

**RECEIVED**

By dehloptoxic at 1:18 pm, Dec 28, 2006

**CAL GAS**  
15595 WASHINGTON AVENUE  
SAN LORENZO, CA 94580

April 21, 2006

**Mr. Barney Chan**  
ACHCSA  
1131 Harbor Bay Parkway, Suite 250  
Alameda, California 94502-6577

**SUBJECT: FIRST QUARTER OF 2006 GROUNDWATER  
MONITORING AND SAMPLING REPORT**  
15595 Washington Avenue, San Leandro, CA

Dear Mr. Chan:

Enclosed, please find a copy of the April 17, 2006 subject Groundwater Monitoring and Sampling Report prepared by my consultant, Enviro Soil Tech Consultants.

I declare, under penalty of perjury, that the information and/or recommendations contained in this report are true and correct to the best of my knowledge.

Sincerely,

MEHDI MOHAMMADIAN

*M. Mohammadian*



**FIRST QUARTER OF 2006 GROUNDWATER  
MONITORING AND SAMPLING  
FOR THE PROPERTY  
LOCATED AT 15595 WASHINGTON AVENUE  
SAN LORENZO, CALIFORNIA  
APRIL 17, 2006**

**PREPARED FOR:  
MR. MEHDI MOHAMMADIAN  
CAL GAS  
15595 WASHINGTON AVENUE  
SAN LORENZO, CALIFORNIA 94580**

**BY:  
ENVIRO SOIL TECH CONSULTANTS  
131 TULLY ROAD  
SAN JOSE, CALIFORNIA 95111**

**ENVIRO SOIL TECH CONSULTANTS**

## **LIST OF TABLES**

**TABLE 1 ...** Groundwater Monitoring Data and Analytical Results

## **LIST OF FIGURES**

**FIGURE 1 ...** Site Vicinity Map showing 15595 Washington Avenue,  
San Lorenzo, California

**FIGURE 2 ...** Site Plan showing location of Building, Monitoring Wells  
Groundwater Flow Direction and Groundwater Elevation  
Contour

**FIGURE 3 ...** Isocontours of TPHg Map

**FIGURE 4 ...** Isocontours of Benzene Map

**FIGURE 5 ...** Isocontours of MTBE Map

**LIST OF APPENDICES**

**APPENDIX "A"** ... Table 1

**APPENDIX "B"** ... Figures 1, 2, 3, 4 and 5

**APPENDIX "C"** ... Hydrographs

**APPENDIX "D"** ... Standard Operation Procedures

**APPENDIX "E"** ... Laboratory Report and Chain-of-Custody  
Documentation

**APPENDIX "F"** ... Field Notes



<b>TABLE OF CONTENTS</b>	<b><u>Page Number</u></b>
Letter of Transmittal	1-2
Purpose	3
Site Description	3
Background	3-5
Scope of Present Work	5
Field Activities	5-6
Depth to Groundwater and Flow Direction	6
Analytical Results	7
Extent of Contamination	7-8
Recommendation	8
Limitations	8-9
 <b><u>APPENDIX "A"</u></b>	
<b>Table 1 - Groundwater Monitoring Data and Analytical Results</b>	T1-T10
 <b><u>APPENDIX "B"</u></b>	
<b>Figure 1 - Vicinity Map</b>	M1
<b>Figure 2 - Site Plan</b>	M2
<b>Figure 3 - Isocontours of TPHg</b>	M3
<b>Figure 4 - Isocontours of Benzene</b>	M4
<b>Figure 5 - Isocontours of MTBE</b>	M5

**TABLE OF CONTENTS CONT'D**

**Page Number**

**APPENDIX "C"**

Hydrographs

**APPENDIX "D"**

Groundwater Sampling

SOP1

**APPENDIX "E"**

Entech Analytical Labs Report and Chain-of-Custody Record

**APPENDIX "F"**

Field Notes

April 17, 2006

File No. 12-99-702-SI

**Mr. Mehdi Mohammadian**  
Cal Gas  
15595 Washington Avenue  
San Lorenzo, California 94580

**SUBJECT: FIRST QUARTER OF 2006 GROUNDWATER  
MONITORING & SAMPLING FOR THE PROPERTY**  
Located at 15595 Washington Avenue, in  
San Lorenzo, California

Dear Mr. Mohammadian:

This report presents results from the quarterly groundwater monitoring and sampling conducted by Enviro Soil Tech Consultants (ESTC), on March 16, 2006, at the subject site (Figure 1).

The five monitoring wells (MW-1 through MW-5) located on-site were monitored for presence of floating products and/or distinctive odor, and groundwater samples were collected from these wells for laboratory analyses.

This quarterly groundwater monitoring and sampling was conducted in accordance with the authorization of Mr. Mehdi Mohammadian and at the request of Alameda County Health Care Services Agency-Environmental Health Services (ACHCSA-EHS) in a letter dated May 19, 1999.




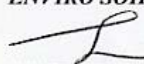
File No. 12-99-702-SI

If you have any questions or require additional information, please feel free to contact our office at (408) 297-1500.


Sincerely,

ENVIRO SOIL TECH CONSULTANTS

  
FRANK HAMEDI-FARD  
GENERAL MANAGER

  
LAWRENCE KO  
C. E. #34928



  
VICTOR B. CHERVEN, PH.D.  
PROFESSIONAL GEOLOGIST #3475



ENVIRO SOIL TECH CONSULTANTS 2

**PURPOSE:**

The purposes of the quarterly groundwater monitoring and sampling reported here were to define the direction of groundwater flow, assess the water quality, and map the extent of hydrocarbons contamination in the groundwater at the site.

**SITE DESCRIPTION:**

The site is located on the northwest corner of Washington Avenue and Via Enrico Street, in San Lorenzo, California (Figure 1), and is currently being used as a service station. The site contains one single story building. The underground storage tanks are located at the center portion of the property south of the pump islands. The subject property is located in an area of commercial and residential development.

**BACKGROUND:**

Several parties have owned or operated this service station in the past 30 years. From 1974 to 1983 it was owned and operated by the Calleri family. In 1983, the Calleri's sold it to Texaco, Inc. Texaco owned the site from 1983 to 1986, but the site was not in operation during that time. Texaco removed the existing USTs in 1986, and subsurface contamination was detected in the fuel tank excavation.

After removing the UST's and discovering the contamination, Texaco sold the property to Bertram Kubo in 1986 or 1987. Mr. Kubo installed three new 10,000-gallon fuel tanks at a new location and reopened as a retail service station. He sold the property in 1990 to the current owner, Mr. Mehdi Mohammadian, who operates the site as Shell retail service station.

Groundwater Technology (GWT) conducted a soil and groundwater investigation on behalf of Texaco in 1986. Three monitoring wells (MW-1 to MW-3) were installed, and hydrocarbon impact to shallow groundwater was detected in these wells. Investigation was suspended at that time, and no further work took place under Mr. Kubo's ownership after he purchased the site from Texaco.

After purchasing the site in 1990 and re-sampling the three monitoring wells in 1992, Mr. Moahammadian retained Toxichem Management Systems, Inc. (TMS) in 1998 to conduct further subsurface investigation. Two additional wells (MW-4 and MW-5) were installed to the north of the three existing wells. Quarterly monitoring of all five wells began in August 1998 and has continued to the present.

ESTC continued the investigation in 2000 by drilling several new borings west and southwest of the site, in the presumed downgradient direction. Since then, ESTC has continued to monitor the five wells and re-mapped the concentrations of various analytes in the groundwater. With these data, ESTC concluded in late 2004 that the highest concentrations are located in the western portion of the site, west of the UST's that were removed in 1986. Groundwater elevation maps indicate that west is a common, if not dominant groundwater flow direction, which explains why MW-3, which is located just west (downgradient) of the tanks where Texaco discovered the contamination in 1986, has historically been the most contaminated well. In the past 12 months, however, MW-5 has been the most contaminated well.

In 2004, ACHSA-EHS requested a work plan for further site assessment, and ESTC submitted a proposal in September 2004. The plan was rejected and several revisions or modifications were requested. ESTC submitted an addendum letter in June



2005, but ACHSA-EHS also rejected these modifications and requested an additional meeting to clarify its expectations regarding the additional work. These expectations were summarized in a written directive from ACHSA-EHS in December 2005, and ESTC is currently attempting to respond to this directive.

### **SCOPE OF PRESENT WORK:**

The scope of work included in the groundwater monitoring program includes:

- Measure water depths in wells MW-1 to MW-5 and note whether petroleum sheen and/or odor are present.
- Purge the monitoring wells of standing water.
- Collect water samples from each well.
- Submit samples to a state-certified laboratory for chemical analyses of Total Petroleum Hydrocarbons as gasoline (TPHg); Benzene, Toluene, Ethylbenzene, Total Xylenes (BTEX); Methyl Tertiary Butyl Ether (MTBE) and other fuel oxygenates.
- Review results and prepare a report of the investigation.

### **FIELD ACTIVITIES:**

On March 16, 2006, ESTC's staff monitored five monitoring wells (MW-1 to MW-5) for groundwater depth and presence of sheen and/or odor. Depth measurements and other observations were recorded on the field monitoring sheet, and are shown in Table 1. Petroleum sheen was noted in monitoring well MW-5, but no evidence of contamination was observed in any of the other wells.

After the depth to groundwater was measured, approximately four to five well volumes of water were bailed from each well in order to purge standing water from the casing and assure that water samples would be representative of surrounding groundwater. The purged water was stored on site in 55-gallon drums.

Water samples were collected after purging. A stainless steel bailer was used for sample collection. Water sampling equipment was decontaminated before and after each well was sampled using Tri-sodium Phosphate (TSP) and water wash, followed by double rinsing. The samples were preserved in 40-milliliter glass vials sealed with Teflon-lined screw caps, labeled and placed in a cold ice chest and then transported to Entech Analytical Labs, a state-certified laboratory, with proper chain-of-custody for analyses. The sampling was conducted in accordance with ESTC's Standard Operation Procedures (Appendix "D") and ACHCSA-EHS guidelines.

#### **DEPTH TO GROUNDWATER AND FLOW DIRECTION:**

The depth to groundwater on March 16 ranged from 6.60 feet (well MW-2) to 8.50 feet (well MW-5) below ground surface. This is approximately 1 foot shallower than in December.

Water elevation data from Table 1 were contoured (Figure 2) and used to determine groundwater flow direction. The water table sloped to the west or southwest on March 16, implying groundwater flow in that direction.

## **ANALYTICAL RESULTS:**

Groundwater samples from monitoring wells MW-1 to MW-5 were analyzed for Total Petroleum Hydrocarbons as gasoline (TPHg) per EPA Method 8015MOD; for BTEX per EPA Method 8020; and for MTBE and other gasoline oxygenates per EPA Method 8260B. The results are summarized in Table 1, and the laboratory report is contained in Appendix "E".

As noted in the Background section, monitoring well MW-5 has been the most strongly impacted well since the third quarter of 2004, and this continues to be the case. The concentration of most hydrocarbons has been rising in this well since early 2001, and this continued during the first quarter of 2006. On several occasions, the laboratory noted that MTBE formed a strong peak within the TPHg range and accounted for most of the TPHg concentration (Table 1). This quarter, the MTBE concentration was approximately 23% of the TPH concentration.

Concentrations in MW-1 also rose this quarter, after several quarters of rather modest decline. Except for MTBE, which was detected at less than 14 µg/L, no hydrocarbons were detected in either MW-2 or MW-4. Tert-butanol (TBA) was the only hydrocarbon detected in MW-3. This gasoline oxygenate has generally been on the rise in recent years.

