THIRD 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
November 1999

Project BNC103

November 18, 1999 Project No. BNC103

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

Re:

Third Quarter 1999 Groundwater Monitoring Results, B&C Gas Mini

Mart, 2008 First Street, Livermore, California (Station ID 1689)

Dear Mr. Angle:

Conor Pacific/EFW has compiled third quarter 1999 groundwater monitoring results for B&C Gas Mini Mart (B&C), 2008 First Street, Livermore, California (Figure 1). This report includes third quarter 1999 groundwater elevation data, groundwater sampling methods, and results of groundwater chemical analyses.

This third quarter 1999 groundwater monitoring is the initial sampling period incorporating the new downgradient monitoring wells into the quarterly monitoring program, and reducing the monitoring of existing site wells. Under this new monitoring program, site wells MW-1, MW-3, MW-4, and MW-6 will be sampled annually, in the first quarter, when groundwater levels are generally the highest. Site wells MW-2 and MW-5, typically the wells with the highest concentrations, are sampled quarterly. All wells installed during the downgradient investigation will be sampled quarterly, with the exception of cross-gradient well MW-9, which will be monitored annually. Well (MS)MW-1 will be monitored quarterly for free-phase hydrocarbon and sampled if free-phase hydrocarbon is not present. This monitoring program will be re-evaluated following one year, with changes proposed based on the monitoring results.

SITE INFORMATION

Site Name & Contact

Mr. Balaji Angle B&C Gas Mini Mart 2008 First Street Livermore, California 94550 (510) 654-3461

¹ Conor Pacific/EFW. Report of Downgradient Investigation, B&C Gas Mini Mart, Livermore, California. November 1999.

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.²

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.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

² H⁺GCL, Inc. Deep Groundwater Conduit Study, Livermore Arcade Shopping Center, First Street and South P Street, Livermore, California. December 6, 1993.

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."

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).

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).⁶ 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, 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; floating product has not re-entered the well.

⁶ Einarson, Fowler & Watson, November 5, 1999, Report of Downgradient Investigation, B&C Gas Mini Mart, 2008 First Street, Livermore, California.

GROUNDWATER SAMPLING AND ANALYSIS

Third 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 third quarter 1999 sampling event, EFW checked for free product in all site wells. Wells MW-2, MW-5, and MW-6, which previously have been reported to contain free product, did not contain 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 (MSP), was also checked for product (Figure 1). (MS)MW-1 did not contain a measurable thickness of product. However, product was observed during purging and thus, a groundwater sample was not collected from this well.

Groundwater Elevations

On September 27, 1999, 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,⁷ 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 September 1999. A comparison of well screen elevations (Table 2) and third quarter measurements shows that the water levels were above the well screens in wells MW-3, MW-13, D-1, and D-2. The water levels in all other wells intercepted the well screen intervals at the time of groundwater sampling. A groundwater contour map, based on September 1999 measurements, is shown in Figure 2. Third quarter groundwater elevations are generally three feet lower than the second quarter 1999. Groundwater flow was slightly west of north during third quarter 1999. Based on third quarter measurements, the hydraulic gradient is approximately 0.013 foot per foot. The flow direction and gradient are in accordance with previous results.

Sampling Methods

Conor Pacific/EFW sampled ten monitoring wells (MW-2, MW-5, MW-7, MW-8, MW-10, MW-11, MW-12, MW-13, D-1, and D-2) on September 28, 1999, following EFW's standard protocol. Well (MS)MW-1 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

⁷ Einarson, Fowler & Watson. Third Quarter 1998 Groundwater Monitoring Results, B&C Gas Mini Mart, Livermore, California, Appendix A. September 10, 1998.

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.

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. Third quarter 1999 analytical results for benzene and MTBE are also presented on Figure 3.

Site Well

Well MW-2 is the only site well sampled quarterly. Hydrocarbon concentrations in well MW-2 were similar to the previous two quarter's. In well MW-2, TPH-G was detected at a concentration of 18,000 μ g/l. Concentrations of BTEX compounds ranged from 351 to 2,140 μ g/l. MTBE was detected at 225 μ g/l.

Downgradient Wells

Well MW-5, located 75 feet downgradient of the site, was purged and sampled, with a hydrocarbon sheen observed during purging. Petroleum hydrocarbons were detected at concentrations similar to the previous sampling events.

(MS)MW-1, located approximately 800 feet downgradient from the B&C site, was not sampled during the third quarter event, due to the presence of blebs of free product during well purging. Because there was more than a hydrocarbon sheen present in the groundwater purged from well (MS)MW-1, the well was not sampled.

Well MW-7, located on the Mill Springs Park Apartments property approximately 550 feet downgradient from the site, had hydrocarbon concentrations roughly one-half to one

order of magnitude lower than the previous sampling event in July 1999. Concentrations of benzene and MTBE declined from 31.9 μ g/l and 43.6 μ g/l to 2.75 μ g/l and 14 μ g/l, respectively.

Well MW-8, located on Railroad Avenue at the Bank of America building, contained only MTBE. The MTBE concentration was similar to the previous sampling in June 1999.

No TPH-G, BTEX, or MTBE were detected in downgradient wells MW-10, MW-11, MW-12, D-1, and D-2. Except for well MW-11, these results are consistent with the previous sampling event for these wells (June 1999). In June 1999, well MW-11 had low concentrations of TPH-G and BTEX, but no MTBE. These low concentrations of hydrocarbons were attributed to the Beacon Gasoline Station located at the intersection of P and First Streets (Conor Pacific/EFW, November 1999).

Well MW-13 had low concentrations of benzene and MTBE lower than the previous sampling event in July 1999.

SUMMARY

The third quarter 1999 groundwater monitoring results are consistent with previous monitoring results. Fourth quarter 1999 groundwater monitoring is currently scheduled for December 1999.

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

KRIS H. JOHNSON

No. 1763

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GEOLOGIST

OF CALIFORN

Sincerely, Conor Pacific/EFW

Kris H. Johnson

Senior Engineering Geologist

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Principal Environmental Engineer

Attachments:

Tables

Table 1 - Summary of Groundwater Elevations

Table 2 - Monitoring Well Constructions

Table 3 - Historical Groundwater Analytical Results

Figures

Figure 1 - Site Location

Figure 2 - Well Locations and Groundwater Contours (September 1999)

Figure 3 - Groundwater Chemistry (September 1999)

Appendices

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

cc: Eva Chu, ACEHS

Mr. Matt Katen, Alameda Co. Flood Control and Water Cons. District Zone 7 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		
		06/08/99	27.78	456.29		
		09/27/99	30.65	453.42		
3431.0	483.86	06/19/94	·			
MW-2	483.80	08/25/94	38.15 44.13	445.71	43.47	0.66
		11/22/94	40.96	-	40.92	
		03/09/95	29.28	-		0.04
		03/09/95	29.28	-	28.47	0.81
		05/15/95	22.61	461.25	28.29	0.42
		00/01/93	20.05	463.81		
		Feb-97				
		07/30/98	18.30 25.75	465.56	25.74	0.01
		11/05/98	33.31	450.55	25.74	0.01
		03/23/99	25.51	458.35		
		05/23/99	27.54	456.32		
		09/27/99	30.73	453.13		
MW-3	484.24	06/19/94	37.15	447.09		<u> </u>
101 00 -2	404.24					
		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		

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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-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		
MW-5*	481.97	02/29/96	19.35	462.62		
141 44 - 2	401.27	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	32,40	0.22
		06/08/99	27.27	454.70		
		09/27/99	30.00	451.97		
NAME C	402.02		20.32	463.61	u watana 17. 17.77. atauna 17. atauna 17. atau n	••
MW-6	483.93	02/29/96 Feb-97	18.92	465.01		
		07/30/98	25.59	458.34	25.58	0.01
		11/05/98	23.39 NA	438.34 NA	23.30	0.01
		03/23/99	25.43	458.50		
		05/25/99	27.43	456.50		
		09/27/99	NM >28.6	450.50 NM		
3.6337.72	470 14		28.37	449.77		
MW-7	478.14	7/12/1999 09/27/99	30.2	449.77 447.94		
		•			······································	
MW-8	473.23	7/12/1999	34.29	438.94		
		09/27/99	37.11	436.12		
MW-9	477.08	7/12/1999	30.71	446.37		
		09/27/99	32.61	444.47		
MW-10	471.42	7/12/1999	34.60	436.82		
		09/27/99	37.62	433.80		
MW-11	464.93	7/12/1999	31.00	433.93		
		09/27/99	33.83	431.10		
MW-12	458.34	7/12/1999	25.50	432.84		
2-2-71 44	150,51	09/27/99	28.28	430.06		
MW-13	474.79	7/12/1999	30.65	444.14		
CT = AA TAI	4/4./7	09/27/99	32.74	442.05		
D-1	464.70	7/12/1999	30.67	434.03		

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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)
D-2	457.61	7/12/1999	25.72	431.89		
		09/27/99	28.44	429.17	,	
(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		

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

(1) - free product visible in purge or sample water

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Table 2
Monitoring Well Constructions
B&C Gas Mini Mart
Livermore, California

			T.D.	T.D.	Borehole	Casing	Casing	Screen	Sand	Screened	Sand Pack
Well	Drilling	Date	Boring	Well	Diameter	Material	Diameter	Size	Pack	Interval	Interval
No.	Method	Installed	(ftbgs)	(ftbgs)	(in.)	(PVC)	(in.)	(in.)	Material	(ftbgs)	(ftbgs)
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	NS	NS	NS	NA

NA = not available

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	Sample	TPH-G	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE
No.	Date	(ug/l)	(ug/l)	(ug/l)	(ug/l)	(ug/l)	(ug/l)
MW-1	Aug-90	24,000	1,300	1,300	400	2,700	NA
141 44 - 1	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	70.4	51.7	54.6	138	66.8
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
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	9	7	4	53

