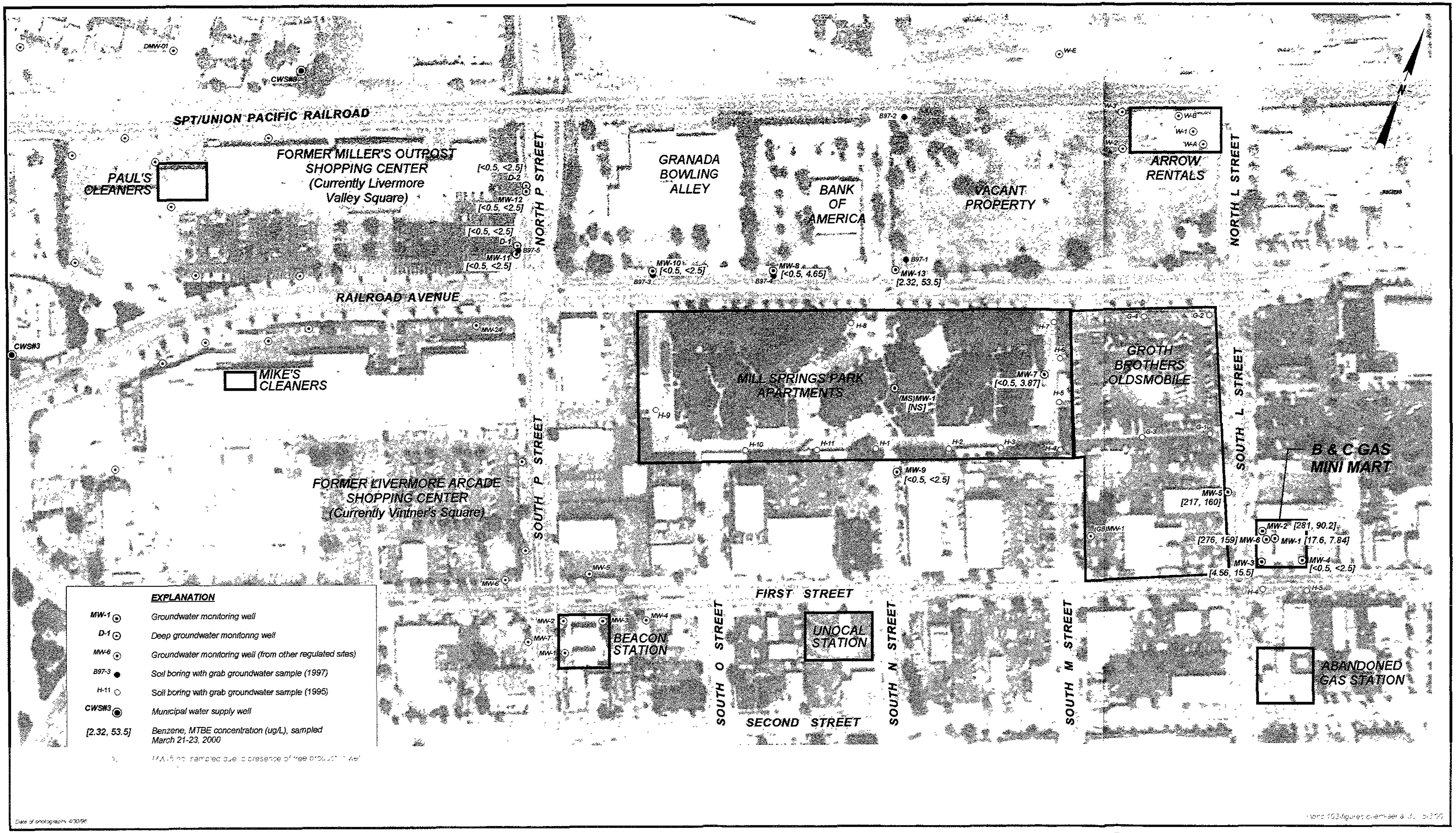
SCALE 0 200 400 FEET
(APPROXIMATE)

GROUNDWATER MONITORING
B & C GAS MINI MART
LIVERMORE CALIFORNIA

WELL LOCATIONS AND GROUNDWATER CONTOURS (MARCH 2000)

FIGURE 2

PROJECT NO BNC103


SPT/UNION PACIFIC RAILROAD
FORMER MILLER'S OUTPOST SHOPPING CENTER
(Currently Livermore Valley Square)
PAUL'S CLEANERS
GRANADA BOWLING ALLEY
BANK OF AMERICA
VACANT PROPERTY
ARROW RENTALS
NORTH P STREET
NORTH L STREET
RAILROAD AVENUE
MIKE'S CLEANERS
MILL SPRINGS PARK APARTMENTS
GROTH BROTHERS OLDSMOBILE
B & C GAS MINI MART
FORMER LIVERMORE ARCADE SHOPPING CENTER
(Currently Vintner's Square)
SOUTH P STREET
SOUTH L STREET
FIRST STREET
SECOND STREET
SOUTH O STREET
SOUTH N STREET
SOUTH M STREET
BEACON STATION
UNOCAL STATION
ABANDONED GAS STATION
MW-12 [<0.5, <2.5]
D-2 [<0.5, <2.5]
D-1 [<0.5, <2.5]
MW-11 [<0.5, <2.5]
MW-10 [<0.5, <2.5]
MW-8 [<0.5, 4.65]
MW-13 [2.32, 53.5]
MW-7 [<0.5, 3.87]
(MS)MW-1 [NS]
MW-9 [<0.5, <2.5]
MW-5 [217, 160]
MW-2 [281, 90.2]
[276, 159] MW-6
MW-1 [17.6, 7.84]
MW-3 [4.56, 15.5]
MW-4 [<0.5, <2.5]
CWS#3
N
EXPLANATION
MW-1 Groundwater monitoring well
D-1 Deep groundwater monitoring well
MW-6 Groundwater monitoring well (from other regulated sites)
B97-3 Soil boring with grab groundwater sample (1997)
H-11 Soil boring with grab groundwater sample (1995)
CWS#3 Municipal water supply well
[2.32, 53.5] Benzene, MTBE concentration (ug/L), sampled March 21-23, 2000

SCALE 0 200 400 FEET

(APPROXIMATE)

GROUNDWATER MONITORING
B & C GAS MINI MART
LIVERMORE, CALIFORNIA

GROUNDWATER CHEMISTRY (MARCH 2000)

FIGURE
3

PROJECT NO.
BNC103

APPENDIX A

WATER SAMPLE FIELD DATA SHEETS
AND CERTIFIED ANALYTICAL REPORT

WATER LEVEL DATA SHEET

Conor Pacific/EFW

Project: B&C Gas Mini Mart

Project No.: BNC103

Date(s): 3/21/00

Name: RPark

Weather: Sunny, Windy Sounder #: KECK, 350'

Well	Date	DTFP (TOC)	DTW (TOC)	Total Depth	Meas. By	Comments
MW-1	3/21/00	ND	23.95	75.5	MW	
MW-2			24.13	56.1		
MW-3			22.95	57.2		9/16"
MW-4			23.43	59.9		
MW-5			23.55			15/16"
MW-6			24.02	(28.7)*		*Obstructed.
MW-7			24.10	49.3		9/16"
MW-8			29.10	54.6		
MW-9			26.75	44.0		
MW-10			29.50	53.9		
MW-11			26.41	40.9		
MW-12			20.70	43.3		9/16"
MW-13			26.03	54.3		
D-1			27.84	124.3		
D-2			20.91	111.4		
MS MW01			28.22	59.5		
						All locks 0909