## **EXTENT OF CONTAMINATION:**

Figures 3-5 are contour maps for TPHg, Benzene, and MTBE. The maps are very similar to those for the previous quarter, and demonstrate that the concentration of all three analytes increases to the northwest. The southern and eastern limits of groundwater



contamination are delineated by the original three wells (MW-1 through MW-3), but the northern and western limits of contamination are off site, north and west (downgradient) of MW-5. Several years ago, however, the data in Table 1 imply that the southern limit of contamination was probably tens of feet or more south of the original wells and the northern limit was not as far north of MW-5 as it is today.

### **RECOMMENDATION:**

We recommend performing additional drilling to define the extent of groundwater contamination north and west of the site. The investigation should be sufficiently broad in scope to provide data on the vertical extent of contamination as well, and to make it possible to identify and map contaminant transport paths through the subsurface.

A copy of this report should be forwarded to Alameda County Health Care Services Agency-Environmental Health Services (ACHCSA-EHS) and Regional Water Quality Control Board (RWQCB) for their review and comments.

### **LIMITATIONS:**

This report and the associated work have been provided in accordance with the general principles and practices currently employed in the environmental consulting profession. The contents of this report reflect the conditions of the site at this particular time. The findings of this report are based on:

- 1) The observations of field personnel.
- 2) The results of laboratory analyses performed by a state-certified laboratory.

It is possible that variations in the soil and groundwater could exist beyond the points explored in this investigation. Also, changes in groundwater conditions of a property can occur with the passage of time due to variations in rainfall, temperature, regional water usage and other natural processes or the works of man on this property or adjacent property.

The services that ESTC provided have been in accordance with generally accepted environmental professional practices for the nature and conditions of work completed in the same or similar localities at the time the work was performed. The contents of this report reflect the conditions of the subject site at this particular time. No other warranties, expressed or implied as to the professional advice provided are made.



**A P P E N D I X "A"**

**TABLES**

**TABLE 1**  
**GROUNDWATER MONITORING DATA (feet)**  
**AND ANALYTICAL RESULTS (µg/L)**

Date	Well No./ Elevation	Depth of Well	Depth of Perf.	Depth to Water	GW Elev.	Well Observation	TPHg	B	T	E	X	MTBE	PCE	TBA	TCE	Other VOCs By EPA 8260B
8/08/86	MW-1 (N/A)	15	10	N/A	N/A	N/A	N/A	ND <500	ND <500	NA	82	NA	NA	NA	NA	NA
11/12/92				11.37†	N/A	N/A	720	3	0.5	1	1	NA	NA	NA	NA	NA
3/24/94	22.93 (feet MSL)			8.71*	14.22	Odor	1300	110	ND <0.5	19	ND <0.5	NA	NA	NA	NA	NA
12/15/95				8.49*	14.44	No sheen Weakly petro. odor	350	18	2.9	3.5	2.8	NA	NA	NA	NA	NA
8/26/98	(22.96) resurveyed			9.30*	13.66	N/A	ND <500	17	ND<5	ND<5	ND<5	340000	NA	NA	NA	NA
1/26/99				7.96*	15.00	N/A	ND <50000	ND <500	ND <500	ND <500	ND <500	269000	NA	NA	NA	NA
4/06/99				8.01*	14.95	N/A	3500	296	ND <10	43	18.6	117000	NA	NA	NA	NA
5/24/00	(23.05) resurveyed			8.24*	14.81	No sheen or odor	33000	ND <5000	ND <5000	ND <5000	ND <5000	74000	ND <5000	ND <20000	ND <5000	None Detected<5000
8/24/00				9.43*	13.62	No sheen or odor	11000	ND <2000	ND <2000	ND <2000	ND <2000	32000	ND <2500	ND <10000	ND <2500	None Detected<2500
11/22/00				9.28*	13.77	L. rainbow sheen No odor	24000	ND <2500	ND <2500	ND <2500	ND <2500	35000	ND <2500	ND <10000	ND <2500	None Detected<2500
2/22/01				7.86*	15.19	No sheen or odor	19000	ND <5000	ND <5000	ND <5000	ND <5000	51000	ND <5000	ND <20000	ND <5000	None Detected<5000
5/29/01				8.96*	14.09	No sheen or odor	30000	ND <5000	ND <5000	ND <5000	ND <5000	110000	ND <5000	ND <20000	ND <5000	None Detected<5000
8/22/01				9.66*	13.39	No sheen or odor	46000	ND <2500	ND <2500	ND <2500	ND <2500	70000	ND <2500	11000	ND <2500	None Detected<2500
12/06/01				8.36*	14.69	No sheen or odor	25000	ND <2500	ND <2500	ND <2500	ND <2500	37000	ND <2500	ND <10000	ND <2500	None Detected<2500
3/25/02	(23.05) resurveyed			7.84*	15.21	L. rainbow sheen No odor	770	ND <830	ND <830	ND <830	ND <830	20000	ND <830	NA	ND <830	None Detected<830
7/02/02				8.96*	14.14	No sheen or odor	550	ND <500	ND <500	ND <500	ND <500	13000	ND <500	NA	ND <500	None Detected<500
10/05/02				9.58*	13.47	No sheen or odor	880•	ND <250	ND <250	ND <250	ND <250	3800	ND <250	ND <1000	ND <250	None Detected<250

**TABLE 1 CONT'D**  
**GROUNDWATER MONITORING DATA (feet)**  
**AND ANALYTICAL RESULTS (µg/L)**

Date	Well No./ Elevation	Depth of Well	Depth of Perf.	Depth to Water	GW Elev.	Well Observation	TPHg	B	T	E	X	MTBE	PCE	TBA	TCE	Other VOCs By EPA 8260B
1/17/03	MW-1 (23.05)	15	10	7.72*	15.33	No sheen or odor	8200a	ND <500	ND <500	ND <500	ND <500	11000	ND <500	2200	ND <500	None Detected<500
4/17/03				8.48*	14.57	No sheen or odor	390	ND <2.5	ND <2.5	ND <2.5	ND <2.5	1400	ND <2.5	NA	ND <2.5	n-Propylbenzene 3.1
7/24/03				9.20*	13.85	No sheen or odor	490•	ND <100	ND <100	ND <100	ND <100	590	ND <100	ND <200	ND <100	None Detected<100
10/22/03				9.88*	13.17	No sheen or odor	430c	ND<50	ND<50	ND<50	ND<50	540	ND <50	ND <100	ND <50	None Detected<50
1/17/04				8.18*	14.87	No sheen or odor	420d	ND<25	ND<25	ND<25	ND<25	340	ND <25	ND <50	D <25	None Detected<25
4/05/04				7.96*	15.09	No sheen or odor	520n	ND<5	ND<5	ND<5	ND<10	700	ND<5	ND <100	ND<5	None Detected<5
7/06/04				9.13*	13.92	No sheen or odor	150c	ND <0.5	ND <0.5	ND <0.5	ND<1	120	ND <0.5	ND <10	ND <0.5	None Detected<0.5
9/27/04				9.46*	13.59	No sheen or odor	110	5.3	1.2	2	4.3	47	ND <0.5	ND <10	ND <0.5	None Detected<0.5
12/17/04				8.38*	14.67	No sheen or odor	160	13	15	3.2	13	34	ND <0.5	ND <10	ND <0.5	None Detected<0.5
3/21/05				7.62*	15.43	No sheen or odor	450	ND<5	ND<5	ND<5	ND<5	520	ND<5	ND <100	ND<5	None Detected<5
6/18/05				8.18*	14.87	No sheen or odor	270	ND <2.5	ND <2.5	ND <2.5	ND <2.5	210	ND <2.5	63	ND <2.5	None Detected
9/15/05				8.84*	14.21	No sheen or odor	110	ND <0.5	ND <0.5	ND <0.5	ND <0.5	47	ND <0.5	15	ND <0.5	Carbon Disulfide 0.74
12/09/05				8.64*	14.41	No sheen or odor	70	ND <0.5	ND <0.5	ND <0.5	ND <0.5	16	ND <0.5	13	ND <0.5	None Detected<0.5
3/16/06				7.48*	15.57	No sheen or odor	280	ND <2.5	ND <2.5	ND <2.5	ND <2.5	270	ND <2.5	87	ND<2. 5	None Detected<2.5
8/08/96	MW-2 (N/A)	15	10	N/A	N/A	N/A	NA	ND<50	ND<50	NA	ND<50	NA	NA	NA	NA	NA
11/12/92				10.55†	N/A	N/A	ND<10	ND <0.3	ND <0.3	ND <0.3	ND <0.5	NA	NA	NA	NA	NA
3/24/94	22.09 (feet MSL)			7.87*	14.22	N/A	ND<50	ND <0.5	ND <0.5	ND <0.5	ND <0.5	N/A	NA	NA	NA	NA

**ENVIRO SOIL TECH CONSULTANTS**

**TABLE 1 CONT'D**  
**GROUNDWATER MONITORING DATA (feet)**  
**AND ANALYTICAL RESULTS (µg/L)**

Date	Well No./ Elevation	Depth of Well	Depth of Perf.	Depth to Water	GW Elev.	Well Observation	TPHg	B	T	E	X	MTBE	PCE	TBA	TCE	Other VOCs By EPA 8260B
12/15/95	MW-2 (22.09)	15	10	4.62*	17.47	No sheen or odor	ND<50	ND <0.5	ND <0.5	ND <0.5	ND <0.5	NA	NA	NA	NA	NA
2/28/98	(22.07) resurveyed			8.40*	13.67	N/A	ND<50	ND <0.5	ND <0.5	ND <0.5	ND <0.5	210000	NA	NA	NA	NA
1/26/99				7.29*	14.78	N/A	ND <2000	ND <20	ND <20	ND <20	ND <20	9450	NA	NA	NA	NA
4/06/99				7.28*	14.79	N/A	ND <1000	ND <10	ND <10	ND <10	ND <10	209000	NA	NA	NA	NA
5/24/00	(21.94) resurveyed			7.22*	14.72	No sheen or odor	46000	ND <12500	ND <12500	ND <12500	ND <12500	180000	ND <12500	ND <50000	ND <12500	None Detected<12500
8/24/00				8.39*	13.55	No sheen or odor	21000	ND <2500	ND <2500	ND <2500	ND <2500	70000	ND <2500	ND <10000	ND <2500	None Detected<2500
11/22/00				8.24*	13.70	No sheen or odor	29000	ND <2500	ND <2500	ND <2500	ND <2500	43000	ND <2500	ND <10000	ND <2500	None Detected<2500
2/22/01				6.52*	15.42	No sheen or odor	20000	ND <5000	ND <5000	ND <5000	ND <5000	61000	ND <5000	ND <20000	ND <5000	None Detected<5000
5/29/01				7.90*	14.04	No sheen or odor	9100	ND <1000	ND <1000	ND <1000	ND <1000	24000	ND <1000	ND <4000	ND <1000	None Detected<1000
8/22/01				8.62*	13.32	No sheen or odor	8700	ND <500	ND <500	ND <500	ND <500	12000	ND <500	ND <2000	ND <500	None Detected<500
12/06/01				7.28*	14.66	No sheen or odor	11000	ND <1250	ND <1250	ND <1250	ND <1250	22000	ND <1250	ND <5000	ND <1250	None Detected<1250
3/25/02	(21.94) resurveyed			6.86*	15.08	No sheen or odor	ND<50	ND <830	ND <830	ND <830	ND <830	25000	ND <830	NA	ND <830	None Detected<830
7/02/02				7.96*	13.98	No sheen or odor	ND<50	ND <170	ND <170	ND <170	ND <170	6000	ND <170	NA	ND <170	None Detected<170
10/05/02				8.54*	13.40	No sheen or odor	820•	ND <250	ND <250	ND <250	ND <250	3400	ND <250	ND <1000	ND <250	None Detected<250
1/17/03				6.76*	15.18	No sheen or odor	7000a	ND <500	ND <500	ND <500	ND <500	6800	ND <500	1100	ND <500	None Detected<500
4/17/03				7.38*	14.56	No sheen or odor	ND <500	ND<5	ND<5	ND<5	ND <5	3100	ND<5	NA	ND<5	None Detected<5
7/24/03				8.14*	13.80	No sheen or odor	720a	ND<5	ND<5	ND<5	ND<5	1400	ND 250	ND <500	ND <250	None Detected<250
10/22/03				8.82*	13.12	No sheen or odor	420c	ND<50	ND <50	ND <50	ND<50	580	ND<50	ND <100	ND<50	None Detected<50



