HYDRO ENVIRONMENTAL TECHNOLOGIES, INC.

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93 SEP -1 AM 11:48

August 27, 1993 **12-007**

Mr. Lynn Walker
Shell Oil Company
P. O. Box 5278
Concord, CA 94520

Re: Former Shell Service Station - WIC# 204-6852-1008
15275 Washington Avenue, San Leandro, California

Dear Mr. Walker,

Hydro-Environmental Technologies, Inc. (HETI) is pleased to present this report describing the results of the third quarter 1993 ground water sampling at the above-referenced site (Figure 1). Information presented in this report is based on the results of lab analysis of ground water samples collected by the Shell Oil Company (Shell) sampling contractor on July 23, 1993. A copy of this report has been forwarded to the Alameda County Department of Environmental Health and to the Regional Water Quality Control Board.

Executive Summary

- Field data indicates that the local ground water flow direction calculated this quarter is similar to that calculated during previous quarters, with ground water moving predominantly towards the south at a variable gradient.

- Ground water elevations in most monitoring wells have decreased from last quarter by one-half to one-and-one-half feet.

- Laboratory analytical results from ground water samples collected during this monitoring event indicate that petroleum hydrocarbons were not detected in concentrations exceeding the method detection limit in the sample collected from well S-18.

- Results indicate that concentrations of hydrocarbons have decreased in wells S-1, S-7, S-8, S-9 and S-10.

Site Description

Project history and background information has been presented in investigative reports prepared by other consultants during the site characterization phase of this project. There are currently six ground water monitoring wells and one extraction well present on-site, and ten monitoring wells located off-site (Figure 2).

Results of the Second Quarter 1993 Ground Water Sampling

Ground Water Gradient:

The depth to ground water in all monitoring wells was measured by the Shell sampling contractor, Blaine Tech Services, Inc. (Blaine), on July 23, 1993. These measurements were combined with previously established well head elevations to produce a Ground Water Gradient Map (Figure 3). Water table elevations are presented in Table 1.

As shown on Figure 3, ground water flow direction is generally towards the south. This flow direction is consistent with that measured during previous phases of the site investigation. As shown on Table 1, ground water elevations have decreased by approximately one-half to one-and-one-half feet since the previous sampling visit in April, 1993.

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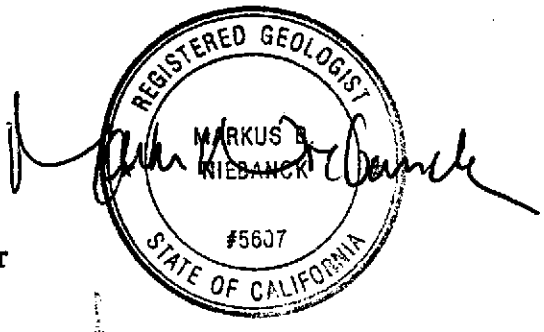
Ground Water Analytical Data:

Laboratory analytical results indicate that petroleum hydrocarbons were not detected in concentrations exceeding the method detection limit in the sample collected from monitoring well S-18 on July 23, 1993. Dissolved benzene distribution is shown on Figure 4, the Benzene Isoconcentration Map. Blaine sampling and analytical data is attached as Appendix A. Current and historical analytical results are presented in Table 1.

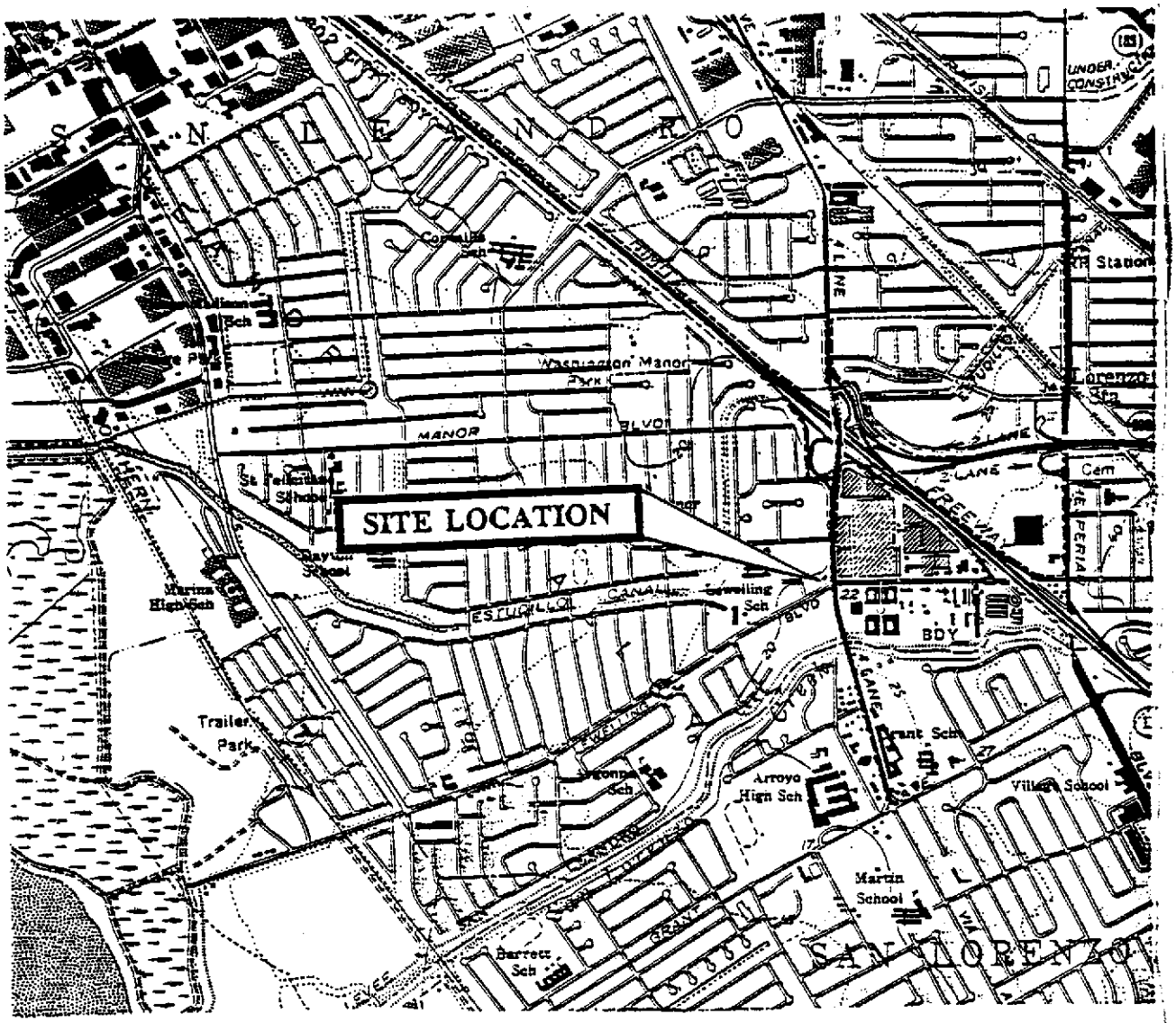
All information and interpretation in this report is presented in accordance with currently accepted professional practices. This report has been prepared for the sole use of Shell Oil Company. Any reliance on the information presented herein by third parties will be at such parties' sole risk. HETI is pleased to be of continued service to Shell. If you have any questions or comments regarding this report, please do not hesitate to call me at (510) 521-2684.

Very truly yours,
HYDRO-ENVIRONMENTAL TECHNOLOGIES, INC.



Markus B. Niebanck, R. G.
Western Regional Manager

cc: Juliette Shin, Alameda County Department of Environmental Health
cc: Rich Hiett, Regional Water Quality Control Board.



SCALE 1:24 000

1 0 1 MILE

1000 0 1000 2000 3000 4000 5000 6000 7000 FEET

1 .5 0 1 KILOMETER

NORTH

SOURCE:
USGS 7.5 MINUTE SERIES
SAN LEANDRO QUADRANGLE
PHOTOREVISED 1980

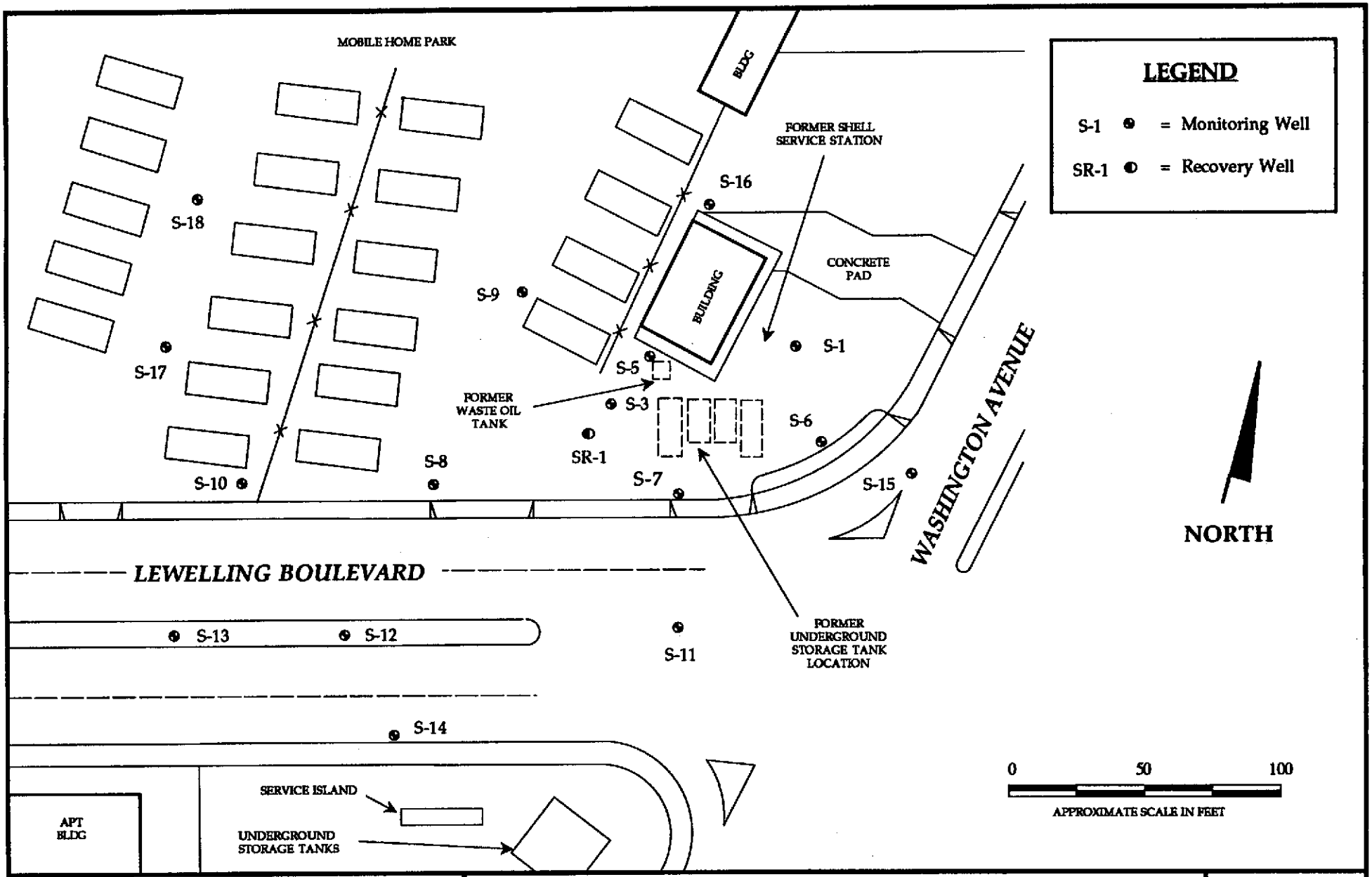
HYDRO-ENVIRONMENTAL TECHNOLOGIES, INC.