Conor Pacific

EFW

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 1 Surface Water ____ Leachate ____ Treatment System ____ Other ____
CASING DIAMETER (OD-inches): 3/4 ____ 1 ____ 2 1 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): 75.5
Depth to Water (ft): 23.97
Height of Water Column (ft): 51.53
Volume in Casing (gal): 8.8
Calculated Purge (volumes / gal.): 8.8
Actual Pre-Sampling Purge (gal): 9.0

PURGE:
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____
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)	Elec. Conductivity (µmhos/cm)	pH (std. units)	Color (visual)	Turbidity (visual)	Other	Observation
1553	3.0	21.0	994	7.15	lt brown	moderate		
1557	6.0	20.5	993	7.17	↓	↓		
1602	9.0	20.3	995	7.20				

Purge Date: 3/22/00

SAMPLE:
Device (Depth of Intake from TOC): S.S. Bailer____ Teflon Bailer____ PVC Bailer____ Disp. Bailer (70')
PVC Hand Pump ____ Peristaltic Pump ____ Centrifugal Pump ____ Bladder Pump ____
Pneumatic Displacement Pump____ Electric Submersible Pump____ Dedicated____ Other____

Time (2400 Hr)	Temp. (°C)	Electical Conductivity (µmhos/cm)	pH (std. units)	Dissolved Oxygen (mg/l)	Color (visual)	Turbidity (NTU)	Other
1610	20.4	1040	7.21	3.04	lt brown	485	

Sheen: none Odor: light Sample Date: 3/22/00

Field Measurement Devices: Horiba X Omega ____ QuickCheck ____ D.O. Test Kit ____
REMARKS: 1 Casing Volume Purge.

SIGNATURE: [signature] **DATE:** 3/22/00

M:\FORMS\SAMPLING\WTRSMPL2000.DOC

Conor Pacific

EFW

WATER SAMPLE FIELD DATA

LOCATION: B&C Gas Mini Mart
SAMPLE ID: MW-2
PROJECT NO: BNC103
SAMPLED BY: R Pumr
CLIENT: B&C Gas Mini Mart
REGULATORY AGENCY: _____
SAMPLE TYPE: Groundwater l Surface Water _____ Leachate _____ Treatment System _____ Other _____
CASING DIAMETER (OD-inches): 3/4 ___ 1 ___ 2 ___ 4 l 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): 56.1	Volume in Casing (gal): 21.2
Depth to Water (ft): 24.00	Calculated Purge (volumes / gal.): 21.2
Height of Water Column (ft): 32.10	Actual Pre-Sampling Purge (gal): 22.0

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: drummed
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
1250	7.5	20.3	948	6.79	lt.gray	moderate		mod. sheen
1256	15.0	20.3	953	6.83	↓	↓		↓
1302	22.0	20.2	953	6.84	↓	↓		↓

Purge Date: 3/23/00

SAMPLE:
Device (Depth of Intake from TOC): S.S. Bailer _____ Teflon Bailer _____ PVC Bailer _____ Disp. Bailer (51')
PVC Hand Pump _____ Peristaltic Pump _____ Centrifugal Pump _____ Bladder Pump _____
Pneumatic Displacement Pump _____ Electric Submersible Pump _____ Dedicated _____ Other _____

Time (2400 Hr)	Temp. (°C)	Electical Conductivity (µmhos/cm)	pH (std. units)	Dissolved Oxygen (mg/l)	Color (visual)	Turbidity (NTU)	Other
1309	20.1	968	6.99	1.48	lt.gray	236	

Sheen: moderate Odor: strong Sample Date: 3/23/00

Field Measurement Devices: Horiba l Omega ___ QuickCheck ___ D.O. Test Kit ___
REMARKS: Removed, discarded 1"Ø PVC pipe from well. 1 Casing Volume purge.

SIGNATURE: _____ **DATE:** 3/23/00

Conor Pacific

EFW

WATER SAMPLE FIELD DATA

LOCATION: B&C Gas Mini Mart
SAMPLE ID: MW-3
PROJECT NO: BNC103
SAMPLED BY: R Pine
CLIENT: B&C Gas Mini Mart
REGULATORY AGENCY:
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): 57.2	Volume in Casing (gal): ~~4.6~~ 22.6
Depth to Water (ft): 23.04	Calculated Purge (volumes / gal.): 22.6
Height of Water Column (ft): 34.16	Actual Pre-Sampling Purge (gal): 23.0

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: Drummed
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
1153	8.0	20.1	1040	7.08	lt. brown	moderate		Spotty sheen
1158	16.0	19.9	1050	7.09	↓	high		
1203	23.0	19.7	1010	7.10	↓	↓		

Purge Date: 3/23/00

SAMPLE:
Device (Depth of Intake from TOC): S.S. Bailer____ Teflon Bailer____ PVC Bailer____ Disp. Bailer (52')
PVC Hand Pump ____ Peristaltic Pump ____ Centrifugal Pump ____ Bladder Pump ____
Pneumatic Displacement Pump____ Electric Submersible Pump____ Dedicated____ Other____

Time (2400 Hr)	Temp. (°C)	Electical Conductivity (µmhos/cm)	pH (std. units)	Dissolved Oxygen (mg/l)	Color (visual)	Turbidity (NTU)	Other
1210	19.8	971	7.08	2.38	lt. brown	>999	

Sheen: slight spotty Odor: moderate/strong Sample Date: 3/23/00

Field Measurement Devices: Horiba ✓ Omega ____ QuickCheck ____ D.O. Test Kit ____
REMARKS: Removed, discarded 1" ϕ pipe from well. 1 casing volume purge.

SIGNATURE: [signature] **DATE:** 3/23/00

Conor Pacific

EFW

WATER SAMPLE FIELD DATA

LOCATION: B&C Gas Mini Mart
SAMPLE ID: MW-4
PROJECT NO: BNC103
SAMPLED BY: R Pant
CLIENT: B&C Gas Mini Mart
REGULATORY AGENCY:
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): 59.9	Volume in Casing (gal): 24.1
Depth to Water (ft): 23.46	Calculated Purge (volumes / gal.): 72.3
Height of Water Column (ft): 36.44	Actual Pre-Sampling Purge (gal): 73.0

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 (50') Dedicated____ 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)	Elec. Conductivity (µmhos/cm)	pH (std. units)	Color (visual)	Turbidity (visual)	Other	Observation
1406	25.0	20.7	981	7.15	lt.brown	tint low		
1416	49.0	20.8	982	7.14	colorless	trace		
1425	73.0	20.8	983	7.13	↓	↓		

Purge Date: 3/22/00

SAMPLE:
Device (Depth of Intake from TOC): S.S. Bailer____ Teflon Bailer____ PVC Bailer____ Disp. Bailer (55')
PVC Hand Pump ____ Peristaltic Pump ____ Centrifugal Pump ____ Bladder Pump ____
Pneumatic Displacement Pump____ Electric Submersible Pump____ Dedicated____ Other____

Time (2400 Hr)	Temp. (°C)	Electical Conductivity (µmhos/cm)	pH (std. units)	Dissolved Oxygen (mg/l)	Color (visual)	Turbidity (NTU)	Other
1432	20.8	985	7.16	6.14	lt.brown tint	83	

Sheen: none Odor: none Sample Date: 3/22/00

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

REMARKS:

SIGNATURE: _____ **DATE:** 3/22/00

Conor Pacific

EFW

WATER SAMPLE FIELD DATA

LOCATION: B&C Gas Mini Mart
SAMPLE ID: MW-5
PROJECT NO: BNC 103
SAMPLED BY: R Pace
CLIENT: B&C Gas Mini Mart
REGULATORY AGENCY:
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): 39.7	Volume in Casing (gal): 10.7
Depth to Water (ft): 23.61	Calculated Purge (volumes / gal.): 10.7
Height of Water Column (ft): 16.09	Actual Pre-Sampling Purge (gal): 11.0

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: drummed
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
1105	4.0	20.0	938	6.73	lt brown	low		
1109	7.5	20.2	943	6.74	lt brown/tint	↓		
1114	11.0	20.2	944	6.78	↓	↓		

Purge Date: 3/23/00

SAMPLE:
Device (Depth of Intake from TOC): S.S. Bailer____ Teflon Bailer____ PVC Bailer____ Disp. Bailer (35')
PVC Hand Pump ____ Peristaltic Pump ____ Centrifugal Pump ____ Bladder Pump ____
Pneumatic Displacement Pump____ Electric Submersible Pump____ Dedicated____ Other____

Time (2400 Hr)	Temp. (°C)	Electical Conductivity (µmhos/cm)	pH (std. units)	Dissolved Oxygen (mg/l)	Color (visual)	Turbidity (NTU)	Other
1120	20.2	1020	6.86	1.22	colorless	92	

Sheen: none Odor: moderate/strong Sample Date: 3/23/00

Field Measurement Devices: Horiba ✓ Omega ____ QuickCheck ____ D.O. Test Kit ____
REMARKS: 1 Casing volume purge. Absorbent sock cage hanging just below cap.