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

No. Date (ug/l) (ug/l) (ug/l) (ug/l) (ug/l) (ug/l) (ug/l) (ug/l)	Well	Sample	TPH-G	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE
MW-4 Jun-94 810 12 25 <0.5 22 NA Aug-94 850 37 51 9.5 35 NA Nov-95 1,700 110 110 5.8 58 NA Jun-95 ND 3 1 ND 1 ND Jun-95 ND 3 1 ND 1 ND Sep-95 <50		=	(ug/l)	(ug/l)	(ug/l)	•	-	(ug/l)
Aug-94	NASS/ A	In OA		•		-0.5	•	
Nov-94	IVI VV -4							
Mar-95		_						
Jun-95								
Sep-95								
Feb-96					-			
Feb-97								
Jul-98								
Nov-98								
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** 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 MW-6 Oct-95 110,000 9,00 22,000 3,200 17,000 47,000 Feb-96 23,000 2,000 460 2,900 2,600 6300								
MW-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 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 Ju								
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 Jum-99 34,500 722 1,980 1,720 7,170 765 Sep-99 49,100 540 2,500 1,730 8,040 255 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** NS** NS** NS**								
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Jul-98				,	· ·			
Nov-98			-	-	-		-	
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Jun-99 34,500 722 1,980 1,720 7,170 765 Sep-99 49,100 540 2,500 1,730 8,040 255 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** NS** Nov-98 NS* NS* NS* NS* NS* NS* NS* Mar-99 5,700 240 260 120 440 150 Jun-99 7,610 259 334 283 567 275 MW-7 Jul-99 5,090 31.9 4.8 60 219 43.6 Sep-99 2,160 2.75 8.16 5.91 27.3 14.0 MW-8 Jun-9								
Sep-99 49,100 540 2,500 1,730 8,040 255 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*								
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Feb-97 12,000 450 780 200 590 790 Jul-98 NS** NS*	MW-6	Oct-95		9,900	22,000	3,200	17,000	47,000
Jul-98 NS** <		Feb-96	23,000	2,000	460	2,900	2,600	6,300
Nov-98 NS* NS*<		Feb-97						790
Mar-99 5,700 240 260 120 440 150 Jun-99 7,610 259 334 283 567 275 MW-7 Jul-99 5,090 31.9 4.8 60 219 43.6 Sep-99 2,160 2.75 8.16 5.91 27.3 14.0 MW-8 Jun-99 <50		Jul-98	NS**	NS**		NS**	NS**	NS^{**}
Jun-99 7,610 259 334 283 567 275 MW-7 Jul-99 5,090 31.9 4.8 60 219 43.6 Sep-99 2,160 2.75 8.16 5.91 27.3 14.0 MW-8 Jun-99 <50		Nov-98						
MW-7 Jul-99 5,090 31.9 4.8 60 219 43.6 Sep-99 2,160 2.75 8.16 5.91 27.3 14.0 MW-8 Jun-99 <50			5,700					150
Sep-99 2,160 2.75 8.16 5.91 27.3 14.0 MW-8 Jun-99 <50		Jun-99	7,610	259	334	283	567	275
Sep-99 2,160 2.75 8.16 5.91 27.3 14.0 MW-8 Jun-99 <50	MW-7	Int-99	5 090	31.9	4.8	60	219	43.6
MW-8 Jun-99 <50 <0.5 <0.5 <0.5 <0.5 88.5 Sep-99 <50	141 44 7							
Sep-99 <50 <0.5 <0.5 <0.5 52.0 MW-9 Jun-99 <50	· · · · · · · · · · · · · · · · · · ·					**********		
MW-9 Jun-99 <50 <0.5 <0.5 <0.5 <0.5 <2 MW-10 Jun-99 <50	MW-8							
MW-10 Jun-99 <50 <0.5 <0.5 <0.5 <0.5 <2 Sep-99 <50		Sep-99	<50	<0.5	<0.5	<0.5	<0.5	52.0
Sep-99 <50 <0.5 <0.5 <0.5 <0.5 <2.5 MW-11 Jun-99 91.3 0.683 2.02 1.07 2.62 <2	MW-9	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 MW-11 Jun-99 91.3 0.683 2.02 1.07 2.62 <2	MW-10	Jun=00	<50	<0.5	<0.5	<0.5	<0.5	<2
MW-11 Jun-99 91.3 0.683 2.02 1.07 2.62 <2 Sep-99 <50	141 44 - 10							
Sep-99 <50 <0.5 <0.5 <0.5 <2.5 MW-12 Jun-99 <50			-50					
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 MW-13 Jul-99 214 42.8 <0.5 4.48 <0.5 332	MW-11	Jun-99	91.3	0.683	2.02	1.07		<2
Sep-99 <50 <0.5 <0.5 <0.5 <0.5 <2.5 MW-13 Jul-99 214 42.8 <0.5		Sep-99	<50	<0.5	<0.5	< 0.5	<0.5	<2.5
Sep-99 <50 <0.5 <0.5 <0.5 <0.5 <2.5 MW-13 Jul-99 214 42.8 <0.5	MW 12	Jun 00	~5N	<0.5	<0.5	<0 s	<0.5	<
MW-13 Jul-99 214 42.8 <0.5 4.48 <0.5 332	JV1 VV - 1∠							
		36p-22	-JU	-0.5	~0.3	~0.5	~0.2	~2.3
Sep-99 <100 5.8 <1 <1 <1 160	MW-13	Jul-99	214	42.8	< 0.5	4.48	< 0.5	
		Sep-99	<100	5.8	<1	<1	<1	160

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

Well	Sample	TPH-G	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE
No.	Date	(ug/l)	(ug/l)	(ug/l)	(ug/l)	(ug/l)	(ug/l)
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
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
(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**

ug/l = micrograms per liter

TPH-G = total petroleum hydrocarbons as gasoline

MTBE = methyl tertiary-butyl ether

MSP = Mill Springs Park

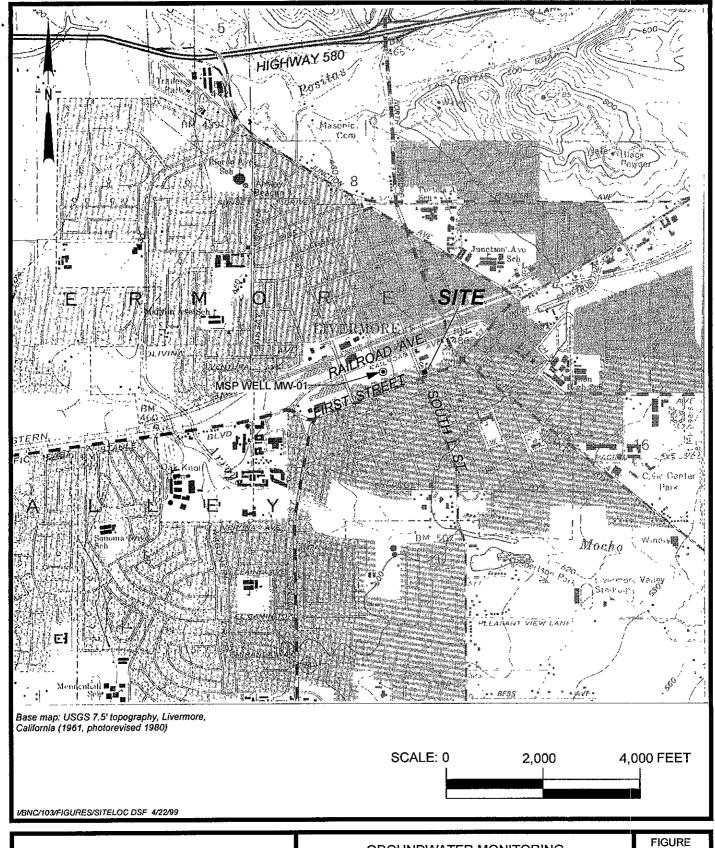
NA= not analyzed

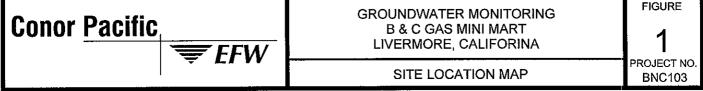
NS= not sampled

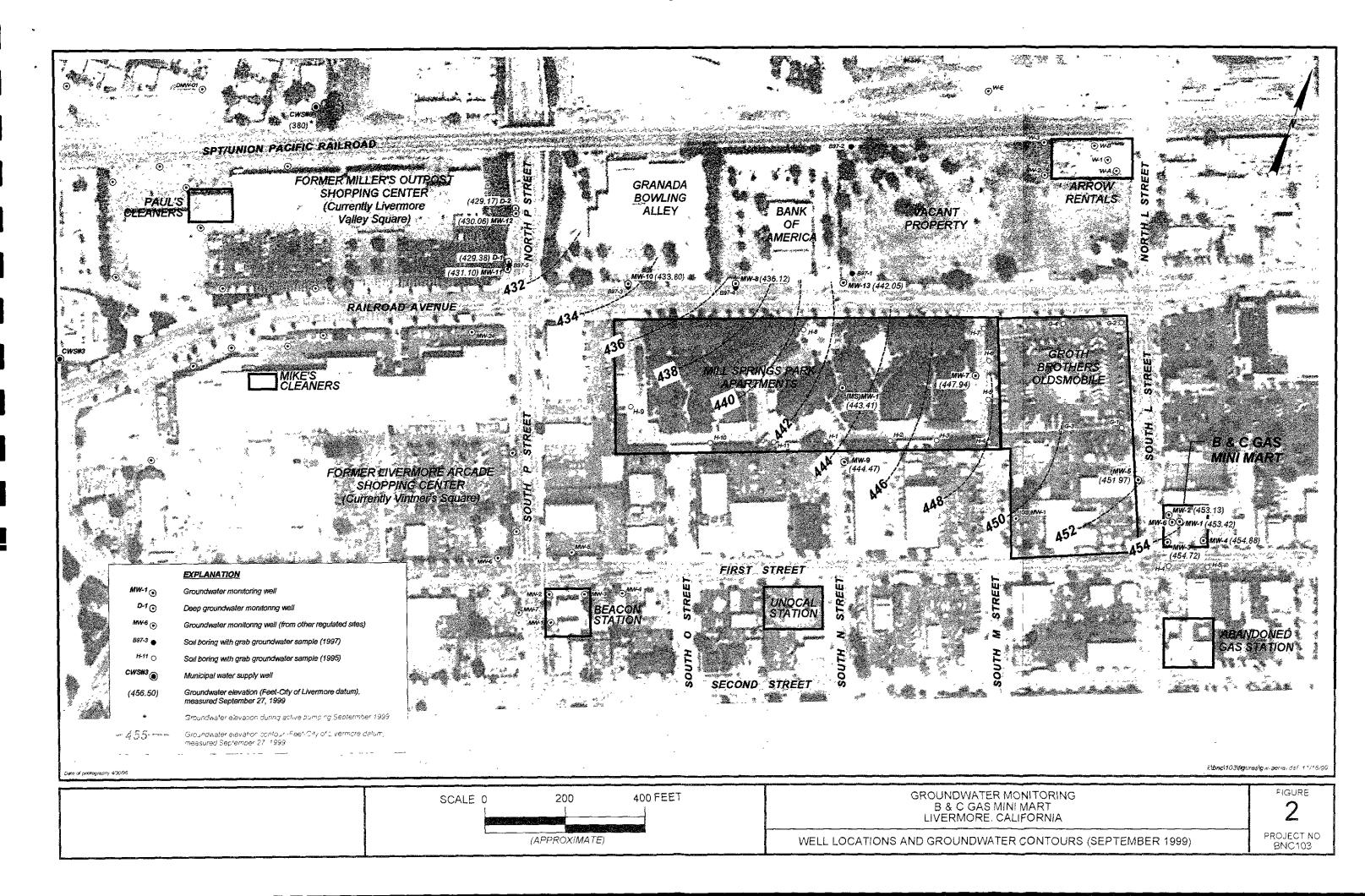
* = well inaccessible ** = floating hydrocarbon present