SITE LOCATION MAP

Shell Service Station
15275 Washington Street
San Leandro, California
WIC #204-6852-1008

Figure 1

12-007 8/93

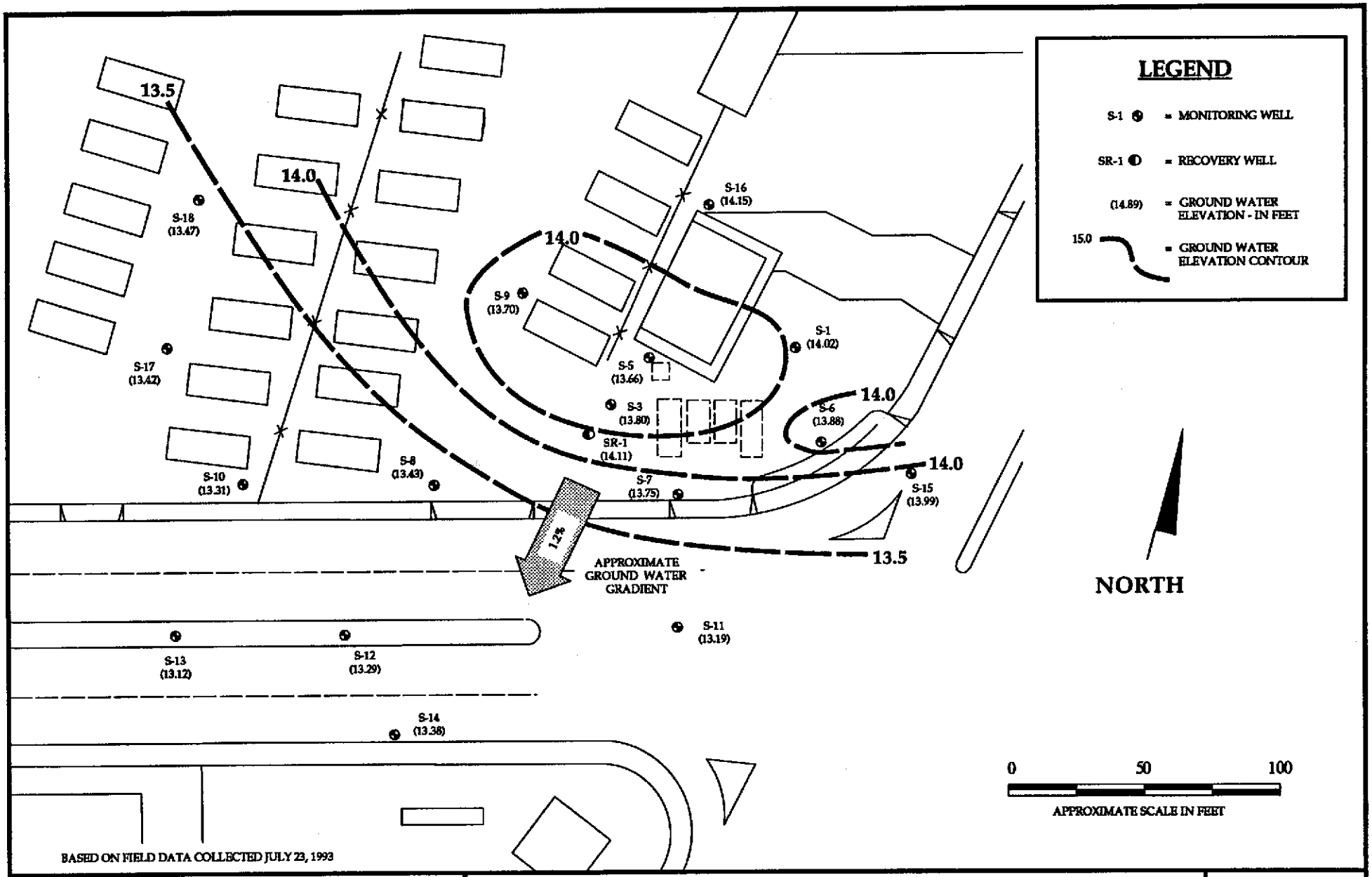


HYDRO-ENVIRONMENTAL TECHNOLOGIES, INC.

SITE PLAN
Former Shell Service Station
15275 Washington Avenue
San Leandro, California
WIC # 204-6852-1008

Figure
2

12-007 8/93



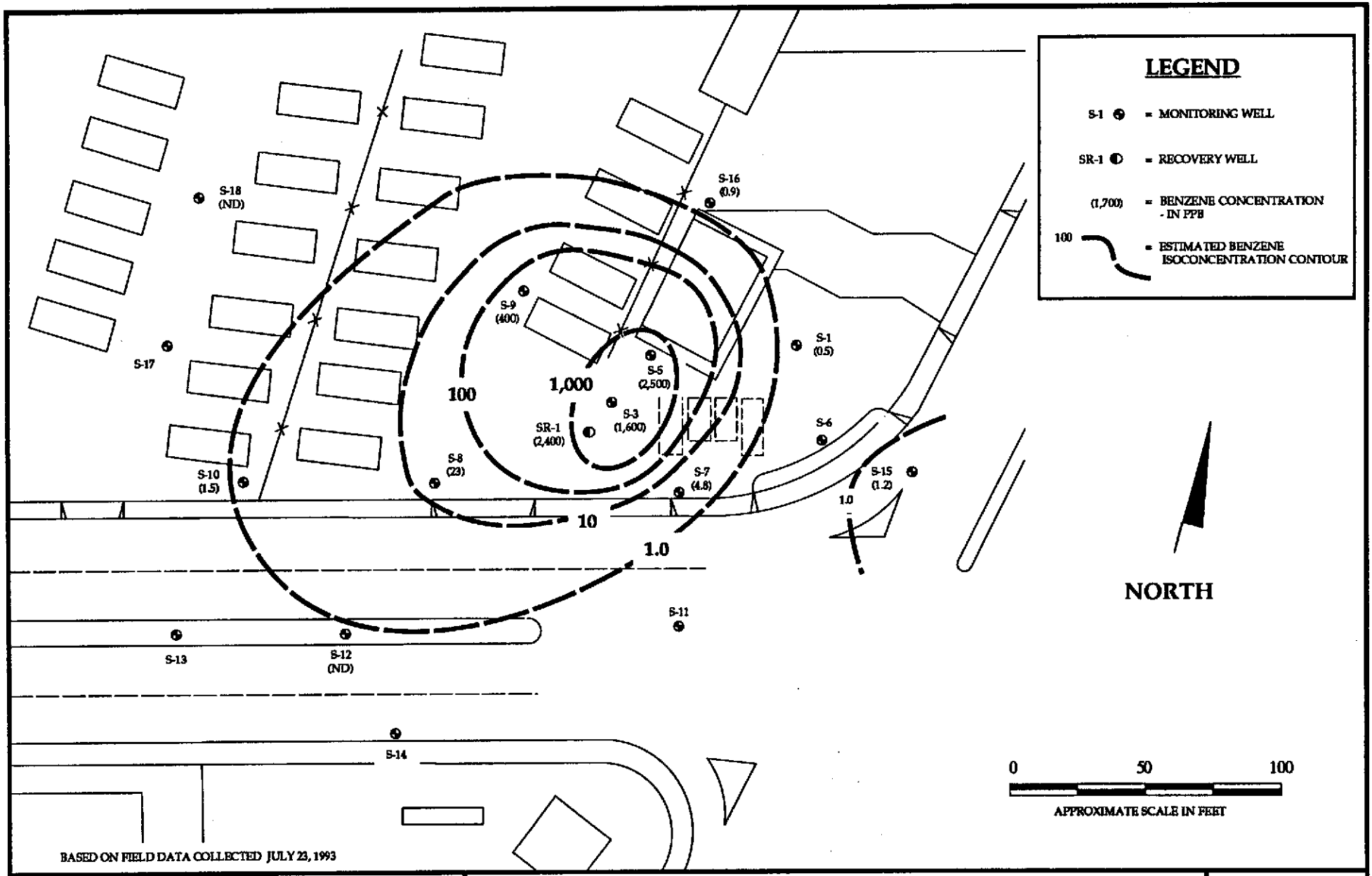
HYDR-ENVIRONMENTAL TECHNOLOGIES, INC.

GROUND WATER GRADIENT MAP

Former Shell Service Station
15275 Washington Avenue
San Leandro, California
WIC # 204-6852-1008

Figure 3

12-007 8/93



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BENZENE ISOCONCENTRATION MAP
Former Shell Service Station
15275 Washington Avenue
San Leandro, California
WIC # 204-6852-1008

Figure
4
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Table 1

SUMMARY OF GROUND WATER ELEVATIONS AND WATER SAMPLE ANALYTICAL RESULTS

Former Shell Service Station
15275 Washington Avenue
San Leandro, California
WIC#204-6852-1008

Well Number	Sampling Date	TOB (feet)	DTW (feet)	GWE (feet)	TPHg (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)
S-1	7/8/85	—	—	—	520	NA	NA	NA	NA
	9/6/88	—	—	—	<50	<0.5	<1	<1	<3
	11/16/88#	21.55	8.01	13.54	<50	<0.5	<1	<1	<3
	2/27/89	—	—	—	<50	0.5	<1	<1	<3
	5/4/89	—	—	—	<50	1	<1	<1	<3
	8/10/89	21.55	7.93	13.62	<50	0.7	<1	<1	<3
	10/10/89	—	—	—	<50	<0.5	<1	<1	<3
	1/25/90	—	—	—	<50	<0.5	<0.5	<0.5	<1
	4/18/90	21.55	7.91	13.64	<50	<0.5	<0.5	<0.5	<1
	7/23/90	—	—	—	<50	<0.5	<0.5	<0.5	<0.5
	10/18/90	—	—	—	80	5	<0.5	<0.5	3
	1/28/91	—	—	—	<50	4.5	<0.5	<0.5	2
	4/25/91	—	—	—	80*	3.7	<0.5	0.7	2
	7/9/91	—	—	—	200	16	<0.5	1.3	5.8
	10/8/91	—	—	—	<50	2.3	<0.5	<0.5	<0.5
	2/5/92	—	—	—	160	8.9	<0.5	2.1	6
	4/28/92	—	—	—	<50	2.4	<0.5	<0.5	0.9
	7/27/92	—	—	—	<50	<0.5	<0.5	<0.5	<0.5
	10/26/92	—	—	—	57	3	1.6	1.4	1.7
	1/14/93	21.55	5.91	15.64	490	53	1.2	20	33
	4/16/93	21.55	6.66	14.89	240	20	<0.5	15	240
	7/23/93	21.55	7.53	14.02	<50	0.5	<0.5	<0.5	<0.5
S-3	9/6/88	—	—	—	96000	3400	9500	2700	17000
	11/16/88#	21.14	7.76	13.38	70000	4600	8400	2500	13000
	2/27/89	—	—	—	32000	2400	3100	1500	6400
	5/4/89	—	—	—	47000	4400	300	2400	15000
	8/10/89	21.14	7.92	13.22	110000	5700	5700	3200	19000
	10/10/89	—	—	—	52000	4600	3300	2600	15000
	1/25/90	—	—	—	420000	5200	4100	6700	34000
	4/18/90	21.14	7.74	13.40	58000	3800	1400	2400	12000
	7/23/90	—	—	—	49000	3400	1800	2300	12000
	10/18/90	—	—	—	44000	3500	650	2400	11000

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Former Shell Service Station
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San Leandro, California
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Well Number	Sampling Date	TOB (feet)	DTW (feet)	GWE (feet)	TPHg (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)
S-3	1/28/91	---	---	---	64000	4090	570	1940	8090
	4/25/91	---	---	---	120000	3900	3600	2400	8900
	7/9/91	---	---	---	50000	3600	2300	1800	10000
	10/8/91	---	---	---	130000	3600	1000	2800	8400
	2/5/92	---	---	---	150000	2500	670	2700	10000
	4/28/92	---	---	---	120000	2200	1200	2000	5800
	7/27/92	---	---	---	190000	1400	<1250	<1250	3400
	10/26/92	---	---	---	950000	2000	8400	16000	36000
	1/14/93	21.14	5.16	15.98	41000	2700	2500	1800	6900
	4/16/93	21.14	7.18	13.96	40000	930	2800	1900	14000
	7/23/93	21.14	7.34	13.80	87000	1600	<5.0	1300	4000
S-5	1/8/87	---	---	---	7800	380	510	NR	1000
	9/6/88	---	---	---	7000	2600	60	400	700
	11/16/88#	---	---	---	3000	660	60	120	220
	2/27/89	---	---	---	5700	2000	220	260	320
	5/4/89	---	---	---	9000	3000	600	630	1700
	8/10/89	21.41	8.28	13.13	5100	1100	<50	270	400
	10/10/89	---	---	---	15000	3300	160	830	2200
	1/25/90	---	---	---	12000	2400	360	570	1400
	4/18/90	21.41	8.32	13.09	5200	1100	40	300	460
	7/23/90	---	---	---	5500	1300	140	320	730
	10/18/90	---	---	---	12000	3200	40	720	900
	1/28/91	---	---	---	2550	410	15	110	60
	4/25/91	---	---	---	67000	5100	3100	2800	11000
	7/9/91	---	---	---	4900	480	36	360	1000
	10/8/91	---	---	---	6600	370	7	190	380
	2/5/92	---	---	---	44000	4800	850	2700	8400
	4/28/92	---	---	---	33000	1400	320	1600	5200
	7/27/92	---	---	---	20000	2400	<125	1800	5300
	10/26/92	---	---	---	21000	1600	140	1500	2800
	1/14/93	21.41	5.22	16.19	54000	1900	1000	2700	16000