SIGNATURE: [signature] **DATE:** 3/23/00

Conor Pacific

EFW

WATER SAMPLE FIELD DATA

LOCATION: B&C Gas Mini Mart
SAMPLE ID: MW-6
PROJECT NO: BNC103
SAMPLED BY: R Park
CLIENT: B&C Gas Mini Mart
REGULATORY AGENCY:
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): 40.0	Volume in Casing (gal): ~~BMA~~ 10.6
Depth to Water (ft): 24.00	Calculated Purge (volumes / gal.): 10.6
Height of Water Column (ft): 16.00	Actual Pre-Sampling Purge (gal): 11.0

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: Drummed
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
1630	4.0	20.8	919	6.73	lt. yellow/brown	low		
1633	7.5	20.5	919	6.75	↓	↓		
1636	11.0	20.5	918	6.76				

Purge Date: 3/22/00

SAMPLE:
Device (Depth of Intake from TOC): S.S. Bailer____ Teflon Bailer____ PVC Bailer____ Disp. Bailer (20')
PVC Hand Pump ____ Peristaltic Pump ____ Centrifugal Pump ____ Bladder Pump ____
Pneumatic Displacement Pump____ Electric Submersible Pump____ Dedicated____ Other____

Time (2400 Hr)	Temp. (°C)	Electical Conductivity (µmhos/cm)	pH (std. units)	Dissolved Oxygen (mg/l)	Color (visual)	Turbidity (NTU)	Other
1642	20.7	922	6.76	1.52	lt. brown tint	120	

Sheen: ~~none~~ moderate Odor: Strong Sample Date: 3/22/00

Field Measurement Devices: Horiba ✓ Omega ____ QuickCheck ____ D.O. Test Kit ____
REMARKS: Casing volume purge. Well obstructed at 20.7'.

SIGNATURE: [signature] **DATE:** 3/22/00

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Conor Pacific

EFW

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 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): 49.3
Volume in Casing (gal): 4.3
Depth to Water (ft): 24.31
Calculated Purge (volumes / gal.): 12.8
Height of Water Column (ft): 24.99
Actual Pre-Sampling Purge (gal): 13.0

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: drummed
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
1021	4.5	19.1	938	7.08	lt.brown	high		
1025	9.0	19.2	938	7.07	↓	↓		
1030	13.0	19.2	939	7.09				

Purge Date: 3/23/00

SAMPLE:
Device (Depth of Intake from TOC): S.S. Bailer____ Teflon Bailer____ PVC Bailer____ Disp. Bailer (45')
PVC Hand Pump ____ Peristaltic Pump ____ Centrifugal Pump ____ Bladder Pump ____
Pneumatic Displacement Pump____ Electric Submersible Pump____ Dedicated____ Other____

Time (2400 Hr)	Temp. (°C)	Electical Conductivity (µmhos/cm)	pH (std. units)	Dissolved Oxygen (mg/l)	Color (visual)	Turbidity (NTU)	Other
1037	19.5	941	7.07	4.01	lt.brown	>999	

Sheen: none Odor: light Sample Date: 3/23/00

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

REMARKS:

Calibrated meter 750, 3/23/00: pH: 7.02, 10.05; EC: 0, 2000; turb: 0; DO: auto; T: 19.6°C

SIGNATURE: [signature] **DATE:** 3/23/00

Conor Pacific

EFW

WATER SAMPLE FIELD DATA

LOCATION: B & C Gas Mini Mart
SAMPLE ID: MW-8
PROJECT NO: BNC 103
SAMPLED BY: R Pare
CLIENT: B & C Gas Mini Mart
REGULATORY AGENCY:
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): 54.6	Volume in Casing (gal): 4.4
Depth to Water (ft): 29.10	Calculated Purge (volumes / gal.): 13.0
Height of Water Column (ft): 25.50	Actual Pre-Sampling Purge (gal): 13.0

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: Drummed
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
1615	4.5	20.0	961	7.05	lt. brown	high		
1621	9.0	19.7	963	7.07	↓	↓		
1624	13.0	19.5	964	7.11				

Purge Date: 3/21/00

SAMPLE:
Device (Depth of Intake from TOC): S.S. Bailer ____ Teflon Bailer ____ PVC Bailer ____ Disp. Bailer (50')
PVC Hand Pump ____ Peristaltic Pump ____ Centrifugal Pump ____ Bladder Pump ____
Pneumatic Displacement Pump ____ Electric Submersible Pump ____ Dedicated ____ Other ____

Time (2400 Hr)	Temp. (°C)	Electical Conductivity (µmhos/cm)	pH (std. units)	Dissolved Oxygen (mg/l)	Color (visual)	Turbidity (NTU)	Other
1631	19.6	964	7.10	3.32	lt. brown	>999	

Sheen: none Odor: none Sample Date: 3/21/00

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

REMARKS:

SIGNATURE: _____ **DATE:** 3/21/00

Conor Pacific

EFW

WATER SAMPLE FIELD DATA

LOCATION: B&C Gas Mini Mart
SAMPLE ID: MW-9
PROJECT NO: BNC103
SAMPLED BY: RPark
CLIENT: B&C Gas Mini Mart
REGULATORY AGENCY:
SAMPLE TYPE: Groundwater 1 Surface Water ____ Leachate ____ Treatment System ____ Other ____
CASING DIAMETER (OD-inches): 3/4 ____ 1 ____ 2 1 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): 44.0
Depth to Water (ft): 26.75
Height of Water Column (ft): 17.25
Volume in Casing (gal): 3.0
Calculated Purge (volumes / gal.): 8.0
Actual Pre-Sampling Purge (gal): 9.0

PURGE:
Device (Depth of Intake from TOC): S.S. Bailer____ Teflon Bailer____ PVC Bailer 1 Disp. Bailer____
PVC Hand Pump ____ Peristaltic Pump ____ Centrifugal Pump ____ Bladder Pump ____
Pneumatic Displacement Pump____ Electric Submersible Pump____ Dedicated____ 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)	Elec. Conductivity (µmhos/cm)	pH (std. units)	Color (visual)	Turbidity (visual)	Other	Observation
1500	3.0	20.0	933	7.16	lt brown	high		
1503	6.0	20.0	942	7.18	↓	↓		
1507	9.0	19.8	946	7.25				

Purge Date: 3/21/00

SAMPLE:
Device (Depth of Intake from TOC): S.S. Bailer____ Teflon Bailer____ PVC Bailer____ Disp. Bailer(40')
PVC Hand Pump ____ Peristaltic Pump ____ Centrifugal Pump ____ Bladder Pump ____
Pneumatic Displacement Pump____ Electric Submersible Pump____ Dedicated____ Other____