**TABLE 1 CONT'D**  
**GROUNDWATER MONITORING DATA (feet)**  
**AND ANALYTICAL RESULTS ( $\mu\text{g/L}$ )**

Date	Well No./ Elevation	Depth of Well	Depth of Perf.	Depth to Water	GW Elev.	Well Observation	TPHg	B	T	E	X	MTBE	PCE	TBA	TCE	Other VOCs By EPA 8260B
10/22/03	MW-2 (21.94)	15	10	8.82*	13.12	No sheen or odor	420c	ND<50	ND <50	ND <50	ND<50	580	ND<50	ND <100	ND<50	None Detected<100
1/17/04				7.14*	14.80	No sheen or odor	860c	ND <100	ND <100	ND <100	ND <100	1800	ND<5	250	ND<5	None Detected<5
4/05/04				6.94*	15.00	No sheen or odor	330n	ND<5	ND<5	ND<5	ND<10	500	ND<5	260	ND<5	None Detected<5
7/06/04				8.05*	13.89	No sheen or odor	200e	ND<1	ND<1	ND<1	ND<2	220	ND<1	ND<20	ND<1	None Detected<1
9/27/04				8.38*	13.11	No sheen or odor	54e	1.1	ND 0.5	ND <0.5	ND<1	72	ND <0.5	ND<10	ND <0.5	None Detected<0.5
12/17/04				7.31*	14.63	No sheen or odor	160	22	25	5.1	21	86	ND <0.5	39	ND <0.5	None Detected<0.5
3/21/05				6.54*	15.40	No sheen or odor	59	1.2	3.2	0.87	4.8	63	ND <0.5	30	ND <0.5	None Detected<0.5
6/18/05				7.16*	14.78	No sheen or odor	ND<50	ND <0.5	ND <0.5	ND <0.5	ND <0.5	41	ND <0.5	12	ND <0.5	None Detected<0.5
9/15/05				7.74*	14.20	No sheen or odor	ND<50	ND <0.5	ND <0.5	ND <0.5	ND <0.5	20	ND <0.5	ND<10	ND <0.5	None Detected<0.5
12/09/05				7.56*	14.38	No sheen or odor	ND<50	ND<1	ND<1	ND<1	ND<1	9.7	ND <0.5	ND<10	ND <0.5	None Detected<0.5
3/16/06				6.60*	15.34	No sheen or odor	ND<50	ND <0.5	ND <0.5	ND <0.5	ND <0.5	8	ND <0.5	ND <10	ND <0.5	None Detected<0.5
8/08/96	MW-3 (N/A)	16	10	N/A	N/A	N/A	NA	ND<50	ND<50	NA	ND<50	NA	NA	NA	NA	NA
11/12/92				11.32†	N/A	N/A	69	ND <0.3	ND <0.3	ND <0.3	ND <0.3	NA	NA	NA	NA	NA
3/24/94	22.73 (feet MSL)			8.69*	14.04	N/A	ND<50	ND <0.5	ND <0.5	ND <0.5	ND <0.5	NA	NA	NA	NA	NA
12/15/95				8.31*	14.42	No sheen or odor	ND<50	ND <0.5	ND <0.5	ND <0.5	ND <0.5	NA	NA	NA	NA	NA
8/26/98	(22.74) resurveyed			9.29*	13.45	N/A	ND <500	36	ND<5	ND<5	ND<5	99000	NA	NA	NA	NA
12/16/98				8.00*	14.74	N/A	ND <500	ND<50	ND<50	ND<50	ND<50	19800	NA	NA	NA	NA

**TABLE 1 CONT'D**  
**GROUNDWATER MONITORING DATA (feet)**  
**AND ANALYTICAL RESULTS (µg/L)**

Date	Well No./ Elevation	Depth of Well	Depth of Perf.	Depth to Water	GW Elev.	Well Observation	TPHg	B	T	E	X	MTBE	PCE	TBA	TCE	Other VOCs By EPA 8260B
4/06/99	MW-3 (22.56) resurveyed	16	10	8.00*	14.74	N/A	ND <1000	ND<10	ND<10	ND<10	ND<10	151000	NA	NA	NA	NA
5/24/00				8.08*	14.47	No sheen or odor	48000	ND <12500	ND <12500	ND <12500	ND <12500	200000	ND <12500	ND <50000	ND <12500	None Detected<12500
8/24/00				9.24*	13.32	No sheen or odor	52000	ND <5000	ND <5000	ND <5000	ND <5000	170000	ND <5000	ND <20000	ND <5000	None Detected<5000
11/22/00				9.08*	13.48	No sheen or odor	69000	ND <10000	ND <10000	ND <10000	ND <10000	160000	ND <10000	ND <40000	ND <10000	None Detected<10000
2/22/01				7.58*	14.98	No sheen or odor	30000	ND <5000	ND <5000	ND <5000	ND <5000	130000	ND <5000	ND <20000	ND <5000	None Detected<5000
5/29/01				8.76*	13.80	No sheen or odor	29000	ND <2500	ND <2500	ND <2500	ND <2500	78000	ND <2500	ND <10000	ND <2500	None Detected<2500
8/22/01				9.46*	13.10	No sheen or	37000	ND <5000	ND <5000	ND <5000	ND <5000	98000	ND <5000	ND <20000	ND <5000	None Detected<5000
12/06/01				8.06*	14.50	No sheen or odor	33000	ND <5000	ND <5000	ND <5000	ND <5000	94000	ND <5000	ND <20000	ND <5000	None Detected<5000
3/25/02	(22.56) resurveyed			7.62*	14.94	No sheen or odor	ND<50	ND <2500	ND <2500	ND <2500	ND <2500	62000	ND <2500	NA	ND <2500	None Detected<2500
7/02/02				7.78*	14.78	No sheen or odor	73Z	ND <2000	ND <2000	ND <2000	ND <2000	67000	NND <2000	NA	ND <2000	None Detected<2000
10/05/02				9.38*	13.18	No sheen or odor	25000•	ND <2500	ND <2500	ND <2500	ND <2500	55000	ND <2500	ND <10000	ND <2500	Methylene Chloride 7000
1/17/03				7.46*	15.10	No sheen or odor	32000 <sup>a</sup>	ND <2500	ND <2500	ND <2500	ND <2500	49000	ND <2500	ND <5000	ND <2500	None Detected<2500
4/17/03				8.22*	14.34	No sheen or odor	ND <10000	ND <100	ND <100	ND <100	ND <100	38000	ND <100	NA	ND <100	None Detected<100
7/24/03				9.02*	13.54	No sheen or odor	16000 <sup>a</sup>	ND <2500	ND <2500	ND <2500	ND <2500	31000	ND <2500	ND <5000	ND <2500	None Detected<2500
10/22/03				9.66*	12.90	No sheen or odor	17000 <sup>c</sup>	ND <2500	ND <2500	ND <2500	ND <2500	29000	ND <2500	ND <5000	ND <2500	None Detected<2500
1/17/04				7.92*	14.64	No sheen or odor	11000 <sup>d</sup>	ND <2000	ND <2000	ND <2000	ND <2000	23000	ND <2000	ND <4000	ND <2000	None Detected<2000
4/05/04				7.46*	15.10	No sheen or odor	13000 <sup>n</sup>	ND <200	ND <200	ND <200	ND <400	22000	ND <200	ND <4000	ND <200	None Detected<200

**TABLE 1 CONT'D  
GROUNDWATER MONITORING DATA (feet)  
AND ANALYTICAL RESULTS (µg/L)**

Date	Well No./ Elevation	Depth of Well	Depth of Perf.	Depth to Water	GW Elev.	Well Observation	TPHg	B	T	E	X	MTBE	PCE	TBA	TCE	Other VOCs By EPA 8260B
7/06/04	MW-3 (22.56)	16	10	8.92*	13.64	No sheen or odor	13000e	ND<50	ND<50	ND<50	ND <100	12000	ND<50	ND <1000	ND<50	None Detected<50
9/27/04				9.24*	13.32	No sheen or odor	4200e	ND<50	ND<50	ND<50	ND <100	6800	ND<50	ND <1000	ND<50	None Detected<50
12/17/04				8.12*	14.44	No sheen or odor	4000c	ND<50	ND<50	ND<50	ND<50	5400	ND<50	ND <1000	ND<50	None Detected<50
3/21/05				7.38*	15.18	No sheen or odor	3500c	ND<50	ND<50	ND<50	ND<50	6400	ND<50	4300	ND<50	None Detected<50
6/18/05				8.02*	14.54	No sheen or odor	650	ND<25	ND<25	ND<25	ND<25	700	ND<25	9200	ND<25	None Detected<25
9/15/05				8.64*	13.92	No sheen or odor	180	ND<10	ND<10	ND<10	ND<10	110	ND<10	7300	ND<10	None Detected<10
12/09/05				8.42*	14.14	No sheen or odor	ND<50	ND<5	ND<5	ND<5	ND<5	15	ND<5	2500	ND<5	None Detected<5
3/16/06				7.24*	15.32	No sheen or odor	ND<50	ND <2.5	ND <2.5	ND <2.5	ND <2.5	ND<5	ND <2.5	1600	ND <2.5	None Detected<2.5
8/26/98	MW-4 (23.51) feet MSL	19	N/A	9.87	13.64	N/A	170	2	0.74	1.3	1	150	NA	NA	NA	NA
1/26/99				8.54	14.97	N/A	140	ND <0.5	ND <0.5	ND <0.5	ND <0.5	7.6	NA	NA	NA	NA
4/06/99				8.34	15.17	N/A	390	3.94	ND <0.5	1.52	0.808	15.2	NA	NA	NA	NA
5/24/00	(23.40) resurveyed			8.72	14.68	No sheen or odor	210	ND<5	ND<5	ND<5	ND<5	40	ND<5	ND<20	ND<5	None Detected<5
8/24/00				9.88	13.52	No sheen or odor	160	ND<5	7.4	ND<5	ND<5	44	ND<5	ND<20	ND<5	None Detected<5
11/22/00				9.76	13.64	No sheen or odor	140	ND<5	ND<5	ND<5	ND<5	25	ND<5	ND<20	ND<5	None Detected<5
2/22/01				8.42	14.98	No sheen or odor	160	ND<5	ND<5	ND<5	ND<5	32	ND<5	ND<20	ND<5	None Detected<5
5/29/01				9.42	13.98	No sheen or odor	160	ND<5	ND<5	ND<5	ND<5	31	ND<5	ND<20	ND<5	None Detected<5
8/22/01				10.10	13.30	No sheen or odor	96	N<5	ND<5	ND<5	ND<5	28	ND<5	ND<20	ND<5	None Detected<5
12/06/01				8.68	14.72	No sheen or odor	160	ND<5	ND<5	ND<5	ND<5	25	ND<5	ND<20	ND<5	None Detected<5
3/25/02				8.28	15.12	No sheen or odor	150	ND<5	ND<5	ND<5	ND<5	14	ND<5	NA	ND<5	None Detected<5
7/02/02				9.36	14.04	No sheen or odor	120	ND<5	ND<5	ND<5	ND<5	ND<5	ND<5	NA	ND<5	None Detected<5
10/05/02				10.12	13.28	No sheen or odor	110	ND<5	ND<5	ND<5	ND<5	53	ND<5	ND<20	ND<5	None Detected<5
1/17/03				8.10	15.30	No sheen or odor	86c	ND<5	ND<5	ND<5	ND<5	23	ND <05	NA	ND <0.5	Naphthalene 0.81