Table 1

SUMMARY OF GROUND WATER ELEVATIONS AND WATER SAMPLE ANALYTICAL RESULTS

Former Shell Service Station
15275 Washington Avenue
San Leandro, California
WIC#204-6852-1008

Well Number	Sampling Date	TOB (feet)	DTW (feet)	GWE (feet)	TPHg (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)
S-5	4/16/93	21.41	7.04	14.37	42000	2000	1300	4300	18000
	7/23/93	21.41	7.75	13.66	46000	2500	2200	3400	11000
S-6	11/16/88#	22.02	8.58	13.44	50	0.7	<1	<1	<3
	2/27/89	—	—	—	<50	<0.5	<1	<1	<3
	5/4/89	—	—	—	<50	<0.5	<1	<1	<3
	8/10/89	22.02	8.54	13.48	<50	<0.5	<1	<1	<3
	10/10/89	—	—	—	<50	<0.5	<1	<1	<3
	1/25/90	—	—	—	<50	<0.5	<0.5	<0.5	<1
	4/18/90	22.02	8.43	13.59	<50	<0.5	0.6	<0.5	1
	7/23/90	—	—	—	<50	<0.5	0.9	<0.5	1.8
	10/18/90	—	—	—	<50	<0.5	0.7	<0.5	0.8
	1/28/91	—	—	—	<50	<0.5	<0.5	<0.5	<0.5
	4/25/91	—	—	—	<50	<0.5	<0.5	<0.5	0.7
	7/9/91	—	—	—	<50	<0.5	<0.5	<0.5	<0.5
	10/8/91	—	—	—	<50	0.7	<0.5	<0.5	<0.5
	4/28/92	—	—	—	<50	<0.5	<0.5	<0.5	<0.5
	10/26/92	—	—	—	<50	<0.5	<0.5	<0.5	<0.5
	1/13/93	22.02	6.43	15.59	NA	NA	NA	NA	NA
	4/16/93	22.02	7.12	14.90	<50	<0.5	<0.5	<0.5	<0.5
	7/23/93	22.02	8.14	13.88	NA	NA	NA	NA	NA
S-7	11/16/88#	21.47	8.24	13.23	100	5.1	15	2	13
	2/27/89	—	—	—	50	0.5	3	1	11
	5/4/89	—	—	—	<50	<0.5	<1	<1	<3
	8/10/89	21.47	8.18	13.29	<50	<0.5	<1	<1	<3
	10/10/89	—	—	—	<50	<0.5	<1	<1	<3
	1/25/90	—	—	—	<50	<0.5	<0.5	<0.5	<1
	4/18/90	21.47	8.06	13.41	<50	<0.5	<0.5	<0.5	<1
	7/23/90	—	—	—	<50	<0.5	<0.5	<0.5	<0.5
	10/18/90	—	—	—	<50	<0.5	0.5	0.5	4.1
	1/28/91	—	—	—	<50	<0.5	<0.5	<0.5	<0.5
	4/25/91	—	—	—	60*	<0.5	<0.5	<0.5	<0.5

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Well Number	Sampling Date	TOB (feet)	DTW (feet)	GWE (feet)	TPHg (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)
S-7	7/9/91	---	---	---	<50	<0.5	<0.5	<0.5	<0.5
	10/8/91	---	---	---	<50	<0.5	<0.5	<0.5	<0.5
	2/5/92	---	---	---	<50	<0.5	<0.5	<0.5	<0.5
	4/28/92	---	---	---	<50	<0.5	<0.5	<0.5	<0.5
	7/27/92	---	---	---	<50	<0.5	<0.5	<0.5	<0.5
	10/26/92	---	---	---	57^	<0.5	<0.5	<0.5	<0.5
	1/14/93	21.47	5.84	15.63	56^	<0.5	<0.5	<0.5	<0.5
	4/16/93	21.47	6.38	15.09	110	28	<0.5	<0.5	1.8
	7/23/93	21.47	7.72	13.75	80	4.8	<0.5	<0.5	0.8
S-8	11/16/88#	20.72	7.76	12.96	210	5	<1	1	5
	2/27/89	---	---	---	<50	2.4	<1	<1	<3
	5/3/89	---	---	---	<50	7.5	<1	2	<3
	8/10/89	20.72	7.79	12.93	<50	0.6	<1	<1	<3
	10/9/89	---	---	---	<50	<0.5	<1	<1	<3
	1/25/90	---	---	---	<50	<0.5	<0.5	<0.5	<1
	4/18/90	20.72	7.59	13.13	<50	<0.5	<0.5	<0.5	<1
	7/23/90	---	---	---	<50	<0.5	<0.5	<0.5	<0.5
	10/18/90	---	---	---	<50	<0.5	<0.5	<0.5	<0.5
	1/28/91	---	---	---	<50	55	0.5	<0.5	1.4
	4/25/91	---	---	---	130*	19	<0.5	1.3	1.1
	7/9/91	---	---	---	200	33	<0.5	1.8	2.8
	10/8/91	---	---	---	580	95	2.2	4.9	6.5
	2/5/92	---	---	---	90*	18	<0.5	6.2	1.8
	4/28/92	---	---	---	<50	5.9	<0.5	2.5	<0.5
	7/27/92	---	---	---	<50	<0.5	<0.5	<0.5	<0.5
	10/26/92	---	---	---	<50	<0.5	<0.5	<0.5	<0.5
	1/14/93	20.72	5.32	15.40	270	74	0.9	25	5.5
	4/16/93	20.72	5.76	14.96	1100	420	<0.5	200	20
	7/23/93	20.72	7.29	13.43	160	23	<0.5	1.2	1.5
S-9	11/16/88#	20.96	7.78	13.18	1400	69	3	52	180
	2/27/89	---	---	---	1600	240	4	130	180

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S-9	5/3/89	—	—	—	2600	470	10	240	480
	8/10/89	20.96	7.82	13.14	520	73	<10	40	<30
	10/9/89	—	—	—	380	82	<1	46	13
	1/25/90	—	—	—	750	140	1.2	69	75
	4/18/90	20.96	7.65	13.31	680	150	1.7	50	37
	7/23/90	—	—	—	490	94	1.2	32	24
	10/18/90	—	—	—	390	140	0.7	3.3	24
	1/28/91	—	—	—	1040	450	4.6	85	97
	4/25/91	—	—	—	5800	880	9	360	500
	7/9/91	—	—	—	1400	220	2.8	82	100
	10/8/91	20.96	7.82	13.14	890	960	<2.5	16	29
	2/5/92	—	—	—	950	240	<2.5	28	55
	4/28/92	—	—	—	1400*	290	3	100	81
	7/27/92	—	—	—	890	190	<2.5	66	68
	10/26/92	—	—	—	650	160	<2.5	63	89
	1/13/93	20.96	6.80	14.16	19000	2400	38	1700	2200
	4/16/93	20.96	6.28	14.68	10000	1500	<0.5	1100	990
	7/23/93	20.96	7.26	13.70	1100	400	<5.0	260	160
S-10	11/16/88#	20.86	7.91	12.95	330	0.5	<1	1	11
	2/27/89	—	—	—	140	<0.5	<3	2	6
	5/3/89	—	—	—	220	<0.5	1	2	7
	8/10/89	20.86	7.94	12.92	<50	<0.5	<1	<1	<3
	10/9/89	—	—	—	170	<0.5	<1	<1	<3
	1/25/90	—	—	—	<50	<0.5	<0.5	1.1	4
	4/18/90	20.86	7.71	13.15	<50	<0.5	0.9	<0.5	2
	7/23/90	—	—	—	590	<0.5	<0.5	1.9	19
	10/18/90	—	—	—	140	<0.5	0.7	<0.5	7
	1/28/91	—	—	—	<50	<0.5	<0.5	<0.5	<0.5
	4/25/91	—	—	—	<50	<0.5	<0.5	1.1	0.8
	7/9/91	—	—	—	<50	<0.5	<0.5	<0.5	<0.5

Table 1

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Former Shell Service Station
15275 Washington Avenue
San Leandro, California
WIC#204-6852-1008

Well Number	Sampling Date	TOB (feet)	DTW (feet)	GWE (feet)	TPHg (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)
S-10	10/8/91	—	—	—	140	<0.5	<0.5	<0.5	<0.5
	2/5/92	—	—	—	<50	<0.5	<0.5	<0.5	<0.5
	4/28/92	—	—	—	<50	<0.5	<0.5	<0.5	<0.5
	7/27/92	—	—	—	<50	<0.5	<0.5	<0.5	<0.5
	10/26/92	—	—	—	<50	<0.5	<0.5	<0.5	<0.5
	1/13/93	20.69	3.78	16.91	88	<0.5	0.6	<0.5	<0.5
	4/16/93	20.69	6.46	14.23	80	<0.5	<0.5	<0.5	<0.5
	7/23/93	20.69	7.38	13.31	<50	1.5	<0.5	0.7	2.7
S-11	11/16/88#	21.26	8.62	12.64	<50	<0.5	<1	<1	<3
	2/27/89	—	—	—	<50	<0.5	<1	<1	<3
	5/3/89	—	—	—	<50	<0.5	<1	<1	<3
	8/10/89	21.26	8.65	12.61	<50	<0.5	<1	<1	<3
	10/9/89	—	—	—	<50	<0.5	<1	<1	<3
	1/25/90	—	—	—	<50	<0.5	<0.5	<0.5	<1
	4/18/90	21.26	8.42	12.84	<50	<0.5	<0.5	<0.5	<1
	7/23/90	—	—	—	<50	<0.5	0.6	<0.5	1.1
	10/18/90	—	—	—	<50	<0.5	<0.5	<0.5	0.5
	1/28/91	—	—	—	63	<0.5	3.3	0.9	7
	4/25/91	—	—	—	<50	<0.5	<0.5	0.8	<0.5
	7/9/91	—	—	—	<50	<0.5	<0.5	<0.5	<0.5
	10/8/91	—	—	—	<50	<0.5	<0.5	<0.5	<0.5
	4/28/92	—	—	—	<50	<0.5	<0.5	<0.5	<0.5
	10/26/92	—	—	—	<50	<0.5	<0.5	<0.5	<0.5
	1/13/93	21.26	6.38	14.88	NA	NA	NA	NA	NA
	4/16/93	21.26	6.86	14.40	<50	<0.5	<0.5	<0.5	<0.5
	7/23/93	21.26	8.07	13.19	NA	NA	NA	NA	NA
S-12	11/16/88#	21.05	8.34	12.71	50	3.5	<1	<1	<3
	2/27/89	—	—	—	<50	0.8	<1	<1	<3

Table 1

SUMMARY OF GROUND WATER ELEVATIONS AND WATER SAMPLE ANALYTICAL RESULTS

Former Shell Service Station
15275 Washington Avenue
San Leandro, California
WIC#204-6852-1008

Well Number	Sampling Date	TOB (feet)	DTW (feet)	GWE (feet)	TPHg (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)
S-12	5/3/89	—	—	—	<50	<0.5	<1	<1	<3
	8/10/89	21.05	8.32	12.73	<50	<0.5	<1	<1	<3
	10/9/89	—	—	—	<50	<0.5	<1	<1	<3
	1/25/90	—	—	—	<50	<0.5	<0.5	<0.5	<1
	4/18/90	21.05	8.05	13.00	<50	<0.5	<0.5	<0.5	<1
	7/23/90	—	—	—	<50	<0.5	<0.5	<0.5	<0.5
	10/18/90	—	—	—	<50	<0.5	<0.5	<0.5	<0.5
	1/28/91	—	—	—	<50	<0.5	<0.5	<0.5	<0.5
	4/25/91	—	—	—	90	5.4	<0.5	1.1	0.7
	7/9/91	—	—	—	<50	2.9	<0.5	<0.5	<0.5
	10/8/91	—	—	—	50	<0.5	<0.5	<0.5	<0.5
	2/5/92	—	—	—	50*	<0.5	<0.5	<0.5	<0.5
	4/28/92	—	—	—	<50	<0.5	<0.5	<0.5	<0.5
	7/27/92	—	—	—	94^	<0.5	<0.5	<0.5	<0.5
	10/26/92	—	—	—	86^	<0.5	<0.5	<0.5	<0.5
	1/14/93	21.05	6.38	14.67	120	2	<0.5	<0.5	<0.5
	4/16/93	21.05	6.56	14.49	60	<0.5	<0.5	<0.5	<0.5
	7/23/93	21.05	7.76	13.29	90	<0.5	<0.5	<0.5	0.9
S-13	5/3/89	—	—	—	150	4.9	4	2	14
	8/10/89	20.57	8.00	12.57	110	2.9	<1	<1	<3
	10/9/89	—	—	—	77	1.4	<1	<1	<3
	1/25/90	—	—	—	51	0.5	<0.5	<0.5	<1
	4/18/90	20.57	7.73	12.84	85	8.7	<0.5	<0.5	<1
	7/23/90	—	—	—	80	0.8	<0.5	<0.5	<0.5
	10/18/90	—	—	—	130	<0.5	<0.5	<0.5	<0.5
	1/28/91	—	—	—	<50	<0.5	0.9	<0.5	1
	4/25/91	—	—	—	440*	3.8	<0.5	1.2	0.6
	7/9/91	—	—	—	320*	0.6	<0.5	<0.5	<0.5
	10/8/91	—	—	—	310	<0.5	<0.5	<0.5	<0.5