Time (2400 Hr)	Temp. (°C)	Electical Conductivity (µmhos/cm)	pH (std. units)	Dissolved Oxygen (mg/l)	Color (visual)	Turbidity (NTU)	Other
1515	20.1	937	7.28	5.96	lt brown	>999	

Sheen: none Odor: none Sample Date: 3/21/00

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

REMARKS:

Calibrated with 1450, 3/21/00: pH: 7.0 7 9.00; EC: 0, 2060; turb: 0; DO: auto; T: 21.1°C

SIGNATURE: [signature] **DATE:** 3/21/00

Conor Pacific

EFW

WATER SAMPLE FIELD DATA

LOCATION: B&C Gas Mini Mart
SAMPLE ID: MW-10
PROJECT NO: BNC 103
SAMPLED BY: R Pine
CLIENT: B&C Gas Mini Mart
REGULATORY AGENCY:

SAMPLE TYPE: Groundwater 1 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)	1 (0.17)	(0.66)	(0.83)	(1.5)	(2.6)	

Well Total Depth (ft): 53.9
Depth to Water (ft): 29.50
Height of Water Column (ft): 24.40
Volume in Casing (gal): 4.2
Calculated Purge (volumes / gal.): 12.5
Actual Pre-Sampling Purge (gal): 12.5

PURGE:

Device (Depth of Intake from TOC): S.S. Bailer____ Teflon Bailer____ PVC Bailer 1 Disp. Bailer____
PVC Hand Pump ____ Peristaltic Pump ____ Centrifugal Pump ____ Bladder Pump ____
Pneumatic Displacement Pump____ Electric Submersible Pump____ Dedicated____ 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)	Elec. Conductivity (µmhos/cm)	pH (std. units)	Color (visual)	Turbidity (visual)	Other	Observation
1650	4.5	19.4	923	7.04	lt.brown	high		
1702	8.5	19.2	926	7.04	↓	↓		
1704	12.5	19.1	927	7.06				

Purge Date: 3/21/00

SAMPLE:

Device (Depth of Intake from TOC): S.S. Bailer____ Teflon Bailer____ PVC Bailer____ Disp. Bailer (50')
PVC Hand Pump ____ Peristaltic Pump ____ Centrifugal Pump ____ Bladder Pump ____
Pneumatic Displacement Pump____ Electric Submersible Pump____ Dedicated____ Other____

Time (2400 Hr)	Temp. (°C)	Electical Conductivity (µmhos/cm)	pH (std. units)	Dissolved Oxygen (mg/l)	Color (visual)	Turbidity (NTU)	Other
1712	19.1	925	7.06	4.32	lt.brown	523	

Sheen: none Odor: none Sample Date: 3/21/00

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

REMARKS:

SIGNATURE: [signature] **DATE:** 3/21/00

Conor Pacific

EFW

WATER SAMPLE FIELD DATA

LOCATION: B&C Gas Mini Mart
SAMPLE ID: MW-11
PROJECT NO: BNC103
SAMPLED BY: RVan
CLIENT: B&C Gas Mini Mart
REGULATORY AGENCY:
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): 40.9
Depth to Water (ft): 20.49
Height of Water Column (ft): 22.41
Volume in Casing (gal): 3.9
Calculated Purge (volumes / gal.): 11.5
Actual Pre-Sampling Purge (gal): 11.5

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: Drummed
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
1215	4.0	20.8	922	7.03	lt brown	high		
1219	8.0	20.6	926	7.02	↓	↓		
1222	11.5	20.5	926	7.05				

Purge Date: 3/22/00

SAMPLE:
Device (Depth of Intake from TOC): S.S. Bailer____ Teflon Bailer____ PVC Bailer____ Disp. Bailer (45')
PVC Hand Pump ____ Peristaltic Pump ____ Centrifugal Pump ____ Bladder Pump ____
Pneumatic Displacement Pump____ Electric Submersible Pump____ Dedicated____ Other____

Time (2400 Hr)	Temp. (°C)	Electical Conductivity (µmhos/cm)	pH (std. units)	Dissolved Oxygen (mg/l)	Color (visual)	Turbidity (NTU)	Other
1229	20.6	920	7.05	4.64	lt brown	>999	

Sheen: none Odor: none Sample Date: 3/22/00

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

REMARKS: Some small brown floating globules in sample bailer, poured into VOAs. After ~5 minutes, could not locate globules in VOAs, probably not product.

SIGNATURE: [signature] **DATE:** 3/22/00

Conor Pacific

EFW

WATER SAMPLE FIELD DATA

LOCATION: B&C Gas Mini Mart
SAMPLE ID: MW-12
PROJECT NO: BNC103
SAMPLED BY: R Pane
CLIENT: B&C Gas Mini Mart
REGULATORY AGENCY: _____

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): ~~43.3~~ 43.3	Volume in Casing (gal): ~~5.1~~ 3.9
Depth to Water (ft): 20.79 ✓	Calculated Purge (volumes / gal.): ~~17.1~~ 11.5
Height of Water Column (ft): ~~22.51~~ 22.51	Actual Pre-Sampling Purge (gal): 11.5

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: drummed
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
1053	4.0	20.1	940	6.91	lt. brown	high		
1057	8.0	20.0	943	6.90	↓	↓		
1100	11.5	19.9	942	6.94	↓	↓		

Purge Date: 3/22/00

SAMPLE:
Device (Depth of Intake from TOC): S.S. Bailer_____ Teflon Bailer_____ PVC Bailer_____ Disp. Bailer ~~40~~ (~~50~~')
PVC Hand Pump _____ Peristaltic Pump _____ Centrifugal Pump _____ Bladder Pump _____
Pneumatic Displacement Pump_____ Electric Submersible Pump_____ Dedicated_____ Other_____

Time (2400 Hr)	Temp. (°C)	Electical Conductivity (µmhos/cm)	pH (std. units)	Dissolved Oxygen (mg/l)	Color (visual)	Turbidity (NTU)	Other
1107	20.0	941	6.91	0.21	lt. brown	>999	

Sheen: none Odor: none Sample Date: 3/22/00

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

REMARKS:

Calibrated mtr 1040, 3/22/00: pH: 7.02, ~~4.0~~ 10.05; EC: 0.2000; turb: 0; DO: auto; T: 20.1°C

SIGNATURE: _____ **DATE:** 3/22/00

Conor Pacific

EFW

WATER SAMPLE FIELD DATA

LOCATION: B&C Gas Minimart — SAMPLE ID: MW-13
PROJECT NO: BNL103 — SAMPLED BY: RPark
CLIENT: B&C Gas Mini Mart — REGULATORY AGENCY:
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): 54.3 — Volume in Casing (gal): 4.9
Depth to Water (ft): 26.03 — Calculated Purge (volumes / gal.): 14.5
Height of Water Column (ft): 28.27 — Actual Pre-Sampling Purge (gal): 14.5

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: Drummed
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
1540	5.0	20.1	939	7.23	H.brown	high		
1544	10.0	19.8	946	7.23	↓	↓		
1549	14.5	19.7	952	7.26				

Purge Date: 3/21/00

SAMPLE:
Device (Depth of Intake from TOC): S.S. Bailer____ Teflon Bailer____ PVC Bailer____ Disp. Bailer (50')
PVC Hand Pump ____ Peristaltic Pump ____ Centrifugal Pump ____ Bladder Pump ____
Pneumatic Displacement Pump____ Electric Submersible Pump____ Dedicated____ Other____

Time (2400 Hr)	Temp. (°C)	Electical Conductivity (µmhos/cm)	pH (std. units)	Dissolved Oxygen (mg/l)	Color (visual)	Turbidity (NTU)	Other
1557	20.0	951	7.24	2.85	H.brown	>999	