**TABLE 1 CONT'D**

**ENVIRO SOIL TECH CONSULTANTS**

**GROUNDWATER MONITORING DATA (feet)  
AND ANALYTICAL RESULTS (µg/L)**

Date	Well No./ Elevation	Depth of Well	Depth of Perf.	Depth to Water	GW Elev.	Well Observation	TPHg	B	T	E	X	MTBE	PCE	TBA	TCE	Other VOCs By EPA 8260B
4/17/03	MW-4 (23.40)	15	N/A	8.88	14.52	No sheen or odor	110	3	2.8	1.1	2.84	89	ND<5	ND<10	ND<5	None Detected<5
7/24/03				9.74	13.66	No sheen or odor	130•	ND<5	ND<5	ND<5	ND<5	71	ND<5	ND<10	ND<5	None Detected<5
10/22/03				10.40	13.00	No sheen or odor	130b	ND<5	ND<5	ND<5	ND<5	81	ND<5	ND<10	ND<5	None Detected<5
1/17/04				8.72	14.68	No sheen or odor	180d	ND<5	ND<5	ND<5	ND<5	65	ND<0.5	ND<10	ND<0.5	None Detected<0.5
4/05/04				8.48	14.92	No sheen or odor	94	ND<0.5	ND<0.5	ND<0.5	ND<1	38	ND<0.5	ND<10	ND<0.5	None Detected<0.5
7/06/04				9.67	13.73	No sheen or odor	61e	ND<0.5	ND<0.5	ND<0.5	ND<1	79	ND<0.5	ND<10	ND<0.5	None Detected<0.5
9/27/04				10.02	13.38	No sheen or odor	230	3.8	0.8	1.3	2.3	57	ND<0.5	ND<10	ND<0.5	None Detected<0.5
12/17/04				8.88	14.52	No sheen or odor	430	62	68	13	53	42	ND<0.5	ND<10	ND<0.5	1,2,4-Trimethylbenzene 6.9
3/21/05				8.02	15.38	No sheen or odor	71	2.3	5.1	1.2	6.9	15	ND<0.5	ND<10	ND<0.5	None Detected<0.5
6/18/05				8.72	14.68	No sheen or odor	98	ND<0.5	ND<0.5	ND<0.5	ND<0.5	29	ND<0.5	11	ND<0.5	None Detected<0.5
9/15/05				9.38	14.02	No sheen or odor	150	ND<0.5	ND<0.5	ND<0.5	ND<0.5	35	ND<0.5	12	ND<0.5	None Detected<0.5
12/09/05				9.20	14.20	No sheen or odor	110	ND<0.5	ND<0.5	ND<0.5	ND<0.5	23	ND<0.5	14	ND<0.5	None Detected<0.5
3/16/06				7.88	15.52	No sheen or odor	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	12	ND<0.5	ND<10	ND<0.5	None Detected<0.5
8/26/98	MW-5 (23.85) feet MSL	19	N/A	10.51	13.34	N/A	6600	240	ND<50	380	84	ND<250	NA	NA	NA	NA
1/26/99				10.26	13.59	N/A	371	11.7	ND<0.5	3.22	ND<0.5	36.4	NA	NA	NA	NA
4/06/99				9.32	14.53	N/A	7680	266	ND<10	280	ND<10	ND<10	NA	NA	NA	NA
5/24/00	(23.86) resurveyed			9.39	14.47	Rainbow sheen No odor	3300	180	ND<25	140	ND<25	200	ND<25	ND<100	ND<25	Isopropylbenzene 55 n-Butylbenzene 42 n-Propylbenzene 200 Naphthalene 120

**TABLE 1 CONT'D**  
**GROUNDWATER MONITORING DATA (feet)**  
**AND ANALYTICAL RESULTS (µg/L)**

Date	Well No./ Elevation	Depth of Well	Depth of Perf.	Depth to Water	GW Elev.	Well Observation	TPHg	B	T	E	X	MTBE	PCE	TBA	TCE	Other VOCs By EPA 8260B
8/24/00	MW-5 (23.86)	19	N/A	10.54	13.32	Light rainbow sheen No odor	3200	150	ND <10	91	ND <10	300	ND <10	ND <40	ND <10	1,2,4-Trimethylbenzene 15 Isopropylbenzene 38 n-Butylbenzene 29 n-Propylbenzene 140 Naphthalene 87 p-Isopropyltoluene 28 sec-Butylbenzene 12
11/22/00				10.42	13.44	No sheen Light sewerage odor	520	120	ND <25	46	ND <25	510	ND <25	ND <100	ND <25	Isopropylbenzene 31 n-Propylbenzene 100 Naphthalene 37
2/22/01				8.88	14.98	No sheen or odor	5400	100	ND <50	94	ND <50	700	ND <50	ND <200	ND <50	n-Propylbenzene 160 Naphthalene 90
5/29/01				10.08	13.78	Rainbow sheen No odor	3700	83	ND <50	58	ND <50	860	ND <50	ND <200	ND <50	n-Propylbenzene 130 Naphthalene 64
8/22/01				10.76	13.10	Light rainbow sheen No odor	5900	150	ND <10	ND <10	ND <10	1700	ND <5	ND <20	ND <5	None Detected<5
12/06/01				9.48	14.38	Rainbow sheen Light petroleum odor	4900	ND <50	ND <50	ND <50	ND <50	1900	ND <50	ND <200	ND <50	None Detected<50
3/25/02	(23.86) resurveyed			9.08	14.78	No sheen or odor	4000	170	ND <83	ND <83	ND <83	2200	ND <83	NA	ND <83	Propylbenzene 180
7/02/02				10.02	13.84	No sheen or odor	6100	ND <130	ND <130	ND <130	ND <130	2600	ND <130	NA	ND <130	Propylbenzene 240
10/05/02				10.72	13.14	No sheen or odor	5500	110	ND <100	ND <100	ND <100	2500	ND <100	ND <400	ND <100	n-Propylbenzene 230 Naphthalene 120
1/17/03				8.76	15.10	No sheen or odor	3900 <sup>a</sup>	ND <100	ND <100	ND <100	ND <100	2000	ND <100	310	ND <100	n-Propylbenzene 140
4/17/03				9.58	14.28	No sheen or odor	7500	110	ND <10	61	ND <10	3500	ND <10	NA	ND <10	Isopropylbenzene 71 n-Propylbenzene 270 sec-Butylbenzene 21 Naphthalene 140
7/24/03				10.36	13.50	No sheen or odor	7000 <sup>a</sup>	ND <250	ND <250	ND <250	ND <250	3300	ND <250	520	ND <250	None Detected<250
10/22/03				11.02	12.84	No sheen Sewerage odor	7100	ND <500	ND <500	ND <500	ND <500	6100	ND <500	ND <1000	ND <500	None Detected<500

**TABLE 1 CONT'D  
GROUNDWATER MONITORING DATA (feet)  
AND ANALYTICAL RESULTS (µg/L)**

Date	Well No./ Elevation	Depth of Well	Depth of Perf.	Depth to Water	GW Elev.	Well Observation	TPHg	B	T	E	X	MTBE	PCE	TBA	TCE	Other VOCs By EPA 8260B
1/17/04	MW-5 (23.86)	19	N/A	9.30	14.56	No sheen Sewerage odor	7100n	ND <500	ND <500	ND <500	ND <500	4200	ND <500	ND <1000	ND <500	None Detected<500
4/05/04				9.06	14.80	No sheen Light sewerage odor	6200n	100	ND <50	ND <50	ND <100	4800	ND <50	ND <1000	ND <50	None Detected<50
7/06/04				10.30	13.56	No sheen Sewerage odor	7800	110	ND <25	44	ND <50	5600	ND <25	ND <500	ND <25	Isopropylbenzene 81 n-Propylbenzene 350
9/27/04				10.92	12.94	No sheen Sewerage odor	6100e	83	ND <50	ND <50	ND <100	4000	ND <50	ND <1000	ND <50	None Detected<50
12/17/04				9.47	14.39	Slight sheen Sewerage odor	5700	110	54	27	ND <25	4200	ND <25	ND <500	ND <25	None Detected<25
3/21/05				8.58	15.28	No sheen Sewerage odor	5600	60	ND <50	ND <50	ND <50	4600	ND <50	1300	ND <50	None Detected<50
6/18/05				9.32	14.54	Rainbow sheen Petroleum odor	8100	66	ND <50	ND <50	ND <50	4800	ND <50	1400	ND <50	None Detected<50
9/15/05				10.02	13.84	Rainbow sheen Petroleum odor	7600	ND <50	ND <50	ND <50	ND <50	4500	ND <50	1500	ND <50	None Detected<50
12/09/05				9.82	14.04	Rainbow sheen Petroleum odor	5000	28	ND <25	ND <25	ND <25	2600	ND <25	1300	ND <25	None Detected<25
3/16/06				8.50	15.36	Rainbow sheen No odor	6000	33	ND <25	ND <25	ND <25	3000	ND <25	1400	ND <25	n-Propylbenzene 310

**TPHg** - Total Petroleum Hydrocarbons as gasoline

**MTBE** - Methyl Tertiary Butyl Ether

**Perf.** – Perforation

**GW Elev.** - Groundwater Elevation

**NA** - Not Analyzed

† Well screens are not submerged

**Z** - Sample exhibits unknown single peak or peaks

**BTEX** - Benzene, Toluene, Ethylbenzene, Total Xylenes

**VOCs** - Volatile Organic Compounds

**MSL** - Mean Sea Level

**N/A** - Not Applicable

**ND** - Not Detected (Below Laboratory Detection Limit)

\* Well screens are submerged

**TABLE 1 CONT'D  
GROUNDWATER MONITORING DATA (feet)  
ENVIRO SOIL TECH CONSULTANTS**

## AND ANALYTICAL RESULTS ( $\mu\text{g/L}$ )

- TPH as gasoline reported value due to high concentrations of MTBE which are present in the TPH as gasoline quantitation range
- a** Report TPH as gasoline value is the result of high concentrations of discrete peak (MTBE) within the TPH as gasoline quantitation range
- b** TPH as gasoline value is the result of high concentrations of MTBE and high boiling point hydrocarbon mixture within the TPH as gasoline quantitation range
- c** Report TPH as gasoline value contains the result of high concentrations of MTBE within the TPH as gasoline quantitation range
- d** TPH as gasoline value contains high concentration of MTBE and a typical gasoline pattern within the TPH as gasoline quantitation range
- e** TPH as gasoline reported value due to high concentrations of MTBE present in the TPH as gasoline
- n** Report TPH as gasoline value contains the result of high concentrations of MTBE within the TPH as gasoline quantitation range.  
High surrogate recovery for 4-BFB due to matrix interference. See TFT results.