Table 1

SUMMARY OF GROUND WATER ELEVATIONS AND WATER SAMPLE ANALYTICAL RESULTS

Former Shell Service Station
15275 Washington Avenue
San Leandro, California
WIC#204-6852-1008

Well Number	Sampling Date	TOB (feet)	DTW (feet)	GWE (feet)	TPHg (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)
S-13	4/28/92	—	—	—	<50	<0.5	<0.5	<0.5	<0.5
	10/26/92	—	—	—	180^	<0.5	<0.5	<0.5	<0.5
	1/13/93	20.57	5.06	15.51	NA	NA	NA	NA	NA
	4/16/93	20.57	6.38	14.19	240	4.8	<0.5	1.3	<0.5
	7/23/93	20.57	7.45	13.12	NA	NA	NA	NA	NA
S-14	5/3/89	—	—	—	5300	750	400	200	800
	8/10/89	20.44	7.58	12.86	1800	540	140	42	50
	10/9/89	—	—	—	1000	360	60	20	30
	1/25/90	—	—	—	640	160	77	17	39
	4/18/90	20.44	7.37	13.07	1200	200	110	30	96
	7/23/90	—	—	—	5000	430	340	140	660
	10/18/90	—	—	—	1800	770	13	17	120
	1/28/91	—	—	—	720	200	36	21	78
	4/25/91	—	—	—	14000	930	430	250	970
	7/9/91	—	—	—	160	30	5.3	5	16
	10/8/91	—	—	—	5400	81	57	95	380
	4/28/92	—	—	—	2000	270	140	48	170
	10/26/92	—	—	—	920	33	12	25	88
	1/13/93	20.44	5.07	15.37	NA	NA	NA	NA	NA
	4/16/93	20.44	5.86	14.58	4500	1100	29	91	170
	7/23/93	20.44	7.06	13.38	NA	NA	NA	NA	NA
S-15	5/3/89	—	—	—	<50	<0.5	<1	<1	<3
	8/10/89	22.22	8.48	13.74	<50	<0.5	<1	<1	<3
	10/9/89	—	—	—	<50	<0.5	<1	<1	<3
	1/25/90	—	—	—	<50	<0.5	<0.5	<0.5	<1
	4/18/90	22.22	8.45	13.77	<50	<0.5	<0.5	<0.5	<1
	7/23/90	—	—	—	<50	<0.5	<0.5	<0.5	<0.5
	10/18/90	—	—	—	<50	<0.5	<0.5	<0.5	<0.5

Table 1

SUMMARY OF GROUND WATER ELEVATIONS AND WATER SAMPLE ANALYTICAL RESULTS

Former Shell Service Station
15275 Washington Avenue
San Leandro, California
WIC#204-6852-1008

Well Number	Sampling Date	TOB (feet)	DTW (feet)	GWE (feet)	TPHg (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)
S-15	1/28/91	—	—	—	<50	<0.5	0.6	<0.5	0.8
	4/25/91	—	—	—	<50	<0.5	<0.5	<0.5	<0.5
	7/9/91	—	—	—	<50	<0.5	<0.5	<0.5	<0.5
	10/8/91	—	—	—	<50	<0.5	<0.5	<0.5	<0.5
	2/5/92	—	—	—	<50	<0.5	<0.5	<0.5	<0.5
	4/28/92	—	—	—	50	0.8	0.9	<0.5	1.4
	7/27/92	—	—	—	<50	<0.5	<0.5	<0.5	<0.5
	10/26/92	—	—	—	<50	<0.5	<0.5	<0.5	<0.5
	1/14/93	22.22	6.64	15.58	<50	<0.5	<0.5	<0.5	<0.5
	4/16/93	22.22	7.14	15.08	<50	0.6	1	<0.5	0.7
	7/23/93	22.22	8.23	13.99	<50	1.2	<0.5	<0.5	1.6
S-16	5/4/89	—	—	—	380	44	3	2	<3
	8/10/89	21.82	8.36	13.46	<50	0.6	<1	<1	<3
	10/10/89	—	—	—	<50	<0.5	<1	<1	<3
	1/25/90	—	—	—	240	160	3.3	0.8	11
	4/18/90	21.82	8.19	13.63	<50	1	<0.5	<0.5	<1
	7/23/90	—	—	—	<50	1.1	<0.5	<0.5	<0.5
	10/18/90	—	—	—	<50	<0.5	<0.5	<0.5	<0.5
	1/28/91	—	—	—	<50	<0.5	0.6	<0.5	0.9
	4/25/91	—	—	—	60^	21	0.5	3.2	4.8
	7/9/91	—	—	—	<50	1	<0.5	<0.5	<0.5
	10/8/91	—	—	—	50	17	1.4	1.2	5.5
	2/5/92	—	—	—	150	65	0.7	<0.5	8.4
	4/28/92	—	—	—	<50	13	<0.5	<0.5	<0.5
	7/27/92	—	—	—	510	130	<2.5	<0.5	21
	10/26/92	—	—	—	<50	<0.5	<0.5	<2.5	<0.5
	1/13/93	21.82	5.78	16.04	100	25	1.9	<0.5	8.4
	4/16/93	21.82	6.80	15.02	150	56	1.8	4.6	12
	7/23/93	21.82	7.67	14.15	<50	0.9	<0.5	<0.5	<0.5

Table 1

SUMMARY OF GROUND WATER ELEVATIONS AND WATER SAMPLE ANALYTICAL RESULTS

Former Shell Service Station
15275 Washington Avenue
San Leandro, California
WIC#204-6852-1008

Well Number	Sampling Date	TOB (feet)	DTW (feet)	GWE (feet)	TPHg (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)
S-17	5/3/89	—	—	—	<50	<0.5	<1	<1	<3
	8/10/89	20.95	8.13	12.82	<50	<0.5	<1	<1	<3
	10/9/89	—	—	—	<50	<0.5	<1	<1	<3
	1/25/90	—	—	—	<50	<0.5	<0.5	<0.5	<1
	4/18/90	20.95	7.95	13.00	<50	<0.5	<0.5	<0.5	<1
	7/23/90	—	—	—	<50	<0.5	<0.5	<0.5	<0.5
	10/18/90	—	—	—	390	10	62	22	110
	1/28/91	—	—	—	<50	<0.5	<0.5	<0.5	<0.5
	4/25/91	—	—	—	<50	<0.5	<0.5	<0.5	<0.5
	7/9/91	—	—	—	<50	<0.5	<0.5	<0.5	<0.5
	10/8/91	—	—	—	<50	<0.5	<0.5	<0.5	<0.5
	4/28/92	—	—	—	<50	<0.5	<0.5	<0.5	<0.5
	10/26/92	—	—	—	<50	<0.5	<0.5	<0.5	<0.5
	1/13/93	20.95	3.43	17.52	NA	NA	NA	NA	NA
	4/16/93	20.95	6.70	14.25	130	<0.5	<0.5	<0.5	<0.5
	7/23/93	20.95	7.53	13.42	NA	NA	NA	NA	NA
S-18	5/31/91	—	—	—	<50	<0.5	<0.5	<0.5	<0.5
	7/9/91	—	—	—	<50	<0.5	<0.5	<0.5	<0.5
	10/8/91	—	—	—	<50	<0.5	<0.5	<0.5	<0.5
	2/5/92	—	—	—	<50	<0.5	<0.5	<0.5	<0.5
	4/28/92	—	—	—	<50	<0.5	<0.5	<0.5	<0.5
	7/27/92	—	—	—	<50	<0.5	<0.5	<0.5	<0.5
	10/26/92	—	—	—	<50	<0.5	<0.5	<0.5	<0.5
	1/13/93	21.03	5.86	15.17	<50	<0.5	<0.5	<0.5	<0.5
	4/16/93	21.03	4.88	16.15	<50	<0.5	<0.5	<0.5	<0.5
	7/23/93	21.03	7.56	13.47	<50	<0.5	<0.5	<0.5	<0.5
SR-1	3/22/93	—	—	—	5400	1100	230	350	1300
	1/25/90	—	—	—	2200	470	120	110	510

Table 1

SUMMARY OF GROUND WATER ELEVATIONS AND WATER SAMPLE ANALYTICAL RESULTS

Former Shell Service Station
15275 Washington Avenue
San Leandro, California
WIC#204-6852-1008

Well Number	Sampling Date	TOB (feet)	DTW (feet)	GWE (feet)	TPHg (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)
SR-1	4/18/90	21.45	8.17	13.28	1000	130	47	47	220
	7/23/90	—	—	—	3200	470	320	170	870
	10/18/90	—	—	—	1300	280	6.6	110	130
	1/28/91	—	—	—	110	120	12	51	110
	7/9/91	—	—	—	1400	200	27	130	340
	10/8/91	—	—	—	980	79	1.5	44	52
	2/5/92	—	—	—	3800	580	36	320	400
	4/28/92	—	—	—	38000	1800	460	1900	750
	7/27/92	—	—	—	Floating product 0.01 feet				
	10/26/92	—	—	—	1800	370	10	130	130
	1/13/93	21.45	5.46	15.99	47000	1000	1100	1700	13000
	4/16/93	21.45	6.28	15.17	25000	1700	430	2400	8300
	7/23/93	21.45	7.34	14.11	33000	2400	2000	3800	14000

Notes :

TOB : Top of well box referenced to mean sea level
DTW : Depth to water
GWE : Ground water elevation. Ground water elevation data available for certain dates only.
TPHg : Total petroleum hydrocarbons as gasoline by EPA Method 8015 (modified)
BTEX : Benzene, toluene, ethylbenzene and total xylenes by EPA Method 8020
NA : Not analyzed
NR : Not Reported
* Compounds detected within the chromatographic range of gasoline but not characteristic of the standard gasoline pattern.
^ Compounds detected are volatile aromatics (BTEX) present in sample.
# Groundwater elevation data obtained 11/22/88.

APPENDIX A

BLAINE
TECH SERVICES INC.

985 TIMOTHY DRIVE
SAN JOSE, CA 95133
(408) 995-5535
FAX (408) 293-8773

August 10, 1993

Shell Oil Company
P.O. Box 5278
Concord, CA 94520-9998

Attn: Lynn Walker

SITE:
Shell WIC #204-6852-1008
15275 Washington
San Leandro, California

QUARTER:
3rd quarter of 1993

QUARTERLY GROUNDWATER SAMPLING REPORT 930723-T-1

This report contains data collected during routine inspection, gauging and sampling of groundwater monitoring wells performed by Blaine Tech Services, Inc. in reponse to the request of the consultant who is overseeing work at this site on behalf of our mutual client, Shell Oil Company. Data collected in the course of our field work is presented in a TABLE OF WELL GAUGING DATA. The field information was collected during our preliminary gauging and inspection of the wells, the subsequent evacuation of each well prior to sampling, and at the time of sampling.

Measurements taken include the total depth of the well and the depth to water. The surface of water was further inspected for the presence of immiscibles which may be present as a thin film (a sheen on the surface of the water) or as a measurable free product zone (FPZ). At intervals during the evacuation phase, the purge water was monitored with instruments that measure electrical conductivity (EC), potential hydrogen (pH), temperature (degrees Fahrenheit), and turbidity (NTU). In the interest of simplicity, fundamental information is tabulated here, while the bulk of the information is turned over directly to the consultant who is making professional interpretations and evaluations of the conditions at the site.