Sheen: none — Odor: none — Sample Date: 3/21/00

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

REMARKS: ____

SIGNATURE: [signature] **DATE:** 3/21/00

Conor Pacific

EFW

WATER SAMPLE FIELD DATA

LOCATION: B&C Gas Mini Mart
SAMPLE ID: D-1
PROJECT NO: BNC103
SAMPLED BY: R Pauc
CLIENT: B&C Gas Mini Mart
REGULATORY AGENCY:
SAMPLE TYPE: Groundwater ℓ Surface Water ____ Leachate ____ Treatment System ____ Other ____
CASING DIAMETER (OD-inches): 3/4 ____ 1 ____ 2 ℓ 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): 124.3	Volume in Casing (gal): 16.4
Depth to Water (ft): 28.37	Calculated Purge (volumes / gal.): 49.0
Height of Water Column (ft): 95.93	Actual Pre-Sampling Purge (gal): 49.0

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 (105') Dedicated____ 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)	Elec. Conductivity (µmhos/cm)	pH (std. units)	Color (visual)	Turbidity (visual)	Other	Observation
1253	16.5	20.4	942	7.34	lt.brown	high		
1300	33.0	20.1	943	7.36	↓	low		
1307	49.0	20.0	980	7.37	lt.brown tint	↓		

Purge Date: 3/22/00

SAMPLE:
Device (Depth of Intake from TOC): S.S. Bailer____ Teflon Bailer____ PVC Bailer____ Disp. Bailer (110')
PVC Hand Pump ____ Peristaltic Pump ____ Centrifugal Pump ____ Bladder Pump ____
Pneumatic Displacement Pump____ Electric Submersible Pump____ Dedicated____ Other____

Time (2400 Hr)	Temp. (°C)	Electical Conductivity (µmhos/cm)	pH (std. units)	Dissolved Oxygen (mg/l)	Color (visual)	Turbidity (NTU)	Other
1345	19.0	945	7.39	7.16	lt.brown	>999	

Sheen: none Odor: none Sample Date: 3/22/00

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

REMARKS:

SIGNATURE: _____ **DATE:** 3/22/00

Conor Pacific

EFW

WATER SAMPLE FIELD DATA

LOCATION: B&C Gas Mini Mart
SAMPLE ID: D-2
PROJECT NO: BNC103
SAMPLED BY: RVan
CLIENT: B&C Gas Mini Mart
REGULATORY AGENCY:
SAMPLE TYPE: Groundwater 1 Surface Water ____ Leachate ____ Treatment System ____ Other ____
CASING DIAMETER (OD-inches): 3/4 ____ 1 ____ 2 1 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): 111.4
Volume in Casing (gal): 15.3
Depth to Water (ft): 21.43
Calculated Purge (volumes / gal.): 45.9
Height of Water Column (ft): 89.97
Actual Pre-Sampling Purge (gal): 46.0

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 (95') Dedicated____ 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)	Elec. Conductivity (µmhos/cm)	pH (std. units)	Color (visual)	Turbidity (visual)	Other	Observation
1124	15.5	20.0	945	7.36	lt. brown	moderate		
1131	31.0	19.9	945	7.37	↓	low		
1138	46.0	19.9	945	7.37	lt. brown tint	↓		

Purge Date: 3/22/00

SAMPLE:
Device (Depth of Intake from TOC): S.S. Bailer____ Teflon Bailer____ PVC Bailer____ Disp. Bailer (105')
PVC Hand Pump ____ Peristaltic Pump ____ Centrifugal Pump ____ Bladder Pump ____
Pneumatic Displacement Pump____ Electric Submersible Pump____ Dedicated____ Other____

Time (2400 Hr)	Temp. (°C)	Electical Conductivity (µmhos/cm)	pH (std. units)	Dissolved Oxygen (mg/l)	Color (visual)	Turbidity (NTU)	Other
1145	19.9	946	7.37	7.04	lt. brown	>999	

Sheen: none Odor: none Sample Date: 3/22/00

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

REMARKS: ____

SIGNATURE: ____ **DATE:** 3/22/00

Conor Pacific

EFW

WATER SAMPLE FIELD DATA

LOCATION: B&C Gas Mini Mart
SAMPLE ID: MS MW01
PROJECT NO: BNC103
SAMPLED BY: F Pane
CLIENT: B&C Gas Mini Mart
REGULATORY AGENCY:
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): 59.5
Depth to Water (ft): 20.22
Height of Water Column (ft): 31.28
Volume in Casing (gal): 5.4
Calculated Purge (volumes / gal.): 16.0
Actual Pre-Sampling Purge (gal): 1.0

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: drummed
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
	5.5							

Purge Date: 3/21/00

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)	Electical Conductivity (µmhos/cm)	pH (std. units)	Dissolved Oxygen (mg/l)	Color (visual)	Turbidity (NTU)	Other

Sheen: ____ Odor: ____ Sample Date: ____

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

REMARKS: Brown product globules in bailer from 3rd and 4th bails. End purge. No samples collected.

SIGNATURE: ____ **DATE:** 3/21/00

Sequoia Analytical

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April 4, 2000

Kris Johnson
Conor Pacific / EFW
2650 East Bayshore Rd.
Palo Alto, CA 94303

RE: B&C Gas Mini Mart/P003605

Dear Kris Johnson

Enclosed are the results of analyses for sample(s) received by the laboratory on March 24, 2000. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Michelle M. Portis
Project Manager

CA ELAP Certificate Number 2374

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Conor Pacific / EFW	Project:	B&C Gas Mini Mart	Sampled: 3/21/00 to 3/23/00
2650 East Bayshore Rd.	Project Number:	BNC103	Received: 3/24/00
Palo Alto, CA 94303	Project Manager:	Kris Johnson	Reported: 4/4/00

ANALYTICAL REPORT FOR P003605

Sample Description	Laboratory Sample Number	Sample Matrix	Date Sampled
MW-1	P003605-01	Water	3/22/00
MW-2	P003605-02	Water	3/23/00
MW-3	P003605-03	Water	3/23/00
MW-4	P003605-04	Water	3/22/00
MW-5	P003605-05	Water	3/23/00
MW-6	P003605-06	Water	3/22/00
MW-7	P003605-07	Water	3/23/00
MW-8	P003605-08	Water	3/21/00
MW-9	P003605-09	Water	3/21/00
MW-10	P003605-10	Water	3/21/00
MW-11	P003605-11	Water	3/22/00
MW-12	P003605-12	Water	3/22/00
MW-13	P003605-13	Water	3/21/00
D-1	P003605-14	Water	3/22/00
D-2	P003605-15	Water	3/22/00

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Conor Pacific / EFW	Project:	B&C Gas Mini Mart	Sampled: 3/21/00 to 3/23/00
2650 East Bayshore Rd.	Project Number:	BNC103	Received: 3/24/00
Palo Alto, CA 94303	Project Manager:	Kris Johnson	Reported: 4/4/00

Total Petroleum Hydrocarbons as Gasoline and BTEX by EPA 8015M/8020M
Sequoia Analytical - Petaluma