**A P P E N D I X "B"**

**FIGURES**



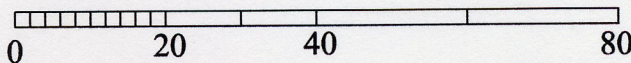
Legend

⊕ = Monitor Well

Values in ug/L  
Contour Intervals are Variable



Scale: Feet

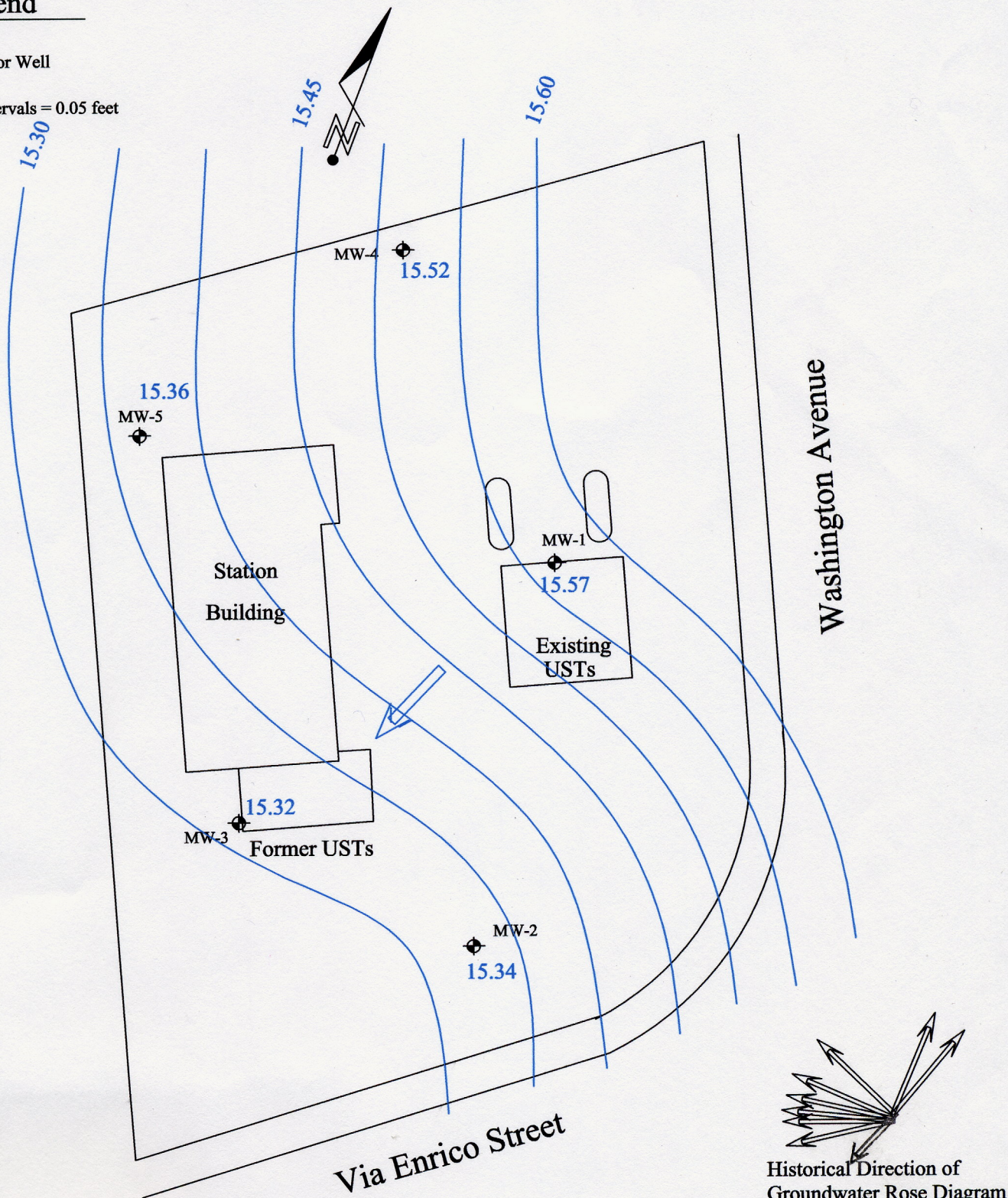




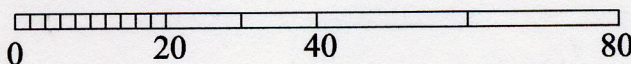
Legend

⊕ = Monitor Well

Contour Intervals = 0.05 feet



Scale: Feet

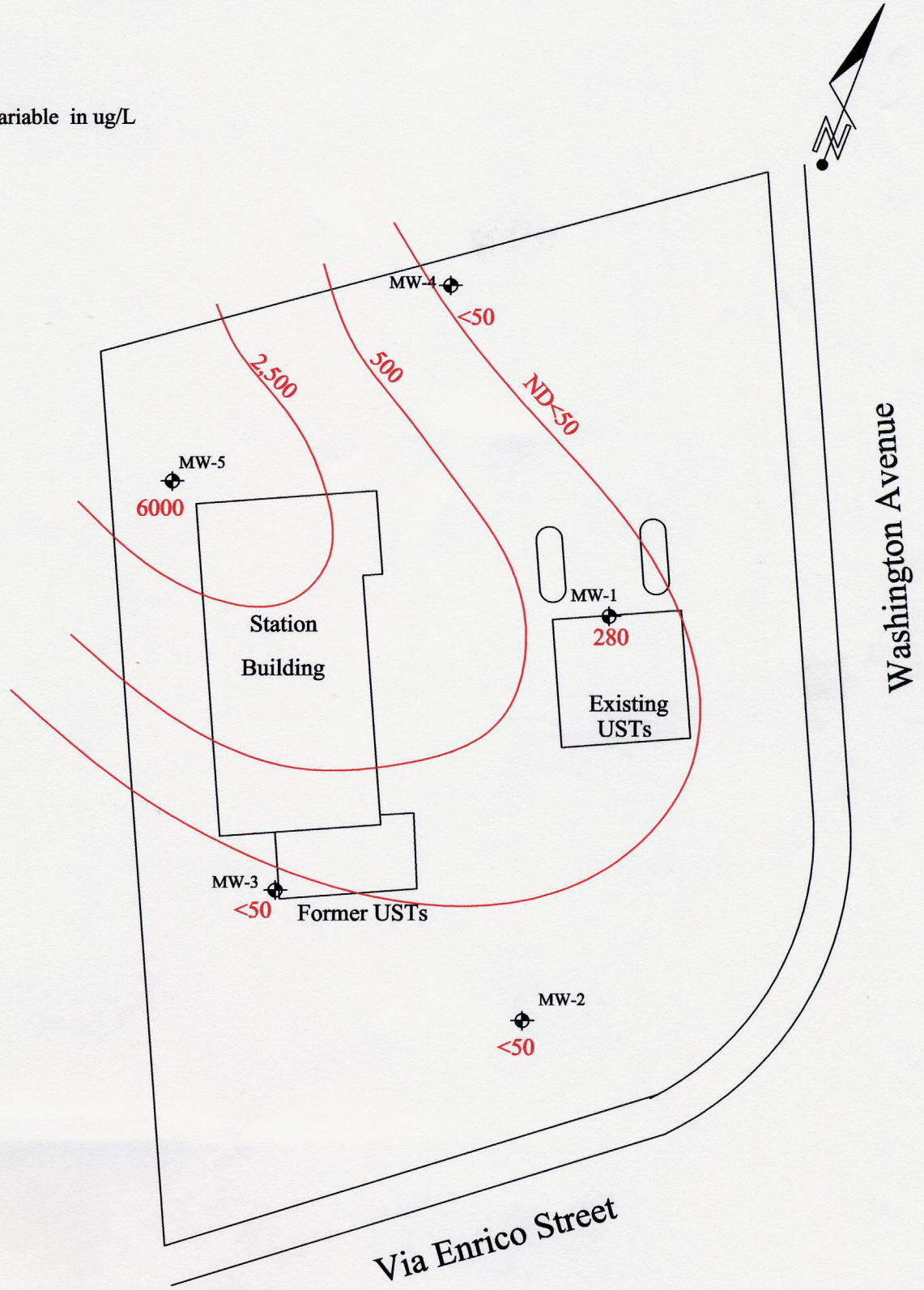




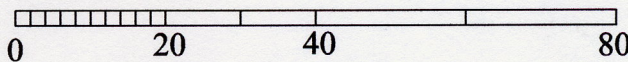
Legend

⊕ = Monitor Well

Contour Intervals are Variable in ug/L



Scale: Feet

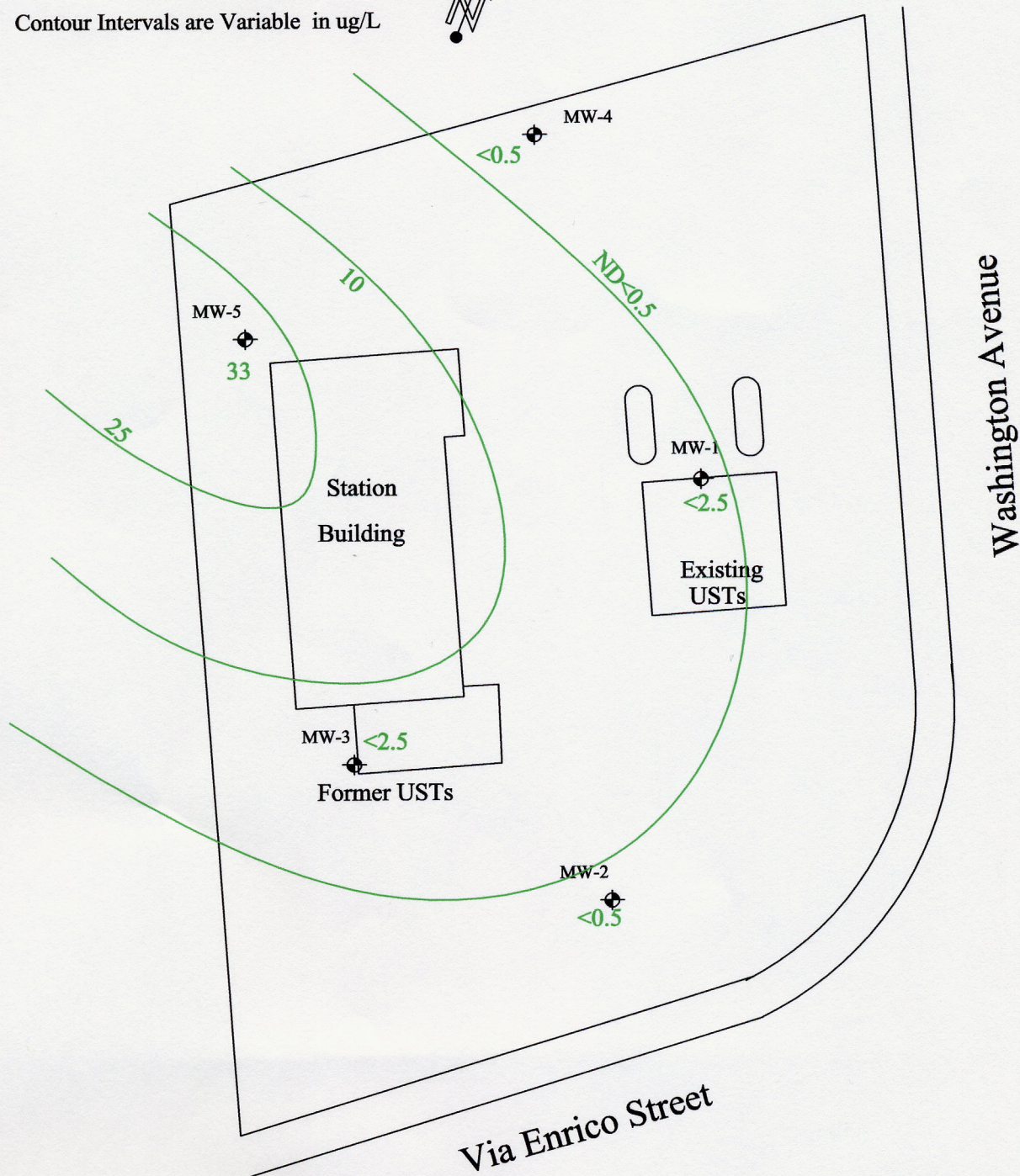




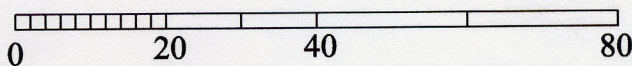
Legend

⊕ = Monitor Well

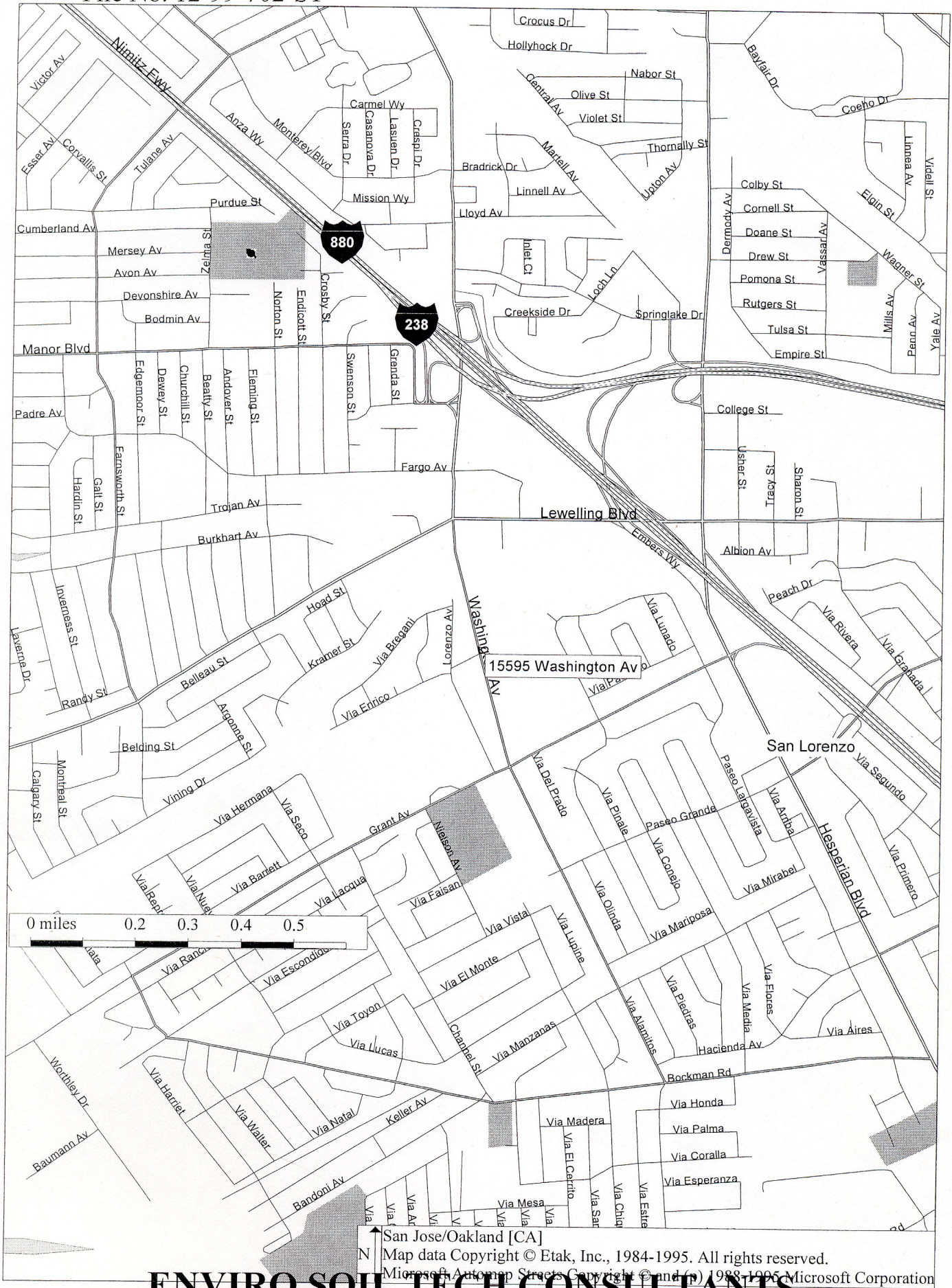
Contour Intervals are Variable in ug/L



Scale: Feet







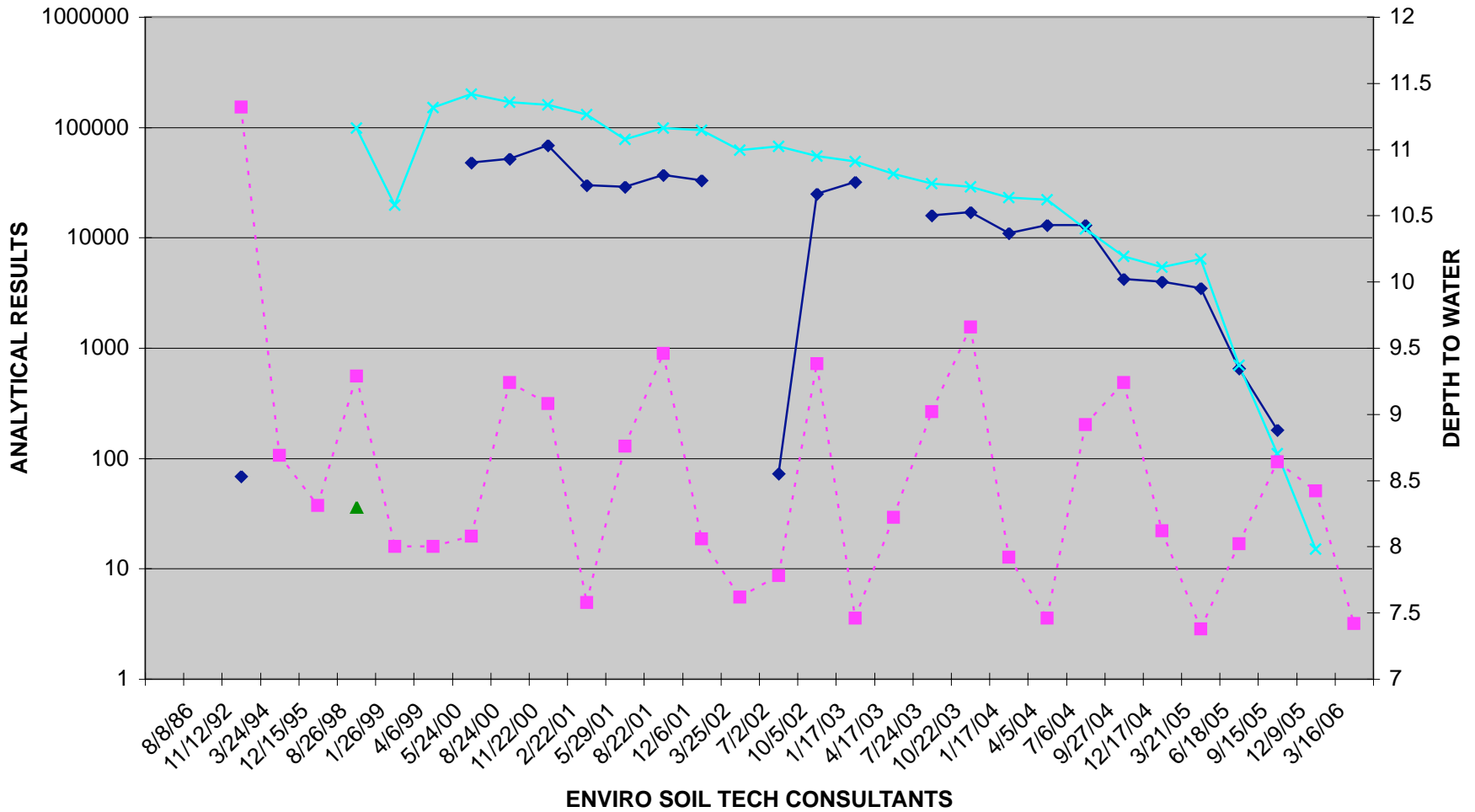
**ENVIRO SOIL TECH CONSULTANTS**

Figure 1

**A P P E N D I X "C"**

**HYDROGRAPHS**

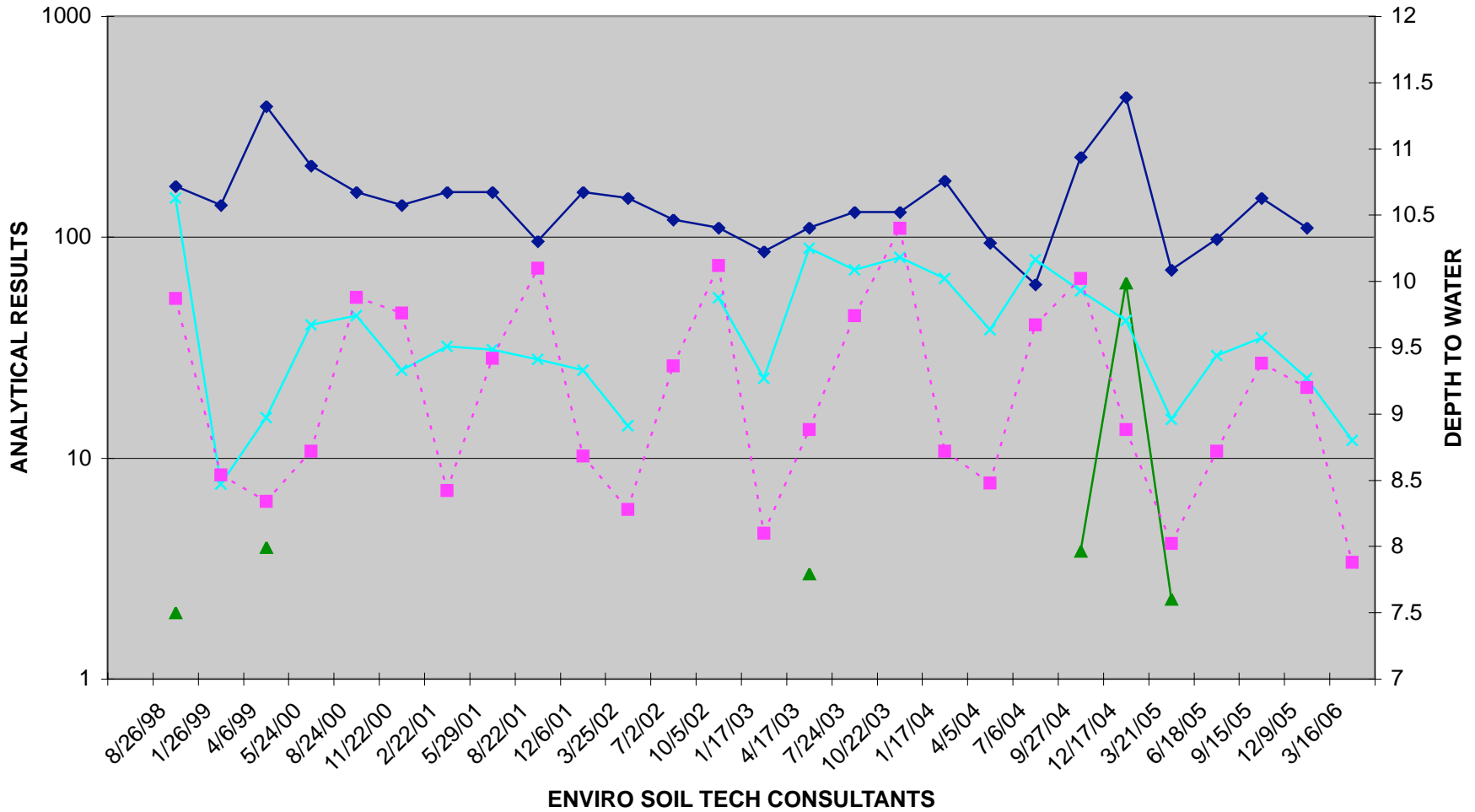
**File No.: 12-99-702-SI**  
**TPHg, BENZENE & MTBE RESULTS FOR MW-3 (µg/L)**  
**AND DEPTH TO WATER MEASUREMENT (Feet)**



◆ TPHg   
 ▲ BENZENE   
 × MTBE   
 ■ DEPTH TO WATER



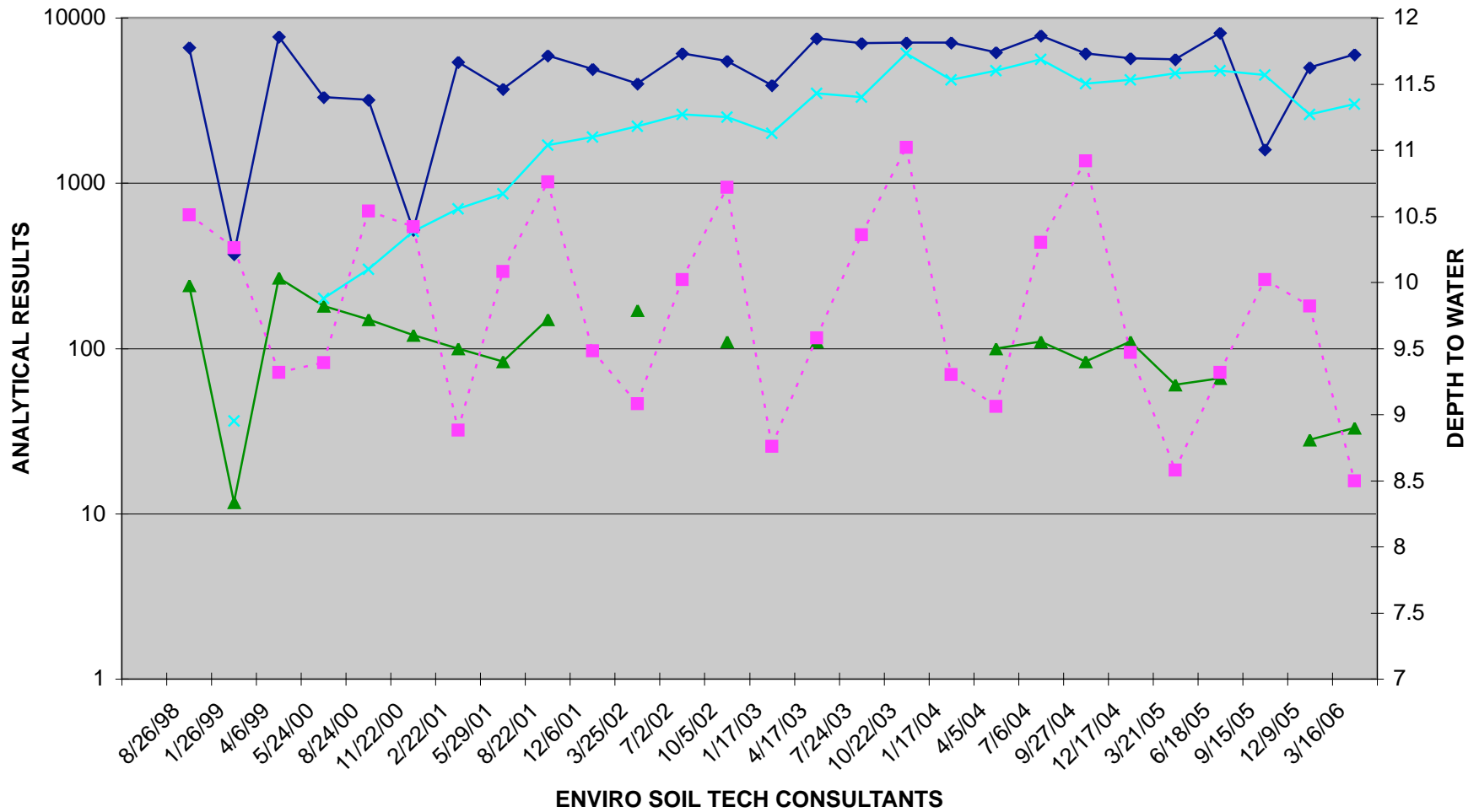
**File No.: 12-99-702-SI**  
**TPHg, BENZENE & MTBE RESULTS FOR MW-4 (µg/L)**  
**AND DEPTH TO WATER MEASUREMENT (Feet)**



ENVIRO SOIL TECH CONSULTANTS

TPHg  
 BENZENE  
 MTBE  
 DEPTH TO WATER

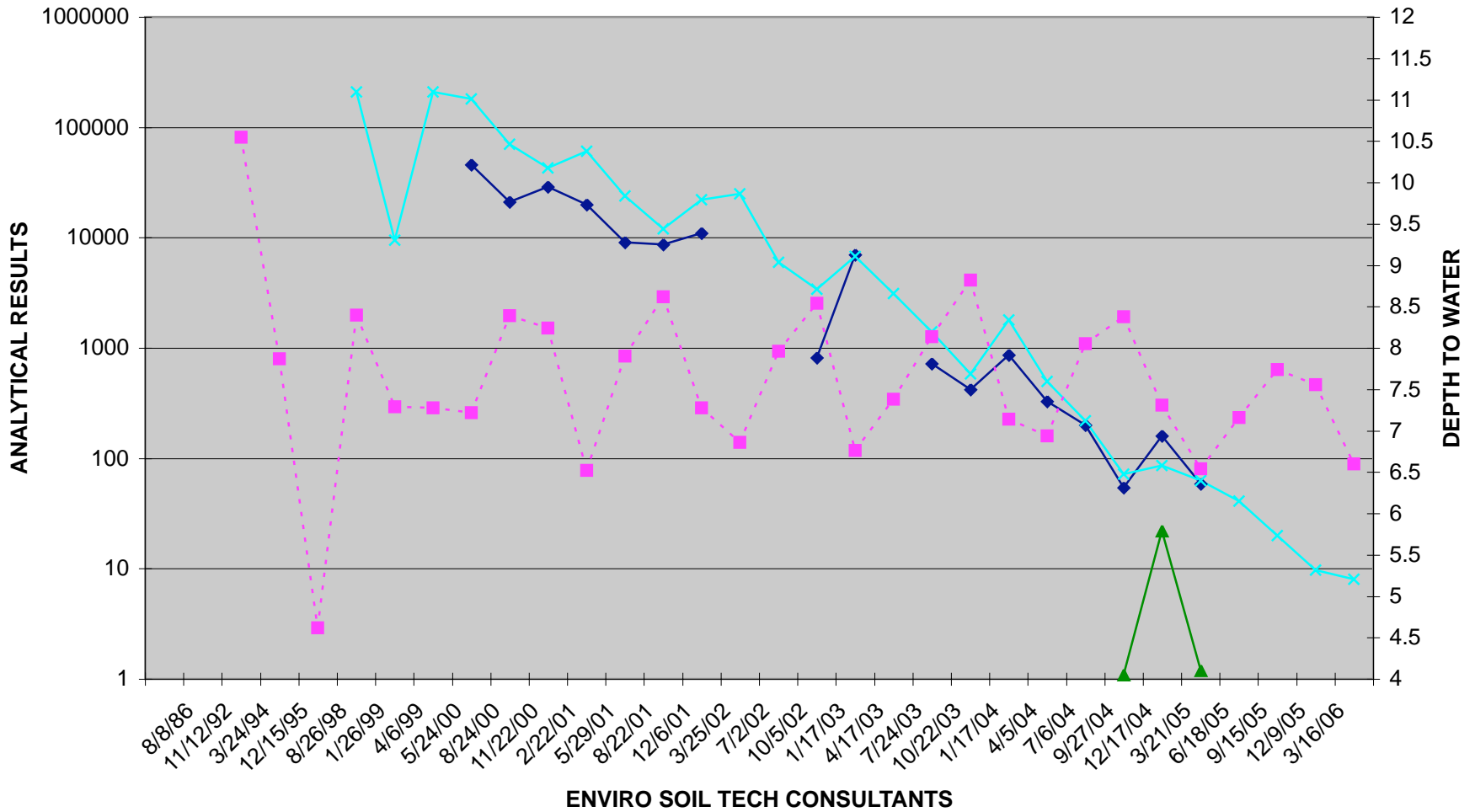
**File No.: 12-99-702-SI**  
**TPHg, BENZENE & MTBE RESULTS FOR MW-5 (µg/L)**  
**AND DEPTH TO WATER MEASUREMENT (Feet)**



◆ TPHg   
 ▲ BENZENE   
 × MTBE   
 ■ DEPTH TO WATER

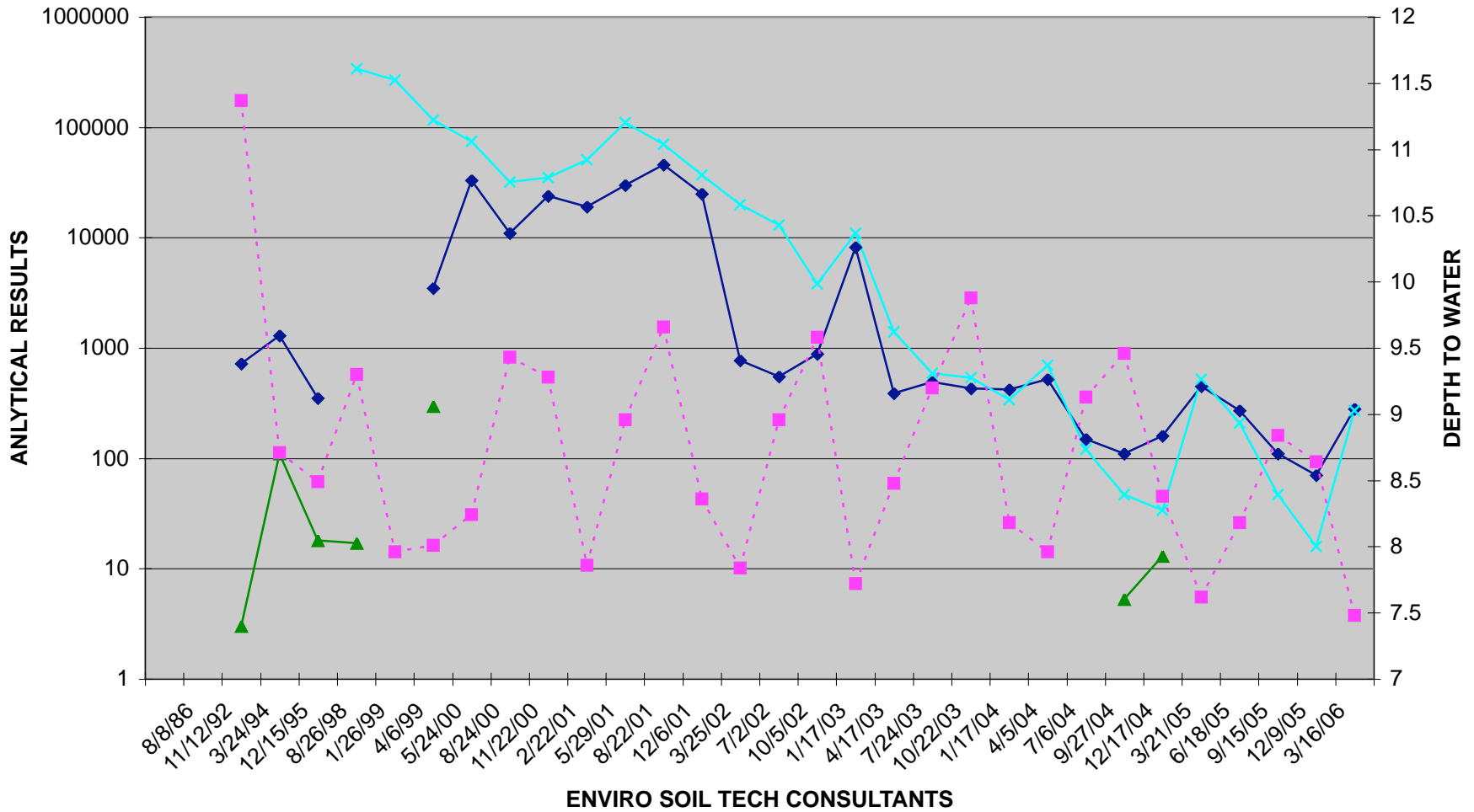
ENVIRO SOIL TECH CONSULTANTS

**File No.: 12-99-702-SI**  
**TPHg, BENZENE & MTBE RESULTS FOR MW-2 (µg/L)**  
**AND DEPTH TO WATER MEASUREMENT (Feet)**



◆ TPHg   
 ▲ BENZENE   
 × MTBE   
 ■ DEPTH TO WATER

**File No.: 12-99-702-SI**  
**TPHg, BENZENE & MTBE FOR MW-1 (µg/L)**  
**AND DEPTH TO WATER MEASUREMENT (Feet)**



—◆— TPHg   
 —▲— BENZENE   
 —×— MTBE   
 - - -■- - - DEPTH TO WATER

**A P P E N D I X "D"**

**STANDARD OPERATION PROCEDURE**

**ENVIRO SOIL TECH CONSULTANTS**

## **GROUNDWATER SAMPLING**

Prior to collection of groundwater samples, all of the sampling equipment (i.e. bailer, cables, bladder pump, discharge lines and etc.) was cleaned by pumping TSP water solution followed by distilled water.

Prior to purging, the well "Water Sampling Field Survey Forms" were filled out (depth to water and total depth of water column were measured and recorded). The well was then bailed or pumped to remove four to ten well volumes or until the discharged water temperature, conductivity and pH stabilized. "Stabilized" is defined as three consecutive readings within 15% of one another.

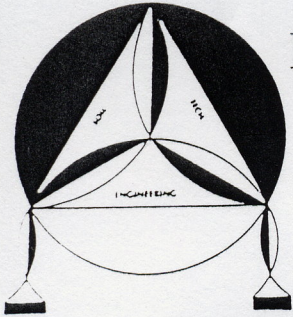
The groundwater sample was collected when the water level in the well recovered to 80% of its static level.

Forty milliliter (ml.), glass volatile organic analysis (VOA) vials with Teflon septa were used as sample containers. The groundwater sample was decanted into each VOA vial in such a manner that there was a meniscus at the top. The cap was quickly placed over the top of the vial and securely tightened. The VOA vial was then inverted and tapped to see if air bubbles were present. If none were present, the sample was labeled and refrigerated for delivery under chain-of-custody to the laboratory. The label information would include a sample identification number, job identification number, date, time, type of analysis requested, and the sampler's name.

**A P P E N D I X "F"**

**FIELD NOTES**





# ENVIRO SOIL TECH CONSULTANTS

Environmental & Geotechnical Consultants  
131 TULLY ROAD, SAN JOSE, CALIFORNIA 95111  
Tel: (408) 297-1500 Fax: (408) 292-2116

FILE NO.: 12-99-702-57

DATE: 3-16-06

DEPTH TO WELL: \_\_\_\_\_

DEPTH TO WATER: 7 FT .48

HEIGHT OF WATER COLUMN: \_\_\_\_\_

WELL NO.: mw-1

SAMPLER: Perched manually

1 WELL VOLUME: 1, 2

5 WELL VOLUME: 6

ACTUAL PURGED VOLUME: 9

CASING DIAMETER: ✓ 2" \_\_\_\_\_ 4"

### CALCULATIONS:

2" x 0.1632 7.52

4" x 0.653 \_\_\_\_\_

PURGE METHOD: \_\_\_\_\_ BAILER ✓ DISPLACEMENT PUMP \_\_\_\_\_ OTHER

SAMPLE METHOD: ✓ BAILER \_\_\_\_\_ OTHER

SHEEN: ✓ NO \_\_\_\_\_ YES, DESCRIBE: \_\_\_\_\_

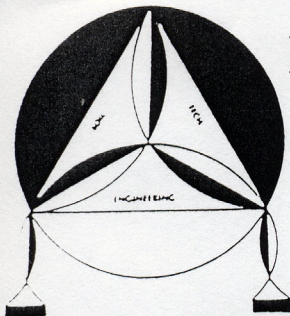
ODOR: ✓ NO \_\_\_\_\_ YES, DESCRIBE: \_\_\_\_\_

### FIELD MEASUREMENTS

<u>TIME</u>	<u>VOLUME</u>	<u>Ph</u>	<u>TEMP.</u>	<u>E.C.</u>
_____	<u>3 GAC</u>	<u>8.03</u>	<u>18.1</u>	<u>828</u>
_____	<u>6 GAC</u>	<u>7.78</u>	<u>18.4</u>	<u>815</u>
_____	<u>9 GAC</u>	<u>7.70</u>	<u>18.7</u>	<u>818</u>
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____

8 FT .15





# ENVIRO SOIL TECH CONSULTANTS

Environmental & Geotechnical Consultants  
131 TULLY ROAD, SAN JOSE, CALIFORNIA 95111  
Tel: (408) 297-1500 Fax: (408) 292-2116

FILE NO.: 12-99-702-ST  
DATE: 3-16-06  
DEPTH TO WELL: \_\_\_\_\_  
DEPTH TO WATER: 8<sup>FT</sup>.50  
HEIGHT OF WATER COLUMN: \_\_\_\_\_

WELL NO.: MW-5  
SAMPLER: Richel mundy  
1 WELL VOLUME: 1.7  
5 WELL VOLUME: 8.5  
ACTUAL PURGED VOLUME: 9

CASING DIAMETER:  2"  4"

## CALCULATIONS:

2" x 0.1632 10.5  
4" x 0.653 \_\_\_\_\_

PURGE METHOD:  BAILER  DISPLACEMENT PUMP  OTHER  
SAMPLE METHOD:  BAILER  OTHER

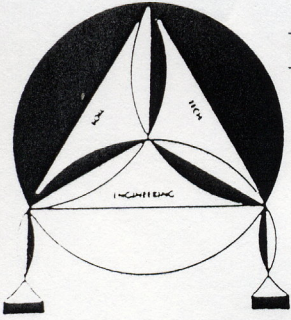
SHEEN:  NO  YES, DESCRIBE: Rain Bow  
ODOR:  NO  YES, DESCRIBE: \_\_\_\_\_

## FIELD MEASUREMENTS

TIME	VOLUME	Ph	TEMP.	E.C.
_____	<u>3 g AC</u>	<u>7.66</u>	<u>17.9</u>	<u>1040</u>
_____	<u>6 g AC</u>	<u>7.52</u>	<u>18.0</u>	<u>1043</u>
_____	<u>9 g AC</u>	<u>7.48</u>	<u>18.1</u>	<u>1041</u>
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____

9<sup>FT</sup>.35





# ENVIRO SOIL TECH CONSULTANTS

Environmental & Geotechnical Consultants  
131 TULLY ROAD, SAN JOSE, CALIFORNIA 95111  
Tel: (408) 297-1500 Fax: (408) 292-2116

FILE NO.: 12-99-702-9I  
DATE: 3-16-06  
DEPTH TO WELL: \_\_\_\_\_  
DEPTH TO WATER: 6<sup>ft</sup> .60  
HEIGHT OF WATER COLUMN: \_\_\_\_\_

WELL NO.: MW-2  
SAMPLER: Quikil maul  
1 WELL VOLUME: 1.4  
5 WELL VOLUME: 7  
ACTUAL PURGED VOLUME: 9

CASING DIAMETER: \_\_\_\_\_  2" \_\_\_\_\_  4"

## CALCULATIONS:

2" x 0.1632 8.4  
4" x 0.653 \_\_\_\_\_

PURGE METHOD: \_\_\_\_\_ BAILER  DISPLACEMENT PUMP \_\_\_\_\_ OTHER  
SAMPLE METHOD:  BAILER \_\_\_\_\_ OTHER

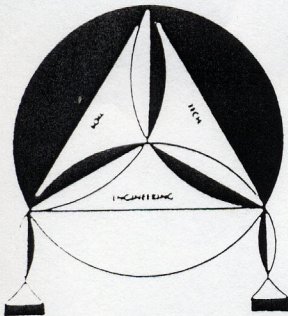
SHEEN:  NO \_\_\_\_\_ YES, DESCRIBE: \_\_\_\_\_  
ODOR:  NO \_\_\_\_\_ YES, DESCRIBE: \_\_\_\_\_

## FIELD MEASUREMENTS

TIME	VOLUME	Ph	TEMP.	E.C.
_____	<u>3 gpc</u>	<u>7.96</u>	<u>18.9</u>	<u>725</u>
_____	<u>6 gpc</u>	<u>7.83</u>	<u>19.3</u>	<u>742</u>
_____	<u>9 gpc</u>	<u>7.80</u>	<u>19.5</u>	<u>733</u>
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____

7<sup>ft</sup> .34





# ENVIRO SOIL TECH CONSULTANTS

Environmental & Geotechnical Consultants

131 TULLY ROAD, SAN JOSE, CALIFORNIA 95111

Tel: (408) 297-1500

Fax: (408) 292-2116

FILE NO.: 12-99-702-5I

DATE: 3-16-06

DEPTH TO WELL: \_\_\_\_\_

DEPTH TO WATER: 7' .24

HEIGHT OF WATER COLUMN: \_\_\_\_\_

WELL NO.: nw-3

SAMPLER: Peristaltic pump

1 WELL VOLUME: 1.4

5 WELL VOLUME: 7

ACTUAL PURGED VOLUME: 9

CASING DIAMETER: ✓ 2" \_\_\_\_\_ 4"

### CALCULATIONS:

2" x 0.1632 8.76

4" x 0.653 \_\_\_\_\_

PURGE METHOD: \_\_\_\_\_ BAILER ✓ DISPLACEMENT PUMP \_\_\_\_\_ OTHER

SAMPLE METHOD: ✓ BAILER \_\_\_\_\_ OTHER

SHEEN: ✓ NO \_\_\_\_\_ YES, DESCRIBE: \_\_\_\_\_

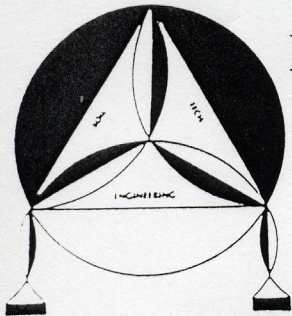
ODOR: ✓ NO \_\_\_\_\_ YES, DESCRIBE: \_\_\_\_\_

### FIELD MEASUREMENTS

TIME	VOLUME	Ph	TEMP.	E.C.
	3 GAL	7.98	18.6	722
	6 GAL	7.80	18.7	789
	9 GAL	7.72	18.9	845

8' .18





# ENVIRO SOIL TECH CONSULTANTS

Environmental & Geotechnical Consultants

131 TULLY ROAD, SAN JOSE, CALIFORNIA 95111

Tel: (408) 297-1500

Fax: (408) 292-2116

FILE NO.: 12-99-702-ST

DATE: 3-16-06

DEPTH TO WELL: \_\_\_\_\_

DEPTH TO WATER: 7<sup>ft</sup> .88

HEIGHT OF WATER COLUMN: \_\_\_\_\_

WELL NO.: MW-4

SAMPLER: Perched sample

1 WELL VOLUME: 1.8

5 WELL VOLUME: 9

ACTUAL PURGED VOLUME: 9

CASING DIAMETER:  2"

4"

## CALCULATIONS:

2" x 0.1632 11.12

4" x 0.653 \_\_\_\_\_

PURGE METHOD:  BAILER  DISPLACEMENT PUMP  OTHER

SAMPLE METHOD:  BAILER  OTHER

SHEEN:  NO  YES, DESCRIBE: \_\_\_\_\_

ODOR:  NO  YES, DESCRIBE: \_\_\_\_\_

## FIELD MEASUREMENTS

<u>TIME</u>	<u>VOLUME</u>	<u>Ph</u>	<u>TEMP.</u>	<u>E.C.</u>
_____	<u>3 gpc</u>	<u>8.04</u>	<u>18.6</u>	<u>872</u>
_____	<u>6 gpc</u>	<u>7.84</u>	<u>18.4</u>	<u>888</u>
_____	<u>9 gpc</u>	<u>7.74</u>	<u>18.7</u>	<u>889</u>
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____

8<sup>ft</sup> .18