STANDARD PROCEDURES

Evacuation

Groundwater wells are thoroughly purged before sampling to insure that the sample is collected from water that has been newly drawn into the well from the surrounding geologic formation. The selection of equipment to evacuate each well is based on the physical characteristics of the well and what is known about the performance of the formation in which the well has been installed. There are several suitable devices which can be used for evacuation. The most commonly employed devices are air or gas actuated pumps, electric submersible pumps, and hand or mechanically actuated bailers. Our personnel frequently employ USGS/Middleburg positive displacement pumps or similar air actuated pumps which do not agitate the water standing in the well.

Normal evacuation removes three case volumes of water from the well. More than three case volumes of water may be removed in cases where more evacuation is needed to achieve stabilization of water parameters. Less than three case volumes of water may be obtained in cases where the well dewaters and does not recharge to 80% of its original volume within two hours and any additional time our personnel have reason to remain at the site. In such cases, our personnel return to the site within twenty four hours and collect sample material from the water which has recharged into the well case.

Decontamination

All apparatus is brought to the site in clean and serviceable condition. The equipment is decontaminated after each use and before leaving the site.

Free Product Skimmer

The column headed, VOLUME OF IMMISCIBLES REMOVED (ml) is included in the TABLE OF WELL GAUGING DATA to cover situations where a free product skimming device must be removed from the well prior to gauging. Skimmers are installed in wells with a free product zone on the surface of the water. The skimmer is a free product recovery device which often prevents normal well gauging and free product zone measurements. The 2.0" and 3.0" PetroTraps fall into the category of devices that obstruct normal gauging. In cases where the consultant elects to have our personnel pull the skimmers out of the well and gauge the well, our personnel perform the additional task of draining the accumulated free product out of the PetroTrap before putting it back in the well. This recovered free product is measured and logged in the VOLUME OF IMMISCIBLES REMOVED column. Gauging at such site is performed in accordance with specific directions from the professional consulting firm overseeing work at the site on Shell's behalf.

Sample Containers

Sample material is collected in specially prepared containers which are provided by the laboratory that performs the analyses.

Sampling

Sample material is collected in stainless steel bailer type devices normally fitted with both a top and a bottom check valve. Water is promptly decanted into new sample containers in a manner which reduces the loss of volatile constituents and follows the applicable EPA standard for handling volatile organic and semi-volatile compounds.

Following collection, samples are promptly placed in an ice chest containing prefrozen blocks of an inert ice substitute such as Blue Ice or Super Ice. The samples are maintained in either an ice chest or a refrigerator until delivered into the custody of the laboratory.

Sample Designations

All sample containers are identified with a site designation and a discrete sample identification number specific to that particular groundwater well. Additional standard notations (e.g. time, date, sampler) are also made on the label. Either the requested analyses or the specific analytes are written on the sample label (e.g. TPH-G, BTEX).

Chain of Custody

Samples are continuously maintained in an appropriate cooled container while in our custody and until delivered to the laboratory under a standard Shell Oil Company chain of custody. If the samples are taken charge of by a different party (such as another person from our office, a courier, etc.) prior to being delivered to the laboratory, appropriate release and acceptance records are made on the chain of custody (time, date, and signature of the person releasing the samples followed by the time, date and signature of the person accepting custody of the samples).

Hazardous Materials Testing Laboratory

The samples obtained at this site were delivered to Anametrix, Inc. in San Jose, California. Anametrix, Inc. is a California Department of Health Services certified Hazardous Materials Testing Laboratory and is listed as DOHS HMTL #1234.

Objective Information Collection

Blaine Tech Services, Inc. performs specialized environmental sampling and documentation as an independent third party. In order to avoid compromising the objectivity necessary for the proper and disinterested performance of this work, Blaine Tech Services, Inc. performs no consulting and does not become involved in the marketing or installation of remedial systems of any kind. Blaine Tech Services, Inc. is concerned only with the generation of objective information, not with the use of that information to support evaluations and recommendations concerning the environmental condition of the site. Even the straightforward interpretation of objective analytical data is better performed by interested regulatory agencies, and those engineers and geologists who are engaged in the work of providing professional opinions about the site and proposals to perform additional investigation or design remedial systems.

Reportage

Submission of this report and the attached laboratory report to interested regulatory agencies is handled by the consultant in charge of the project. Any professional evaluations or recommendations will be made by the consultant under separate cover.

Please call if we can be of any further assistance.

Richard C. Blaine

RCB/lpn

attachments: table of well gauging data
chain of custody
certified analytical report

cc: Hydro Environmental Technologies, Inc.
2363 Mariner Square Drive, Suite 243
Alameda, CA 94501
ATTN: Markus B. Niebanck

TABLE OF WELL GAUGING DATA

WELL I.D.	DATA COLLECTION DATE	MEASUREMENT REFERENCED TO	QUALITATIVE OBSERVATIONS (sheen)	DEPTH TO FIRST IMMISCIBLES LIQUID (FPZ) (feet)	THICKNESS OF IMMISCIBLES LIQUID ZONE (feet)	VOLUME OF IMMISCIBLES REMOVED (ml)	DEPTH TO WATER (feet)	DEPTH TO WELL BOTTOM (feet)
S-1	7/23/93	TOB	--	NONE	--	--	7.53	19.96
S-3	7/23/93	TOB	SHEEN/ODOR	NONE	--	--	7.34	15.48
S-5	7/23/93	TOB	ODOR	NONE	--	--	7.75	18.43
S-6	7/23/93	TOB	--	NONE	--	--	8.14	24.68
S-7 *	7/23/93	TOB	--	NONE	--	--	7.72	24.35
S-8	7/23/93	TOB	--	NONE	--	--	7.29	24.28
S-9	7/23/93	TOB	ODOR	NONE	--	--	7.26	17.92
S-10	7/23/93	TOB	--	NONE	--	--	7.38	18.21
S-11	7/23/93	TOB	--	NONE	--	--	8.07	23.96
S-12	7/23/93	TOB	--	NONE	--	--	7.76	23.91
S-13	7/23/93	TOB	--	NONE	--	--	7.45	23.82
S-14	7/23/93	TOB	--	NONE	--	--	7.06	23.24
S-15	7/23/93	TOB	--	NONE	--	--	8.23	23.46
S-16	7/23/93	TOB	--	NONE	--	--	7.67	24.29
S-17	7/23/93	TOB	--	NONE	--	--	7.53	24.33
S-18	7/23/93	TOB	--	NONE	--	--	7.56	18.07
SR-1	7/23/93	TOB	ODOR	NONE	--	--	7.34	21.22

* Sample DUP was a duplicate sample taken from well S-7.

9307259 (18)

SHELL OIL COMPANY
RETAIL ENVIRONMENTAL ENGINEERING - WEST

CHAIN OF CUSTODY RECORD
Serial No: _____

Date: 7-23-93
Page 1 of 2

Site Address: 15275 WASH. SAN LEANDRO

WIC#: 204 6852 1008

Shell Engineer: DAN KIRK — Phone No.: 510 — Fax #: 675-6171

Consultant Name & Address: BLAINE TECH SERVICES SAN JOSE

Consultant Contact: JIM KELLER — Phone No.: 408 — Fax #: 995-5535

Comments:

Sampled by: Francis Thie

Printed Name: FRANCIS THIE

LAB: ANALYTRIX

CHECK ONE (1) BOX ONLY — CT/DI

- Quarterly Monitoring ☒ 6441
- Site Investigation ☐ 6441
- Soil Classify/Disposal ☐ 6442
- Water Classify/Disposal ☐ 6443
- Soil/Air Rem. or Sys. O & M ☐ 6452
- Water Rem. or Sys. O & M ☐ 6453
- Other ☐

TURN AROUND TIME

- 24 hours ☐
- 48 hours ☐
- 15 days ☒ (Normal)
- Other ☐ _____

NOTE: Notify Lab as soon as Possible of 24/48 hr. TAT.

Analysis Required

	Sample ID	Date	Sludge	Soil	Water	Air	No. of conts.	TPH (EPA 8015 Mod. Gas)	TPH (EPA 8015 Mod. Diesel)	BTEX (EPA 8020/602)	Volatile Organics (EPA 8240)	Test for Disposal	Combination TPH 8015 & BTEX 8020	Asbestos	Container Size	Preparation Used	Composite Y/N	MATERIAL DESCRIPTION	SAMPLE CONDITION/ COMMENTS
1	S-1	7-23			✓		3						✓						
2	S-3	7-23			✓		3						✓						
3	S-5				✓		3						✓						
4	S-7				✓		3						✓						
5	S-8				✓		3						✓						
6	S-9				✓		3						✓						
7	S-10				✓		3						✓						
8	S-12				✓		3						✓						

Relinquished By (signature): Francis Thie	Printed Name: FRANCIS THIE	Date: 7-23-93 Time: 1610	Received (signature): Kenny S. Campos	Printed Name: KENNY S. CAMPOSA	Date: 7-23-93 Time: 1610
Relinquished By (signature): Kenny S. Campos	Printed Name: KENNY S. CAMPOSA	Date: 7-23-93 Time: 1640	Received (signature):	Printed Name: Maria Baraj 95	Date: 7/23/93 Time: 1614
Relinquished By (signature):	Printed Name:	Date: Time:	Received (signature):	Printed Name:	Date: Time:

THE LABORATORY MUST PROVIDE A COPY OF THIS CHAIN-OF-CUSTODY WITH INVOICE AND RESULTS

9307259 (18)

SHELL OIL COMPANY
RETAIL ENVIRONMENTAL ENGINEERING - WEST

CHAIN OF CUSTODY RECORD
Serial No:_____

Date: 7/23/93
Page 2 of 2

Site Address: 15275 WASHINGTON San Leandro
WIC#: 204 6852 1008
Shell Engineer: DAN KIRK — Phone No.: 510 675-6171 Fax #:
Consultant Name & Address: BLAINE TECH SERVICES INC. San Jose
Consultant Contact: Jim Keller — Phone No.: 408 995-5535 Fax #:
Comments:
Sampled by: Francis Thie
Printed Name: FRANCIS THIE

LAB: ANAMETRIX

Sample ID	Date	Sludge	Soil	Water	Air	No. of conts.	TPH (EPA 8015 Mod. Gas)	TPH (EPA 8015 Mod. Diesel)	BTEX (EPA 8020/602)	Volatile Organics (EPA 8240)	Test for Disposal	Combination TPH 8015 & BTEX 8020			Asbestos	Container Size	Preparation Used	Composite Y/N	MATERIAL DESCRIPTION	SAMPLE CONDITION/ COMMENTS
(9) S-15	7-23			✓		3						✓								
(10) S-16	7-23			✓		3						✓								
(11) S-18	7-23			✓		3						✓								
(12) SR-1	7-23			✓		3						✓								
(13) DUP	7-23			✓		3						✓								
(14) EB	7-23			✓		3						✓								
(15) TB	7-23			✓		2						✓								

CHECK ONE (1) BOX ONLY — C1/D1

		C1/D1
Quarterly Monitoring	☒	6441
Site Investigation	☐	6441
Soil Closure/Disposal	☐	6442
Water Closure/Disposal	☐	6443
Soil/Air Rem. or Sys. O & M	☐	6462
Water Rem. or Sys. O & M	☐	6463
Other	☐	

TURN AROUND TIME

- 24 hours ☐
- 48 hours ☐
- 15 days ☒ (Normal)
- Other ☐ ____

NOTE: Notify Lab as soon as Possible of 24/48 hrs. TAT.

Relinquished By (Signature):	Printed Name:	Date: 7-23-93 Time: 1612	Received (Signature):	Printed Name:	Date: 7.23.93 Time: 1619
Francis Thie	FRANCIS THIE				
Relinquished By (Signature):	Printed Name:	Date: 7-23-93 Time: 1650	Received (Signature):	Printed Name:	Date: 7/23/93 Time: 1640
Benny S. Carrizosa	BENNY S. CARRIZOSA				
Relinquished By (Signature):	Printed Name:	Date: Time:	Received (Signature):	Printed Name:	Date: Time:

THE LABORATORY MUST PROVIDE A COPY OF THIS CHAIN-OF-CUSTODY WITH INVOICE AND RESULTS

Inchcape Testing Services
Anametrix Laboratories

1961 Concourse Drive
Suite E
San Jose, CA 95131
Tel: 408-432-8192
Fax: 408-432-8198

MR. JIM KELLER
BLAINE TECH
985 TIMOTHY DRIVE
SAN JOSE, CA 95133

Workorder # : 9307259
Date Received : 07/23/93
Project ID : 204-6852-1008
Purchase Order: MOH-B813

The following samples were received at Anametrix, Inc. for analysis :

ANAMETRIX ID	CLIENT SAMPLE ID
9307259- 1	S-1
9307259- 2	S-3
9307259- 3	S-5
9307259- 4	S-7
9307259- 5	S-8
9307259- 6	S-9
9307259- 7	S-10
9307259- 8	S-12
9307259- 9	S-15
9307259-10	S-16
9307259-11	S-18
9307259-12	SR-1
9307259-13	DUP
9307259-14	EB
9307259-15	TB

This report consists of 11 pages not including the cover letter, and is organized in sections according to the specific Anametrix laboratory group or section which performed the analysis(es) and generated the data. The Report Summary that precedes each section will help you determine which Anametrix group is responsible for those test results, and will bear the signatures of the department supervisor and the chemist who have reviewed the analytical data. Please refer all questions to the department supervisor who signed the form.