Analyte	Batch Number	Date Prepared	Date Analyzed	Surrogate Limits	Reporting Limit	Result	Units	Notes*
MW-1			**P003605-01**				**Water**	
Gasoline	0030687	3/29/00	3/29/00		50.0	**300**	ug/l	
Benzene	"	"	"		0.500	**17.6**	"	
Toluene	"	"	"		0.500	**14.2**	"	
Ethylbenzene	"	"	"		0.500	**9.89**	"	
Xylenes (total)	"	"	"		0.500	**40.7**	"	
Methyl tert-butyl ether	"	"	"		2.50	**7.84**	"	
Surrogate: a,a,a-Trifluorotoluene	"	"	"	*65.0-135*		*107*	*%*	
Surrogate: 4-Bromofluorobenzene	"	"	"	*65.0-135*		*88.3*	"	
MW-2			**P003605-02**				**Water**	
Gasoline	0030687	3/29/00	3/29/00		500	**6340**	ug/l	
Benzene	"	"	"		5.00	**281**	"	
Toluene	"	"	"		5.00	**184**	"	
Ethylbenzene	"	"	"		5.00	**233**	"	
Xylenes (total)	"	"	"		5.00	**348**	"	
Methyl tert-butyl ether	"	"	"		25.0	**90.2**	"	
Surrogate: a,a,a-Trifluorotoluene	"	"	"	*65.0-135*		*106*	*%*	
Surrogate: 4-Bromofluorobenzene	"	"	"	*65.0-135*		*92.0*	"	
MW-3			**P003605-03**				**Water**	
Gasoline	0030687	3/29/00	3/29/00		50.0	**465**	ug/l	
Benzene	"	"	"		0.500	**4.56**	"	
Toluene	"	"	"		0.500	**1.87**	"	
Ethylbenzene	"	"	"		0.500	**6.20**	"	
Xylenes (total)	"	"	"		0.500	**7.45**	"	
Methyl tert-butyl ether	"	"	"		2.50	**15.5**	"	
Surrogate: a,a,a-Trifluorotoluene	"	"	"	*65.0-135*		*99.7*	*%*	
Surrogate: 4-Bromofluorobenzene	"	"	"	*65.0-135*		*95.3*	"	
MW-4			**P003605-04**				**Water**	
Gasoline	0030687	3/29/00	3/29/00		50.0	ND	ug/l	
Benzene	"	"	"		0.500	ND	"	
Toluene	"	"	"		0.500	ND	"	
Ethylbenzene	"	"	"		0 500	ND	"	
Xylenes (total)	"	"	"		0.500	ND	"	
Methyl tert-butyl ether	"	"	"		2.50	ND	"	
Surrogate: a,a,a-Trifluorotoluene	"	"	"	*65.0-135*		*106*	*%*	
Surrogate: 4-Bromofluorobenzene	"	"	"	*65.0-135*		*91.3*	"	
MW-5			**P003605-05**				**Water**	
Gasoline	0030687	3/29/00	3/29/00		500	**10700**	ug/l	

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Conor Pacific / EFW	Project:	B&C Gas Mini Mart	Sampled: 3/21/00 to 3/23/00
2650 East Bayshore Rd.	Project Number:	BNC103	Received: 3/24/00
Palo Alto, CA 94303	Project Manager:	Kris Johnson	Reported: 4/4/00

Total Petroleum Hydrocarbons as Gasoline and BTEX by EPA 8015M/8020M
Sequoia Analytical - Petaluma

Analyte	Batch Number	Date Prepared	Date Analyzed	Surrogate Limits	Reporting Limit	Result	Units	Notes*
MW-5 (continued)			**P003605-05**				**Water**	
Benzene	0030687	3/29/00	3/29/00		5.00	**217**	ug/l	
Toluene	"	"	"		5.00	**300**	"	
Ethylbenzene	"	"	"		5.00	**332**	"	
Xylenes (total)	"	"	"		5.00	**1480**	"	
Methyl tert-butyl ether	"	"	"		25.0	**160**	"	
Surrogate: a,a,a-Trifluorotoluene	"	"	"	*65.0-135*		*110*	%	
Surrogate: 4-Bromofluorobenzene	"	"	"	*65.0-135*		*92.0*	"	
MW-6			**P003605-06**				**Water**	
Gasoline	0030687	3/29/00	3/29/00		500	**10100**	ug/l	
Benzene	"	"	"		5.00	**276**	"	
Toluene	"	"	"		5.00	**170**	"	
Ethylbenzene	"	"	"		5.00	**200**	"	
Xylenes (total)	"	"	"		5.00	**673**	"	
Methyl tert-butyl ether	"	"	"		25.0	**159**	"	
Surrogate: a,a,a-Trifluorotoluene	"	"	"	*65.0-135*		*112*	%	
Surrogate: 4-Bromofluorobenzene	"	"	"	*65.0-135*		*93.3*	"	
MW-7			**P003605-07**				**Water**	
Gasoline	0030687	3/29/00	3/29/00		50.0	**624**	ug/l	
Benzene	"	"	"		0.500	ND	"	
Toluene	"	"	"		0.500	ND	"	
Ethylbenzene	"	"	"		0.500	ND	"	
Xylenes (total)	"	"	"		0.500	**1.61**	"	
Methyl tert-butyl ether	"	"	"		2.50	**3.87**	"	
Surrogate: a,a,a-Trifluorotoluene	"	"	"	*65.0-135*		*106*	%	
Surrogate: 4-Bromofluorobenzene	"	"	"	*65.0-135*		*91.7*	"	
MW-8			**P003605-08**				**Water**	
Gasoline	0030687	3/29/00	3/29/00		50.0	ND	ug/l	
Benzene	"	"	"		0.500	ND	"	
Toluene	"	"	"		0.500	ND	"	
Ethylbenzene	"	"	"		0.500	ND	"	
Xylenes (total)	"	"	"		0.500	ND	"	
Methyl tert-butyl ether	"	"	"		2.50	**4.65**	"	
Surrogate: a,a,a-Trifluorotoluene	"	"	"	*65.0-135*		*107*	%	
Surrogate: 4-Bromofluorobenzene	"	"	"	*65.0-135*		*90.0*	"	
MW-9			**P003605-09**				**Water**	
Gasoline	0030687	3/29/00	3/29/00		50.0	ND	ug/l	
Benzene	"	"	"		0.500	ND	"	

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Conor Pacific / EFW	Project:	B&C Gas Mini Mart	Sampled: 3/21/00 to 3/23/00
2650 East Bayshore Rd.	Project Number:	BNC103	Received: 3/24/00
Palo Alto, CA 94303	Project Manager:	Kris Johnson	Reported: 4/4/00

Total Petroleum Hydrocarbons as Gasoline and BTEX by EPA 8015M/8020M
Sequoia Analytical - Petaluma

Analyte	Batch Number	Date Prepared	Date Analyzed	Surrogate Limits	Reporting Limit	Result	Units	Notes*
MW-9 (continued)			**P003605-09**				**Water**	
Toluene	0030687	3/29/00	3/29/00		0.500	ND	ug/l	
Ethylbenzene	"	"	"		0.500	ND	"	
Xylenes (total)	"	"	"		0.500	ND	"	
Methyl tert-butyl ether	"	"	"		2.50	ND	"	
Surrogate: a,a,a-Trifluorotoluene	"	"	"	*65.0-135*		*111*	*%*	
Surrogate: 4-Bromofluorobenzene	"	"	"	*65.0-135*		*92.0*	"	
MW-10			**P003605-10**				**Water**	
Gasoline	0030687	3/29/00	3/29/00		50.0	**52.7**	ug/l	
Benzene	"	"	"		0.500	ND	"	
Toluene	"	"	"		0.500	ND	"	
Ethylbenzene	"	"	"		0.500	ND	"	
Xylenes (total)	"	"	"		0.500	ND	"	
Methyl tert-butyl ether	"	"	"		2.50	ND	"	
Surrogate: a,a,a-Trifluorotoluene	"	"	"	*65.0-135*		*109*	*%*	
Surrogate: 4-Bromofluorobenzene	"	"	"	*65.0-135*		*92.3*	"	
MW-11			**P003605-11**				**Water**	
Gasoline	0030687	3/29/00	3/29/00		50.0	ND	ug/l	
Benzene	"	"	"		0.500	ND	"	
Toluene	"	"	"		0.500	ND	"	
Ethylbenzene	"	"	"		0.500	ND	"	
Xylenes (total)	"	"	"		0.500	ND	"	
Methyl tert-butyl ether	"	"	"		2.50	ND	"	
Surrogate: a,a,a-Trifluorotoluene	"	"	"	*65.0-135*		*110*	*%*	
Surrogate: 4-Bromofluorobenzene	"	"	"	*65.0-135*		*92.3*	"	
MW-12			**P003605-12**				**Water**	
Gasoline	0040007	4/3/00	4/3/00		50.0	ND	ug/l	
Benzene	"	"	"		0.500	ND	"	
Toluene	"	"	"		0.500	ND	"	
Ethylbenzene	"	"	"		0.500	ND	"	
Xylenes (total)	"	"	"		0.500	ND	"	
Methyl tert-butyl ether	"	"	"		2.50	ND	"	
Surrogate: a,a,a-Trifluorotoluene	"	"	"	*65.0-135*		*108*	*%*	
Surrogate: 4-Bromofluorobenzene	"	"	"	*65.0-135*		*91.3*	"	
MW-13			**P003605-13**				**Water**	
Gasoline	0030739	3/30/00	3/30/00		50.0	ND	ug/l	
Benzene	"	"	"		0.500	**2.32**	"	
Toluene	"	"	"		0.500	ND	"	