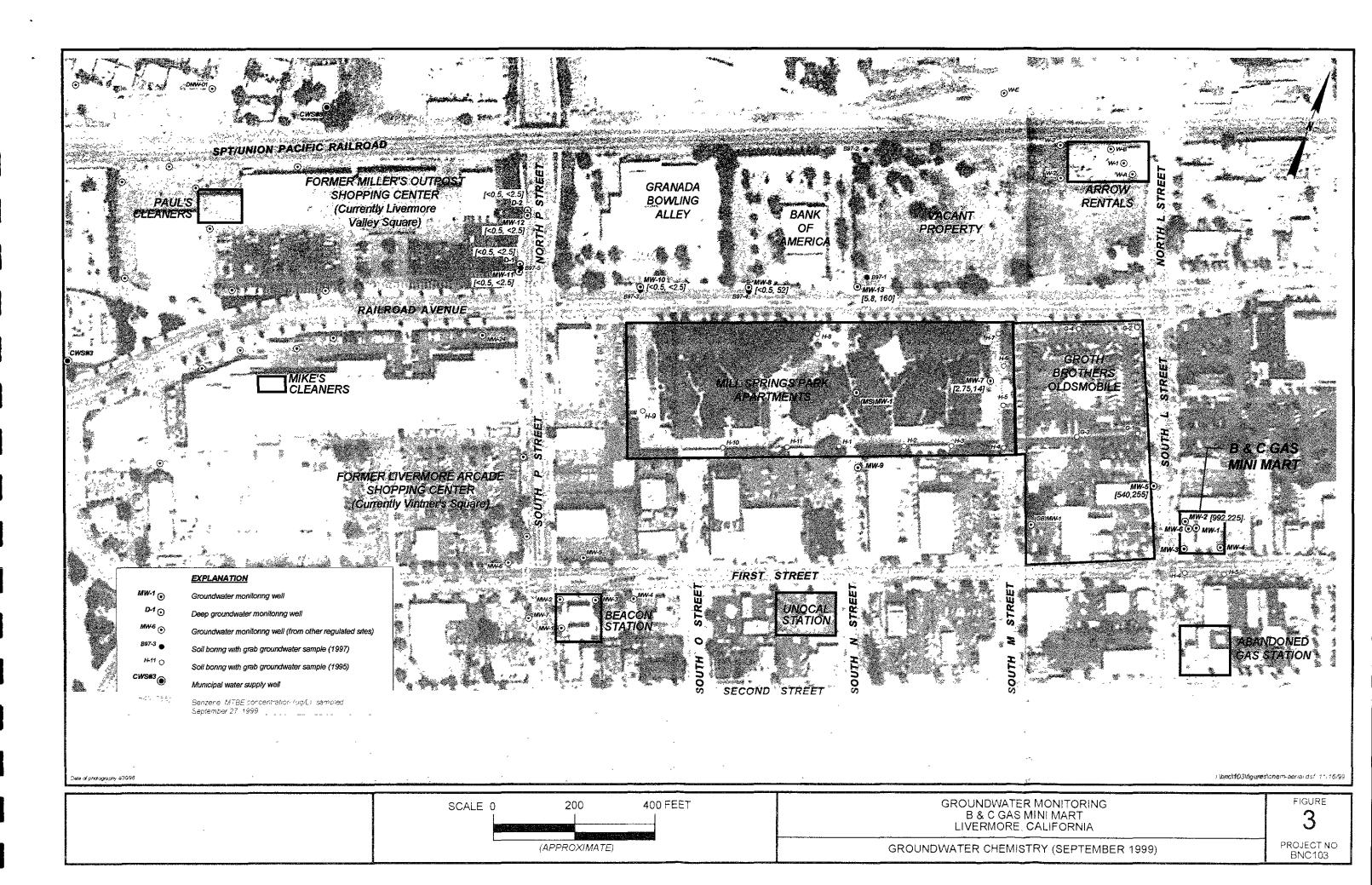
ND = not detected above reporting limit, limit not available