Anametrix is certified by the California Department of Health Services (DHS) to perform environmental testing under Certificate Number 1234. A detailed list of the approved fields of testing can be obtained by calling our office, or the DHS Environmental Laboratory Accreditation Program at (415)540-2800.

If you have any further questions or comments on this report, please give us a call as soon as possible. Thank you for using Anametrix.

Sarah Schoen, Ph.D.
Laboratory Director

08-05-93
Date

REPORT SUMMARY
ANAMETRIX, INC. (408)432-8192

MR. JIM KELLER
BLAINE TECH
985 TIMOTHY DRIVE
SAN JOSE, CA 95133

Workorder # : 9307259
Date Received : 07/23/93
Project ID : 204-6852-1008
Purchase Order: MOH-B813
Department : GC
Sub-Department: TPH

SAMPLE INFORMATION:

ANAMETRIX SAMPLE ID	CLIENT SAMPLE ID	MATRIX	DATE SAMPLED	METHOD
9307259- 1	S-1	WATER	07/23/93	TPHgBTEX
9307259- 2	S-3	WATER	07/23/93	TPHgBTEX
9307259- 3	S-5	WATER	07/23/93	TPHgBTEX
9307259- 4	S-7	WATER	07/23/93	TPHgBTEX
9307259- 5	S-8	WATER	07/23/93	TPHgBTEX
9307259- 6	S-9	WATER	07/23/93	TPHgBTEX
9307259- 7	S-10	WATER	07/23/93	TPHgBTEX
9307259- 8	S-12	WATER	07/23/93	TPHgBTEX
9307259- 9	S-15	WATER	07/23/93	TPHgBTEX
9307259-10	S-16	WATER	07/23/93	TPHgBTEX
9307259-11	S-18	WATER	07/23/93	TPHgBTEX
9307259-12	SR-1	WATER	07/23/93	TPHgBTEX
9307259-13	DUP	WATER	07/23/93	TPHgBTEX
9307259-14	EB	WATER	07/23/93	TPHgBTEX
9307259-15	TB	WATER	07/21/93	TPHgBTEX

REPORT SUMMARY
ANAMETRIX, INC. (408)432-8192

MR. JIM KELLER
BLAINE TECH
985 TIMOTHY DRIVE
SAN JOSE, CA 95133

Workorder # : 9307259
Date Received : 07/23/93
Project ID : 204-6852-1008
Purchase Order: MOH-B813
Department : GC
Sub-Department: TPH

QA/QC SUMMARY :

- The concentrations reported as gasoline for samples S-7, S-12 and DUP are primarily due to the presence of a discrete peak not indicative of gasoline.

Cheryl Balmer 8/3/93
Department Supervisor Date

Reggie Dawson 8/3/93
Chemist Date

ANALYSIS DATA SHEET - TOTAL PETROLEUM HYDROCARBONS
(GASOLINE WITH BTEX)
ANAMETRIX, INC. - (408) 432-8192

Anametrix W.O.: 9307259
Matrix : WATER
Date Sampled : 07/23/93

Project Number : 204-6852-1008
Date Released : 08/03/93

COMPOUNDS	Reporting Limit (ug/L)	Sample I.D.# S-1 -01	Sample I.D.# S-3 -02	Sample I.D.# S-5 -03	Sample I.D.# S-7 -04	Sample I.D.# S-8 -05
Benzene	0.5	0.5	1600	2500	4.8	23
Toluene	0.5	ND	ND	2200	ND	ND
Ethylbenzene	0.5	ND	1300	3400	ND	1.2
Total Xylenes	0.5	ND	4000	11000	0.8	1.5
TPH as Gasoline	50	ND	87000	46000	80	160
% Surrogate Recovery		121%	126%	121%	130%	129%
Instrument I.D.		HP21	HP21	HP21	HP21	HP21
Date Analyzed		07/28/93	07/30/93	07/29/93	07/28/93	07/28/93
RLMF		1	500	250	1	1

ND - Not detected at or above the practical quantitation limit for the method.
TPHg - Total Petroleum Hydrocarbons as gasoline is determined by GCFID using modified EPA Method 8015 following sample purge and trap by EPA Method 5030.
BTEX - Benzene, Toluene, Ethylbenzene, and Total Xylenes are determined by modified EPA Method 8020 following sample purge and trap by EPA Method 5030.
RLMF - Reporting Limit Multiplication Factor.

Anametrix control limits for surrogate p-Bromofluorobenzene recovery are 61-139%.

All testing procedures follow California Department of Health Services (Cal-DHS) approved methods.

Reggie Davison 8/3/93
Analyst Date

Cheryl Balmer 8/3/93
Supervisor Date

ANALYSIS DATA SHEET - TOTAL PETROLEUM HYDROCARBONS
(GASOLINE WITH BTEX)
ANAMETRIX, INC. - (408) 432-8192

Anametrix W.O.: 9307259
Matrix : WATER
Date Sampled : 07/23/93

Project Number : 204-6852-1008
Date Released : 08/03/93

	Reporting Limit	Sample I.D.# S-9	Sample I.D.# S-10	Sample I.D.# S-12	Sample I.D.# S-15	Sample I.D.# S-16
COMPOUNDS	(ug/L)	-06	-07	-08	-09	-10
Benzene	0.5	400	1.5	ND	1.2	0.9
Toluene	0.5	ND	ND	ND	ND	ND
Ethylbenzene	0.5	260	0.7	ND	ND	ND
Total Xylenes	0.5	160	2.7	0.9	1.6	ND
TPH as Gasoline	50	1100	ND	90	ND	ND
% Surrogate Recovery		134%	120%	122%	136%	128%
Instrument I.D.		HP21	HP21	HP21	HP21	HP21
Date Analyzed		07/29/93	07/28/93	07/28/93	07/28/93	07/28/93
RLMF		10	1	1	1	1

ND - Not detected at or above the practical quantitation limit for the method.
TPHg - Total Petroleum Hydrocarbons as gasoline is determined by GCFID using modified EPA Method 8015 following sample purge and trap by EPA Method 5030.
BTEX - Benzene, Toluene, Ethylbenzene, and Total Xylenes are determined by modified EPA Method 8020 following sample purge and trap by EPA Method 5030.
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Reggie Davison 8/3/93
Analyst Date

Cheryl Baemen 8/3/93
Supervisor Date

ANALYSIS DATA SHEET - TOTAL PETROLEUM HYDROCARBONS
(GASOLINE WITH BTEX)
ANAMETRIX, INC. - (408) 432-8192

Anametrix W.O.: 9307259
Matrix : WATER
Date Sampled : 07/21 & 23/93

Project Number : 204-6852-1008
Date Released : 08/03/93

	Reporting Limit	Sample I.D.# S-18	Sample I.D.# SR-1	Sample I.D.# DUP	Sample I.D.# EB	Sample I.D.# TB
COMPOUNDS	(ug/L)	-11	-12	-13	-14	-15
Benzene	0.5	ND	2400	2.5	ND	ND
Toluene	0.5	ND	2000	ND	ND	ND
Ethylbenzene	0.5	ND	3800	ND	ND	ND
Total Xylenes	0.5	ND	14000	0.6	ND	ND
TPH as Gasoline	50	ND	33000	80	ND	ND
% Surrogate Recovery		124%	126%	122%	119%	124%
Instrument I.D.		HP21	HP21	HP21	HP21	HP21
Date Analyzed		07/28/93	07/29/93	07/28/93	07/28/93	07/28/93
RLMF		1	250	1	1	1

ND - Not detected at or above the practical quantitation limit for the method.
TPHg - Total Petroleum Hydrocarbons as gasoline is determined by GCFID using modified EPA Method 8015 following sample purge and trap by EPA Method 5030.
BTEX - Benzene, Toluene, Ethylbenzene, and Total Xylenes are determined by modified EPA Method 8020 following sample purge and trap by EPA Method 5030.
RLMF - Reporting Limit Multiplication Factor.

Anametrix control limits for surrogate p-Bromofluorobenzene recovery are 61-139%.

All testing procedures follow California Department of Health Services (Cal-DHS) approved methods.

Reggie Davison 8/3/93
Analyst Date

Cheryl Balmer 8/3/93
Supervisor Date

ANALYSIS DATA SHEET - TOTAL PETROLEUM HYDROCARBONS
(GASOLINE WITH BTEX)
ANAMETRIX, INC. - (408) 432-8192

Anametrix W.O.: 9307259
Matrix : WATER
Date Sampled : N/A

Project Number : 204-6852-1008
Date Released : 08/03/93

COMPOUNDS	Reporting Limit (ug/L)	Sample I.D.# BL2801E2 BLANK	Sample I.D.# BL2901E2 BLANK	Sample I.D.# BL3001E2 BLANK
Benzene	0.5	ND	ND	ND
Toluene	0.5	ND	ND	ND
Ethylbenzene	0.5	ND	ND	ND
Total Xylenes	0.5	ND	ND	ND
TPH as Gasoline	50	ND	ND	ND
% Surrogate Recovery		121%	129%	128%
Instrument I.D.		HP21	HP21	HP21
Date Analyzed		07/28/93	07/29/93	07/30/93
RLMF		1	1	1

ND - Not detected at or above the practical quantitation limit for the method.
TPHg - Total Petroleum Hydrocarbons as gasoline is determined by GCFID using modified EPA Method 8015 following sample purge and trap by EPA Method 5030.
BTEX - Benzene, Toluene, Ethylbenzene, and Total Xylenes are determined by modified EPA Method 8020 following sample purge and trap by EPA Method 5030.
RLMF - Reporting Limit Multiplication Factor.

Anametrix control limits for surrogate p-Bromofluorobenzene recovery are 61-139%.

All testing procedures follow California Department of Health Services (Cal-DHS) approved methods.

Reggie Davison 8/3/93
Analyst Date

Cheryl Baeuer 8/3/93
Supervisor Date

TOTAL VOLATILE HYDROCARBON MATRIX SPIKE REPORT
EPA METHOD 5030 WITH GC/FID
ANAMETRIX, INC. (408) 432-8192

Sample I.D. : 204-6852-1008 S-1
Matrix : WATER
Date Sampled : 07/23/93
Date Analyzed : 07/28/93

Anametrix I.D. : 07259-01
Analyst : RD
Supervisor : [illegible]
Date Released : 08/03/93
Instrument I.D.: HP21

COMPOUND	SPIKE AMT (ug/L)	SAMPLE CONC (ug/L)	REC MS (ug/L)	%REC MS	REC MD (ug/L)	%REC MD	RPD	%REC LIMITS
BENZENE	20.0	0.5	16.3	79%	19.6	96%	18%	45-139
TOLUENE	20.0	0.0	18.1	91%	21.5	108%	17%	51-138
ETHYLBENZENE	20.0	0.0	19.7	99%	23.6	118%	18%	48-146
TOTAL XYLENES	20.0	0.0	20.0	100%	24.4	122%	20%	50-139
p-BFB				114%		116%		61-139

* Quality control established by Anametrix, Inc.

TOTAL VOLATILE HYDROCARBON MATRIX SPIKE REPORT
EPA METHOD 5030 WITH GC/FID
ANAMETRIX, INC. (408) 432-8192

Sample I.D.	: 204-6852-1008 S-18	Anametrix I.D.	: 07259-11
Matrix	: WATER	Analyst	: RD
Date Sampled	: 07/23/93	Supervisor	: CB
Date Analyzed	: 07/28/93	Date Released	: 08/03/93
		Instrument ID	: HP21

COMPOUND	SPIKE AMT (ug/L)	SAMPLE AMT (ug/L)	REC MS (ug/L)	% REC MS	REC MD (ug/L)	% REC MD	RPD	% REC LIMITS
GASOLINE	500	0	520	104%	510	102%	-2%	48-149
P-BFB				115%		109%		61-139

* Limits established by Anametrix, Inc.