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Conor Pacific / EFW	Project:	B&C Gas Mini Mart	Sampled: 3/21/00 to 3/23/00
2650 East Bayshore Rd.	Project Number:	BNC103	Received: 3/24/00
Palo Alto, CA 94303	Project Manager:	Kris Johnson	Reported: 4/4/00

Total Petroleum Hydrocarbons as Gasoline and BTEX by EPA 8015M/8020M
Sequoia Analytical - Petaluma

Analyte	Batch Number	Date Prepared	Date Analyzed	Surrogate Limits	Reporting Limit	Result	Units	Notes*
MW-13 (continued)			**P003605-13**				**Water**	
Ethylbenzene	0030739	3/30/00	3/30/00		0.500	ND	ug/l	
Xylenes (total)	"	"	"		0.500	ND	"	
Methyl tert-butyl ether	"	"	"		2.50	**53.5**	"	
Surrogate: a,a,a-Trifluorotoluene	"	"	"	*65.0-135*		*105*	%	
Surrogate: 4-Bromofluorobenzene	"	"	"	*65.0-135*		*92.7*	"	
D-1			**P003605-14**				**Water**	
Gasoline	0040007	4/3/00	4/3/00		50.0	ND	ug/l	
Benzene	"	"	"		0.500	ND	"	
Toluene	"	"	"		0.500	ND	"	
Ethylbenzene	"	"	"		0.500	ND	"	
Xylenes (total)	"	"	"		0.500	ND	"	
Methyl tert-butyl ether	"	"	"		2.50	ND	"	
Surrogate: a,a,a-Trifluorotoluene	"	"	"	*65.0-135*		*108*	%	
Surrogate: 4-Bromofluorobenzene	"	"	"	*65.0-135*		*92.0*	"	
D-2			**P003605-15**				**Water**	
Gasoline	0040007	4/3/00	4/3/00		50.0	ND	ug/l	
Benzene	"	"	"		0.500	ND	"	
Toluene	"	"	"		0.500	ND	"	
Ethylbenzene	"	"	"		0.500	ND	"	
Xylenes (total)	"	"	"		0.500	ND	"	
Methyl tert-butyl ether	"	"	"		2.50	ND	"	
Surrogate: a,a,a-Trifluorotoluene	"	"	"	*65.0-135*		*108*	%	
Surrogate: 4-Bromofluorobenzene	"	"	"	*65.0-135*		*94.7*	"	

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Conor Pacific / EFW	Project:	B&C Gas Mini Mart	Sampled: 3/21/00 to 3/23/00
2650 East Bayshore Rd.	Project Number:	BNC103	Received: 3/24/00
Palo Alto, CA 94303	Project Manager:	Kris Johnson	Reported: 4/4/00

Total Petroleum Hydrocarbons as Gasoline and BTEX by EPA 8015M/8020M/Quality Control
Sequoia Analytical - Petaluma

Analyte	Date Analyzed	Spike Level	Sample Result	QC Result	Units	Reporting Limit Recov. Limits	Recov. %	RPD Limit	RPD %	Notes*
Batch: 0030687	**Date Prepared: 3/28/00**					**Extraction Method: EPA 5030 waters**				
Blank	**0030687-BLK1**									
Gasoline	3/28/00			**ND**	ug/l	**50.0**				
Benzene	"			**ND**	"	**0.500**				
Toluene	"			**ND**	"	**0.500**				
Ethylbenzene	"			**ND**	"	**0.500**				
Xylenes (total)	"			**ND**	"	**0.500**				
Methyl tert-butyl ether	"			**ND**	"	**2.50**				
Surrogate: a,a,a-Trifluorotoluene	"	*300*		*331*	"	*65.0-135*	*110*			
Surrogate: 4-Bromofluorobenzene	"	*300*		*283*	"	*65.0-135*	*94.3*			
Blank	**0030687-BLK2**									
Gasoline	3/29/00			**ND**	ug/l	**50.0**				
Benzene	"			**ND**	"	**0.500**				
Toluene	"			**ND**	"	**0.500**				
Ethylbenzene	"			**ND**	"	**0.500**				
Xylenes (total)	"			**ND**	"	**0.500**				
Methyl tert-butyl ether	"			**ND**	"	**2.50**				
Surrogate: a,a,a-Trifluorotoluene	"	*300*		*316*	"	*65.0-135*	*105*			
Surrogate: 4-Bromofluorobenzene	"	*300*		*282*	"	*65.0-135*	*94.0*			
LCS	**0030687-BS1**									
Benzene	3/28/00	100		101	ug/l	65.0-135	101			
Toluene	"	100		100	"	65.0-135	100			
Ethylbenzene	"	100		95.2	"	65.0-135	95.2			
Xylenes (total)	"	300		296	"	65.0-135	98.7			
Surrogate: a,a,a-Trifluorotoluene	"	*300*		*323*	"	*65 0-135*	*108*			
LCS	**0030687-BS2**									
Gasoline	3/29/00	1000		975	ug/l	65.0-135	97.5			
Surrogate: 4-Bromofluorobenzene	"	*300*		*291*	"	*65.0-135*	*97.0*			
Matrix Spike	**0030687-MS1**		**P003563-02**							
Benzene	3/28/00	100	ND	102	ug/l	65.0-135	**102**			
Toluene	"	100	ND	103	"	65.0-135	**103**			
Ethylbenzene	"	100	ND	97.8	"	65 0-135	**97.8**			
Xylenes (total)	"	300	ND	303	"	65.0-135	**101**			
Surrogate: a,a,a-Trifluorotoluene	"	*300*		*321*	"	*65 0-135*	*107*			
Matrix Spike Dup	**0030687-MSD1**		**P003563-02**							
Benzene	3/28/00	100	ND	102	ug/l	65.0-135	**102**	20.0	**0**	
Toluene	"	100	ND	102	"	65.0-135	**102**	20.0	**0.976**	

Sequoia Analytical

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Conor Pacific / EFW	Project:	B&C Gas Mini Mart	Sampled: 3/21/00 to 3/23/00
2650 East Bayshore Rd.	Project Number:	BNC103	Received: 3/24/00
Palo Alto, CA 94303	Project Manager:	Kris Johnson	Reported: 4/4/00

Total Petroleum Hydrocarbons as Gasoline and BTEX by EPA 8015M/8020M/Quality Control
Sequoia Analytical - Petaluma

Analyte	Date Analyzed	Spike Level	Sample Result	QC Result	Units	Reporting Limit / Recov. Limits	Recov. %	RPD Limit	RPD %	Notes*
Matrix Spike Dup (continued)	**0030687-MSD1**		**P003563-02**							
Ethylbenzene	3/28/00	100	ND	97.1	ug/l	65.0-135	**97.1**	20.0	**0.718**	
Xylenes (total)	"	300	ND	301	"	65.0-135	**100**	20.0	**0.995**	
Surrogate: a,a,a-Trifluorotoluene	"	*300*		*332*	"	*65.0-135*	*111*			
Batch: 0030739	**Date Prepared: 3/30/00**					**Extraction Method: EPA 5030 waters**				
Blank	**0030739-BLK1**									
Gasoline	3/30/00			**ND**	ug/l	**50.0**				
Benzene	"			**ND**	"	**0.500**				
Toluene	"			**ND**	"	**0.500**				
Ethylbenzene	"			**ND**	"	**0.500**				
Xylenes (total)	"			**ND**	"	**0.500**				
Methyl tert-butyl ether	"			**ND**	"	**2.50**				
Surrogate: a,a,a-Trifluorotoluene	"	*300*		*325*	"	*65.0-135*	*108*			
Surrogate: 4-Bromofluorobenzene	"	*300*		*286*	"	*65.0-135*	*95.3*			
LCS	**0030739-BS1**									
Gasoline	3/30/00	1000		977	ug/l	65.0-135	97.7			
Surrogate: 4-Bromofluorobenzene	"	*300*		*300*	"	*65.0-135*	*100*			
Matrix Spike	**0030739-MS1**		**P003612-01**							
Gasoline	3/30/00	1000	114	1010	ug/l	65.0-135	**89.6**			
Surrogate: 4-Bromofluorobenzene	"	*300*		*293*	"	*65.0-135*	*97.7*			
Matrix Spike Dup	**0030739-MSD1**		**P003612-01**							
Gasoline	3/30/00	1000	114	1010	ug/l	65.0-135	**89.6**	20.0	**0**	
Surrogate: 4-Bromofluorobenzene	"	*300*		*289*	"	*65.0-135*	*96.3*			
Batch: 0040007	**Date Prepared: 4/2/00**					**Extraction Method: EPA 5030 waters**				
Blank	**0040007-BLK1**									
Gasoline	4/2/00			**ND**	ug/l	**50.0**				
Benzene	"			**ND**	"	**0.500**				
Toluene	"			**ND**	"	**0.500**				
Ethylbenzene	"			**ND**	"	**0.500**				
Xylenes (total)	"			**ND**	"	**0.500**				
Methyl tert-butyl ether	"			**ND**	"	**2.50**				
Surrogate: a,a,a-Trifluorotoluene	"	*300*		*303*	"	*65.0-135*	*101*			
Surrogate: 4-Bromofluorobenzene	"	*300*		*290*	"	*65.0-135*	*96.7*			
Blank	**0040007-BLK2**									
Gasoline	4/3/00			**ND**	ug/l	**50.0**				
Benzene	"			**ND**	"	**0.500**				

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2650 East Bayshore Rd.	Project Number:	BNC103	Received: 3/24/00
Palo Alto, CA 94303	Project Manager:	Kris Johnson	Reported: 4/4/00

Total Petroleum Hydrocarbons as Gasoline and BTEX by EPA 8015M/8020M/Quality Control
Sequoia Analytical - Petaluma

Analyte	Date Analyzed	Spike Level	Sample Result	QC Result	Units	Reporting Limit Recov. Limits	Recov. %	RPD Limit	RPD %	Notes*
Blank (continued)	**0040007-BLK2**									
Toluene	4/3/00			**ND**	ug/l	**0.500**				
Ethylbenzene	"			**ND**	"	**0.500**				
Xylenes (total)	"			**ND**	"	**0.500**				
Methyl tert-butyl ether	"			**ND**	"	**2.50**				
Surrogate: a,a,a-Trifluorotoluene	"	*300*		*321*	"	*65.0-135*	*107*			
Surrogate: 4-Bromofluorobenzene	"	*300*		*279*	"	*65.0-135*	*93.0*			
LCS	**0040007-BS1**									
Benzene	4/2/00	100		104	ug/l	65.0-135	104			
Toluene	"	100		104	"	65.0-135	104			
Ethylbenzene	"	100		97.8	"	65.0-135	97.8			
Xylenes (total)	"	300		303	"	65.0-135	101			
Methyl tert-butyl ether	"	100		95.2	"	65.0-135	95.2			
Surrogate: a,a,a-Trifluorotoluene	"	*300*		*307*	"	*65.0-135*	*102*			
LCS	**0040007-BS2**									
Gasoline	4/3/00	1000		918	ug/l	65.0-135	91.8			
Surrogate: 4-Bromofluorobenzene	"	*300*		*285*	"	*65.0-135*	*95.0*			
Matrix Spike	**0040007-MS1**		**P003623-09**							
Benzene	4/2/00	100	ND	109	ug/l	65.0-135	**109**			
Toluene	"	100	0.534	110	"	65.0-135	**109**			
Ethylbenzene	"	100	ND	103	"	65.0-135	**103**			
Xylenes (total)	"	300	ND	318	"	65.0-135	**106**			
Methyl tert-butyl ether	"	*100*	*ND*	*96.7*	"	*65.0-135*	**96.7**			
Surrogate: a,a,a-Trifluorotoluene	"	*300*		*336*	"	*65.0-135*	*112*			
Matrix Spike Dup	**0040007-MSD1**		**P003623-09**							
Benzene	4/2/00	100	ND	108	ug/l	65.0-135	**108**	20.0	**0.922**	
Toluene	"	100	0.534	110	"	65.0-135	**109**	20.0	**0**	
Ethylbenzene	"	100	ND	103	"	65.0-135	**103**	20.0	**0**	
Xylenes (total)	"	300	ND	316	"	65.0-135	**105**	20.0	**0.948**	
Methyl tert-butyl ether	"	100	ND	94.1	"	65.0-135	**94.1**	20.0	**2.73**	
Surrogate: a,a,a-Trifluorotoluene	"	*300*		*335*	"	*65.0-135*	*112*			

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2650 East Bayshore Rd.		Project Number:	BNC103	Received:	3/24/00
Palo Alto, CA 94303		Project Manager:	Kris Johnson	Reported:	4/4/00

Notes and Definitions

#	Note
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
Recov.	Recovery
RPD	Relative Percent Difference

EINARSON FOWLER & WATSON

CHAIN OF CUSTODY

Page 1 of 1

PO # ✓

CONTRACT LABORATORY: Sequoia-Petaluma

TURN-AROUND TIME: Standard

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

Sampler(s): (printed) RPark (signature) [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	
MW-1		3/22/00	1610	water	✓	200360501	3	N		3	COOLER CUSTODY SEALS INTACT ☐ NOT INTACT ☐
MW-2		3/23/00	1309			2	3			3	COOLER TEMPERATURE 6 °C
MW-3		↓	1210			3	3			3	
MW-4		3/22/00	1432			4	3			3	
MW-5		3/23/00	1120			5	3			3	
MW-6		3/22/00	1642			6	3			3	
MW-7		3/23/00	1037			7	3			3	
MW-8		3/21/00	1631			8	3			3	
MW-9		↓	1515			9	3			3	
MW-10		↓	1712			10	3			3	
MW-11		3/22/00	1229			11	3			3	
MW-12		↓	1107			12	3			3	
MW-13		3/21/00	1557			13	3			3	
D-1		3/22/00	1315			14	3			3	
D-2		↓	1145			15	3			3	
MS MW01		no sample		↓			✓	↓		✓	

Relinquished by: (signature)	Received by: (signature)	Date/Time
[signature]	[signature]	3/24/00
Relinquished by: (signature)	Received by: (signature)	Date/Time: 3-24 1230
Relinquished by: (signature)	Received by: (signature)	Date/Time: 3-24 14:15

Send Results To:
Attn: Kris Johnson
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