< = less than method reporting limit









WATER LEVEL DATA SHEET

Conor Pacific/EFW

Project: B&	C Gas Mini M	1art				
Project No.:						
Date(s): 0	12799					
Name: 27	ans.					
Weather:	Jumy L	101		Sounder #:	Keck	
Well	Date	DTFP	DTW	Total	Meas.	Comments
		(TOC)	(TOC)		By	
MW-1	92799	NO	30.05	75.5	m	
MW-2	1		30.73	56.0		
MW-3			29.52	57.3		9/1u"
MW-4			30.16	59.9		
MW-5			30.00	39.7		115/111"- Casususpinded at Cap
MW-6			NM -	7		Ostructed at 20.0'.
MW-7			30.20	49.3		9hu"
MW-8			37.11	53.5 44.0		
MW-9			32.01	44.0 **		
MW-10			37.62	54.1		
MW-11			33.93	49.2		
MW-12			28.28	43.4		
MW-13			32.74	54.4		
D-1			35.32	(2A.V		
D-2			20.44			
MS MW01	₹	_ 🎖	34.38	595	V	Ÿ
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PROJECT NO: SACUATION OF SAMPLED BY: PAUL REGULATORY AGENCY: SAMPLE TYPE: Groundwater Surface Water Leachate Treatment Effluent Other CASING DIAMETER (OD-inches): 3/4	SAMPLE PROJECT NO. BNC. U.S SAMPLE TYPE: Groundwater Surface Water CASING DIAMETER (OD-inches): 3/4	LOCATION: B&C GGSMINI Mart	SAMPLE ID: MW-2
CLIENT: B? CGSSWINT WWW REGULATORY AGENCY: SAMPLE: Depth of Intake from TOC): Showersible Pump CAOD Hr) (gallons) CO Sumpersible Pump CO Sumples Collected at this Well (Equipment or Field Blank): CAOD Hr) (gallons) CO Sumpersible Pump CO Sumples Collected at this Well (Equipment or Field Blank): CAOD Hr) (gallons) CO Sumpersible Pump CO Sumples Collected at this Well (Equipment or Field Blank): CAOD Hr) (gallons) CO Sumpersible Pump CO Sumples Collected at this Well (Equipment or Field Blank): CAOD Hr) (gallons) CO Sumpersible Pump CO Sumples Collected at this Well (Equipment or Field Blank): CO Sumples Collected at this Well (Equipment or Field Blank): CO Sumples Collected at this Well (Equipment or Field Blank): CO Sumples Collected at this Well (Equipment or Field Blank): CO Sumples Collected at this Well (Equipment or Field Blank): CO Sumples Collected at this Well (Equipment or Field Blank): CO Sumples Collected at this Well (Equipment or Field Blank): CO Sumples Collected at this Well (Equipment or Field Blank): CO Sumples Collected at this Well (Equipment or Field Blank): CO Sumples Collected at this Well (Equipment or Field Blank): CO Sumples Collected at this Well (Equipment or Field Blank): CO Sumples Collected at this Well (Equipment or Field Blank): CO Sumples Collected at this Well (Equipment or Field Blank): CO Sumples Collected at this Well (Equipment or Field Blank): CO Sumples Collected at this Well (Equipment or Field Blank): CO Sumples Collected at this Well (Equipment or Field Blank): CO Sumples Collected at this Well (Equipment or Field Blank): CO Sumples Collected at this Well (Equipment or Field Blank): CO Sumples Collected at this Well (Equipment or Field Blank): CO Sumples Collected at this Well (Equipment o	CLIENT. CASS		SAMPLE ID:
SAMPLE TYPE: Groundwater	SAMPLE: Period Color from ToC): Sample Color from ToC): Time Temp. (2400 Hr) (2400 Hr) (2200 Hr) (2400 Hr) (2400 Hr) (2700	OF TENT. BAC. GOSIMINA MONT	
CASING DIAMETER (OD-inches): 3/4 1	CASING DIAMETER (OD-inches): 3/4 1 2 4 45 6 8 8 CALLONS PER LINEAR FOOT: (0.02) (0.04) (0.17) (0.66) (0.83) (1.5) (2.6) Well Total Depth (ft): 50/0 Volume in Casing (gal): (10.7) Depth to Weter (ft): 20.73 Calculated Purge (volumes / gal.): 10.7 Height of Water Column (ft): 75.77 Actual Pre-Sampling Purge (gal): 17.0 PURGE: Talpon Bailer PVC Bailer Disposable Bailer Other Purge Water Containment Characteristic Pump Purge (gal): 17.0 Time Volume Temp. Horiba QuickCheck pH. Color Turbidity (visual) Observation (1.5) (2.6) (1.5) (1.5) (2.6) (1.5) (1.	SAMPLE TYPE: Groundwater Surface Water	
Callons Per Linear Foot	Comparison Com		
Depth to Water (ft): 2013	Depth to Water (ff): 2073 Calculated Purge (volumes / gal.): 17.0 Height of Water Column (ff): 75.7 Height of Water Column (ff): 75.7 Device (Depth of Intake from TOC): Submersible Pump		
Depth to Water (ft): 2013	Depth to Water (ff): 2073 Calculated Purge (volumes / gal.): 17.0 Height of Water Column (ff): 75.7 Height of Water Column (ff): 75.7 Device (Depth of Intake from TOC): Submersible Pump	Well Total Depth (ft): 54.0	Volume in Casing (gal): 10.7
Height of Water Column (ft):	Hatight of Water Column (ft): VS-V	Depth to Water (ft): 30.73	
PURCE: Device (Depth of Intake from TOC): Submersible Pump	PURGE: Device (Depth of Intake from TOC): Submersible Pump (5) Peristaltic Pump PVC Hand Pump S.S. Bailer Teffon Bailer PVC Bailer Disposable Bailer Other Time Temp. Horba QuickCheck (1750) Purge Date: Sheefife Conductance Pump (2400 Hr) (gallons) (70) Purge Date: Sheefife Conductance Pump (1750) Purge Date: Purge Date: Sheefife Conductance Pump (1750) Purge Date: Purge Date: Sheefife Conductance Pump (1750) Purge Date: Purge Date: Sheefife Conductance Pump Purge Date: Sheen: NOW Odor Shows Sample Date: Parge Date: Sheen: NOW Odor Shows Sample Date: Parge Date: Sheen: Now Date: Shows Date: Sheen: Now Date: Shows Date: Parge Date: Date: 9[22]99	Height of Water Column (ft): 25.27	Actual Pre-Sampling Purge (gal): 17.0
S.S. Bailer Teffon Bailer PVC Bailer Disposable Bailer Other Purge Water Containment: WWW.W.W.W.W.W.W.W.W.W.W.W.W.W.W.W.W.W.	S.S. Bailer Teffon Bailer PVC Bailer Disposable Bailer Other Purge Water Containment: Field QC Samples Collected at this Well (Equipment or Field Blank): EB- FB- Other Time Volume Temp. Horiba QuickCheck pH Color Turbidity (visual) (Visual) Observation (µS) (2400 Hr) (gallons) (°C) (µmhos/gm) (µS) (yd. µmhos/gm) (µS) (yd. µmhos/gm) (yd. µmhos/gm) (yd. µmhos/gm) (yd. µmhos/gm) (µS) (yd. µmhos/gm) (yd. µmh	PURGE:	, 1
Purge Water Containment: Www. Gequipment or Field Blank): EB FB Other	Purge Date: Provided	Device (Depth of Intake from TOC): Submersible Pump [2]	Peristaltic Pump PVC Hand Pump PVC Hand Pump
Sample Collected at this Well (Equipment or Field Blank): EB	Field QC Samples Collected at this Well (Equipment or Field Blank): EB- FB- Other Time Volume Temp. Horiba QuickCheck pH Color Turbidity (visual)	Purge Water Containment: (Twww.l.)	Disposable Baller Other
Time Volume Temp. Horiba QuickCheck pH Color Turbidity (visual) Observation 144 1.0 27.5 17.0 27.0 910 1.00 1.00 1.00 1.00 175 17.0 27.0 920 7.00 1.00 1.00 1.00 176 176 17.0 17.	Time Volume Temp. Horiba QuickCheck pH Color Turbidity (visual) Observation (µx) (yall) (yall) Observation (µx) (yall) Observation (µx) (yall) Observation (µx) (yall) (yall) Observation (µx) (yall) (yall) Observation (µx) (yall) (yall) Observation (µx) (yall) (y	Field QC Samples Collected at this Well (Equipment or Field B	lank): EB FB Other
Time Volume Temp. Horiba QuickCheck pH Color Turbidity (visual) Observation 144 1.0 17.5 17.0 17	Time Volume Temp. Horiba QuickCheck pH Color Turbidity (visual) Observation (µS) (gallons) (°C) (µmhos/gm) (µS) (std. units) (visual) (visual) Observation (µS) (µS) (µS) (µS) (µS) (µS) (µS) (µS)	Specific Conductar	10e
Purge Date: PVC Hand Pump Peristaltic Pump PVC Hand Pu	SAMPLE: Device (Depth of Intake from TOC): Submersible Pump Teflon Bailer PVC Bailer Disposable Bailer Other Specific Conductance (Lay of the conductance phorosome (umbnos/cm) (Lay of the conductance (umbnos/cm) (Lay of the conductance phorosome (visual) (Stat. units) (Stat. uni		
Purge Date: 9 20 Purge Date: 9 20 Purge Date: 9 20 Purge Date: 9 Pur	Purge Date: 9 2499		
SAMPLE: Device (Depth of Intake from TOC): Teflon Bailer PVC Bailer Disposable Bailer Other Time Temp. Horiba QuickCheck pH Oxygen Color Turbidity (2400 Hr) (°C) (µmhos/cm) (µS) (std. units) (mg/l) (visual) (NTU) (NTU) (150) V.5 930 (Sample Date: 9 Ve/99 Field Measurement Devices: Horiba Omega QuickCheck D.O. Test Kit	Purge Date: 9 2099 SAMPLE: Device (Depth of Intake from TOC): Submersible Pump Peristaltic Pump PVC Hand Pump Teflon Bailer PVC Bailer Disposable Bailer Other Time Temp. Specific Conductance Horriba QuickCheck pH Oxygen Color Turbidity (std. units) (mg/l) (visual) (NTU) (150 21.5 930 (usk) (std. units) (mg/l) (visual) (NTU) Sheen: NOW Odor: Swory Sample Date: 9 2099 Field Measurement Devices: Horriba Omega QuickCheck D.O. Test Kit REMARKS: (USK) William Purgl. SIGNATURE: 9 2099	1744 U.O 22.5 mango 920	1 696 Harry moderary
SAMPLE: Device (Depth of Intake from TOC): Submersible Pump Peristaltic Pump PVC Hand Pump Teflon Bailer PVC Bailer Disposable Bailer Other Specific Conductance PH Oxygen Color Turbidity (2400 Hr) (°C) (µmhos/cm) (µS) (std. units) (mg/l) (visual) (NTU) 150 71.5 930 (91.07) Hand Pump Specific Conductance PH Oxygen Color Turbidity (std. units) (mg/l) (visual) (NTU) 150 71.5 930 (91.07) Hand Pump Sample Date: 972699	SAMPLE: Device (Depth of Intake from TOC): Submersible Pump Peristaltic Pump PvC Hand Pump Oxygen Color Turbidity (visual) (NTU) Pigus Peristaltic Pump Peristaltic Pump PvC Hand	1747 115 223 910 /	(6.99 j low
SAMPLE: Device (Depth of Intake from TOC): Submersible Pump Peristaltic Pump PVC Hand Pump Teflon Bailer PVC Bailer Disposable Bailer Other Specific Conductance Dissolved Time Temp. Horiba QuickCheck pH Oxygen Color Turbidity (2400 Hr) (°C) (µmhos/cm) (µS) (std. units) (mg/l) (visual) (NTU) 1 150 21.5 930 (9.9) Sample Date: 97299 Field Measurement Devices: Horiba Omega QuickCheck D.O. Test Kit	SAMPLE: Device (Depth of Intake from TOC): Submersible Pump Peristaltic Pu	1751 170 220 920	7.00
SAMPLE: Device (Depth of Intake from TOC): Submersible Pump Peristaltic Pump PVC Hand Pump Teflon Bailer PVC Bailer Disposable Bailer Other Specific Conductance Dissolved Time Temp. Horiba QuickCheck pH Oxygen Color Turbidity (2400 Hr) (°C) (µmhos/cm) (µS) (std. units) (mg/l) (visual) (NTU) 1 150 21.5 930 (9.9) Sample Date: 97299 Field Measurement Devices: Horiba Omega QuickCheck D.O. Test Kit	SAMPLE: Device (Depth of Intake from TOC): Submersible Pump Peristaltic Pump PVC Hand Pump Teflon Bailer PVC Bailer Disposable Bailer Other Specific Conductance Dissolved Other Time Temp. Horiba QuickCheck PH Oxygen Color Turbidity (visual) (NTU) (visual) (NTU) (visual) (visual) (visual) (NTU) Sheen: NON Sample Date: PVC Hand Pump Disposable Bailer Other Turbidity (visual) (NTU) (visual) (NTU) Sheen: NON Sheen: NO		
SAMPLE: Device (Depth of Intake from TOC): Submersible Pump Peristaltic Pump PVC Hand Pump Teflon Bailer PVC Bailer Disposable Bailer Other Specific Conductance Dissolved Time Temp. Horiba QuickCheck pH Oxygen Color Turbidity (2400 Hr) (°C) (µmhos/cm) (µS) (std. units) (mg/l) (visual) (NTU) 1 150 21.5 930 (9.9) Sample Date: 97299 Field Measurement Devices: Horiba Omega QuickCheck D.O. Test Kit	SAMPLE: Device (Depth of Intake from TOC): Submersible Pump Peristaltic Pu		
SAMPLE: Device (Depth of Intake from TOC): Submersible Pump Peristaltic Pump PVC Hand Pump Teflon Bailer PVC Bailer Disposable Bailer Other Specific Conductance Dissolved Time Temp. Horiba QuickCheck pH Oxygen Color Turbidity (2400 Hr) (°C) (µmhos/cm) (µS) (std. units) (mg/l) (visual) (NTU) 1 150 21.5 930 (9.9) Sample Date: 97299 Field Measurement Devices: Horiba Omega QuickCheck D.O. Test Kit	SAMPLE: Device (Depth of Intake from TOC): Submersible Pump Peristaltic Pump PVC Hand Pump Teflon Bailer PVC Bailer Disposable Bailer Other Specific Conductance Dissolved Other Time Temp. Horiba QuickCheck PH Oxygen Color Turbidity (visual) (NTU) (visual) (NTU) (visual) (visual) (visual) (NTU) Sheen: NON Sample Date: PVC Hand Pump Disposable Bailer Other Turbidity (visual) (NTU) (visual) (NTU) Sheen: NON Sheen: NO		
SAMPLE: Device (Depth of Intake from TOC): Submersible Pump Peristaltic Pump PVC Hand Pump Teflon Bailer PVC Bailer Disposable Bailer Other Specific Conductance Dissolved Time Temp. Horiba QuickCheck pH Oxygen Color Turbidity (2400 Hr) (°C) (µmhos/cm) (µS) (std. units) (mg/l) (visual) (NTU) 1 150 21.5 930 (9.9) Sample Date: 97299 Field Measurement Devices: Horiba Omega QuickCheck D.O. Test Kit	SAMPLE: Device (Depth of Intake from TOC): Submersible Pump Peristaltic Pu		
SAMPLE: Device (Depth of Intake from TOC): Submersible Pump Peristaltic Pump PVC Hand Pump Teflon Bailer PVC Bailer Disposable Bailer Other Specific Conductance Dissolved Time Temp. Horiba QuickCheck pH Oxygen Color Turbidity (2400 Hr) (°C) (µmhos/cm) (µS) (std. units) (mg/l) (visual) (NTU) 1 150 21.5 930 (9.9) Sample Date: 97299 Field Measurement Devices: Horiba Omega QuickCheck D.O. Test Kit	SAMPLE: Device (Depth of Intake from TOC): Submersible Pump Peristaltic Pump PVC Hand Pump Teflon Bailer PVC Bailer Disposable Bailer Other Specific Conductance Dissolved Other Time Temp. Horiba QuickCheck PH Oxygen Color Turbidity (visual) (NTU) (visual) (NTU) (visual) (visual) (visual) (NTU) Sheen: NON Sample Date: PVC Hand Pump Disposable Bailer Other Turbidity (visual) (NTU) (visual) (NTU) Sheen: NON Sheen: NO	Biological designation of the contract of the	
SAMPLE: Device (Depth of Intake from TOC): Submersible Pump Peristaltic Pump PVC Hand Pump Teflon Bailer PVC Bailer Disposable Bailer Other Specific Conductance Dissolved Time Temp. Horiba QuickCheck pH Oxygen Color Turbidity (2400 Hr) (°C) (µmhos/cm) (µS) (std. units) (mg/l) (visual) (NTU) 1 150 21.5 930 (9.9) Sample Date: 97299 Field Measurement Devices: Horiba Omega QuickCheck D.O. Test Kit	SAMPLE: Device (Depth of Intake from TOC): Submersible Pump Peristaltic Pump PVC Hand Pump Teflon Bailer PVC Bailer Disposable Bailer Other Specific Conductance Dissolved Other Time Temp. Horiba QuickCheck PH Oxygen Color Turbidity (visual) (NTU) (visual) (NTU) (visual) (visual) (visual) (NTU) Sheen: NON Sample Date: PVC Hand Pump Disposable Bailer Other Turbidity (visual) (NTU) (visual) (NTU) Sheen: NON Sheen: NO		
SAMPLE: Device (Depth of Intake from TOC): Submersible Pump Peristaltic Pump PVC Hand Pump Teflon Bailer PVC Bailer Disposable Bailer Other Specific Conductance Dissolved Time Temp. Horiba QuickCheck pH Oxygen Color Turbidity (2400 Hr) (°C) (µmhos/cm) (µS) (std. units) (mg/l) (visual) (NTU) 1 150 21.5 930 (9.9) Sample Date: 97299 Field Measurement Devices: Horiba Omega QuickCheck D.O. Test Kit	SAMPLE: Device (Depth of Intake from TOC): Submersible Pump Peristaltic Pump PVC Hand Pump Teflon Bailer PVC Bailer Disposable Bailer Other Specific Conductance Dissolved Other Time Temp. Horiba QuickCheck PH Oxygen Color Turbidity (visual) (NTU) (visual) (NTU) (visual) (visual) (visual) (NTU) Sheen: NON Sample Date: PVC Hand Pump Disposable Bailer Other Turbidity (visual) (NTU) (visual) (NTU) Sheen: NON Sheen: NO		
SAMPLE: Device (Depth of Intake from TOC): Submersible Pump Peristaltic Pump PVC Hand Pump Teflon Bailer PVC Bailer Disposable Bailer Other Specific Conductance Dissolved Time Temp. Horiba QuickCheck pH Oxygen Color Turbidity (2400 Hr) (°C) (µmhos/cm) (µS) (std. units) (mg/l) (visual) (NTU) 1 150 21.5 930 (9.9) Sample Date: 97299 Field Measurement Devices: Horiba Omega QuickCheck D.O. Test Kit	SAMPLE: Device (Depth of Intake from TOC): Submersible Pump Peristaltic Pu		
SAMPLE: Device (Depth of Intake from TOC): Submersible Pump Peristaltic Pump PVC Hand Pump Teflon Bailer PVC Bailer Disposable Bailer Other Specific Conductance Dissolved Time Temp. Horiba QuickCheck pH Oxygen Color Turbidity (2400 Hr) (°C) (µmhos/cm) (µS) (std. units) (mg/l) (visual) (NTU) 1 150 21.5 930 (9.9) Sample Date: 97299 Field Measurement Devices: Horiba Omega QuickCheck D.O. Test Kit	SAMPLE: Device (Depth of Intake from TOC): Submersible Pump Peristaltic Pump PVC Hand Pump Teflon Bailer PVC Bailer Disposable Bailer Other Specific Conductance Dissolved Other Time Temp. Horiba QuickCheck PH Oxygen Color Turbidity (visual) (NTU) (visual) (NTU) (visual) (visual) (visual) (NTU) Sheen: NON Sample Date: PVC Hand Pump Disposable Bailer Other Turbidity (visual) (NTU) (visual) (NTU) Sheen: NON Sheen: NO		Purge Date: 012699
Device (Depth of Intake from TOC): Submersible Pump Peristaltic Pump PVC Hand Pump Teflon Bailer PVC Bailer Disposable Bailer Other Specific Conductance Dissolved Time Temp. Horiba QuickCheck pH Oxygen Color Turbidity (2400 Hr) (°C) (µmhos/cm) (µS) (std. units) (mg/l) (visual) (NTU) 1750 V1.5 930 () Hand Pump Specific Conductance Dissolved Field Measurement Devices: Horiba QuickCheck D.O. Test Kit	Device (Depth of Intake from TOC): Teflon Bailer PVC Bailer Disposable Bailer Other Specific Conductance Dissolved Time Temp. Horiba QuickCheck pH Oxygen Color Turbidity (2400 Hr) (°C) (µmhos/cm) (µS) (std. units) (mg/l) (visual) (NTU) (150 21.5 930 QuickCheck pH Oxygen Color Turbidity Sheen: NOV Odor: 510000 Sample Date: 970199 Field Measurement Devices: Horiba Omega QuickCheck D.O. Test Kit REMARKS: 108109 VOUWL PWGL. SIGNATURE: 9(2499)		Tuigo Dutt.
Teflon Bailer PVC Bailer Disposable Bailer Other Specific Conductance Dissolved Time Temp. Horiba QuickCheck pH Oxygen Color Turbidity (2400 Hr) (°C) (µmhos/cm) (µS) (std. units) (mg/l) (visual) (NTU) 1750 21.5 930 () Hany (OU) Sheen: NOW Odor: Story Sample Date: 9/26/99 Field Measurement Devices: Horiba Omega QuickCheck D.O. Test Kit	Teflon Bailer PVC Bailer Disposable Bailer Other		Peristaltic Pump PVC Hand Pump
Time Temp. Horiba QuickCheck pH Oxygen Color Turbidity (2400 Hr) (°C) (µmhos/cm) (µS) (std. units) (mg/l) (visual) (NTU) 1750 215 930 (9.90 1.02 H-g/ty 100 Sheen: NOW Odor: 5100/g Sample Date: 9120/99 Field Measurement Devices: Horiba Omega QuickCheck D.O. Test Kit	Specific Conductance Time Temp. Horiba QuickCheck pH Oxygen Color Turbidity (2400 Hr) (°C) (µmhos/cm) (µS) (std. units) (mg/l) (visual) (NTU) (1750) V1.5 930 Sheen: NOV Odor: 510000 Sample Date: 912099 Field Measurement Devices: Horiba Omega QuickCheck D.O. Test Kit REMARKS: 108500 VOILWL PWGL. SIGNATURE! DATE: 9(2499)		
Time Temp. Horiba QuickCheck pH Oxygen Color Turbidity (2400 Hr) (°C) (µmhos/cm) (µS) (std. units) (mg/l) (visual) (NTU) (150 VI.5 930 (.90 V.90 V.90 V.90 V.90 V.90 V.90 V.90	Time Temp. Horiba QuickCheck pH Oxygen Color Turbidity (2400 Hr) (°C) (µmhos/cm) (µS) (std. units) (mg/l) (visual) (NTU) (150 U.5 930 (9.90 1.00 H gry 100 1		
Sheen: NOV Odor: Stv0vg Sample Date: 9 20 99 Field Measurement Devices: Horiba Omega QuickCheck D.O. Test Kit	Sheen: NON Odor: Strong Sample Date: 97299 Field Measurement Devices: Horiba Omega QuickCheck D.O. Test Kit REMARKS: USSING VOLUME PWGE. SIGNATURE! DATE: 9(2999)	Time Temp. Horiba QuickChe	7
Sheen: NOW Odor: Story Sample Date: 92699 Field Measurement Devices: Horiba Comega QuickCheck D.O. Test Kit	Sheen: NOW Odor: Stworg Sample Date: 9/20/99 Field Measurement Devices: Horiba omega QuickCheck D.O. Test Kit REMARKS: COSMY VOLUME PWGE. SIGNATURE: 9/20/99	1	
Field Measurement Devices: Horiba Omega QuickCheck D.O. Test Kit	Field Measurement Devices: Horiba Omega QuickCheck D.O. Test Kit REMARKS: USSING VOLUME PWGE. SIGNATURE: 9(2999)		0.10 1.00 Hapley 100
	SIGNATURE! DATE: 9(2999	Sheen: NONL Odor: STYONG	Sample Date: 4/74/99
REMARKS: 1 UUSWIG VUUWE /WYE.	SIGNATURE! 9(20)99	1 / 20/2 - 1 / 1 / 1 / 2 / 2 / 2 / 2	QuickCheck D.O. Test Kit
	SIGNATURE! DATE: 1	REMARKS: 1 COOKING VOILING /WYL.	
	SIGNATURE! DATE: 1		
	SIGNATURE! DATE: 1		
	SIGNATURE! DATE: 1		
10000000000000000000000000000000000000	SIGNATURE! DATE: 1	1000000000	aladae
SIGNATURE! DATE: 1(20)	1001	SIGNATURE!	DATE: 1(299)
1.00	M:WORMSISAMPLING:WIRSMPLDOC [A] / []	M:\FORMS\SAMPLING\WTRSMPL.DOC	

LOCATION: B'&C Gasmin, Mart	SAMPLE ID: MW-5
PROJECT NO: BNC103	SAMPLE DY: PAW
CLIENT: B4CGasWin 1 Marz	REGULATORY AGENCY:
	Leachate Treatment Effluent Other
· · · · · · · · · · · · · · · · · · ·	2444.568
GALLONS PER LINEAR FOOT: (0.02) (0.04	
Well Total Depth (ft): 39.7	Volume in Casing (gal): 45
Depth to Water (ft): 50.80	Calculated Purge (volumes / gal.): U.5
Height of Water Column (ft): 0,70	Actual Pre-Sampling Purge (gal): US
PURGE: Device (Depth of Intake from TOC): Submersible Pump S.S. Bailer Teflon Bailer PVC Bailer	Peristaltic Pump PVC Hand Pump Disposable Bailer Other
Purge Water Containment: Of WWW C	
Field QC Samples Collected at this Well (Equipment or Field B	Blank): EB FB Other
Specific Conducta	mce ·
Time Volume Temp. Horiba QuickC	· · · · · · · · · · · · · · · · · · ·
$\begin{array}{ccccc} (2400 \text{Hr}) & (\text{gallons}) & (^{\circ}\text{C}) & (\mu\text{mhos/cm}) & (\mu\text{S}) \\ 1020 & 25 & 209 & 920 \\ \end{array}$	(std. units) (visual) (visual) Observation (U.O.O.O.O.O.O.O.O.O.O.O.O.O.O.O.O.O.O.O
	7.77 (F.)14 VVOVAQ STEELIFE STORY
1620 45 20,0 910	
1030 6.5 20.4 910 /	<u> </u>
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	· · · · · · · · · · · · · · · · · · ·
	Purge Date: 92899
	Purge Date: _t[CO] 11
SAMPLE:	The second secon
Device (Depth of Intake from TOC): Submersible Pump Teflon Bailer PVC Bailer Disposable Bailer	Peristaltic Pump PVC Hand Pump
Specific Conductance	Dissolved
Time Temp. Horiba QuickChe	
(2400 Hr) (°C) (μmhos/cm) (μS)	(std. units) (mg/l) (visual) (NTU)
1437 20.0 910	7.09 1.16 Higrey 731
Sheen: Mavy Odor: Strang	Sample Date: 9 26 99
Field Measurement Devices: Horiba Omega	QuickCheck D.O. Test Kit
REMARKS: 1 COSING VOLUME DWGL.	
<u> </u>	
10000000000	alada
SIGNATURE: MANN	DATE: 1/28/97

t .	•
LOCATION: Bic Gas Mini Mart	SAMPLE ID: WW-7
PROJECT NO: PSNC103	SAMPLED BY: EVAUL
CLIENT: BECGAS WINT WHAT	REGULATORY AGENCY:
	Leachate Treatment Effluent Other
CASING DIAMETER (OD-inches): 3/4 1	$ \begin{array}{cccccccccccccccccccccccccccccccccccc$
Well Total Depth (ft): 49.3	Volume in Casing (gal): 3.3
Depth to Water (ft):	Calculated Purge (volumes / gal.):
Height of Water Column (ft): 19,10	Actual Pre-Sampling Purge (gal): 10.0
PURGE:	
Device (Depth of Intake from TOC): Submersible Pump S.S. Bailer PVC Bailer Purge Water Containment:	Peristaltic Pump PVC Hand Pump Disposable Bailer Other
Field QC Samples Collected at this Well (Equipment or Field B	lank): EB FB Other
Specific Conductar	nce
Time Volume Temp. Horiba QuickCl (2400 Hr) (gallons) (°C) (μ mhos/cm) (μ S)	heck pH Color Turbidity
1601 10.0 19.5 947	7.10
	Purge Date: 9 28 99
SAMPLE: Device (Depth of Intake from TOC): Submersible Pump Teflon Bailer PVC Bailer Disposable Baile	Peristaltic Pump PVC Hand Pump Other
Time Temp. Horiba QuickChe (2400 Hr) (°C) (umhos/cm) (µS)	$\begin{array}{cccccccccccccccccccccccccccccccccccc$
Sheen: NOW Odor: light WOd	
Field Measurement Devices: Horiba Omega Omega Omega	QuickCheck D.O. Test Kit
· · · · · · · · · · · · · · · · · · ·	
	, .
mann	DATE: 9/28/99

Device (Depth of Intake from TOC): Submersible Pump S.S. Bailer Teflon Bailer PVC Bailer Purge Water Containment: OO MOUMAND	Volume in Casing (gal): 2.0 Calculated Purge (volumes / gal.): 9, 4 Actual Pre-Sampling Purge (gal): PVC Hand Pump Disposable Bailer Other
Field QC Samples Collected at this Well (Equipment or Field Black Specific Conductance (2400 Hr) (gallons) (°C) (umhos/cm) (µS) (QS) (QS) (QS) (QS) (QS) (QS) (QS) (Q	mk): EB FB Other
SAMPLE: Device (Depth of Intake from TOC): Submersible Pump Teflon Bailer PVC Bailer Disposable Bailer	Purge Date: 92899 Peristaltic Pump PVC Hand Pump
Time Temp. Horiba QuickCheck (2400 Hr) (°C) (µmhos/cm) (µS) Sheen: NOW Odgr: NOW Field Measure Principles	Dissolved pH Oxygen Color Turbidity (std. units) (mg/l) (visual) (NTU) Q 97 (35) [L.Grown 7999] Sample Date: 9/2499 Check D.O. Test Kit
SIGNATURE: MANAGEMENT AND A COLUMN AND A COL	DATE: 9/28/99

40811

LOCATION: BACGas Min / Mart	SAMPLE ID: MW-10
PROJECT NO: BNC 103	SAMPLED BY: Paul
CLIENT: B' CGas Wini War +	REGULATORY AGENCY:
SAMPLE TYPE: Groundwater & Surface Water	
	2-P 4 4.5 6 8
CASING DIAMETER (OD-inches): 3/4 1 GALLONS PER LINEAR FOOT: (0.02) (0.04)	
Well Total Depth (ft): 54.1	Volume in Casing (gal): 2.9
Depth to Water (ft): 37.U2	Calculated Purge (volumes / gal.):
Height of Water Column (ft): 10.40	Actual Pre-Sampling Purge (gal): <u>0.5</u>
PURGE:	
Device (Depth of Intake from TOC): Submersible Pump	Peristaltic Pump PVC Hand Pump
S.S. Bailer Toflon Bailer PVC Bailer	Disposable Bailer Other
Purge Water Containment: WWW.C. Field QC Samples Collected at this Well (Equipment or Field B	lank): EB- FB- Other
Specific Conductar	
Time Volume Temp. Horiba QuickCl (2400 Hr) (gallons) (°C) (μmhos/cm) (μS)	· · · · · · · · · · · · · · · · · · ·
11129 3.0 19.9 922	(0.010 H. borown high
	1.00
1133 0.0 19.0 917	
1136 05 19.2 920 1	<u> </u>
No	
<u> </u>	
,	
	10-2-2-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1
MANAGEMENT AND	- ataataa
	Purge Date: 9/20/99
SAMPLE:	
Device (Depth of Intake from TOC): Submersible Pump	Peristaltic Pump PVC Hand Pump
Teflon Bailer PVC Bailer Disposable Baile	r Other
Specific Conductance	Dissolved
Time Temp. Horiba QuickChe	
(2400 Hr) (°C) (μmhos/cm) (μS)	(std. units) (mg/l) (visual) (NTU)
1144 19.5 9.64	6.90 1.56 H.brown 7999
Sheen: NONL Odor: NONL	Sample Date: 9/20/99
	QuickCheck D.O. Test Kit
REMARKS:	
^ ^	, 1
SIGNATURE! MMM	DATE: 9/20/99
SIGNATURE:	DATE:

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LOCATION: B&C Gasmini Man	sample id: <u>V</u>	MW-11			
PROJECT NO: BACCO3	SAMPLED BY:	RHUNC			
CLIENT: B'a CGAS MIMI MANT	REGULATORY			A1	
SAMPLE TYPE: Groundwater Surface Water CASING DIAMETER (OD-inches): 3/4 1	Leachate 2	=	luent 1.5	Other	0
CASING DIAMETER (OD-inches): 3/4 1 1 (0.02) (0.04		(0.66)	(0.83)	(1.5)	(2.6)
Well Total Depth (ft): 49.7	Volume in Casin	g (gal): 2.7	<u> </u>	ì	
Depth to Water (ft): 33.93	Calculated Purge		1.7.9		
Height of Water Column (ft): 15.37	Actual Pre-Samp		** ^	·····	
PURGE:	Actual I Te-Bamp	img ruige (gai,	,		
Device (Depth of Intake from TOC): Submersible Pump S.S. Bailer Teflon Bailer PVC Bailer Purge Water Containment:	Disposable B	PumpOth	ner	nd Pump	
Field QC Samples Collected at this Well (Equipment or Field E	llank): EB	FBOthe	er		
Specific Conducta Time Volume Temp. Horiba QuickC (2400 Hr) (gallons) (°C) (µmhos/cm) (µS	heck pH	Color (visual)	Turbidity (visual)	Observati	ion `
1423 3.0 20.3 932	17.04	Hoboun	high		
1427 55 702 935	7.04				
1430 0.0 20.2 935	7.05		d'		
		**************************************		·	
		 ,			 .

			10000		
		Purge Date: 0	12644		
SAMPLE: Device (Depth of Intake from TOC): Teflon Bailer PVC Bailer Disposable Bailer	Peristali T Other_	tic Pump	PVC H	and Pump	
Specific Conductance		Dissolved			
Time Temp, Horiba QuickChe		Oxygen			•
$(2400 \text{ Hr}) \qquad (^{\circ}\text{C}) \qquad (\mu\text{mhos/cm}) \qquad (\mu\text{S})$ $\downarrow \Lambda , 2 \supset 2 \Omega \Omega \qquad \Omega \qquad \Omega \qquad \Omega$	7.94		Hilonow	* * ′	
100.0			A1 45	3 7 1 1	<u></u>
Sheen: NOW Odgr: MONL		Sample Date	: "10019	7	
Field Measurement Devices: Horiba Omega	QuickCheck	D.O. Test Kit			
	······································	<u></u>			
SIGNATURE: MANN			ĐATI	9/20/94	7

LOCATION: B&CGOS MINI MORT	SAMPLE ID: MW-12
PROJECT NO: RNO. (03	SAMPLED BY: 12 Paul
CLIENT: BACGAS MIMI WAWT	REGULATORY AGENCY:
SAMPLE TYPE: Groundwater Surface Water	
CASING DIAMETER (OD-inches): 3/4 1	2-1 4 4.5 6 8
GALLONS PER LINEAR FOOT: (0.02) (0.04)	
Well Total Depth (ft): 43.4	Volume in Casing (gal): 2.0
Depth to Water (ft): 20.20	Calculated Purge (volumes / gal.): 7.0
Height of Water Column (ft): 15.12	Actual Pre-Sampling Purge (gal):
PURGE:	
Device (Depth of Intake from TOC): Submersible Pump	Peristaltic Pump PVC Hand Pump
S.S. Bailer Teflon Bailer PVC Bailer	Disposable Bailer Other
Purge Water Containment: Of WWW Ct Field QC Samples Collected at this Well (Equipment or Field B)	ank): EB- FB- Other
Field QC Samples Confected at this wen (Equipment of Field B.	alik). EB PB Offer
Specific Conductar	
Time Volume Temp. Horiba QuickCh	* · · · · · · · · · · · · · · · · · · ·
(2400 Hr) (gallons) (°C) (μηhos/cm) (μS)	
1214 3.0 20.2 437	16.97 H. Gram high
1 1219 55 20.0 933 /	6.96
1722 400 199 923	1097
1000 000 1111 133	<u> </u>
	•
	alodge
	Purge Date: 9/20199
SAMPLE:	
Device (Depth of Intake from TOC): Submersible Pump_	Peristaltic Pump PVC Hand Pump
Teflon Bailer PVC Bailer Disposable Bailer	Other
Specific Conductance	Dissolved
Time Temp. Horiba QuickChe	ck pH Oxygen Color Turbidity
(2400 Hr) (°C) (μmhos/cm) (μS)	(std. units) (mg/l) (visual) (NTU)
1 1229 20.2 937	U.96 4.05 H.brown 7999
Sheen: NOW Odor: NOW	Sample Date: 9/20/99
	QuickCheck D.O. Test Kit
	MINIOTON NIOT TON WITH
REMARKS:	
$(\Omega\Omega\Omega\Delta$	alaalaa
SIGNATURE: WMANN	DATE; 2/ /0/11

LOCATION: BGCGas Wini Wart	SAMPLE ID: WW-13	
PROJECT NO: BNC 103	SAMPLED BY: Payn	y · · · · · · · · · · · · · · · · · · ·
CLIENT: BIC GAS MINI MAVI	REGULATORY AGENCY:	
SAMPLE TYPE: Groundwater — Surface Water	<u></u>	ent Other
CASING DIAMETER (OD-inches): 3/4 1		568
GALLONS PER LINEAR FOOT: (0.02) (0.04)		(0.83) (1.5) (2.6)
Well Total Depth (ft): 54.4	Volume in Casing (gal): 3.7	
Depth to Water (ft): 37.74	Calculated Purge (volumes / gal.):	t1.1
Height of Water Column (ft): 21.UU	Actual Pre-Sampling Purge (gal):	112~
PURGE:	1 0 0 0	
Device (Depth of Intake from TOC): Submersible Pump		PVC Hand Pump
S.S. Bailer Teflon Bailer PVC Bailer	Disposable Bailer Othe	T
Field OC Samples Collected at this Well (Equipment or Field B)	ank): EB- FB- Other	
<u>Specific Conductar</u> Time Volume Temp. Horiba QuickCh		Furbidity
(2400 Hr) (gallons) (°C) (μmhos/cm) (μS)		(visual) Observation
11013 A.O 20.1 950	7.01 H.barun 1	niah
1017 00 197 949 /	7.01	
1021 11.5 19.4 949	- 7.04 J	
1001 (1.5) 11.4		
	•	

		manufuu — — — — — — — — — — — — — — — — — —
	Purge Date: 41	26/99
SAMPLE:		
Device (Depth of Intake from TOC): Submersible Pump_	Peristaltic Pump	PVC Hand Pump
Teflon Bailer PVC Bailer Disposable Bailer	Other	_
Specific Conductance	Dissolved	
Time Temp. Horiba QuickChe		Color Turbidity
(2400 Hr) (°C) (μmhos/cm) (μS)	(std. units) (mg/l)	(visual) (NTU) 11.600m 7999
	1.05	alautoo
Sheen: NONL Odor: NONL	Sample Date:	41-00199
Field Measurement Devices: Horiba Omega O	QuickCheck D.O. Test Kit	P-7-1-1-7-1-1-1
REMARKS:		
Calibrated mit 1005, 9/20/99: pt. 7.00 4.00, EC:0, 7.	06; twb:0; t20:auto; t:	65.4°C
1 margana		alamha
SIGNATURE!		DATE:

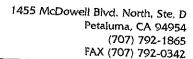
90P11

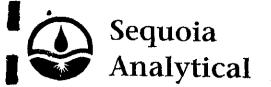
LOCATION: B9CGasMiniMart	SAMPLE ID: D-L
PROJECT NO BAN 1612	SAMPLED BY: EVall
CLIENT: B'CGas Mini Mart	REGULATORY AGENCY:
SAMPLE TYPE: Groundwater Surface Water	77
CASING DIAMETER (OD-inches): 3/4 1 GALLONS PER LINEAR FOOT: (0.02) (0.04	$ \begin{array}{cccccccccccccccccccccccccccccccccccc$
	Volume in Casing (gal): $\frac{\sqrt{5.2}}{}$
Well Total Depth (ft): 124.2	Volume in Cashing (gar): VOVE
Depth to Water (ft): 35.37	Calculated Purge (volumes / gal.): 45.4
Height of Water Column (ft):	Actual Pre-Sampling Purge (gal): 45.5
PURGE: Device (Depth of Intake from TOC): Submersible Pump S.S. Pailon Toffon Railer PVC Railer	5') Peristaltic Pump PVC Hand Pump
S.S. Bailer Teflon Bailer PVC Bailer	Disposable Bailer Other
Purge Water Containment: W WWW Field QC Samples Collected at this Well (Equipment or Field E	Blank): EB- FB- Other
Specific Conducta Time Volume Temp. Horiba QuickC	
(2400 Hr) (gallons) (°C) (µmhos/cm) (µS) (std. units) (visual) (visual) Observation
1342 155 21.0 910	1.26 H.bram high
1350 305 2010 945	7.34 moderate
1359 455 70.65 946	7.35 J TOW
1551 45.5 00.65 190	
	Purge Date: 9 28 99
	Purge Date. 1707.
SAMPLE:	Peristaltic Pump PVC Hand Pump
Device (Depth of Intake from TOC): Submersible Pump Teflon Bailer PVC Bailer Disposable Baile	
Specific Conductance	Dissolved
Time Temp. Horiba QuickCh	eck pH Oxygen Color Turbidity
(2400 Hr) (°C) (umhos/cm) (uS)	(std. units) (mg/l) (visual) (NTU)
1409 20.5 949	7.34 U.SI H.brown >999
Sheen: NONE Odgr: NONE	Sample Date: 9/20/99
Field Measurement Devices: Horiba Omega	QuickCheck D.O. Test Kit
REMARKS:	
00-00-000	aladaa
SIGNATURE: / MAWWV	DATE: 9/20/99

LOCATION: BYCGOSWIN PROJECT NO: BNC 103	ni Mart	SAMPLE ID: $\sqrt{2}$		
CLIENT: B4CGGS WIN	Mort	SAMPLED BY: V	M22	
SAMPLE TYPE: Groundwater	Surface Water	REGULATORY AGENO		
CASING DIAMETER (OD-inches):		- " V	ent Effluent	
GALLONS PER LINEAR FOOT:	(0.02) (0.04)	·	(0.83)	6 8
Well Total Depth (ft): 112.0			A	(1.5) (2.6)
Depth to Water (ft): 20.44	/	Volume in Casing (gal):	A	
		Calculated Purge (volume		
Height of Water Column (ft): PURGE:		Actual Pre-Sampling Purg	ge (gal): 43.0)
Device (Depth of Intake from TOC): S.S. Bailer Teflon B Purge Water Containment: (I WW) Field QC Samples Collected at this V	Mit - PVC Baner -	Disposable Bailer	Other	ad Pump
			Other	
Time Volume Temp. (2400 Hr) (gallons) (°C) 1245 14.5 20.6 1253 29.0 20.3 1300 43.0 20.3	Specific Conductar Horiba QuickCh (µmhos/cm) (µS) Q45 Q44	eck pH Cold (std. units) (visual 7.78 H.M.O.	al) (visual)	Observation `
			I	
	tank take take take take take take take tak			
			 _	
				_
		Dunga Dat	9/24/69	
SAMPLE:		Purge Dat	e: 11-01 (1	
Device (Depth of Intake from TOC): Teflon Bailer PVC Baile		Peristaltic PumpOther	PVC Ha	nd Pump
(2400 Hr) (°C) (µm) 1310 20.5 94 Sheen: NDM	Odor: NONL	(std. units) (mg.	gen Color (Visual) 9 (4.00000 Date: 9/72/99	Turbidity (NTU) 1 7999
Field Measurement Devices: Horiba REMARKS:	Omega Qu	ickCheck D.O. Tes	t Kit	
MEMARYS;			<u> </u>	
SIGNATURE:	\sim		DATE:	9/28/99
MAFORMSISAMPLING/WTRSMPL.DOC	100811		•	,

LOCATION: BACGAS MiniMart	SAMPLE ID: MS MWO (•
PROJECT NO: BNULO3	SAMPLED BY: ZPW	V-87-16-16-16-16-16-16-16-16-16-16-16-16-16-
CLIENT: BYCGASMINI WAVY	REGULATORY AGENCY:	
SAMPLE TYPE: Groundwater & Surface Water		ent Other
CASING DIAMETER (OD-inches): 3/4 1	2 4 4.5	68
GALLONS PER LINEAR FOOT: (0.02) (0.04)		$(0.83) \qquad \overline{(1.5)} \qquad \overline{(2.6)}$
Well Total Depth (ft): 59.5	Volume in Casing (gal): 4.3	
Depth to Water (ft): <u>34.30</u>	Calculated Purge (volumes / gal.):	12.4
Height of Water Column (ft): 25.12	Actual Pre-Sampling Purge (gal): _	1 / 1
PURGE:		
Device (Depth of Intake from TOC): Submersible Pump	Peristaltic Pump	PVC Hand Pump
Purge Water Containment: 1910 Barrer PVC Barrer	Disposable Baller — Other	
Field QC Samples Collected at this Well (Equipment or Field B	lank): EB Other_	
Specific Conductar	nce .	
Time Volume Temp. Horiba QuickCl		urbidity
(2400 Hr) (gallons) (°C) (μmhos/cm) (μS)		visual) Observation
4.5		
Carlotte Strategy Control Cont		
	-/	Marie Andrews
l		
		N-9
		
		(
	Purge Date: <u>9</u>	27/99
SAMPLE:		
Device (Depth of Intake from TOC): Submersible Pump	Peristaltic Pump	PVC Hand Pump
Teflon Bailer PVC Bailer Disposable Bailer	Other	
Specific Conductance	Dissolved	
Time Temp. Horiba QuickChe		Color Turbidity
(2400 Hr) (°C) (μmhos/cm) (μS)	(std. units) (mg/l)	(visual) (NTU)
Sheen: Odor:	Sample Date:	War (18)
	uickCheck D.O. Test Kit	
	gles present in bailer	in 3rd and 4th
Dailer tuits. End purge; this Sando Co	nected.	
0 - 10		01-1
SIGNATURE: MANY		DATE: 9/27/99
SIGNATURE: '		DATE:

110411





October 8, 1999

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

RE: B&C Gas Mini Mart/P910039

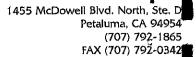
Dear Kris Johnson

Enclosed are the results of analyses for sample(s) received by the laboratory on September 29, 1999. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Michelle M. Portis Project Manager

CA ELAP Certificate Number I-2374





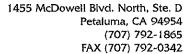
Conor Pacific / EFW 2650 East Bayshore Rd. Palo Alto, CA 94303 Project: B&C Gas Mini Mart

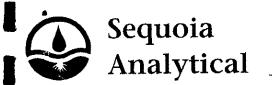
Project Number: BNC103, Task Project Manager: Kris Johnson Sampled: 9/28/99 Received: 9/29/99 Reported: 10/8/99

ANALYTICAL REPORT FOR P910039

Sample Description	Laboratory Sample Number	Sample Matrix	Date Sampled
MW-2	P910039-01	Water	9/28/99
MW-5	P910039-02	Water	9/28/99
MW-7	P910039-03	Water	9/28/99
MW-8	P910039-04	Water	9/28/99
MW-10	P910039-05	Water	9/28/99
MW-11	P910039-06	Water	9/28/99
MW-12	P910039-07	Water	9/28/99
MW-13	P910039-08	Water	9/28/99
D-1	P910039-09	Water	9/28/99
D-2	P910039-10	Water	9/28/99







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

Project: B&C Gas Mini Mart Project Number: BNC103, Task

Project Manager: Kris Johnson

Sampled: Received:

9/28/99 9/29/99 10/8/99 Reported:

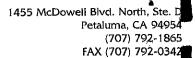
Total Petroleum Hydrocarbons as Gasoline and BTEX by EPA 8015M/8020M ·Sequoia Analytical - Petaluma

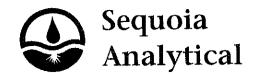
	Batch	Date	Date	Surrogate	Reporting			
Analyte	Number	Prepared	Analyzed	Limits	Limit	Result	Units	Note
MW-2			<u>P91003</u>	3001		~	Water	
	9100033	10/4/99	10/4/99	37*U1	1000	18000	ug/l	
Gasoline	9100033	10/4/99	10/4/99		10.0	992	ug/1	
Benzene	u ,	a	11		10.0		1ì	
l'oluene	H	11	It.			331	D	
Ethylbenzene		11			10.0	901	D	
Kylenes (total)	 H	11			10.0	2140		
Methyl tert-butyl ether					50.0	225		<u>l</u>
Surrogate: a,a,a-Trifluorotoluene	"	n 	n 	65.0-135		105	%	
Surrogate: 4-Bromofluorobenzene	#	n	"	65.0-135		96.7	a	
<u>MW-5</u>			P9100;	39-02			Water	
Gasoline	9100033	10/4/99	10/4/99		5000	49100	ug/l	
Benzene	11000000	10/4/22	10/4/22		50.0	540	11	
Coluene	н	(I	*1		50.0	2500	11	
	14	*1	41		50.0	1730	**	
Ethylbenzene	19	n	11		50.0		u	
Kylenes (total)	11	H	···			8040	*1	•
Methyl tert-butyl ether		- 5	·· - 		250	255		
Surrogate: a,a,a-Trifluorotoluene		,,	"	65.0-135		101	%	
Surrogate: 4-Bromofluorobenzene	п	"	"	65.0-135		94.0	"	
MW-7			P91003	<u>39-03</u>			Water	
Gasoline	9100033	10/4/99	10/4/99		250	2160	ug/l	
Benzene	10	11	ч		2.50	2.75	15	
roluene	19	11	` 1 1		2.50	8.16	re .	1
Ethylbenzene	11	**	н		2.50	5.91	U	
Kylenes (total)	н	11	11		2.50	27.3	U	
Methyl tert-butyl ether	н	19	If.		12.5	14.0	o o	1
Surrogate: a,a,a-Trifluorotoluene	····		n	65.0-135		99.3	%	
Surrogate: 4-Bromofluorobenzene	п	tt .	11	65.0-135		93.7	II .	
A#\$\$7 D			B0100	20.04			Water	
<u>MW-8</u>	0100022	10/4/00	P9100:	37-04	50.0	NID	<u>Water</u>	
Gasoline	9100033	10/4/99	10/4/99		50.0	ND	ug/l	
Benzene			11		0.500	ND		
Toluene	,,				0.500	ND		
Ethylbenzene		н •	0		0.500	ND	**	
Kylenes (total)	ti	U	11		0.500	ND	ti	
Methyl tert-butyl ether	##	н	n		2.50	52.0	#I	
Surrogate a,a,a-Trifluorotoluene	11	11	"	65.0-135		96.0	%	
surrogate. 4-Bromofluorobenzene	,,	"	0	65.0-135		91.7	II .	
				•••			***	
MW-10			P9100	39-05			Water	

Sequoia Analytical - Petaluma

*Refer to end of report for text of notes and definitions.







Conor Pacific / EFWProject:B&C Gas Mini MartSampled:9/28/992650 East Bayshore Rd.Project Number:BNC103, TaskReceived:9/29/99Palo Alto, CA 94303Project Manager:Kris JohnsonReported:10/8/99

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

	Batch	Date	Date	Surrogate	Reporting			
Analyte	Number	Prepared	Analyzed	Limits	Limit	Result	Units	Notes'
MW-10 (continued)			P91003	<u> 39-05</u>			Water	
Benzene	9100033	10/4/99	10/4/99		0.500	ND	ug/l	
Toluene	0	11	+1		0.500	ND		
Ethylbenzene	ti	11	*1		0.500	ND	H	
Xylenes (total)	ti		**		0.500	ND	н	
Methyl tert-butyl ether	н	Ð	11		2.50	ND	••	
Surrogate: a,a,a-Trifluorotoluene	11	п	11	65 0-135		99.0	%	
Surrogate: 4-Bromofluorobenzene	n	11	e	65.0-135		91.7	"	
MW-11			P9100	39-06			Water	
Gasoline	9100033	10/4/99	10/4/99	······································	50.0	ND	ug/l	
Benzene	11	0	11		0.500	ND	п	
Foluene	71	*1	ıŧ		0.500	ND	н	
Ethylbenzene	11	ii	U		0.500	ND	17	
Xylenes (total)	16	II	U		0.500	ND	ti	
Methyl tert-butyl ether	1)	ц	U		2.50	ND	•	
Surrogate: a,a,a-Trifluorotoluene	11	п	"	65.0-135		99.7	%	
Surrogate: 4-Bromofluorobenzene	н	u	Ħ	65.0-135		93.0	"	
MW-12			P9100	39-07			Water	
Gasoline	9100033	10/4/99	10/4/99		50.0	ND	ug/l	
Benzene	11	1(u .		0.500	ND	ei T	
Foluene	H	t†	\$1		0.500	ND	3 1	
Ethylbenzene	91	O.	11		0.500	ND	11	
Xylenes (total)	11	11	11		0.500	ND	It .	
Methyl tert-butyl ether	I I	11	Ð		2.50	ND	I#	
Surrogate: a,a,a-Trifluorotoluene	п	ri	н	65.0-135		98.7	%	aran recommendencia in production de la Malairia de La Maria
Surrogate: 4-Bromofluorobenzene	H	n	"	65.0-135		91.0	n	
MW-1 <u>3</u>			P9100	39-08			Water	
Gasoline	9100033	10/4/99	10/4/99		100	ND	ug/l	
Benzene	II.	If	II .		1.00	5.78	H	
Toluene	**	lt.	ŧI		1.00	ND	11	
Ethylbenzene	11	U	Ħ		1.00	ND	н	
Xylenes (total)	11	**	н		1.00	ND	п	
Methyl tert-butyl ether	11	71	11		5.00	160		
Surrogate: a,a,a-Trifluorotoluene		<i>n</i>	- ~ _n - · ·	65.0-135		97.7	%	
Surrogate: 4-Bromofluorobenzene	н	н	n	65.0-135		91.0	H	
<u>D-1</u>			P9100	<u>39-09</u>			Water	
Gasoline	9100033	10/4/99	10/4/99		50.0	ND	ug/l	
Benzene	11	H.	u		0,500	ND	n –	

Sequoia Analytical - Petaluma

*Refer to end of report for text of notes and definitions





Conor Pacific / EFW	Project:	B&C Gas Mini Mart	Sampled:	9/28/99
2650 East Bayshore Rd.	Project Number:	BNC103, Task	Received:	9/29/99
Palo Alto, CA 94303	Project Manager:	Kris Johnson	Reported:	10/8/99

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

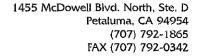
	Batch	Date	Date	Surrogate	Reporting			
Analyte	Number	Prepared	Analyzed	Limits	Limit	Result	Units	Notes*
D-1 (continued)			P9100	<u> 39-09</u>			Water	
Toluene	9100033	10/4/99	10/4/99		0.500	ND	ug/l	
Ethylbenzene	n	11	п		0.500	ND	**	
Xylenes (total)	•	11	и		0.500	ND	**	
Methyl tert-butyl ether	•	11	If		2.50	ND	**	
Surrogate: a,a,a-Trifluorotoluene	и	н	n	65.0-135		97.0	%	
Surrogate: 4-Bromofluorobenzene	Ħ	n .	Ħ	65.0-135		91.0	n	
<u>D-2</u>			P9100:	<u>39-10</u>			<u>Water</u>	
Gasoline	9100033	10/4/99	10/4/99		50.0	ND	ug/i	
Benzene	18	11	I#		0.500	ND	11	
Toluene	an .	11	19		0.500	ND	II .	
Ethylbenzene	it .	11	ц		0.500	ND	п	
Xylenes (total)	11	n	tr.		0.500	ND	н	
Methyl tert-butyl ether	*1	10	16		2 50	ND	11	
Surrogate: a,a,a-Trifluorotoluene	н	"	"	65.0-135		97.3	%	
Surrogate: 4-Bromofluorobenzene	u	n .	n	65.0-135		91.7	ıı.	



Conor Pacific / EFWProject:B&C Gas Mini MartSampled:9/28/992650 East Bayshore Rd.Project Number:BNC103, TaskReceived:9/29/99Palo Alto, CA 94303Project Manager:Kris JohnsonReported:10/8/99

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

	Date	Spike	Sample	QC		Reporting Limit		RPD	RPD	
Analyte	Analyzed	Level	Result	Result	Units	Recov. Limits	%	Limit	%	Notes*
	Data Burre		10		Tvtva a	tion Mathade ED	A 5030 v	atore		
Batch: 9100033	Date Prepared: 10/4/99			•	Extraction Method: EPA 5030 waters					
Blank	9100033-BI			NID	 /1	50.0				
Gasoline	10/4/99			ND	ug/l "	0.500				
Benzene	11			ND	" "					
Toluene				ND	"	0.500				
Ethylbenzene	11			ND	n	0.500				
Xylenes (total)	н			ND	# IF	0.500				
Methyl tert-butyl ether	(1			ND		2.50	00.5			
Surrogate: a,a,a-Trifluorotoluene	n	300		295	<i>n</i>	65.0-135	98.3			
Surrogate: 4-Bromofluorobenzene	11	300		288	u	65.0-135	96.0			
LCS	9100033-B	<u>S1</u>								
Benzene	10/4/99	100		89.3	ug/l	65.0-135	89.3			
Toluene	11	100		91.0	#1	65.0-135	91.0			
Ethylbenzene)tr	100		88.3	н	65.0-135	88.3			
Xylenes (total)	п	300		282	11	65.0-135	94.0			
Surrogate: a,a,a-Trifluorotoluene	"	300		292	11	65.0-135	97.3			
Matrix Spike	9100033-M	(S1 P	910027-01							
Benzene	10/4/99	100	ND	93.6	ug/l	65.0-135	93.6			
Toluene	н	100	ND	93.1	"	65.0-135	93.1			
Ethylbenzene	11	100	ND	88.9	11	65.0-135	88.9			
Xylenes (total)	91	300	ND	285	*1	65.0-135	95.0			
Surrogate: a,a,a-Trifluorotoluene	"	300		298	11	65.0-135	99.3			
Matrix Spike Dup	9100033-M	ISD1 P	910027-01		e					
Benzene	10/4/99	100	ND	95.0	ug/i	65.0-135	95.0	20.0	1.48	
Toluene	11	100	ND	94.6	u u	65.0-135	94.6	20.0	1.60	
Ethylbenzene	11	100	ND	90.4	ti	65.0-135	90.4	20.0	1.67	
Xylenes (total)	41	300	ND	288	H	65.0-135	96.0	20.0	1.05	
Surrogate: a,a,a-Trifluorotoluene	#	300		294	11	65.0-135	98.0			





Conor Pacific / EFWProject:B&C Gas Mini MartSampled:9/28/992650 East Bayshore Rd.Project Number:BNC103, TaskReceived:9/29/99Palo Alto, CA 94303Project Manager:Kris JohnsonReported:10/8/99

Notes and Definitions

#	Note
1	Results between the primary and confirmation columns varied by greater than 40% RPD.
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



PA10079

PO#

CHAIN OF CUSTODY

CONTRACT LABORATORY: PETALUMA TL TURN-AROUND TIME: Awdard Site Name BSC GOO WINI WAY Analyses Project No. BNC103, task STEHONS GREY MICKE PLAN provide Chromodogram (signature) Sampler(s): (printed) ZPan luitu results Collection Container Information Lab Sample Depth Matrix 1.D Onty Filt Prsrv LD. Type/Volume Remarks Date Time V)4 40 _₹7 Hd MIDMU 9/24/9 1758 water N 3 MW-2 3 MW-5 1037 3 3 3 1 1609 mw. 3 3 MW-D 4 1059 3 う ろ MWJO V 1144 3 ĺ 1437 MWLL 3 3 7 1229 MW-121 3 3 1026 MW-13 3 3 1409 6 D-3 ろ 130 17-2 My Son MSUNWO! 200LER CUSTODY SEALS INTACTED NOTINTACT CODIERTEMPERATURE Date/Time: 9 24 9 9 Send Results To: Attn: \Lunis JOUMSOM EINARSON, FOWLER & WATSON Relipquished by: (signature)
WHAWW 1310 10/1/99 Received by: (signature) 2650 East Bayshore Road 1230 Palo Alto, CA 94303 10-1 Phone (650) 843-3828 Received by: (signature) Date/Time: Relinquished by: (signature 1345 Fax (650) 843-3815

10-1