BTEX LABORATORY CONTROL SAMPLE REPORT
EPA METHOD 5030 WITH GC/PID
ANAMETRIX, INC. (408) 432-8192

Sample I.D.	: LAB CONTROL SAMPLE	Anametrix I.D.	: ML2801E3
Matrix	: WATER	Analyst	: RD
Date Sampled	: N/A	Supervisor	: [illegible]
Date Analyzed	: 07/28/93	Date Released	: 07/30/93
		Instrument ID	: HP21

COMPOUND	SPIKE AMT. (ug/L)	LCS (ug/L)	REC LCS	%REC LIMITS
Benzene	20.0	17.6	88%	52-133
Toluene	20.0	19.6	98%	57-136
Ethylbenzene	20.0	20.8	104%	56-139
TOTAL Xylenes	20.0	21.5	108%	56-141
P-BFB			114%	61-139

* Limits established by Anametrix, Inc.

TOTAL VOLATILE HYDROCARBON LABORATORY CONTROL SAMPLE REPORT
EPA METHOD 5030 WITH GC/FID
ANAMETRIX, INC. (408) 432-8192

Sample I.D. : LAB CONTROL SAMPLE
Matrix : WATER
Date Sampled : N/A
Date Analyzed : 07/29/93

Anametrix I.D. : ML2802E1
Analyst : RD
Supervisor : [illegible]
Date Released : 08/03/93
Instrument I.D.: HP21

COMPOUND	SPIKE AMT. (ug/L)	REC LCS (ug/L)	%REC LCS	% REC LIMITS
GASOLINE	500	530	106%	67-127
p-BFB			124%	61-139

* Quality control established by Anametrix, Inc.

TOTAL VOLATILE HYDROCARBON LABORATORY CONTROL SAMPLE REPORT
EPA METHOD 5030 WITH GC/PID
ANAMETRIX, INC. (408) 432-8192

Sample I.D.	: LAB CONTROL SAMPLE	Anametrix I.D.	: ML2901E1
Matrix	: WATER	Analyst	: RD
Date Sampled	: N/A	Supervisor	:
Date Analyzed	: 07/29/93	Date Released	: 08/03/93
		Instrument I.D.	: HP21

COMPOUND	SPIKE AMT. (ug/L)	LCS (ug/L)	REC LCS	%REC LIMITS
Benzene	20.0	19.9	99%	52-133
Toluene	20.0	23.5	118%	57-136
Ethylbenzene	20.0	24.9	124%	56-139
TOTAL Xylenes	20.0	26.0	130%	61-139
P-BFB			124%	61-139

* Limits established by Anametrix, Inc.

WELL GAUGING DATA

shell WIC# 204-6852-1008

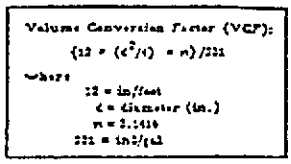
Project # 930723-T1 Date 7-23-93 Client 204 6852 1008

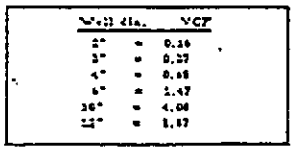
Site 15275 Washington, San Leandro Sampler FT

Well I.D.	Well Size (in.)	Sheen/ Odor	Depth to Immisible Liquid (feet)	Thickness of Immisible Liquid (ft.)	Volume of Immisibles Removed (ml)	Depth to Water (feet)	Depth to Well Bottom (feet)	Measured to: Top of Pipe or Grade
S-1	3					7.53	19.96	TOB
S-3	3	ODOR				7.34	15.48	
S-5	4	ODOR				7.75	18.43	
S-6	3					8.14	24.68	
S-7	3					7.72	24.35	
S-8	3					7.29	24.28	
S-9	3	ODOR				7.26	17.92	
S-10	3					7.38	18.21	
S-11	3					8.07	23.96	
S-12	3					7.76	23.91	
S-13	3					7.45	23.82	
S-14	3					7.06	23.24	
S-15	3					8.23	23.46	
S-16	3					7.67	24.29	
S-17	3					7.53	24.33	
S-18	3					7.56	18.07	
SR-1	6	ST ODOR				7.34	21.22	

SHELL WELL MONITORING DATA SHEET

Project #: 930723-T1	Wic # 204 6852 1008
Sampler: LAD B OLVER	Date Sampled: 9/23/93
Well I.D.: S-1	Well Diameter: (circle one) 2 (3) 4 6 ___
Total Well Depth: Before 19.96 After	Depth to Water: Before 7.53 After
Depth to Free Product:	Thickness of Free Product (feet):
Measurements referenced to: PVC (Grade) Other --	





4.6	x	3	13.8
1 Case Volume		Specified Volumes	= gallons

Purging: Bailer ☒
Middleburg ☐
Electric Submersible ☐
Suction Pump ☐
Type of Installed Pump _____

Sampling: Bailer ☑
Middleburg ☐
Electric Submersible ☐
Suction Pump ☐
Installed Pump ☐

TIME	TEMP. (F)	pH	COND.	TURBIDITY:	VOLUME REMOVED:	OBSERVATIONS:
1408	72.5	5.6	1060.0	>200.0	4.6	
1412	71.7	5.8	1060.0	>200.0	9.2	
1418	71.5	5.9	1020.0	>200.0	12.8	

Did Well Dewater? N If yes, gals. Gallons Actually Evacuated: 13.0

Sampling Time: 1425

Sample I.D.: S-1 Laboratory: ANAMETRIK

Analyzed for: TPH GAS BTEX

Duplicate I.D.: Cleaning Blank I.D.:

Analyzed for:

Shipping Notations:

Additional Notations:

SHELL WELL MONITORING DATA SHEET

Project #: 930723-T1	Wic # 204 6852 1008
Sampler: FT	Date Sampled: 7.23.93
Well I.D.: S-3	Well Diameter: (circle one) 2 (3) 4 6 ___
Total Well Depth: Before 15A8 After	Depth to Water: Before 7.34 After
Depth to Free Product:	Thickness of Free Product (feet):
Measurements referenced to: PVC (Grade) Other --	

Volume Conversion Factor (VCF):

(12 × (d²/4) × π)/231

Where:
12 = in/foot
d = diameter (in.)
π = 3.1416
231 = in³/gal

Well dia.	VCF
2"	= 0.16
3"	= 0.37
4"	= 0.65
6"	= 1.47
10"	= 4.08
12"	= 5.87

3.0	x	3	=	9.0
1 Case Volume		Specified Volumes		gallons

Purging: Bailer [X]
Middleburg ☐
Electric Submersible ☐
Suction Pump ☐
Type of Installed Pump ___

Sampling: Bailer [X]
Middleburg ☐
Electric Submersible ☐
Suction Pump ☐
Installed Pump ☐

TIME	TEMP. (F)	pH	COND.	TURBIDITY:	VOLUME REMOVED:	OBSERVATIONS:
1333	72.1	5.8	1050.0	>200.0	3.0	
1337	70.4	5.8	1050.0	>200.0	6.0	
1340	70.1	5.9	1060.0	>200.0	9.0	ODOR/SHEEN

Did Well Dewater? N If yes, gals. Gallons Actually Evacuated: 9.0

Sampling Time: 1345

Sample I.D.: S-3 Laboratory: ANAMETRIX

Analyzed for: TPH GAS BTEX

Duplicate I.D.: Cleaning Blank I.D.:

Analyzed for:

Shipping Notations:

Additional Notations:

SHELL WELL MONITORING DATA SHEET

Project #: 930723-T1	Wic # 204 6852 1008
Sampler: FT	Date Sampled: 7-23-93
Well I.D.: 5-5	Well Diameter: (circle one) 2 3 4 6 ___
Total Well Depth: Before 16.43 After	Depth to Water: Before 7.75 After
Depth to Free Product:	Thickness of Free Product (feet):
Measurements referenced to: PVC Grade Other --	

Volume Conversion Factor (VCF):
(12 × (d²/4) × π)/231
where
12 = in/foot
d = diameter (in.)
π = 3.1416
231 = in3/gal

Well dia.	VCF
2"	= 0.16
3"	= 0.37
4"	= 0.65
6"	= 1.47
10"	= 4.08
12"	= 5.87

6.91 (1 Case Volume) × 3 (Specified Volumes) = 20.7 gallons

Purging: Bailer ☐ Middleburg ☐ Electric Submersible ☒ Suction Pump ☐ Type of Installed Pump _____

Sampling: Bailer ☒ Middleburg ☐ Electric Submersible ☐ Suction Pump ☐ Installed Pump ☐

TIME	TEMP. (F)	pH	COND.	TURBIDITY:	VOLUME REMOVED:	OBSERVATIONS:
1430	67.0	6.76	1195	179.2	7	
1432	68.2	6.81	1182	186.4	13.9	
1433	68.0	6.84	1186	197.2	21.9	

Did Well Dewater? N If yes, gals. Gallons Actually Evacuated: 22.5

Sampling Time: 1435

Sample I.D.: 5-5 Laboratory: Anametrix

Analyzed for: TPH Gas, BTEX

Duplicate I.D.: Cleaning Blank I.D.:

Analyzed for:

Shipping Notations:

Additional Notations:

SHELL WELL MONITORING DATA SHEET

Project #: 930723-T1	Wic # 204 6852 1008
Sampler: FT	Date Sampled: 7-23-93
Well I.D.: S-7	Well Diameter: (circle one) 2 (3) 4 6 ___
Total Well Depth: Before 24.35 After	Depth to Water: Before 7.72 After
Depth to Free Product:	Thickness of Free Product (feet):
Measurements referenced to: PVC (Grade) Other --	

Volume Conversion Factor (VCF):

$12 \times (d^2/4) \times \pi)/231$

Where
12 = in/feet
d = diameter (in.)
π = 3.1416
231 = in3/gal

Well dia.	VCF
2"	0.16
3"	0.37
4"	0.65
6"	1.47
10"	4.08
12"	5.87

~~10.8~~ 6.2 (1 Case Volume) x 3 (Specified Volumes) = 18.6 gallons

Purging: Bailer ☐ Middleburg ☐ Electric Submersible ☒ Suction Pump ☐ Type of Installed Pump ___

Sampling: Bailer ☒ Middleburg ☐ Electric Submersible ☐ Suction Pump ☐ Installed Pump ☐

TIME	TEMP. (F)	pH	COND.	TURBIDITY:	VOLUME REMOVED:	OBSERVATIONS:
1324	69.0	7.15	1527	>200	6.5	
1325	67.2	7.26	1622	>200	12.7	
1326	67.1	7.31	1623	200	19.2	

Did Well Dewater? N If yes, gals. Gallons Actually Evacuated: 20

Sampling Time: 1330

Sample I.D.: S-7 Laboratory:

Analyzed for: TPH GAS, BTEX

Duplicate I.D.: DUP Cleaning Blank I.D.:

Analyzed for: TPH GAS, BTEX

Shipping Notations:

Additional Notations:

SHELL WELL MONITORING DATA SHEET

Project #: 93072-T1	Wic # 204 6857 1008
Sampler: FT	Date Sampled: 7-23-93
Well I.D.: S-8	Well Diameter: (circle one) 2 (3) 4 6 ___
Total Well Depth: Before 24.28 After	Depth to Water: Before 7.29 After
Depth to Free Product:	Thickness of Free Product (feet):
Measurements referenced to: PVC (Grade) Other --	

Volume Conversion Factor (VCF):
$(12 \times (d^2/4) \times \pi)/231$
Where
12 = in/foot
d = diameter (in.)
π = 3.1416
231 = in³/gal

Well dia.	VCF
2"	= 0.16
3"	= 0.37
4"	= 0.65
6"	= 1.47
10"	= 4.00
12"	= 5.87

1 Case Volume	x	Specified Volumes	=	gallons
6.3	x	3	=	18.9

Purging: Bailer ☐ Middleburg ☐ Electric Submersible ☒ Suction Pump ☐ Type of Installed Pump ___

Sampling: Bailer ☒ Middleburg ☐ Electric Submersible ☐ Suction Pump ☐ Installed Pump ☐

TIME	TEMP. (F)	pH	COND.	TURBIDITY:	VOLUME REMOVED:	OBSERVATIONS:
1402	67.6	7.06	1820	7200	7	
1403	67.4	7.07	1849	7200	13.3	
1405	67.8	7.07	1845	>200	20.3	

Did Well Dewater? N If yes, gals. Gallons Actually Evacuated: 21

Sampling Time: 1410

Sample I.D.: S-8 Laboratory: Anametrix

Analyzed for: TPH GAS, BTEX

Duplicate I.D.: Cleaning Blank I.D.:

Analyzed for:

Shipping Notations:

Additional Notations:

SHELL WELL MONITORING DATA SHEET

Project #: 930723-~~[illegible]~~ T1	Wic # 204685210 08
Sampler: LAD BOLVER	Date Sampled: 7/23/93
Well I.D.: ~~[illegible]~~ 5-9	Well Diameter: (circle one) 2 ~~[illegible]~~ 6 ___ (3)
Total Well Depth: Before 17.92 After	Depth to Water: Before 7.26 After
Depth to Free Product:	Thickness of Free Product (feet):
Measurements referenced to: PVC (Grade) Other --	

Volume Conversion Factor (VCF):
$(12 \times (d^2/4) \times \pi)/231$
where
12 = in/foot
d = diameter (in.)
π = 3.1416
231 = in^3/gal

Well dia.	VCF
2"	= 0.16
3"	= 0.37
4"	= 0.65
6"	= 1.47
10"	= 4.08
12"	= 5.87

~~6.9~~ 3.9 (1 Case Volume) x 3 (Specified Volumes) = ~~21.0~~ 11.8 gallons

Purging: Bailer ~~X~~ Middleburg ☐ Electric Submersible ☐ Suction Pump ☐ Type of Installed Pump _____

Sampling: Bailer ~~X~~ Middleburg ☐ Electric Submersible ☐ Suction Pump ☐ Installed Pump ☐

TIME	TEMP. (F)	pH	COND.	TURBIDITY:	VOLUME REMOVED:	OBSERVATIONS:
1259	74.4	5.5	1000.0	>200.0	3.9	
1305	72.6	5.8	1080.0	> 200.0	7.8	
1315	72.3	6.0	1100.0	>200.0	11.8	

Did Well Dewater? N If yes, gals. Gallons Actually Evacuated: 12.0

Sampling Time: 1320

Sample I.D.: 5-9 Laboratory: AMAMETRIX

Analyzed for: TPH GAS BTEX

Duplicate I.D.: Cleaning Blank I.D.:

Analyzed for:

Shipping Notations:

Additional Notations:

SHELL WELL MONITORING DATA SHEET

Project #: 930723-T1	Wic # 204 6852 1004
Sampler: FT	Date Sampled: 7.23.93
Well I.D.: [redacted] 5-10	Well Diameter: (circle one) 2 (3) 4 6 ___
Total Well Depth: Before 18.21 After	Depth to Water: Before 7.38 After
Depth to Free Product:	Thickness of Free Product (feet):
Measurements referenced to: PVC (Grade) Other --	

Volume Conversion Factor (VCF):
$(12 \times (d^2/4) \times \pi)/231$
where
12 = in./foot
d = diameter (in.)
π = 3.1416
231 = in.³/gal

Well dia.	VCF
2"	= 0.16
3"	= 0.37
4"	= 0.65
6"	= 1.47
10"	= 4.08
12"	= 5.87

1 Case Volume	x	Specified Volumes	=	gallons
4	x	3	=	12

Purging: Bailer ☐ Middleburg ☐ Electric Submersible ☒ Suction Pump ☐ Type of Installed Pump _____

Sampling: Bailer ☒ Middleburg ☐ Electric Submersible ☐ Suction Pump ☐ Installed Pump ☐

TIME	TEMP. (F)	pH	COND.	TURBIDITY:	VOLUME REMOVED:	OBSERVATIONS:
1217	65.4	7.48	1293	>200	4	
1219	62.6	7.26	857	>200	8	
1222	63.4	7.28	861	>200	12	

Did Well Dewater? N If yes, gals. Gallons Actually Evacuated: 12.5

Sampling Time: 1225

Sample I.D.: ~~DUP~~-10 Laboratory: ONSITE

Analyzed for: TPH GAS, BTEX

Duplicate I.D.: Cleaning Blank I.D.:

Analyzed for:

Shipping Notations:

Additional Notations:

SHELL WELL MONITORING DATA SHEET

Project #: 930723-T1	Wic # 204 6852 1008
Sampler: FT	Date Sampled: 7-23-93
Well I.D. ~~MW-~~ 5-12	Well Diameter: (circle one) 2 (3) 4 6 ___
Total Well Depth: Before 23.91 After	Depth to Water: Before 7.76 After
Depth to Free Product:	Thickness of Free Product (feet):
Measurements referenced to: PVC (Grade)	Other --

Volume Conversion Factor (VCF):

$(12 \times (d^2/4) \times \pi)/231$

Where
12 = in/feet
d = diameter (in.)
π = 3.1416
231 = in3/gal

Well dia.	VCF
2"	= 0.16
3"	= 0.37
4"	= 0.65
6"	= 1.47
10"	= 4.08
12"	= 5.87

1 Case Volume	x	Specified Volumes	=	gallons
6	x	3	=	18

Purging: Bailer ☐ Middleburg ☐ Electric Submersible ☒ Suction Pump ☐ Type of Installed Pump _____

Sampling: Bailer ☒ Middleburg ☐ Electric Submersible ☐ Suction Pump ☐ Installed Pump ☐

TIME	TEMP. (F)	pH	COND.	TURBIDITY:	VOLUME REMOVED:	OBSERVATIONS:
1202	65.4	7.38	1413	>200	6	
1204	65.8	7.29	1414	>200	12	
1207	65.6	7.34	1423	>200	18	

Did Well Dewater? N If yes, gals. Gallons Actually Evacuated: 18.5

Sampling Time: 1210

Sample I.D.: ~~MW-~~ 5-12 Laboratory: Anametrix

Analyzed for: TPH GAS, BTEX

Duplicate I.D.: Cleaning Blank I.D.:

Analyzed for:

Shipping Notations:

Additional Notations:

SHELL WELL MONITORING DATA SHEET

Project #: 930723-T1	Wic # 204 6852 1008
Sampler: F +	Date Sampled: 7-23-93
Well I.D.: MW-15	Well Diameter: (circle one) 2 (3) 4 6 ___
Total Well Depth:	Depth to Water:
Before 23.46 After	Before 8.23 After
Depth to Free Product:	Thickness of Free Product (feet):
Measurements referenced to: PVC (Grade) Other --	

Volume Conversion Factor (VCF):
$(12 \times (d^2/4) \times \pi)/231$
where
12 = in/feet
d = diameter (in.)
π = 3.1416
231 = in3/gal

Well dia.	VCF
2"	= 0.16
3"	= 0.37
4"	= 0.65
6"	= 1.47
10"	= 4.08
12"	= 5.87

5.6 (1 Case Volume) x 3 (Specified Volumes) = 16.9 gallons

Purging: Bailer ☐ Middleburg ☐ Electric Submersible ☒ Suction Pump ☐ Type of Installed Pump _____

Sampling: Bailer ☒ Middleburg ☐ Electric Submersible ☐ Suction Pump ☐ Installed Pump ☐

TIME	TEMP. (F)	pH	COND.	TURBIDITY:	VOLUME REMOVED:	OBSERVATIONS:
1146	67.0	7.29	1109	7200	6	
1147	66.3	7.36	1092	7200	6	
1149	65.2	7.64	1086	7200	6	

Did Well Dewater? N If yes, gals. Gallons Actually Evacuated: 18.5

Sampling Time: 1150

Sample I.D.: MW-15 Laboratory: Anametrix

Analyzed for: TPH GAS, BTEX

Duplicate I.D.: Cleaning Blank I.D.:

Analyzed for:

Shipping Notations:

Additional Notations:

SHELL WELL MONITORING DATA SHEET

Project #: 930723-T1	Wic # 204 6852 1008
Sampler: FT	Date Sampled: 7-23-93
Well I.D.: S-16	Well Diameter: (circle one) 2 (3) 4 6 ___
Total Well Depth: Before 24.29 After	Depth to Water: Before 7.67 After
Depth to Free Product:	Thickness of Free Product (feet):
Measurements referenced to: PVC (Grade)	Other --

Volume Conversion Factor (VCF):
$(12 \times (d^2/4) \times \pi)/231$
Where
12 = in/foot
d = diameter (in.)
π = 3.1416
231 = in3/gal

Well dia.	VCF
2"	= 0.16
3"	= 0.37
4"	= 0.65
6"	= 1.47
10"	= 4.08
12"	= 5.87

6.1	x	3	=	18.3
1 Case Volume		Specified Volumes		gallons

Purging: Bailer ☐ Middleburg ☐ Electric Submersible ☒ Suction Pump ☐ Type of Installed Pump _____

Sampling: Bailer ☒ Middleburg ☐ Electric Submersible ☐ Suction Pump ☐ Installed Pump ☐

TIME	TEMP. (F)	pH	COND.	TURBIDITY:	VOLUME REMOVED:	OBSERVATIONS:
1341	66.6	7.02	1915	7200	6.1	
1342	66.4	7.16	1734	7200	12.5	
1343	66.4	7.16	1730	7200	18.7	
~~1350~~						

Did Well Dewater? N If yes, gals. Gallons Actually Evacuated: 19.

Sampling Time: 1350

Sample I.D.: S-16 Laboratory: Onsite

Analyzed for: TPH GAS, BTEX

Duplicate I.D.: ~~S-16~~ Cleaning Blank I.D.: EB

Analyzed for: TPH GAS BTEX

Shipping Notations:

Additional Notations:

SHELL WELL MONITORING DATA SHEET

Project #: 930723-T1	Wic # 204 6852 1008
Sampler: F.T.	Date Sampled: 7-23-93
Well I.D.: ~~MW-18~~ S-18	Well Diameter: (circle one) 2 ~~3~~ 4 6 ___
Total Well Depth: Before 18.07 After	Depth to Water: Before 7.56 After
Depth to Free Product:	Thickness of Free Product (feet):
Measurements referenced to: PVC (Grade) Other --	

Volume Conversion Factor (VCF):
(12 × (d²/4) × π)/231
where
12 = in/foot
d = diameter (in.)
π = 3.1416
231 = in3/gal

Well dia.	VCF
2"	= 0.16
3"	= 0.37
4"	= 0.65
6"	= 1.47
10"	= 4.08
12"	= 5.87

~~1~~ 3.9 x 3 = 11.7

1 Case Volume | Specified Volumes | gallons

Purging: Bailer ☐ Middleburg ☐ Electric Submersible ☒ Suction Pump ☐ Type of Installed Pump ___

Sampling: Bailer ☒ Middleburg ☐ Electric Submersible ☐ Suction Pump ☐ Installed Pump ☐

TIME	TEMP. (F)	pH	COND.	TURBIDITY:	VOLUME REMOVED:	OBSERVATIONS:
11:26	68.8	7.13	1502	81.9	4	
11:28	70.0	7.09	1499	48.5	8	
11:30	69.6	7.03	1488	67.9	12	

Did Well Dewater? N If yes, gals. Gallons Actually Evacuated: 12.5

Sampling Time: 1236

Sample I.D.: MW-18 Laboratory: Anametrix

Analyzed for: TPH GAS, BTEX

Duplicate I.D.: Cleaning Blank I.D.:

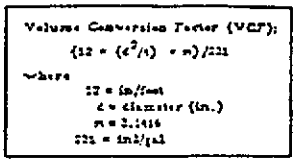
Analyzed for:

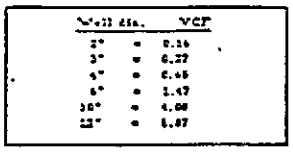
Shipping Notations:

Additional Notations:

SHELL WELL MONITORING DATA SHEET

Project #: 930723-T1	Wic # 204 6852 1008
Sampler: FT	Date Sampled: 7-23-93
Well I.D.: SE-1	Well Diameter: (circle one) 2 3 4 (6) ___
Total Well Depth: Before 21.22 After	Depth to Water: Before 7.34 After
Depth to Free Product:	Thickness of Free Product (feet):
Measurements referenced to: PVC (Grade) Other --	





~~13.9~~ 20.4	x	3	=	61.2
1 Case Volume		Specified Volumes		gallons

Purging: Bailer ☐ Middleburg ☐ Electric Submersible ☒ Suction Pump ☐ Type of Installed Pump ___

Sampling: Bailer ☒ Middleburg ☐ Electric Submersible ☐ Suction Pump ☐ Installed Pump ☐

TIME	TEMP. (F)	pH	COND.	TURBIDITY:	VOLUME REMOVED:	OBSERVATIONS:
14.15	67.4	6.70	1291	34.4	21	
14,18	67.2	6.68	1287	31.8	41.4	
1421	65,4	6.75	1374	53.9	62.4	

Did Well Dewater? N If yes, gals. Gallons Actually Evacuated: 63

Sampling Time: 1425

Sample I.D.: SE-1 Laboratory: Anametrix

Analyzed for: TPH GAS, BTEX

Duplicate I.D.: Cleaning Blank I.D.:

Analyzed for:

Shipping Notations:

Additional Notations: