CAL GAS
15595 WASHINGTON AVENUE
SAN LORENZO, CA 94580

August 21, 2007

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

SUBJECT: SITE CONCEPTUAL MODEL AND CORRECTIVE ACTION PLAN FOR THE PROPERTY
15595 Washington Avenue, San Lorenzo, CA

Dear Mr. Chan:

Enclosed, please find a copy of the August 20, 2007 subject Site Conceptual Model and Corrective Action Plan 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,

M. Mohammadian

MEHDI MOHAMMADIAN

File No. 12-99-702-SI

SITE CONCEPTUAL MODEL AND CORRECTIVE ACTION PLAN FOR THE PROPERTY LOCATED AT 15595 WASHINGTON AVENUE SAN LORENZO, CALIFORNIA AUGUST 20, 2007

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

BY:
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ENVIRO SOIL TECH CONSULTANTS

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ENVIRO SOIL TECH CONSULTANTS

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131 TULLY ROAD, SAN JOSE, CALIFORNIA 95111

Tel: (408) 297-1500 Fax: (408) 292-2116

August 20, 2007

File No. 12-99-702-SI

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

SUBJECT: SITE CONCEPTUAL MODEL AND CORRECTIVE ACTION PLAN FOR THE PROPERTY
Located at 15595 Washington Avenue, in
San Lorenzo, California

Dear Mr. Mohammadian:

Per the directive of Alameda County Health Care Services Agency-Environmental Health Department (ACHCSA-EHD), attached is the site conceptual model and corrective action plan for the subject property located at 15595 Washington Avenue, in San Lorenzo, California.

File No. 12-99-702-SI

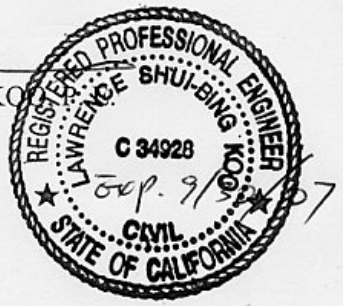
If you have any questions or require additional information, please feel free to contact our office at (408) 297-1500 or via email at info@envirosoiltech.com.

Sincerely,

ENVIRO SOIL TECH CONSULTANTS

FRANK HAMEDI-FARD
GENERAL MANAGER

LAWRENCE KO[illegible]
C. E. #34928



VICTOR B. CHEVERN, PH.D.
P. G. #3475

1.0 INTRODUCTION

1.1 SITE LOCATION AND OWNERSHIP

The property is located at 15595 Washington Avenue in San Lorenzo, California and is an operating gasoline service station. Figure 1 shows the location of the site, and Figure 2 is a generalized map of the site and surrounding area.

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 did not operate the station during that time. Texaco removed the underground fuel storage tanks (UST's) in 1986, and subsurface contamination was detected in the 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.

1.2 INVESTIGATION HISTORY

Groundwater Technology conducted a soil and groundwater investigation on behalf of Texaco in 1986. Three monitoring wells (MW-1 to MW-3) were installed and three additional borings were drilled (SB-1 to SB-3) (Figure 2). All six borings were terminated at a depth of 15 feet, groundwater was encountered at 11 feet, and the monitoring wells were screened from 15 to 5 feet. Hydrocarbon odors were observed in shallow soil between 7 and 12 feet, but no hydrocarbons were detected during laboratory analysis of samples of this soil. However, groundwater samples from the two borings near the pump island (SB-1 and MW-1 in Figure 3)

were impacted by volatile aromatic hydrocarbons, including benzene, which was detected at a concentration of 220 micrograms per liter (µg/L). The laboratory results of GTI's soil samples are in Table 1, and their groundwater results are in Table 2. Texaco suspended the investigation at that time and sold the property to Mr. Kubo. No additional investigation was done during his period of ownership (1987-1990).

After purchasing the site in 1990, Mr. Mohammadian sampled the three monitoring wells in 1992. The results are in Table 3. No hydrocarbons had reached MW-2, but the laboratory detected all of the volatile aromatic hydrocarbons (BTEX) at low concentrations in MW-1 and reported a Total Petroleum Hydrocarbon as gasoline (TPHg) concentration of 720 µg/L in MW-1 and 69 µg/L in MW-3. Mr. Mohammadian sampled the wells again in 1994 and 1995, finding that hydrocarbon concentrations remained below the detection limits in MW-2 and MW-3 but were slightly higher in MW-1.

No further work was performed until 1998, when Mr. Mohammadian retained Toxichem Management Systems, Inc. to drill additional borings and wells. Five new borings (SB-A through SB-E) and two wells (MW-4 and MW-5) were installed and sampled (Figure 2). BTEX concentrations exceeded the detection limits in soil samples from the two borings between the dispenser island and the building (SB-D and SB-E), and the gasoline oxygenate Methyl Tertiary Butyl Ether (MTBE) was detected in both borings and also in SB-B and SB-C. None of these compounds were detected in soil samples from the two new monitoring wells (Table 4). Although there appeared to be limited hydrocarbon impact to soil, the impact to groundwater was greater and most of these compounds were detected in water samples from both the borings and wells, at concentrations that were considerably higher than those detected during the 1986 GTI investigation (Table 5). The MTBE concentration was reported to be particularly high in

the older monitoring wells, ranging from 99,000 µg/L in MW-3 to 340,000 ppb in MW-1, which did not agree well with the total hydrocarbon (TPHg) concentration of less than 500 µg/L in these same samples. In contrast, the MTBE concentrations in the two new monitoring wells were 150 and less than 250 µg/L, similar to or lower than the TPHg concentrations in these wells (170 µg/L and 6,600 µg/L). Toxichem sampled the wells twice in 1999. Table 5 suggests that concentrations in MW-1 decreased between August 1998 and April 1999 and increased in MW-3, but no clear trend is apparent in the data from the other three wells.

Mr. Mohammadian retained Enviro Soil Tech Consultants (ESTC) in 2000 to drill 15 new borings west and southwest of the site. Soil and groundwater samples were collected from all borings, and no off-site impact was detected (Tables 6 and 7). However, the laboratory data were discarded by ACHCSA-EHS when it was learned that the analytical laboratory had been de-certified by the State of California.

ESTC began a quarterly groundwater monitoring program in 2000, and since then has collected twenty–seven (27) rounds of samples (Table 8). The results of this work prompted ACHCSA-EHS to request further drilling, and ESTC drilled eleven additional borings, including three cone penetrometer test (CPT) borings, in October and November 2006 (Figure 2). Total Petroleum Hydrocarbons, mainly MTBE and tert-Butanol (TBA), were detected in soil samples from six of the eight borings, and high TPHg concentrations were detected for the first time in one boring (GP-4) near the pre-1986 UST's (Table 9). Groundwater samples from that boring and most of those that are located north of these tanks also detected MTBE and TBA, while those from boring CPT-2 (located a few tens of feet south of the tanks) had a maximum MTBE concentration of 3.5 µg/L and the samples from CPT-3 were free of these hydrocarbons (Figure 2; Tables 10 and 11). From this, ESTC concluded that the contaminant plume does not extend off site to the south but trends to the north-northwest through the center of the site and crosses

the western boundary of the site in the vicinity of MW-5. The high concentrations that were detected in boring GP-4 identified the location of a residual soil hotspot that is continuing to release MTBE to the groundwater. Based on this conclusion, ESTC recommended proceeding to corrective action, and ACHCSA-EHS concurred with this recommendation.

2.0 CONTAMINANTS OF CONCERN

Comparison of the TPHg and MTBE concentrations in numerous water samples has consistently indicated that the MTBE concentration is nearly as high, and sometimes higher, than the TPHg concentration. Other gasoline hydrocarbons, such as Benzene and Toluene, are present at such low concentrations that they are almost always masked by MTBE and TBA, and it is only where the oxygenate concentrations are lower, such as in the northern wells (MW-4 and MW-5), that these compounds have been detected. In late 2004 and early 2005, the MTBE concentration in MW-4 ranged from 15 to 57 µg/L, while the total BTEX concentration ranged from 8.2 to 196 µg/L. Since then, most BTEX compounds have been below the standard detection limit. The same is true of most of the other wells, although the MTBE concentration in MW-3 has masked the BTEX components until recently, and it is only since the beginning of 2006 that the laboratory has been able to confirm that the BTEX compounds in that well are below the standard detection limit (Table 8). Thus, although we recognize that the laboratory consistently reports TPHg in most samples, we emphasize that the TPHg consists almost entirely of MTBE and TBA.

3.0 CONTAMINANT SOURCE

Groundwater Technology reported that petroleum contamination was detected in the UST excavation when the tanks were removed in 1986, leaving no doubt that these tanks were the source of the contamination. This discovery is what led to the investigation that has taken place

in the succeeding 20 years. Three monitoring wells were installed at that time, but contamination was detected only in MW-1, which was the farthest well from the UST excavation. Coincidentally, this well is located near the UST's that were installed in 1990 (Figure 2), but these UST's did not exist in 1986 and could not have been the source of the strong odors (Appendix "B") and Total Xylenes (Table 8) that were detected in MW-1 in 1986.

The source of the contamination became controversial in 1998 when Toxichem Management Systems started their investigation and began analyzing samples for gasoline oxygenates. Prior to that, samples had been analyzed only for TPHg and BTEX, and most samples were below the detection limit except in MW-1. When Toxichem detected MTBE in newly installed borings and very high concentrations of MTBE in the older monitoring wells, it was evident that a significant release had occurred. Concentrations were higher at MW-1 than at MW-3, leading some to infer that the release occurred after 1990 from the new tanks near MW-1 rather than the older tanks near MW-3. Further, it was known that MTBE was not in widespread use prior to the 1980's. However, it was not clear why the TPHg concentration, which should approximate the sum of all detected petroleum-range hydrocarbons, was much lower than the MTBE concentration in all wells at that time. This anomaly leads to the implication that if the MTBE concentration could be much higher than the TPHg concentration in 1998, the same may have been true in 1986, 1992, 1994, and 1995, when water samples were analyzed for TPHg but not for MTBE. Hence, it is possible that high MTBE concentrations were already present before the new UST's were installed in 1990.

After 1998, both TPHg and MTBE went through cycles of rising and falling concentrations, but not in tandem. In MW-3, MTBE reached peaks of 200,000 µg/L in May of 2000 and 380,000 µg/L in April 2003, whereas TPHg peaked at 690,000 µg/L in November 2000, 370,000 µg/L in August 2001, and 320,000 µg/L in January 2003. In MW-1, MTBE peaks

occurred in August 1998 (340,000 µg/L) and December 2001 (370,000 µg/L), but TPHg peaked in May 2000 (330,000 µg/L) and August 2001 (460,000 µg/L). These off-kilter cycles are difficult to interpret, and it does not appear that changes in the depth to groundwater can explain them (Table 8).

What is clear, however, is that concentrations in MW-1 have declined since the end of 2001, while concentrations in MW-3 remained high until at least the middle of 2004. This, along with the fact that in 1986, stronger hydrocarbon odors were noted in soil samples from MW-3 than from MW-1 (see Appendix "A"), favors the interpretation that the hydrocarbon source was located closer to MW-3 than to MW-1. This interpretation is bolstered by the 2006 discovery in GP-4 of TPHg concentrations of 200 and 1,100 milligrams per kilogram (mg/Kg) in soil samples collected in the depth range of 19-24 feet. None of the other 20 borings that have been drilled on the site have detected soil concentrations approaching such high values, and few, if any, soil samples were collected below 15 feet in any of those earlier borings. MTBE concentrations were also elevated in this boring (0.18 mg/Kg at a depth of 13 feet, possibly reaching as high as 1.2 mg/Kg between 19 and 24 feet; Table 9).

If the fuel release occurred prior to 1986 and the very strong hydrocarbon odors and high TPHg concentrations in GP-4 and MW-3 indicate that these borings are located close to the source of the release, then it is necessary to explain why hydrocarbon concentrations were usually below the detection limits in MW-3 prior to 1998. The answer to this question appears to be that monitoring wells MW-1, -2, and -3 were too shallow to detect the contamination in the late 1980’s and early 1990’s. The high concentrations that were detected in GP-4 in 2006 were found between 19 and 24 feet below surface grade, in a sand bed that was not reached by the earlier monitoring wells (see discussion below and Appendix "A"). These wells are screened from 5 to 15 feet (Table 8), in clay and silt beds that overlie the sand bed. The logs of those wells indicate that the soil was damp to moist when they were drilled, but do not indicate that the

soil was saturated, which probably implies that the water table was in the impacted sand bed, below the well screens, and that the water samples that were collected were from a perched water table in the overlying clay. Hence, these samples would not be indicative of hydrocarbon concentrations in the impacted sandy zone between 18 and 25 feet. If the water table subsequently rose above 15 feet during the 1987-1998 period when few water samples were collected, contaminated groundwater would have entered these wells and been detected when Toxichem Management sampled the wells in August 1998. At that time, groundwater was encountered as deep as 16.5 feet in one boring, but rose to about 10 feet in the new monitoring wells after they were screened (Table 5), implying that the stiff, plastic clay that was encountered at 8 or 9 feet below surface grade acted as a confining layer for groundwater that was present in the impacted sand bed that lies below 19 feet. This confining layer would have inhibited contaminated groundwater from entering MW-1, -2, or -3 when the depth to groundwater was greater than 15 feet.

Thus, although the data do not conclusively rule out the 1990 UST's as a source of contamination, we believe that the bulk of the evidence favors the pre-1986 UST's as the principal source. Data and maps presented in the following sections support this interpretation.

3.1 CONCENTRATION TRENDS IN INDIVIDUAL WELLS

Appendix "D" contains water elevation and water quality data as well as graphs of the data for each monitoring well. In the following section, these graphs are discussed and trends are reported.

3.1.1 MW-1

This well was monitored for water levels from August 8, 1986 to June 14, 2007. Water quality data were collected over the entire period.

- TPHg: The TPHg concentration ranged from non-detectable to a maximum of 46,000 µg/L, but has not exceeded 1,000 µg/L since the first quarter of 2003.

- Benzene: Benzene has been below the detection limit except for November 1992, March 1994, December 1995, August 1998, September and December 2004.

- MTBE: This compound reached its highest concentration in 1998 and has been steadily declining since then. It has not exceeded 1,000 µg/L since the second quarter of 2003.

Groundwater elevations: Groundwater elevations fluctuated significantly, with a general downward trend.

3.1.2 MW-2

This well was monitored for water levels from August 8, 1986 to June 14, 2007. Water quality data were collected over the entire period.

- TPHg: The TPHg concentration was below the detection limit from 1986 through the first quarter of 1998, but then rose rapidly to a peak of 46,000 µg/L in early 2000. Soon thereafter the concentration began to decline, and has been below the detection limit since the middle of 2005.

- Benzene: Benzene has been below the detection limit except for September 2004, December 2004 and March 2005.

- MTBE: The MTBE concentration was not measured prior to 1998. In February of that year, it reached its peak concentration of 210,000 µg/L. The concentration remained very high for about three quarters, and then began to decline. It has not exceeded 500 µg/L since the first quarter of 2004.

Groundwater elevations: Groundwater elevations fluctuated significantly, with a general downward trend.

3.1.3 MW-3

This well was monitored for water levels from August 8, 1986 to June 14, 2007. Water quality data were collected over the entire period.

- TPHg: The TPHg concentration was low or below the detection limit prior to 2000, but then jumped to about 50,000 µg/L. It fluctuated between about 30,000 and 40,000 until early 2003, and then began to fall below 20,000 µg/L. It fell below 1,000 µg/L in the first quarter of 2005, and has mostly been below the detection limit since the end of that year.

- Benzene: Benzene has always been below laboratory detection limits, except for August 1998, when it was 36 µg/L.

- MTBE: The MTBE concentration has been on a very steady downward trend since May of 2000, and has been below 100 µg/L since late 2005.

Groundwater elevations: Groundwater elevations fluctuated significantly, with a slight downward trend.

3.1.4 MW-4

This well was monitored for water levels from August 26, 1986 to June 14, 2007. Water quality data were collected over most of the monitoring period.

- TPHg: This well has always had the lowest and least variable TPHg concentration. The maximum of 430 µg/L occurred in December 2004. There has been a slight downward trend in recent years.

- Benzene: Benzene has been below 5 µg/L in all but one quarter (December 2004, when the laboratory reported 62 µg/L).

- MTBE: The maximum MTBE concentration of approximately 150 µg/L was reached in 1998 and 1999. It dropped below 50 µg/L in early 2000 and remained at that level until early 2003. It ranged between 65 and 90 µg/L in that year, but then began a downward trend that has continued up to the present.

Groundwater elevations: Groundwater elevations fluctuated significantly, but with a general downward trend.

3.1.5 MW-5

This well was monitored for water elevations from August 26, 1986 to June 14, 2007. Water quality data were collected over the entire period.

- TPHg: Concentrations in this well have fluctuated more than in the other wells, and this is the only well that has shown a trend of increasing concentrations in recent years. The TPHg concentration has peaked numerous times, and the peaks do not correlate with calendar quarters or with groundwater elevations. The TPHg concentration has not been below 1,000 µg/L since the fourth quarter of 2000.

- Benzene: This well has consistently had the highest Benzene concentration. Between 1998 and the end of 2004, the concentration was mostly above 100 µg/L, but since then it has declined to less than 25 µg/L.

- MTBE: Between 1998 and the end of 2000, the MTBE concentration was below 500 µg/L. It began to rise in 2001, exceeding 2,500 µg/L by the middle of 2002 and 5,000 µg/L by the third quarter of 2003. It fell below 5,000 µg/L in the third quarter of 2004 and dropped below 2,500 µg/L by the middle of 2006.

Groundwater elevations: Groundwater elevations fluctuated significantly, with a slight downward trend.

No discussion of the results for monitoring wells STMW-6 through STMW-10 is included, because these wells have only been sampled once.

4.0 EXTENT OF CONTAMINATION

4.1 CONTAMINATED SOIL

To date, no maps depicting hydrocarbon concentrations in the soil have been included in any reports. Thus, the extent of soil contamination has not been examined.

Contamination has been detected in soil samples ranging from 5 to 24 feet below surface grade, but attempts to construct isoconcentration maps for soil samples at a specific depth have not been successful because of insufficient vertical sampling profiles in most borings. Instead, Figure 3 contours the highest detected MTBE concentration from each boring, regardless of depth, and this map is used as a proxy to delineate the lateral extent of soil contamination. The sample values cover a long time span as well (1998-2006), and do not account for any concentration changes that may have occurred during this period. Because of these complications, as well as the differences in sampling techniques between investigators and analytical laboratories, the map may contain inaccuracies and is an approximation at best. It implies that the contaminant plume is probably elongated in a north-south direction, and the axis

of highest concentrations trends from the pre-1986 UST's toward the service station building before curving eastward toward the post-1990 UST's. Hence, it could be interpreted to indicate that gasoline leaked from the newer tanks and then migrated westward and southward toward the older tanks, or that it leaked from the older tanks and migrated northward and eastward toward the newer tanks. This question is addressed in sections 4.2 and 5.0.

4.2 CONTAMINATED GROUNDWATER

The extent of groundwater contamination has been mapped for many quarters and is much better known than the extent of soil contamination. Initially, when only three wells were present, groundwater was impacted only in the vicinity of MW-1. The situation has changed over the years, and the area of main impact shifted first to MW-3 and later to MW-5. Data from the fourth quarter of 2006 demonstrate the current situation (Figure 4). The plume is elongate in a south-to-north direction, with an apex between GP-3 and MW-2 and south of GP-4. It trends northward beneath the station building to GP-7, but then turns sharply westward, flares out, and crosses the western site boundary near MW-5, south of the intersection with the northern site boundary. It extends beyond GP-8, and drilling that was conducted in April 2007 demonstrated that it extends at least to the east side of Lorenzo Avenue (see the report titled *OFF-SITE DRILLING AND SECOND QUARTER OF 2007 GROUNDWATER MONITORING AND SAMPLING).* The fact that it widens northward is an obvious indication that the plume has spread laterally from its source in the southern portion of the site as it migrated northward.

5.0 CONTAMINANT MIGRATION PATHWAYS

5.1 HYDROGEOLOGIC UNITS

All of the borings that have been drilled encountered multiple, relatively thin sediment layers of various lithologies, and it is clear that on a detailed scale there are numerous hydrogeologic units underlying the site. Appendix "C" contains boring logs from all of the borings that have been drilled, including the monitoring wells and CPT borings.

The layers tend toward the finer grain sizes (clay, silt, and fine sand), but coarser-grained sand beds become increasingly common downward. Beds are mostly 2 to 5 feet thick, but contacts are generally gradational and not distinct. Correlation of these beds between borings is tentative because of differences in color, grain size, and bed thickness. This is illustrated in Figure 5, which is a site map on which generalized boring logs are shown for all of the on-site borings. In some borings, fine-grained sediment is present near the surface and coarser sediment is present below 10 feet, whereas in others the opposite is true.

A few of the layers are fairly distinctive, especially on the CPT boring logs, and can be traced through the auger and Geoprobe borings to create a reasonable cross section of the site (Figure 6). Beneath the site, there are two relatively “clean” sand bodies between the surface and 60 feet. These beds have large CPT responses, implying coarse grain size and minimal fine-grained matrix, and are relatively likely to transmit groundwater. The lower bed is present from about 50 to 55 feet, but it is known only from CPT logs because no lithologic samples have been collected. The upper bed is discussed in more detail in the next paragraph. Both beds are encased in intervals of clay, clayey sand, sandy silt, and silty clay, which must certainly act to retard groundwater flow in comparison to the two sand beds. South of the site, in CPT-3, there are two other coarse-grained sand beds that are either not present or were not reached in the on-site borings, so these sand beds probably do not greatly influence groundwater flow beneath the site.

The sand bed from 18 to 25 feet in GP-4 is the bed of principal concern for contaminant migration at the site and is informally termed “sand bed A” in this report. The presence of gasoline odors in several borings through this bed confirm that gasoline has indeed migrated within it, and the odor helps to correlate it across the site and demonstrate that it has relatively good lateral continuity. It is the bed from which the soil samples with the highest TPHg and MTBE concentrations were collected, and it is the first permeable sand bed that lies below the water table and has been within the saturated zone since at least 1986. Nonetheless, it does vary in thickness and grain size across the site. It is 8.5 feet thick in GP-4 and consists of downward-coarsening gray sand. It also consists of several feet of fine-to-medium grained sand in GP-3, but it grades eastward to clayey very-fine-grained sand in GP-5 and thins to about 5 feet. It thins further to about 3.5 feet in CPT-1, and consists mostly of silt or sandy silt in GP-6. It also thins and fines to the southwest, where it has a reduced (silty) log signature in CPT-3, as shown in Figure 6. In map view, it has a curvilinear shape and apparently trends northward through the site as far as boring GP-7, but it was not recognized by Toxichem Management in MW-4, so we infer that it veers to the west, where it is approximately 5 feet thick in GP-8 (Figure 7). It is unclear whether this bed extends beyond GP-8, because it was not recognized in any of the five new wells that were drilled in April (see Appendix "C").

The similarity in the map pattern of sand bed “A” and the soil and groundwater plume maps (Figures 3 and 4) is striking. The patterns are consistent with the interpretation presented in section 2.0 that the source of the plume is the pre-1986 UST’s and that the hydrocarbons have spread northward over time within sand bed “A”. As shown below, this is also consistent with the historical record of groundwater flow.

5.2 GROUNDWATER FLOW DIRECTION AND RATE

The direction of groundwater flow can be examined at two scales of observation: regionally, and locally. Information about the regional groundwater flow direction can be gleaned from generalized publications such as Izbicki and others (2003) and Figuers (1998). According to these authors, regional contour maps of water table elevations in the shallow aquifer system of the East Bay Plain indicate that the overall groundwater flow direction is westward toward San Francisco Bay.

Water-table elevation data from the on-site monitoring wells provide the most reliable information about the local groundwater flow direction at the site. The historical record of elevation data dates back to 1993 (Tables 3, 5, and 7), and numerous groundwater elevation maps have been generated from the data. Figure 8 is an example of the most frequently observed situation, where elevation contours trend nearly north-south and indicate decreasing elevation westward. This westward-sloping water table implies groundwater flow toward the west, consistent with the regional pattern referred to above.

Figure 9 illustrates a slightly more complex situation, where a higher-than-normal water table in MW-3 causes the contours to bow westward. The principal flow direction is still westward, but the bowing of the contours suggests local variations where the water table slopes to the south near MW-2, southwest near MW-3, and northwest near MW-5.

The rate of groundwater flow is dependent on the hydraulic gradient and the transmissivity, or hydraulic conductivity, of the aquifer. The hydraulic gradient, as determined from the spacing of groundwater elevation contours, has been in the range of 0.004-0.006 ft/ft for the past several years. This is a typical gradient for flat-lying alluvial sediment in the region.

At this time there is no information about the transmissivity of the aquifer. No samples have been tested to determine hydraulic conductivity, and no aquifer tests have been conducted. This represents a gap in the database for generating the Site Conceptual Model.

5.3 MAN-MADE RECEPTOR FLOW PATHS

No data are available at this time.

5.4 POTENTIAL RECEPTORS

Table 12 lists 22 known wells within a ½-mile radius of the site. Most of these are, or were, used for irrigation. Ten of them are located south, east, or north of the site (Figure 10), and are therefore not at risk of being impacted by westward flow of contaminated groundwater from the site. This includes the nearest well (number 4 in Table 12), which is the out-of-use irrigation well southwest of the site on Lorenzo Avenue. ACHCSA-EHS has already concluded that this well is not a potential receptor.

The remaining 12 wells (#8 to #18 in Figure 10) are located downgradient of the site and could potentially affect or be affected by groundwater flow at the site. The three closest wells (#8, #9, and #10) are all screened from 15 to 30 feet and are used for irrigation. All three are located more than ¼-mile from the site. As discussed in section 4.2, it is now known that groundwater is impacted to the west at least as far as Lorenzo Avenue.

6.0 SUMMARY

Field and laboratory data collected at 15595 Washington Avenue over the past 20 years indicate that an unauthorized release of gasoline has impacted the soil and groundwater beneath the site and that subsequent diffusion of the groundwater plume has caused it to expand to the northwest

beneath residential properties located immediately west of the site. Underground gasoline storage tanks were removed from the site in 1986, impacted soil was observed at that time, and subsequent drilling has revealed that the soil is impacted to a depth of approximately 25 feet in that vicinity. The principal contaminant of concern is methyl tertiary butyl ether, which has been detected by EPA method 8260, as well as by EPA method 8015 as Total Petroleum Hydrocarbons in the gasoline range. A companion compound, Tertiary Butanol, is also present at elevated concentrations, but other gasoline components such as Ethylene Dibromide, Benzene, and Toluene are either absent or present only at very low concentrations and are of relatively minor importance. Maps showing the extent of soil and groundwater contamination and the aquifer bed that is the most probable transport path for impacted groundwater comprise an internally consistent model that favors a pre-1986 release of gasoline from these tanks, followed by northward to northwestward diffusion in groundwater within the aquifer bed at a depth of approximately 20 feet below surface grade.

A second set of underground storage tanks was installed in 1990. These tanks are located northeast of the earlier tanks, and have been investigated to determine if they could be the source of the contamination. Recent drilling shows that soil in the vicinity of these tanks is not impacted, and concentrations in the groundwater are also lower than in samples nearer the older tanks. These relationships argue against the newer tanks as being the source of the release.

Migration of the hydrocarbons to the northwest appears to be controlled by the orientation of the impacted aquifer, which is a fine-to-medium-grained sand bed that is less than 10 feet thick in all borings drilled to date. This sand bed apparently curves to the west in the northern part of the site, allowing MTBE to migrate beneath residential property west of the site. Over time, the groundwater plume has expanded to encompass an elliptical area measuring approximately 220 feet in the east-west direction. Beneath the site, it measures 100 feet in the north-south direction, but west of the site it flares out to about 150 feet in the north-south direction.

7.0 CORRECTIVE ACTION PLAN

The purpose of a Remedial or Corrective Action plan is to develop the procedures that will be utilized to restore the site environmental conditions to a degree no longer of concern to the public's health, regulatory agencies, the property owner, and potentially affected surrounding areas. It also includes a discussion of the cleanup goals that the plan proposes to reach.

This section begins with a discussion of cleanup goals, and then proceeds to the proposed remedial actions for soil and groundwater. Following that is a brief discussion of other remedial methods that were considered but are not recommended for this site.

7.1 REMEDIATION TARGET LEVELS/OBJECTIVES

Remediation Target Levels or Objectives for this type of site are typically based on contaminant concentration limits necessary to protect human health and groundwater quality (e.g., Maximum Concentration Level or MCL). The following concentration target or objectives have been taken from the Underground Storage Tank Cleanup Fund Pay for Performance Condition of Payment, dated March 2002.

The site cleanup objectives for the vadose zone include the following:

1. The remaining vadose zone BTEX/TPHg concentrations no longer cause concentrations in the leachate discharging to groundwater to exceed groundwater cleanup levels, based on interpretation of soil data using an appropriate vadose zone model; and

2. BTEX and TPHg have been removed to the extent technically and economically feasible.

The Remediation Target Levels for the groundwater are the concentrations to be achieved for specified chemicals ("Chemicals of Concern," or "COCs"). These COCs and their respective concentrations are listed in the following table. The chemical concentrations shown are identified as "Preliminary Active Remediation Goals" ("PARGs").

Chemicals of Concern ("COCs")	Preliminary Active Remediation Goals ("PARGs")
TPHg	1,000 ppb
Benzene	100 ppb
Toluene	200 ppb
Ethylbenzene	500 ppb
Xylenes	300 ppb
MTBE	200 ppb

The Preliminary Active Remediation Goals for the BTEX compounds have already been met in all of the ten monitoring wells at the site. The goals for MTBE have been met in all wells except STMW-5 and perhaps MW-1, and the goals for TPHg have been met in all wells except STMW-5.

7.2 SOIL REMEDIATION PLAN

As discussed in the Site Conceptual Model and illustrated in Tables 1, 4, 6, and 9, soil above 5 feet is not impacted by gasoline, and the most highly impacted soil lies below 15 feet. As shown in Table 8, the potentiometric surface normally lies at 8-10 feet below ground level, meaning that nearly all of the contaminated soil lies within the saturated zone. This has significant implications for the feasibility of active soil remediation.

We recommend soil excavation as the most feasible method of reducing hydrocarbon concentrations in the impacted soil. This method has the advantage of being the most rapid way to lower the residual adsorbed concentrations and thereby shorten the time and expense needed to reduce groundwater concentrations. Because the area of highly impacted soil is relatively small and has been identified and because there is relatively limited overburden ('non-impacted soil") to be removed, the total volume of soil to be excavated is not excessive and the work could be completed relatively quickly, thereby minimizing the impact on site operations. Further, exposing the soil opens up additional possibilities for groundwater remediation that would not otherwise be available.

Based on the data in Table 9 and the maps in Figures 3 and 7, we propose to excavate an area measuring 20 x 20 x 25 feet around GP-4 (Figure 11). This would remove the most impacted portion of "sand bed A", and the bottom of the excavation would be within the underlying clay bed that was not impacted in GP-4. Approximately the top 5-7 feet of soil is not impacted in this area and could be used to partially backfill the excavation. The remaining 275 cubic yards of soil would be trucked to an approved landfill for disposal, unless field screening during excavation indicates that only part of this soil is contaminated. During excavation, a field geologist or engineer will direct the excavator and screen the soil with a portable photo-ionization detector (PID) to detect organic vapors and segregate impacted soil from non-impacted soil.

Because excavation will take place within the saturated zone, it will be necessary to install sheet-pile shoring to stabilize the excavation walls and minimize groundwater intrusion. This will limit the opportunity to collect confirmation soil samples from the walls, but it will be possible to sample the floor of the excavation. Prior to disposal, the stockpiled soil will be sampled in accordance with landfill requirements to determine contaminant concentrations.

The excavation will be backfilled with crushed rock and sand to increase the permeability of the backfill and thereby induce groundwater flow toward the excavation. This will improve the success of subsequent efforts to mitigate the impact to groundwater. When the excavation is backfilled, additional operations will be performed to enable testing of groundwater remedial methods, as discussed below.

7.3 GROUNDWATER REMEDIATION PLAN

Several groundwater remediation methods are potentially applicable to this site, but none have been tested for feasibility or cost effectiveness. We propose to test the feasibility of at least one of these methods prior to selecting one and preparing a Final Remedial Plan, and we propose to install the necessary equipment while the excavation is still partially open.

7.3.1 PILOT TEST OF AIR SPARGING AND HORIZONTAL VAPOR EXTRACTION

Air sparging in combination with soil vapor extraction (AS/SVE) is a proven technique for groundwater remediation that is both effective and relatively inexpensive. However, conventional AS/SVE is applicable only at sites that meet certain conditions. Vapor extraction wells need to be screened over 10 or more vertical feet in order to capture a sufficient air/vapor mix from subsurface soil. At sites where the water table is high, such as at this site, the unsaturated zone is limited to only a few feet, which limits the screened interval and makes vapor extraction from vertical wells difficult or impossible. However, horizontal wells or pipes can be screened over long distances across the contaminated zone, making them very effective at withdrawing any vapors that are liberated from groundwater through air sparging.

7.3.1.1 TEST THEORY

The pilot test that we propose will test the theory that contaminated groundwater surrounding the excavation will preferentially flow into the backfill material because of its greater porosity and permeability relative to the native soil. Air injected into an air sparging test well will create bubbles that will rise upward into the backfill material and liberate liquid hydrocarbons dissolved in groundwater and convert them to vapor phase. The vapors will then be withdrawn by a vacuum blower connected to the horizontal well. This process is illustrated in Figure 12.

7.3.1.2 EQUIPMENT CONFIGURATION

We propose to backfill the soil excavation to a depth of 5 feet and then lay screened 4-inch diameter PVC pipe across the floor of the excavation, creating a horizontal vapor extraction "well" that is approximately 20 feet in length. The well will be connected by a vertical riser to just below the ground surface, and then via buried PVC pipe to a vapor destruction unit. The excavation will then be backfilled with sand to the surface and covered with asphalt.

A drilling rig will be used to drill a 2-inch diameter air sparging well through the backfilled excavation. In order to insure that it will be possible to inject air, this well will be constructed with 2 feet of screened casing from 23 to 25 feet or 2 feet above the base of the excavation, whichever is deeper (Figure 12). The construction details of this well are illustrated in Figure 13. The sparging well will be connected by subsurface piping to a blower unit that will inject air into the sparging well.

7.3.1.3 TEST PROCEDURES

After the equipment has been installed and a permit to conduct the sparging test has been obtained from the Bay Area Air Quality Management District, equipment capable of injecting air at a pressure higher than the hydrostatic head will be temporarily connected to the air sparging well. A regenerative vacuum blower will simultaneously be connected to the piping coming from the horizontal vapor well. The vacuum blower will be vented to a vapor-phase granulated carbon canister for hydrocarbon capture.

Air will be injected into the sparging well for a period of 8 hours. A hand-held photo-ionization detector will be used to measure hydrocarbon concentrations in the withdrawn vapor stream at the inlet to the carbon canister at periodic intervals of 30 to 60 minutes, and vapor samples will be collected in tedlar bags at the mid-point and end of the test period to compare with PID readings. Air flow rates will be recorded periodically and used in conjunction with vapor readings to estimate the rate of hydrocarbon removal.

7.3.1.4 DATA ANALYSIS

At the conclusion of the test, ESTC will analyze the field and laboratory data to assess the effectiveness of combined air sparging and horizontal vapor extraction and determine whether this method would be applicable on a larger scale at this site. ESTC will examine air flow rates, vapor concentrations, and any other pertinent data and use this information in preparing a Final Remedial Plan

7.4 ASSESSMENT OF OTHER SOIL REMEDIATION METHODS

Other alternative remedial actions were considered for both soil and groundwater. The following methods for soil remediation were examined:

- In-situ bioremediation
- Ex-situ bioremediation (on-site or off-site)
- Steam injection
- Radio wave heating
- Installation of a Vapor Extraction System (VES) (i.e., extraction of volatile organic compounds (VOCs)
- Thermal desorption (on-site or off-site)

The applicability of each process depends on many factors including:

- Type and concentrations of chemical constituents
- Soil composition and the vertical and lateral extent of chemical constituent dispersion
- Location of the site (i.e., rural, residential, commercial)
- Site accessibility and the potential for disruption to daily activities in the surrounding area
- Health and safety of all personnel potentially impacted by work activities
- Future liability
- Time constraints of design and implementation
- Cost
- The probability of attaining required clean-up levels
- Regulatory requirements.

In determining the most suitable remedial action alternative for the subject site, the following were considered:

1. “Bioremediation”: This method requires the introduction into the soil matrix via excavation (ex-situ) or well screen (in-situ) of particular bacteria especially formulated to degrade specific chemical constituents. Ex-situ bioremediation is easier to perform and monitor than in-situ bioremediation, but is not practical at this site because there is insufficient room to stockpile the excavated soil and construct a treatment cell. In-situ bioremediation is not fully proven successful, and requires a long period of feasibility testing to determine whether it is practical at field-scale. It is also difficult to prove that changes in hydrocarbon concentration are due to biological activity and not other processes, and necessitates additional soil sampling to evaluate restoration progress. Bacteria require oxygen for respiration, and most of the contaminated soil lies below the water table, where oxygen is insufficient. Therefore, it would also be necessary to add supplementary oxygen through other methods. This process will occur anyway using the preferred method of air sparging/horizontal soil vapor extraction, so it may not be necessary to inject additional hydrocarbon-degrading bacteria in order to achieve some degree of in-situ bioremediation.

2. “Vapor Extraction System“: As explained in section 8.1.1, soil vapor extraction is an effective and relatively inexpensive method of soil remediation. However, conventional SVE using vertical wells is not practical at this site because of the limited unsaturated zone available for vapor extraction. Further, most of the contamination is not within the unsaturated zone, and is therefore not within reach of vapor extraction wells. Hence, this method is not applicable at this site.

3. Radio Wave Heating: Metal rods through which radio waves are transmitted are emplaced into the contaminated zone, heating the soil to high temperatures. The resulting high temperatures decompose the petroleum compounds. This is an “emerging technology” currently undergoing development, and is not currently available for practical use.

4. Thermal Desorption: This is typically an ex-situ method, requiring the excavation of the contaminated soil mass, after which the excavated materials are processed through a portable desorption unit. This method cannot be used because it would require stockpiling the excavated soil, which would preclude the business use of the site during the treatment period. After treatment, the soil would either have to be hauled to a landfill or extensively sampled to demonstrate that the hydrocarbons had been destroyed before the soil could be emplaced back into the excavation.

5. Steam Injection: This method involves the injection of steam into the soil plume to break down the contaminant compounds. The high temperatures also tend to volatilize and mobilize contaminants, requiring the simultaneous use of a vapor extraction system to capture these volatilized compounds. A significant drawback is that steam will condense into water near the periphery of the treatment zone and migrate downward into the water table—this condensate can carry contaminants into the groundwater. Therefore, this method would suffer from most of the disadvantages of a typical vapor extraction system.

7.5 ASSESSMENT OF OTHER GROUNDWATER REMEDIATION METHODS

Other methods of groundwater remediation are available and have been used successfully at some sites. Several of these were considered and are discussed below.

1. Groundwater withdrawal (pumping) with on-site carbon adsorption.
2. In-situ or ex-situ bioremediation.
3. Funnel and gate.
4. Slurry/cut-off walls.
5. Ultraviolet Oxidation

The applicability of each process depends on many factors, including:

1) Type and concentrations of chemical constituents
2) Groundwater use and the vertical and lateral extent of chemical constituent dispersion
3) Location of the site (i.e., rural, residential)
4) Site accessibility and potential for disruption to daily activities in the surrounding area
5) Health and safety of all personnel potentially impacted by work activities
6) Future liability
7) Time constraints of design and implementation
8) Cost
9) The probability of attaining required clean-up levels
10) Regulatory requirements.

In determining the most suitable remedial action alternative for the subject site, the following were considered:

1. "Pump and Treat": Groundwater extraction with on-site treatment is a proven method that has been used at many sites. Its advantages are ease of set-up, operation, and monitoring and limited impact to other site operations. The main disadvantage is disposal cost of the treated water, and the permit process can also be difficult. Water treatment is usually done by filtering the extracted water through carbon or with air stripping towers, which adds to the maintenance and disposal costs. The effectiveness of the method depends partly on the sustainable pumping rate of extraction wells. In high-permeability strata, large volumes of groundwater can be quickly extracted from relatively few wells, but hydrocarbon concentrations are usually relatively low due to rapid contaminant diffusion in the high-permeability sediment. In lower permeability situations, extraction is a slow and lengthy process that can require many wells and years of operation and monitoring to achieve desired cleanup levels. Disposal costs may be lower but operation and monitoring costs are higher. However, it is probably the most viable method for groundwater remediation at this site if combined air sparging/horizontal vapor extraction is not successful.

2. Bioremediation: This method requires the introduction into the groundwater via an injection well particular bacteria especially formulated to degrade specific chemical constituents. The method suffers from the same problems that plague in-situ soil remediation, and requires an even more robust monitoring program. The drawback to this method is that biodegradation of hydrocarbons occurs at a very slow rate, and then only under aerobic conditions.

3. Slurry/Cut-off Walls: This method involves the excavation of a trench along and or completely around the periphery of the contaminated soil plume, simultaneously replacing the excavated soil with bentonite slurry. The trench is footed in an impermeable stratum beneath the aquifer. The bentonite slurry, after setting-up, forms a very low permeability barrier to groundwater migration. Construction of such a barrier is limited by the required depth and efficiency of containment depends upon quality of construction. Construction costs are high for this method. Once the contaminated groundwater is contained, a remedial method still has to be determined.

4. Funnel and Gate: This system involves the installation if a slurry wall (the “funnel” structure) downstream of the plume, with construction of “gates” through which the contaminated groundwater is allowed to pass. The gates typically are permeable structures with a reactant material imbedded that effects remediation.

5. Ultraviolet Oxidation: In this method, contaminated groundwater is pumped from the well into the treatment unit. Within the treatment unit, the water is pumped through clear glass tubes in the presence of an ultraviolet light source. Some procedures involve the addition of hydrogen peroxide to the water prior to treatment. These measures are very expensive and may be difficult to permit.

A P P E N D I X "A"

TABLES

TABLE 1
SUMMARY OF SOIL SAMPLES ANALYTICAL RESULTS COLLECTED BY GROUNDWATER TECHNOLOGY, INC. IN MILLIGRAMS PER KILOGRAM (mg/Kg)

Date	Sample No.	TPH	B	T	X	Pb
8/08/06	MW-1	ND<10	ND<0.5	ND<0.5	ND<1	12
	MW-2	ND<10	ND<0.5	ND<0.5	ND<1	12
	MW-3	ND<10	ND<0.5	ND<0.5	ND<1	18
	SB-1	ND<10	ND<0.5	ND<0.5	ND<1	14
	SB-2	ND<10	ND<0.5	ND<0.5	ND<1	20
	SB-3	ND<10	ND<0.5	ND<0.5	ND<1	12

TPH – Total Petroleum Hydrocarbon
BTEX – Benzene, Toluene, Ethylbenzene, Total Xylenes
Pb – Lead
ND – Not Detected (below laboratory detection limit)

TABLE 2
SUMMARY OF WATER SAMPLES ANALYTICAL RESULTS COLLECTED BY GROUNDWATER TECHNOLOGY, INC. IN MILLIGRAMS PER LITER (mg/L)

Date	Sample No.	B	T	X
8/08/86	MW-1	ND<0.05	ND<0.05	0.082
	MW-2	ND<0.05	ND<0.05	ND<0.05
	MW-3	ND<0.05	ND<0.05	ND<0.05
	SB-1	0.22	0.39	0.68
	SB-2	ND<0.05	ND<0.05	ND<0.05
	SB-3	ND<0.05	ND<0.05	ND<0.05

BTX – Benzene, Toluene, Total Xylenes
ND – Not Detected (below laboratory detection limit)

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TABLE 3
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
11/12/92	MW-1 (NA)	15	5-15	11.37†	N/A	N/A	720	3	0.5	1	1
3/24/94	22.93 (feet MSL)			8.71*	14.22	Odor	1300	110	ND<0.5	19	ND<0.5
12/15/95				8.49*	14.44	No sheen Weak petroleum odor	350	18	2.9	3.5	2.8
11/12/92	MW-2 (N/A)	15	5-15	10.55†	N/A	N/A	ND<10	ND<0.3	ND<0.3	ND<0.3	ND<0.5
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
12/15/95				4.62*	17.47	No sheen or odor	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5
11/12/92	MW-3 (N/A)	16	6-16	11.32†	N/A	N/A	69	ND<0.3	ND<0.3	ND<0.3	ND<0.3
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
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

TPHg - Total Petroleum Hydrocarbons as gasoline
Perf. - Perforation
GW Elev. - Groundwater Elevation
ND - Not Detected (Below Laboratory Detection Limit)
***** Well screens are submerged

BTEX - Benzene, Toluene, Ethylbenzene, Total Xylenes
MSL - Mean Sea Level
N/A - Not Applicable
† Well screens are not submerged
Z - Sample exhibits unknown single peak or peaks

TABLE 4
SUMMARY OF SOIL SAMPLES ANALYTICAL RESULTS COLLECTED BY TOXICHEM IN MILLIGRAMS PER KILOGRAM (mg/Kg)

Date	Sample No.	Depth (feet)	TPHg	B	T	E	X	MTBE
7/30/98	SB-A-5'	5	ND<1	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.025
	SB-A-10'	10	ND<1	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.025
	SB-B-5'	5	ND<1	ND<0.005	ND<0.005	ND<0.005	ND<0.005	4.7
	SB-B-10'	10	ND<1	0.01	ND<0.005	ND<0.005	ND<0.005	0.44
	SB-B-15'	15	ND<1	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.025
	SB-C-5'	5	ND<1	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.025
	SB-C-10'	10	ND<1	ND<0.005	ND<0.005	ND<0.005	ND<0.005	4.7
	SB-D-5'	5	ND<1	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.025
	SB-D-10'	10	310**a**	1.1	ND<0.012	0.91	1.1	2.5
	SB-E-5'	5	1.6**a**	0.021	0.024	0.019	0.078	2.1
	SB-E-10'	10	2.5**a**	ND<0.012	ND<0.012	ND<0.012	ND<0.012	16
	MW-4-5'	5	ND<1	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.025
	MW-4-10'	10	ND<1	0.0069	ND<0.005	ND<0.005	ND<0.005	ND<0.025
	MW-4-20'	20	ND<1	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.025
	MW-5-5'	5	ND<1	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.025
	MW-5-10'	10	ND<1	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.025
	MW-5-20'	20	ND<1	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.025

TPHg – Total Petroleum Hydrocarbon as gasoline
BTEX – Benzene, Toluene, Ethylbenzene, Total Xylenes
MTBE – Methyl Tertiary Butyl Ether
ND – Not Detected (below laboratory detection limit)
a – Unidentified hydrocarbons C8-C12

TABLE 5
GROUNDWATER ELEVATION (feet) AND ANALYTICAL RESULTS IN SAMPLES COLLECTED BY TOXICHEM MANAGEMENT IN MICROGRAMS PER LITER (µg/L)

Date	Sample No.	Well Elev. MSL	Depth to Water	GW Elevation	TPHg	B	T	E	X	MTBE
7/30/98	SB-A	--	14.00	--	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	7.2
	SB-B	--	16.50	--	ND<50	0.77	0.51	ND<0.5	0.78	1,600
	SB-C	--	11.50	--	ND<50	20	ND<0.5	ND<0.5	ND<0.5	13,000
	SB-D	--	10.80	--	ND <50000	2,200	ND<500	3,300	9,500	140,000
	SB-E	--	11.80	--	750	74	4.4	6.5	12	15,000
8/26/98	MW-1	22.96	9.30	13.88	ND<500	17	ND<5	ND<5	ND<5	340,000
	MW-2	22.07	8.40	13.67	ND<500	ND<5	ND<5	ND<5	ND<5	210,000
	MW-3	22.74	9.29	13.45	ND<500	36	ND<5	ND<5	ND<5	99,000
	MW-4	23.51	9.87	13.64	170	2	0.74	1.3	1	150
	MW-5	23.85	10.51	13.34	6,600**a**	240	ND<50	380	84	ND<250
	EB	--	--	--	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<2.5

TPHg - Total Petroleum Hydrocarbons as gasoline
MTBE - Methyl Tertiary Butyl Ether
MSL - Mean Sea Level
ND - Not Detected (below laboratory detection limit)
BTEX - Benzene, Toluene, Ethylbenzene, Total Xylenes
Elev. - Elevation
GW - Groundwater
a - Unidentified hydrocarbons C6-C12

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TABLE 6
SUMMARY OF SOIL SAMPLES ANALYTICAL RESULTS COLLECTED BY ESTC FROM OFF-SITE BORINGS IN MILLIGRAMS PER KILOGRAM (mg/Kg)

Date	Sample No.	Depth (ft.)	TPHg	B	T	E	X	TBA	TAME	ETBE	8260B
4/18/00	B-1-8	8	ND<1	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.01	ND<0.01	ND<0.01	ND<0.01
	B-2-8	8	ND<1	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.01	ND<0.01	ND<0.01	ND<0.01
	B-3-8	8	ND<1	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.01	ND<0.01	ND<0.01	ND<0.01
	B-4-8	8	ND<1	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.01	ND<0.01	ND<0.01	ND<0.01
	B-5-8	8	ND<1	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.01	ND<0.01	ND<0.01	ND<0.01
	B-6-8½	8½	NA	NA	NA	NA	NA	NA	NA	NA	NA
	B-7-8½	8½	ND<1	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.01	ND<0.01	ND<0.01	ND<0.01
	B-8-8½	8½	ND<1	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.01	ND<0.01	ND<0.01	ND<0.01
	B-9-9	9	ND<1	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.01	ND<0.01	ND<0.01	ND<0.01
	B-10-9½	9½	ND<1	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.01	ND<0.01	ND<0.01	ND<0.01
	B-11-9½	9½	NA	NA	NA	NA	NA	NA	NA	NA	NA
	B-12-10	10	ND<1	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.01	ND<0.01	ND<0.01	ND<0.01
	B-13-11	11	ND<1	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.01	ND<0.01	ND<0.01	ND<0.01
	B-14-11	11	ND<1	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.01	ND<0.01	ND<0.01	ND<0.01
	B-15-11	11	ND<1	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.01	ND<0.01	ND<0.01	ND<0.01

TPHg - Total Petroleum Hydrocarbons as gasoline
TBA - Tertiary Butyl Alcohol
ETBE - Ethyl Tertiary Butyl Ether
ND - Not Detected (Below Laboratory Detection Limit)
BTEX - Benzene, Toluene, Ethylbenzene, Total Xylenes
TAME - Tertiary Amyl Methyl Ether
8260B - Volatile Organic Compounds
NA - Not Analyzed

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TABLE 7
SUMMARY OF GRAB GROUNDWATER SAMPLES
ANALYTICAL RESULTS COLLECTED BY ESTC
FROM OFF-SITE BORINGS
IN MILLIGRAMS PER LITER (mg/L)

Date	Sample No.	TPHg	B	T	E	X	TBA	TAME	ETBE	8260B
4/18/00	B-1-W	ND<0.05	ND<0.0005	ND<0.0005	ND<0.0005	ND<0.0005	ND<0.005	ND<0.005	ND<0.005	ND<0.005
	B-2-W	ND<0.05	ND<0.0005	ND<0.0005	ND<0.0005	ND<0.0005	ND<0.005	ND<0.005	ND<0.005	ND<0.005
	B-3-W	ND<0.05	ND<0.0005	ND<0.0005	ND<0.0005	ND<0.0005	ND<0.005	ND<0.005	ND<0.005	ND<0.005
	B-4-W	ND<0.05	ND<0.0005	ND<0.0005	ND<0.0005	ND<0.0005	ND<0.005	ND<0.005	ND<0.005	ND<0.005
	B-5-W	ND<0.05	ND<0.0005	ND<0.0005	ND<0.0005	ND<0.0005	ND<0.005	ND<0.005	ND<0.005	ND<0.005
	B-6-W	ND<0.05	ND<0.0005	ND<0.0005	ND<0.0005	ND<0.0005	ND<0.005	ND<0.005	ND<0.005	ND<0.005
	B-7-W	ND<0.05	ND<0.0005	ND<0.0005	ND<0.0005	ND<0.0005	ND<0.005	ND<0.005	ND<0.005	ND<0.005
	B-8-W	ND<0.05	ND<0.0005	ND<0.0005	ND<0.0005	ND<0.0005	ND<0.005	ND<0.005	ND<0.005	ND<0.005
	B-9-W	ND<0.05	ND<0.0005	ND<0.0005	ND<0.0005	ND<0.0005	ND<0.005	ND<0.005	ND<0.005	ND<0.005
	B-10-W	ND<0.05	ND<0.0005	ND<0.0005	ND<0.0005	ND<0.0005	ND<0.005	ND<0.005	ND<0.005	ND<0.005
	B-11-W	ND<0.05	ND<0.0005	ND<0.0005	ND<0.0005	ND<0.0005	ND<0.005	ND<0.005	ND<0.005	ND<0.005
	B-12-W	ND<0.05	ND<0.0005	ND<0.0005	ND<0.0005	ND<0.0005	ND<0.005	ND<0.005	ND<0.005	ND<0.005
	B-13-W	ND<0.05	ND<0.0005	ND<0.0005	ND<0.0005	ND<0.0005	ND<0.005	ND<0.005	ND<0.005	ND<0.005
	B-14-W	ND<0.05	ND<0.0005	ND<0.0005	ND<0.0005	ND<0.0005	ND<0.005	ND<0.005	ND<0.005	ND<0.005
	B-15-W*	ND<0.05	ND<0.0005	ND<0.0005	ND<0.0005	ND<0.0005	ND<0.005	ND<0.005	ND<0.005	ND<0.005

TPHg - Total Petroleum Hydrocarbons as gasoline
BTEX - Benzene, Toluene, Ethylbenzene, Total Xylenes
TBA - Tertiary Butyl Alcohol
TAME - Tertiary Amyl Methyl Ether
ETBE - Ethyl Tertiary Butyl Ether
8260B - Volatile Organic Compounds
ND - Not Detected (below laboratory detection limit)
***** Sample is contaminated with unknown compounds at 1.2 part per million (ppm)

File No. 12-99-702-SI

TABLE 8
QUARTERLY 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
5/24/00	MW-1 (23.05) MSL	15	5-15	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				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
1/17/03				7.72*	15.33	No sheen or odor	8200**a**	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	430**c**	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	420**d**	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	520**n**	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	150**c**	ND <0.5	ND <0.5	ND <0.5	ND<1	120	ND <0.5	ND <10	ND <0.5	None Detected<0.5

File No. 12-99-702-SI

TABLE 8 CONT'D
QUARTERLY 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
9/27/04	MW-1 (23.05) MSL	15	5-15	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
6/20/06				8.36*	14.69	No sheen or odor	220	ND <0.5	ND <0.5	ND <0.5	ND <0.5	58	ND <0.5	22	ND <0.5	None Detected<0.5
9/21/06				9.00*	14.05	No sheen Sewerage odor	120	ND <0.5	ND <0.5	ND <0.5	ND <0.5	17	ND <0.5	ND <10	ND <0.5	None Detected<0.5
12/14/06				8.18*	14.87	No sheen or odor	56	ND <0.5	ND <0.5	ND <0.5	ND\ <0.5	4.3	ND <0.5	ND <10	ND <0.5	None Detected<0.5
5/24/00	MW-2 (21.94) MSL	15	5-15	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

File No. 12-99-702-SI

TABLE 8 CONT'D
QUARTERLY 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
3/25/02	MW-2 (21.94) MSL	15	5-15	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	7000**a**	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	720**a**	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	420**c**	ND<50	ND <50	ND <50	ND<50	580	ND<50	ND <100	ND<50	None Detected<50
10/22/03				8.82*	13.12	No sheen or odor	420**c**	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	860**c**	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	330**n**	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	200**e**	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	54**e**	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

TABLE 8 CONT'D
QUARTERLY 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
6/20/06	MW-2 (21.94) MSL	15	5-15	7.30*	14.64	No sheen or odor	ND<50	ND <0.5	ND <0.5	ND <0.5	ND <0.5	6	ND <0.5	ND<10	ND <0.5	None Detected<0.5
9/21/06				7.94*	14.00	No sheen or odor	ND<50	ND <0.5	ND <0.5	ND <0.5	ND <0.5	2.4	ND <0.5	ND<10	ND <0.5	None Detected<0.5
12/14/06				7.10*	14.84	No sheen or odor	ND<50	ND <0.5	ND <0.5	ND <0.5	ND <0.5	1.4	ND <0.5	ND<10	ND <0.5	None Detected<0.5
5/24/00	MW-3 (22.56) MSL	16	6-16	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				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	73**Z**	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[a]	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[a]	ND <2500	ND <2500	ND <2500	ND <2500	31000	ND <2500	ND <5000	ND <2500	None Detected<2500

TABLE 8 CONT'D
QUARTERLY 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
10/22/03	MW-3 (22.56) MSL	16	6-16	9.66*	12.90	No sheen or odor	17000**c**	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**d**	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**n**	ND <200	ND <200	ND <200	ND <400	22000	ND <200	ND <4000	ND <200	None Detected<200
7/06/04				8.92*	13.64	No sheen or odor	13000**e**	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	4200**e**	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	4000**c**	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	3500**c**	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
6/20/06				8.18*	14.38	No sheen or odor	ND<50	ND <0.5	ND <0.5	ND <0.5	ND <0.5	8.6	ND <0.5	12	ND <0.5	None Detected<0.5
9/21/06				8.82*	13.74	No sheen or odor	ND<50	ND <0.5	ND <0.5	ND <0.5	ND <0.5	8.6	ND <0.5	39	ND <0.5	None Detected<0.5
12/14/06				7.88*	14.68	No sheen or odor	81	ND <0.5	ND <0.5	ND <0.5	ND <0.5	6.1	ND <0.5	14	ND <0.5	None Detected<0.5
5/24/00	MW-4 (23.40) MSL	20	10-20	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

TABLE 8 CONT'D
QUARTERLY 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
3/25/02	MW-4 (23.40) MSL	20	10-20	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	86**c**	ND<5	ND<5	ND<5	ND<5	23	ND <05	NA	ND <0.5	Naphthalene 0.81
4/17/03				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	130**b**	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	180**d**	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	61**e**	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
6/20/06				8.86*	14.54	No sheen or odor	ND<50	ND <0.5	ND <0.5	ND <0.5	ND <0.5	9.8	ND <0.5	ND<10	ND <0.5	None Detected<0.5
9/21/06				9.54*	13.86	No sheen or odor	65	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

File No. 12-99-702-SI

TABLE 8 CONT'D
QUARTERLYGROUNDWATER 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
12/14/06	MW-4 (23.40) MSL	20	10-20	8.76*	14.64	No sheen or odor	75	ND <0.5	ND <0.5	ND <0.5	ND <0.5	7	ND <0.5	ND<10	ND <0.5	None Detected<0.5
5/24/00	MW-5 (23.86) MSL	20	10-20	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
8/24/00				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-Trimetthylbenzene 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				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[n]	ND <100	ND <100	ND <100	ND <100	2000	ND <100	310	ND <100	n-Propylbenzene 140

File No. 12-99-702-SI

TABLE 8 CONT'D
QUARTERLY 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-5 (23.86) MSL	20	10-20	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[n]	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
1/17/04				9.30*	14.56	No sheen Sewerage odor	7100**n**	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	6200**n**	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	6100**e**	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
6/20/06				9.50*	14.36	Rainbow sheen Petroleum odor	7100	21	ND <10	16	ND <10	1200	ND <10	900	ND <10	n-Propylbenzene 260 Naphthalene 200
9/21/06				10.20†	13.66	Rainbow sheen Petroleum odor	3100	20	ND <10	14	ND <10	1000	ND <10	1400	ND <10	n-Propylbenzene 240 Naphthalene 120
12/14/06				9.26*	14.60	Rainbow sheen No odor	4800	11	ND<5	12	ND<5	440	ND<5	740	ND<5	n-Propylbenzene 190 Naphthalene 84

TABLE 8 CONT'D
QUARTERLY GROUNDWATER MONITORING DATA (feet)
AND ANALYTICAL RESULTS (μg/L)

TPHg - Total Petroleum Hydrocarbons as gasoline
MTBE - Methyl Tertiary Butyl Ether
TBA - tert-Butanol
VOCs - Volatile Organic Compounds
MSL - Mean Sea Level
N/A - Not Applicable
ND - Not Detected (Below Laboratory Detection Limit)
† Well screens are not submerged
Z - Sample exhibits unknown single peak or peaks

BTEX - Benzene, Toluene, Ethylbenzene, Total Xylenes
PCE - Tetrachloroethene
TCE - Trichloroethene
Perf. - Perforation
GW Elev. - Groundwater Elevation
NA - Not Analyzed

***** Well screens are submerged

• 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.

TABLE 9
SUMMARY OF SOIL SAMPLES FROM GEOPROBE
ANALYTICAL RESULTS
IN MICROGRAMS PER KILOGRAM (µg/Kg)

Date	Sample No.	Depth feet	TPHg	B	T	E	X	MTBE	PCE	TBA	TCE	VOCs (EPA 8260B)
10/24/06	702-GP-1-9	9	ND <100	ND<5	ND<5	ND<5	ND<10	ND<5	ND<5	ND<40	ND<5	n-Propylbenzene 5.5
	702-GP-1-17	17	ND <100	ND<5	ND<5	ND<5	ND<10	ND<5	ND<5	ND<40	ND<5	n-Propylbenzene 5.5
	702-GP-1-21	21	ND <100	ND<5	ND<5	ND<5	ND<10	6.1	ND<5	ND<40	ND<5	n-Propylbenzene 5.4
10/24/06	702-GP-2-13	13	53000	ND<250	ND<250	ND<250	ND<500	ND<250	ND<250	ND<2000	ND<250	n-Propylbenzene 320
	702-GP-2-17	17	250	ND<5	ND<5	ND<5	ND<10	72	ND<5	940	ND<5	n-Propylbenzene 5.5
	702-GP-2-19.5	19.5	ND <100	ND<5	ND<5	ND<5	ND<10	ND<5	ND<5	ND<40	ND<5	n-Propylbenzene 5.5
	702-GP-2-24.5	24.5	57000	ND<250	ND<250	ND<250	ND<500	ND<250	ND<250	ND<2000	ND<250	n-Propylbenzene 340
10/24/06	702-GP-3-7	7	ND <100	ND<5	ND<5	ND<5	ND<10	ND<5	ND<5	ND<40	ND<5	n-Propylbenzene 5.4
	702-GP-3-14	14	ND <100	ND<5	ND<5	ND<5	ND<10	9.3	ND<5	ND<40	ND<5	n-Propylbenzene 5.4
	702-GP-3-23	23	ND <100	ND<5	ND<5	ND<5	ND<10	7.7	ND<5	ND<40	ND<5	n-Propylbenzene 5.4
10/24/06	702-GP-4-7	7	660	ND<5	ND<5	ND<5	ND<10	54	ND<5	94	ND<5	None Detected<5
	702-GP-4-8	8	1300	ND<5	ND<5	ND<5	ND<10	46	ND<5	40	ND<5	n-Butylbenzene 9 sec-Butylbenzene 10
	702-GP-4-14	14	230	ND<10	ND<10	ND<10	ND<20	180	ND<10	250	ND<10	n-Propylbenzene 11
	702-GP-4-19	19	200000	ND<1200	ND<1200	ND<1200	ND<2500	ND<1200	ND<1200	ND<10000	ND<1200	n-Butylbenzene 1900 n-Propylbenzene 2300
	702-GP-4-23.5	23.5	1100000	ND<1200	ND<1200	ND<1200	ND<2500	ND<1200	ND<1200	ND<10000	ND<1200	n-Propylbenzene 18000
	702-GP-4-27	27	ND <100	ND<5	ND<5	ND<5	ND<10	ND<5	ND<5	ND<40	ND<5	n-Propylbenzene 5.4
	702-GP-4-31	31	ND <100	ND<5	ND<5	ND<5	ND<10	ND<5	ND<5	ND<40	ND<5	n-Propylbenzene 5.6

TABLE 9 CONT'D
SUMMARY OF SOIL SAMPLES FROM GEOPROBE
ANALYTICAL RESULTS
IN MICROGRAMS PER KILOGRAM (µg/Kg)

Date	Sample No.	Depth feet	TPHg	B	T	E	X	MTBE	PCE	TBA	TCE	VOCs (EPA 8260B)
10/24/06	702-GP-5-9	9	ND <100	ND<5	ND<5	ND<5	ND<10	ND<5	ND<5	ND<40	ND<5	None Detected<5
	702-GP-5-14	14	ND <100	ND<5	ND<5	ND<5	ND<10	ND<5	ND<5	ND<40	ND<5	None Detected<5
	702-GP-5-24	24	ND <100	ND<5	ND<5	ND<5	ND<10	ND<5	ND<5	ND<40	ND<5	None Detected<5
10/24/06	702-GP-6-6	6	ND <100	ND<5	ND<5	ND<5	ND<10	ND<5	ND<5	ND<40	ND<5	None Detected<5
	702-GP-6-11.5	11.5	ND <100	ND<5	ND<5	ND<5	ND<10	ND<5	ND<5	ND<40	ND<5	None Detected<5
	702-GP-6-18	18	ND <100	ND<5	ND<5	ND<5	ND<10	ND<5	ND<5	ND<40	ND<5	None Detected<5
	702-GP-6-23	23	ND <100	ND<5	ND<5	ND<5	ND<10	ND<5	ND<5	ND<40	ND<5	None Detected<5
10/24/06	702-GP-7-9	9	ND <100	ND<5	ND<5	ND<5	ND<10	5.6	ND<5	120	ND<5	None Detected<5
	702-GP-7-12	12	9800	ND<50	ND<50	ND<50	ND<100	ND<50	ND<50	ND<400	ND<50	n-Butylbenzene 140 n-Propylbenzene 240 Naphthalene 860
	702-GP-7-21	21	1200	ND<12	ND<12	ND<12	ND<25	ND<12	ND<12	110	ND<12	n-Propylbenzene 24 Naphthalene 59
	702-GP-7-24	24	ND <100	ND<5	ND<5	ND<5	ND<10	ND<5	ND<5	ND<40	ND<5	n-Propylbenzene 5.5
10/24/06	702-GP-8-10	10	ND <100	ND<5	ND<5	ND<5	ND<10	ND<5	ND<5	ND<40	ND<5	None Detected<5
	702-GP-8-15	15	ND <100	ND<5	ND<5	ND<5	ND<10	6.4	ND<5	ND<40	ND<5	None Detected<5
	702-GP-8-22	22	ND <100	ND<5	ND<5	ND<5	ND<10	8.3	ND<5	ND<40	ND<5	None Detected<5

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TABLE 9 CONT'D
SUMMARY OF SOIL SAMPLES FROM GEOPROBE
ANALYTICAL RESULTS
IN MICROGRAMS PER KILOGRAM (µg/Kg)

TPHg – Total Petroleum Hydrocarbon as gasoline
MTBE – Methyl Tertiary Butyl Ether
TBA – tert-Butanol
VOCs – Volatile Organic Compounds

BTEX – Benzene, Toluene, Ethylbenzene, Total Xylenes
PCE – Tetrachloroethene
TCE – Trichloroethene
ND – None Detected (Below Laboratory Detection Limit)

File No. 12-99-702-SI

TABLE 10
SUMMARY OF GROUNDWATER SAMPLES
ANALYTICAL RESULTS FROM GEOPROBE BOREHOLES
IN MICROGRAMS PER LITER (µg/L)

Date	Sample No.	TPHg	B	T	E	X	MTBE	PCE	TBA	TCE	EPA 8260B
10/24/06	702-GP-1	ND<25	ND<0.5	ND<0.5	ND<0.5	ND<0.5	8.4	ND<0.5	ND<10	ND<0.5	None Detected<0.5
	701-GP-2	3600	ND<5	ND<5	ND<5	ND<5	580	ND<5	3300	ND<5	n-Propylbenzene 64
	702-GP-3	29	ND<0.5	ND<0.5	ND<0.5	0.71	23	ND<0.5	ND<10	ND<0.5	None Detected<0.5
	702-GP-4	9100	ND<50	ND<50	ND<50	ND<50	4200	ND<50	6700	ND<50	None Detected<50
	702-GP-5	ND<25	ND<0.5	ND<0.5	ND<0.5	ND<0.5	1.7	ND<0.5	ND<10	ND<0.5	None Detected<0.5
	702-GP-6	ND<25	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<1	ND<0.5	ND<10	ND<0.5	None Detected<0.5
	702-GP-7	12000	ND<10	ND<10	370	ND<10	220	ND<10	ND<200	ND<10	1,2,4-Trimethylbenzene 100 Isopropylbenzene 200 n-Butylbenzene 110 n-Propylbenzene 750 Naphthalene 640
	702-GP-8	160	ND<0.5	ND<0.5	ND<0.5	ND<0.5	87	ND<0.5	11	ND<0.5	None Detected<0.5

TPHg – Total Petroleum Hydrocarbon as gasoline
MTBE – Methyl Tertiary Butyl Ether
TBA – tert-Butanol
EPA 8260B – Other Fuel Hydrocarbon Oxygenates by 8260B
ND – Not Detected (Below Laboratory Detection Limit)

BTEX – Benzene, Toluene, Ethylbenzene, Total Xylenes
PCE – Tetrachloroethene
TCE - Trichloroethene

TABLE 11
SUMMARY OF GROUNDWATER SAMPLES
ANALYTICAL RESULTS FROM CPT BOREHOLES
IN MICROGRAMS PER LITER (µg/L)

Date	Sample No.	Depth feet	TPHg	B	T	E	X	MTBE	PCE	TBA	TCE	EPA 8260B
11/02/06	702-CPT1-23	23	53	ND<0.5	ND<0.5	ND<0.5	ND<0.5	39	ND<0.5	ND<10	ND<0.5	None Detected<0.5
	702-CPT1-40	40	ND<25	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<1	ND<0.5	ND<10	ND<0.5	None Detected<0.5
	702-CPT1-58	58	ND<25	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<1	ND<0.5	ND<10	ND<0.5	None Detected<0.5
	702-CPT2-21	21	ND<25	ND<0.5	ND<0.5	ND<0.5	ND<0.5	3.5	ND<0.5	ND<10	ND<50	None Detected<0.5
	702-CPT2-57	57	ND<25	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<1	ND<0.5	ND<10	ND<0.5	None Detected<0.5
	702-CPT3-10	10	ND<25	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<1	ND<0.5	ND<10	ND<0.5	None Detected<0.5
	702-CPT3-32	32	ND<25	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<1	3.2	ND<10	0.72	None Detected<0.5
	702-CPT3-57	57	ND<25	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<1	ND<0.5	ND<10	ND<0.5	None Detected<0.5

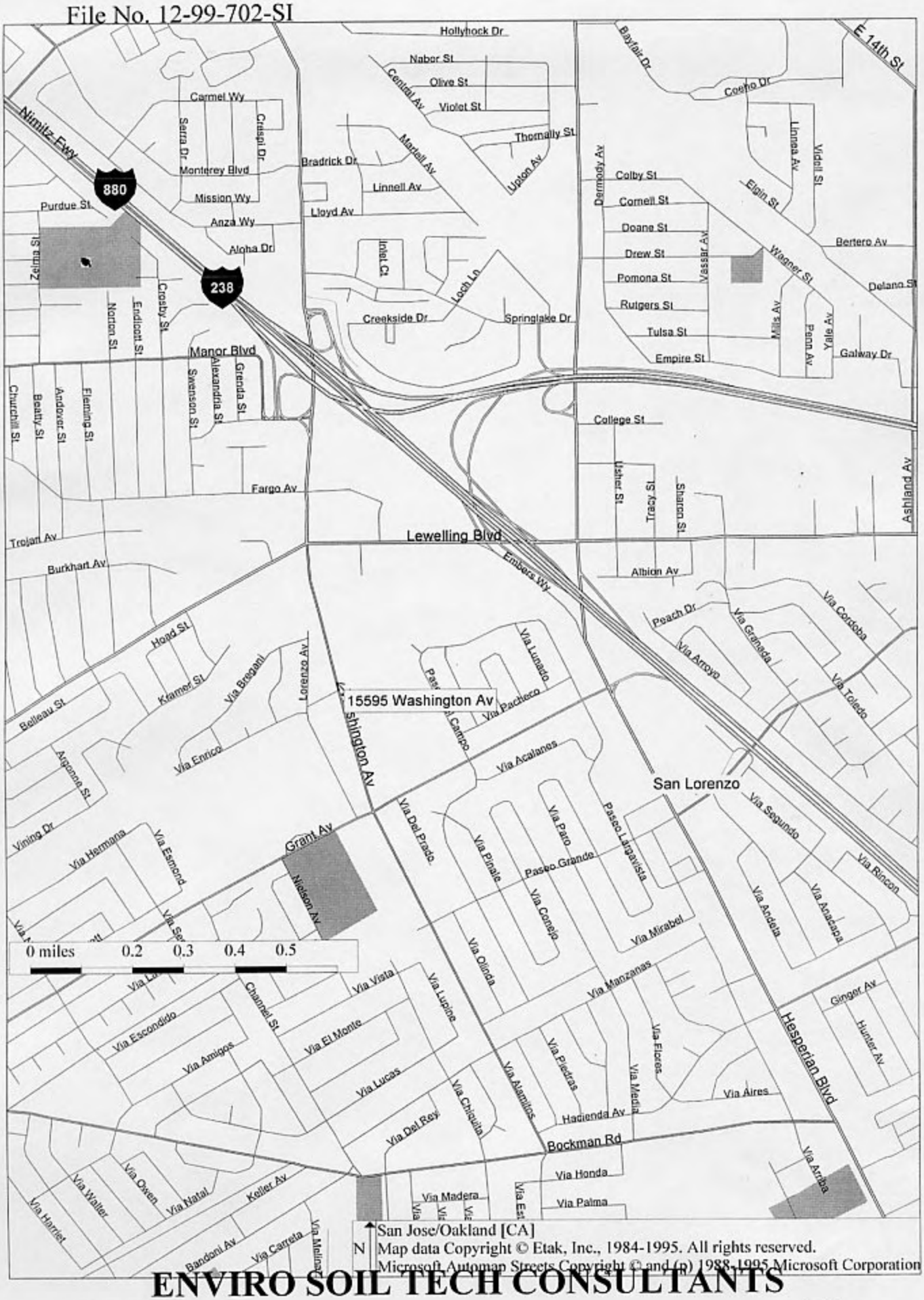
TPHg – Total Petroleum Hydrocarbon as gasoline
MTBE – Methyl Tertiary Butyl Ether
TBA – tert-Butanol
EPA 8260B – Other Fuel Hydrocarbon Oxygenates by 8260B
ND – Not Detected (Below Laboratory Detection Limit)

BTEX – Benzene, Toluene, Ethylbenzene, Total Xylenes
PCE – Tetrachloroethene
TCE - Trichloroethene

A P P E N D I X "B"

FIGURES

File No. 12-99-702-SI

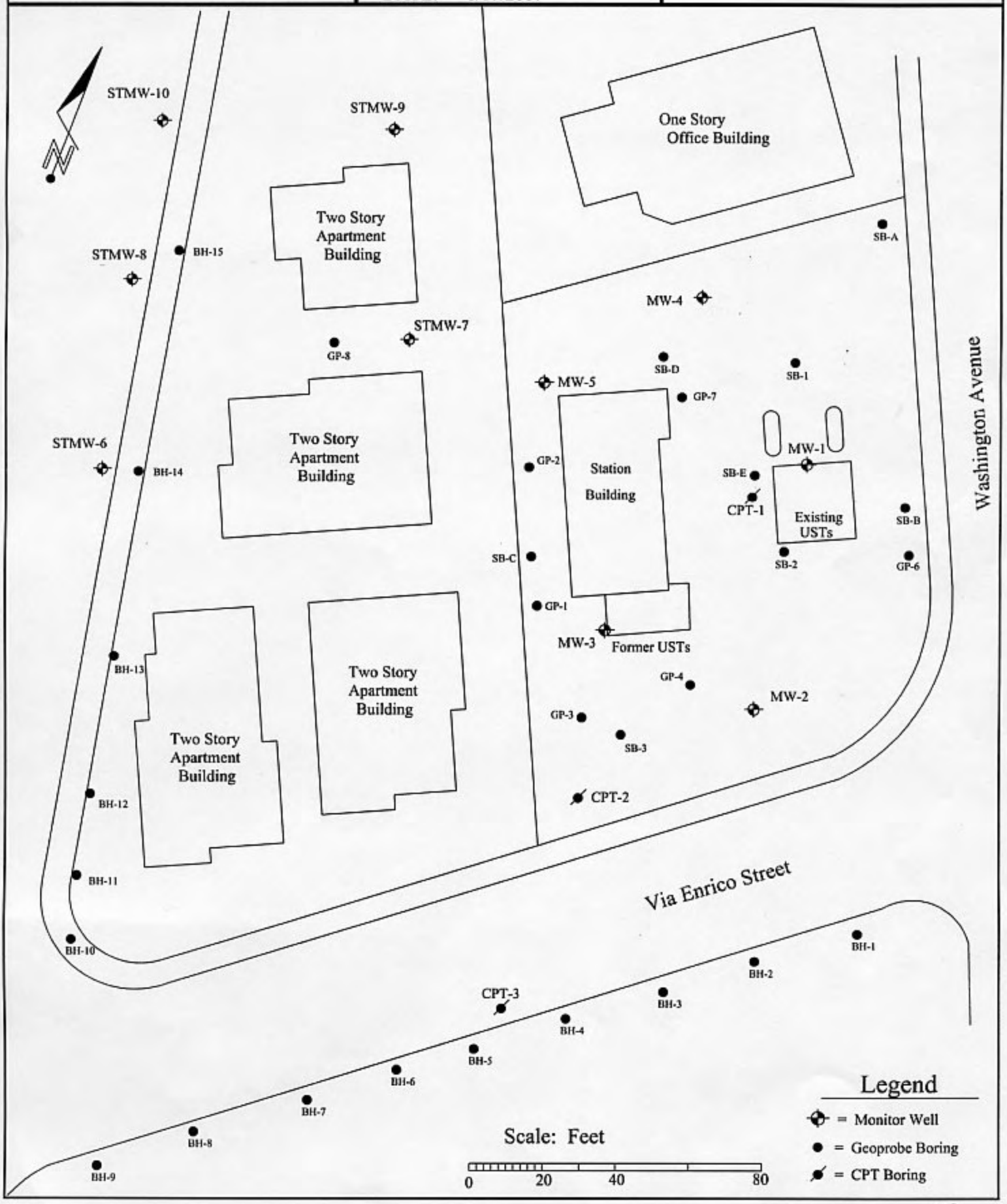


ENVIRO SOIL TECH CONSULTANTS

Figure 1

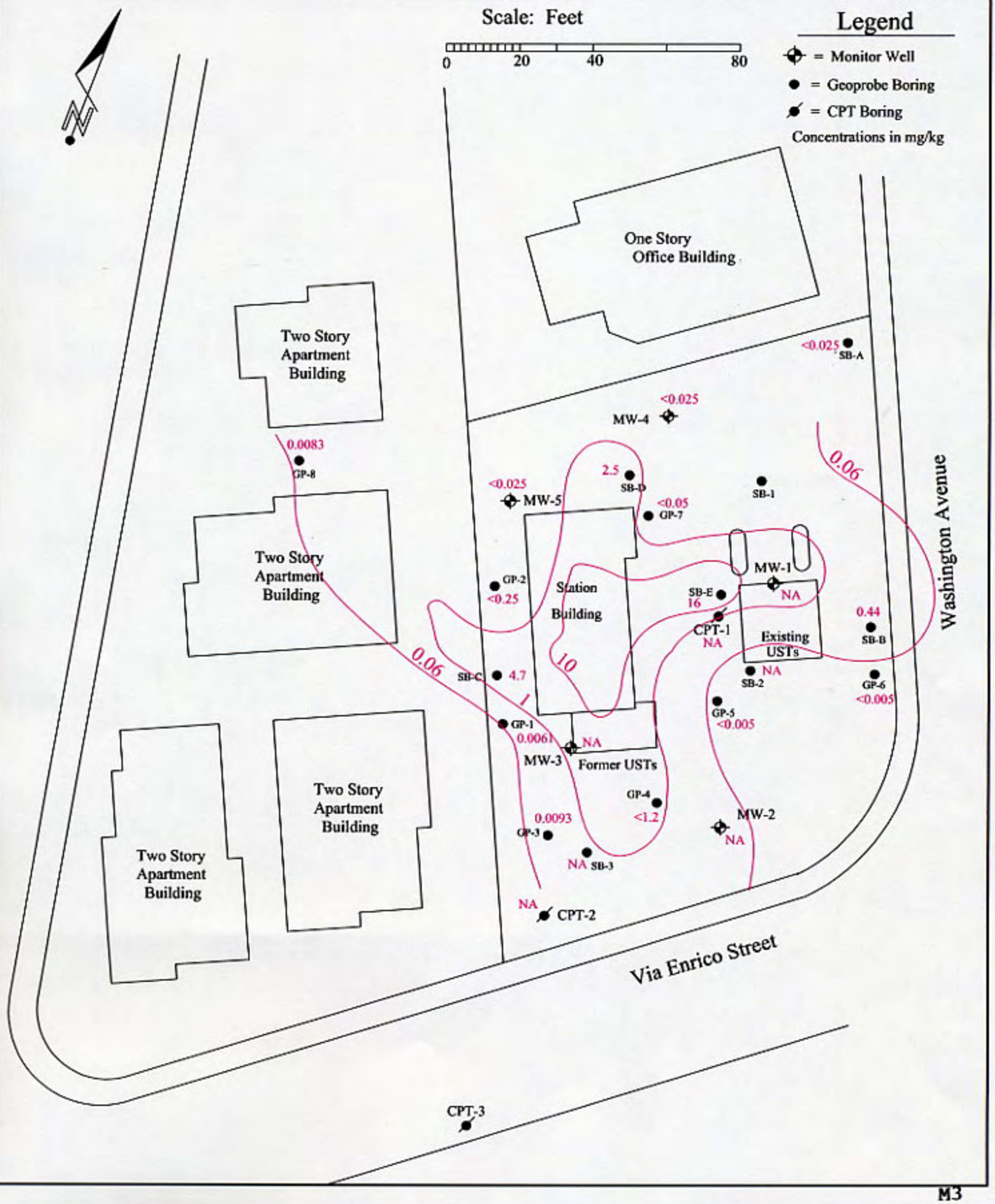
M1

Enviro Soil Tech Consultants 131 Tully Road San Jose, CA 95112	PROJECT 15595 Washington Avenue San Lorenzo, California PROJECT # 12-99-702-SI DATE: 8/17/2007	Figure 2 Site Map

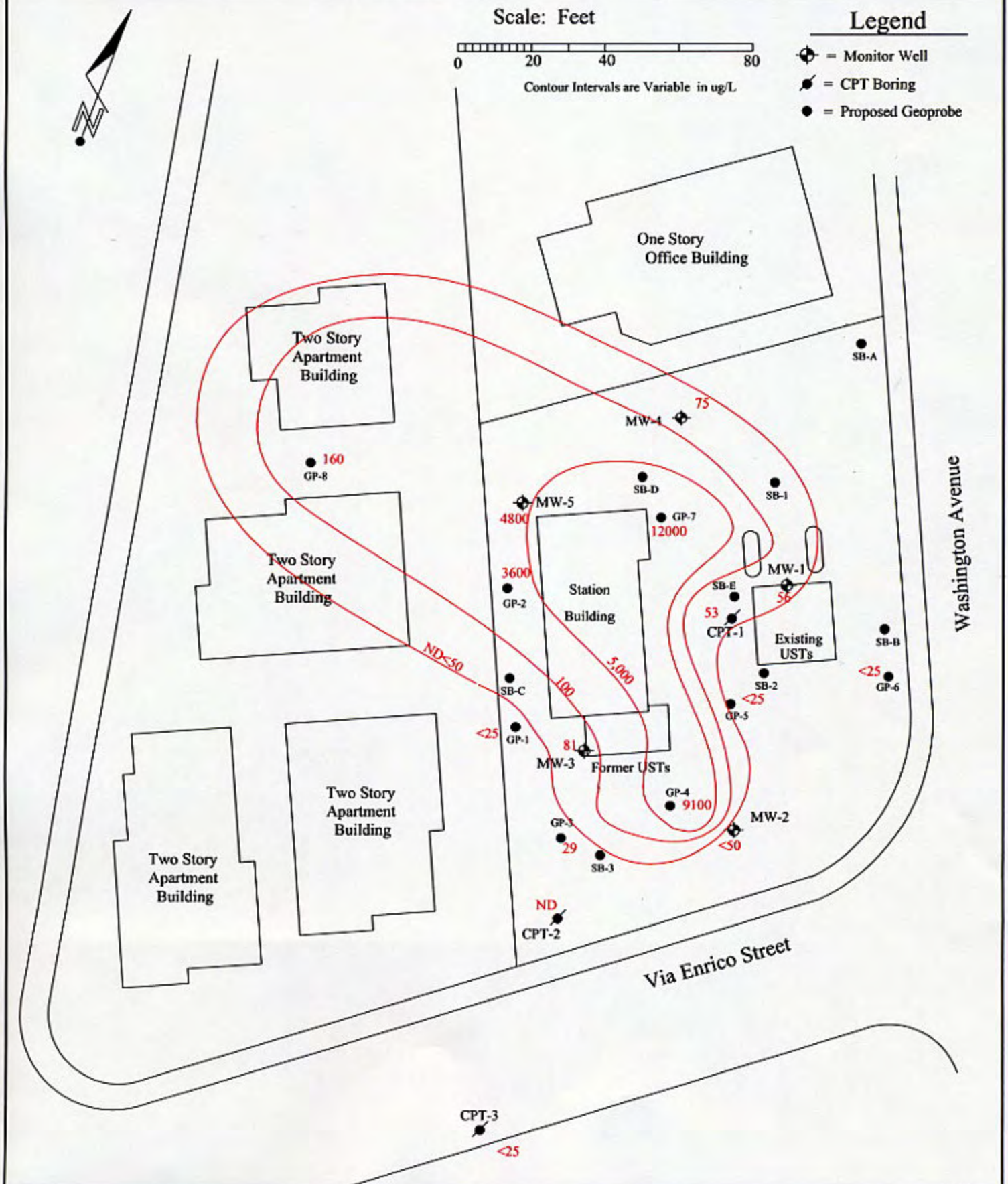


M2

Enviro Soil Tech Consultants 131 Tully Road San Jose, CA 95112	PROJECT 15595 Washington Avenue San Lorenzo, California PROJECT # 12-99-702-SI DATE: 4/27/2007	Figure 3 Highest MTBE Concentration in Soil Samples

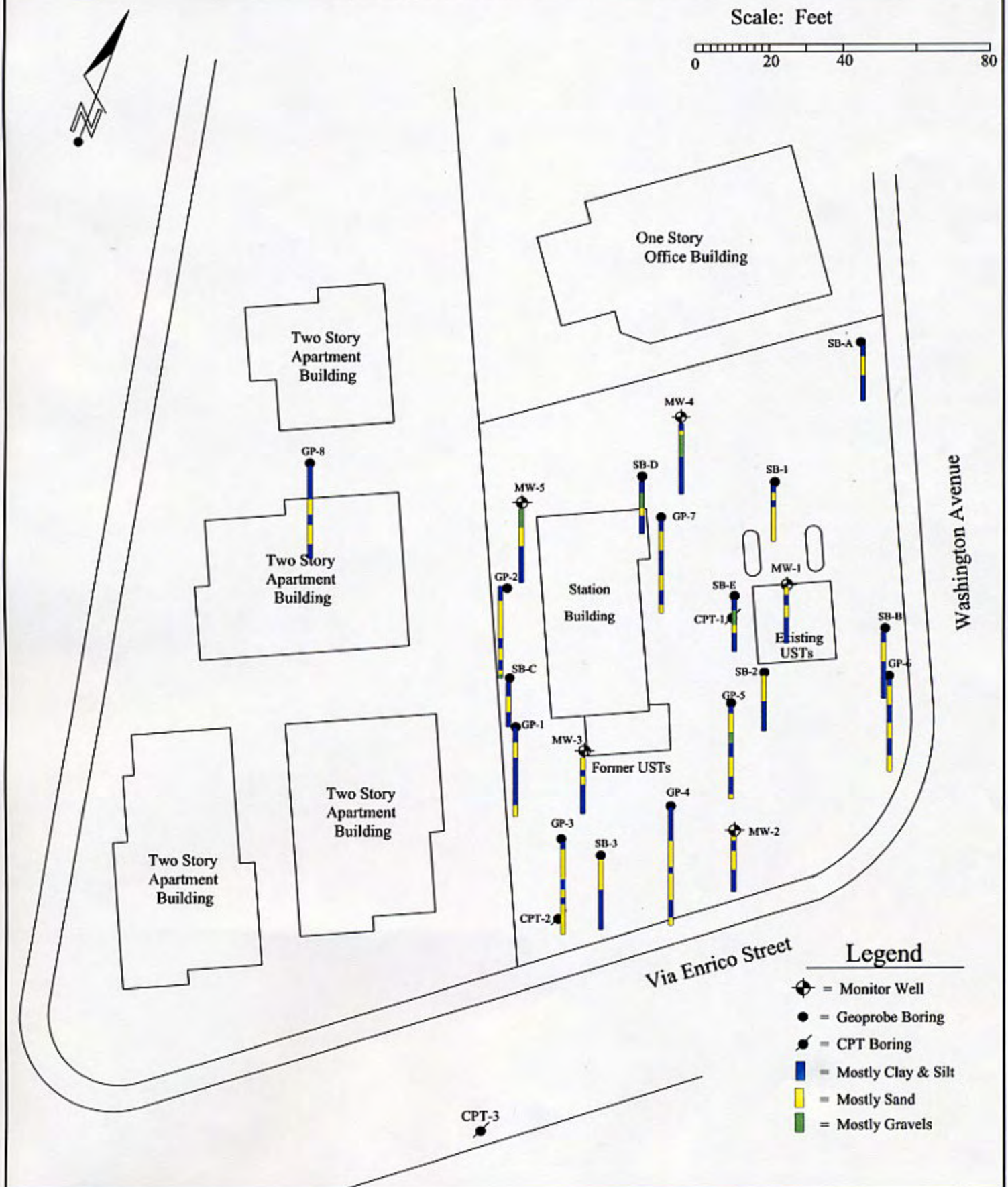


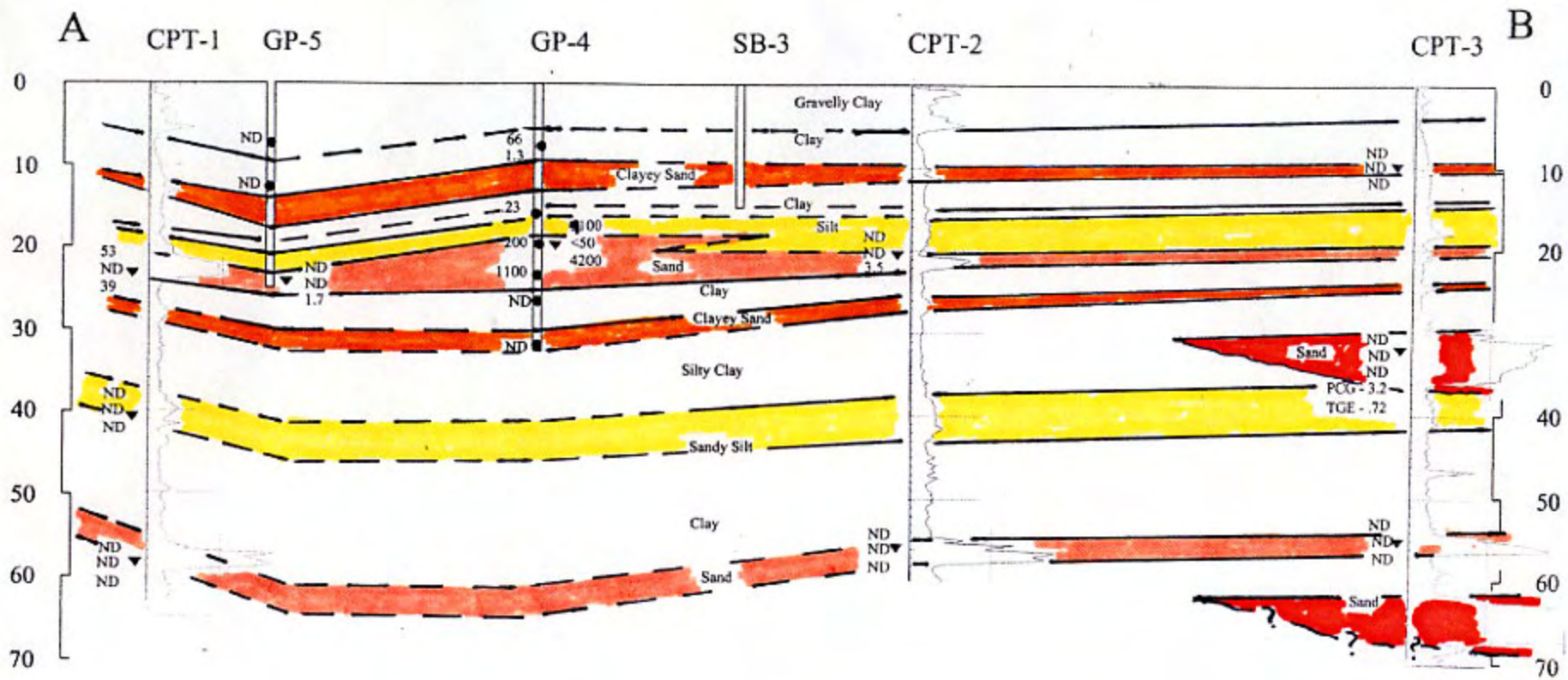
Enviro Soil Tech Consultants	PROJECT	Figure 4
131 Tully Road San Jose, CA 95112	15595 Washington Avenue San Lorenzo, California PROJECT # 12-99-702-SI DATE: 4/27/2007	Isocontours of TPH-g in Groundwater, 12/2006



M4

Enviro Soil Tech Consultants	PROJECT	Figure 5
131 Tully Road San Jose, CA 95112	15595 Washington Avenue San Lorenzo, California PROJECT # 12-99-702-SI DATE: 4/27/2007	Stick Map September to October, 2006





Legend

- ● = TPH-g, soil
- ▼ = TPH-g, Water
  Benzene
  MTBE

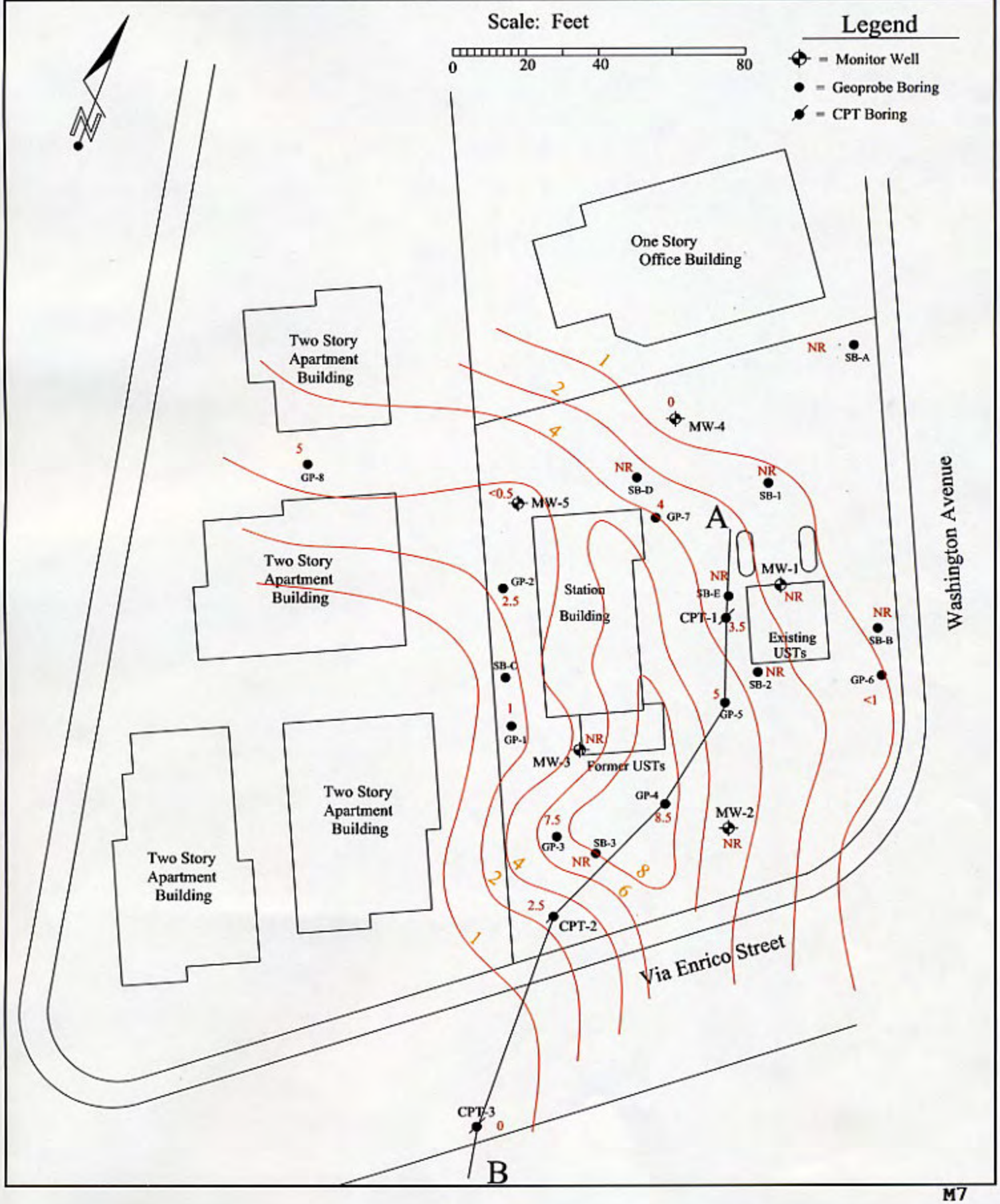
Scale: Feet

0 10 20 40

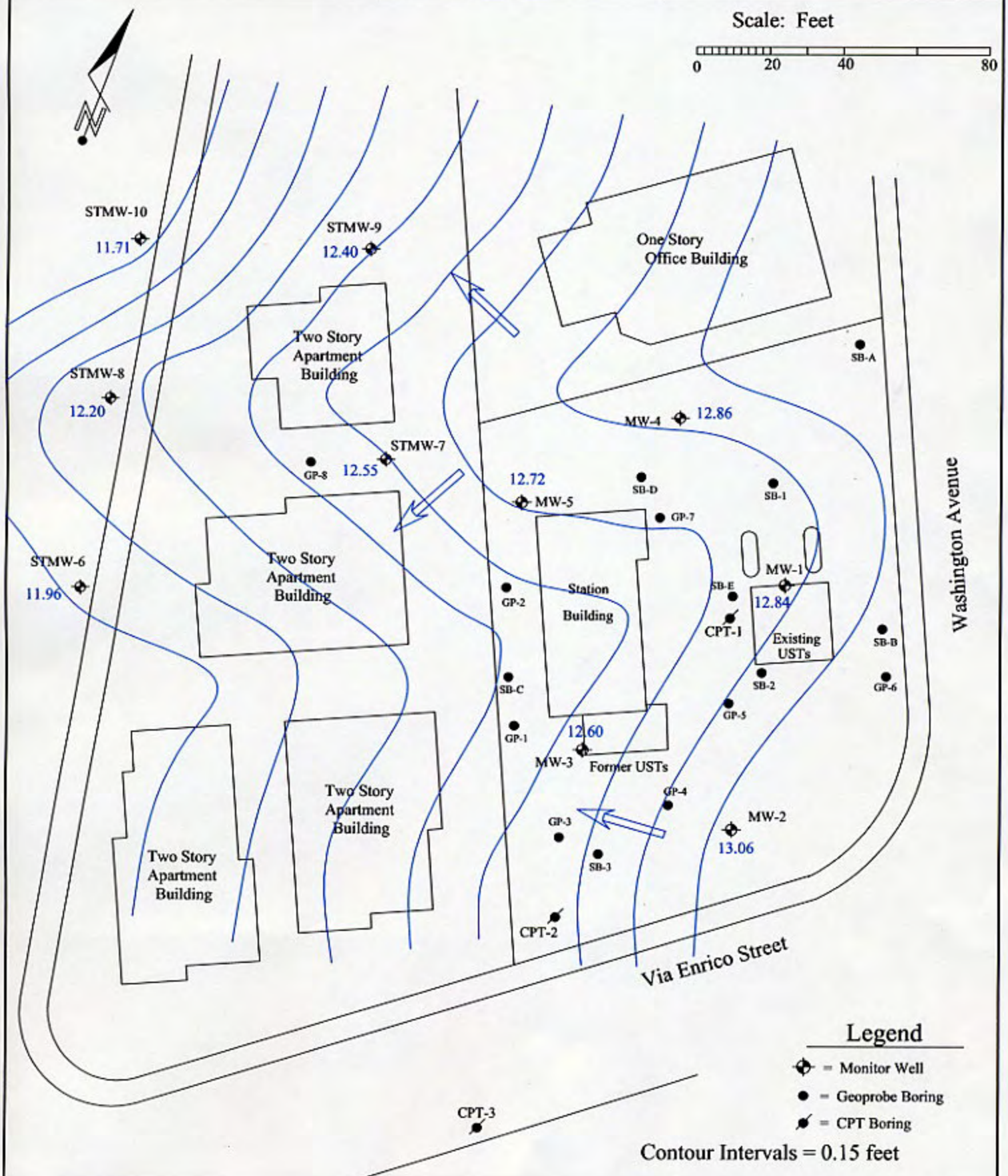
Enviro Soil Tech Consultants 131 Tully Road San Jose, CA 95112	PROJECT 15595 Washington Avenue San Lorenzo, California PROJECT # 12-99-702-SI DATE: 12/18/2006	**Figure 6** Cross Section A - B

M6

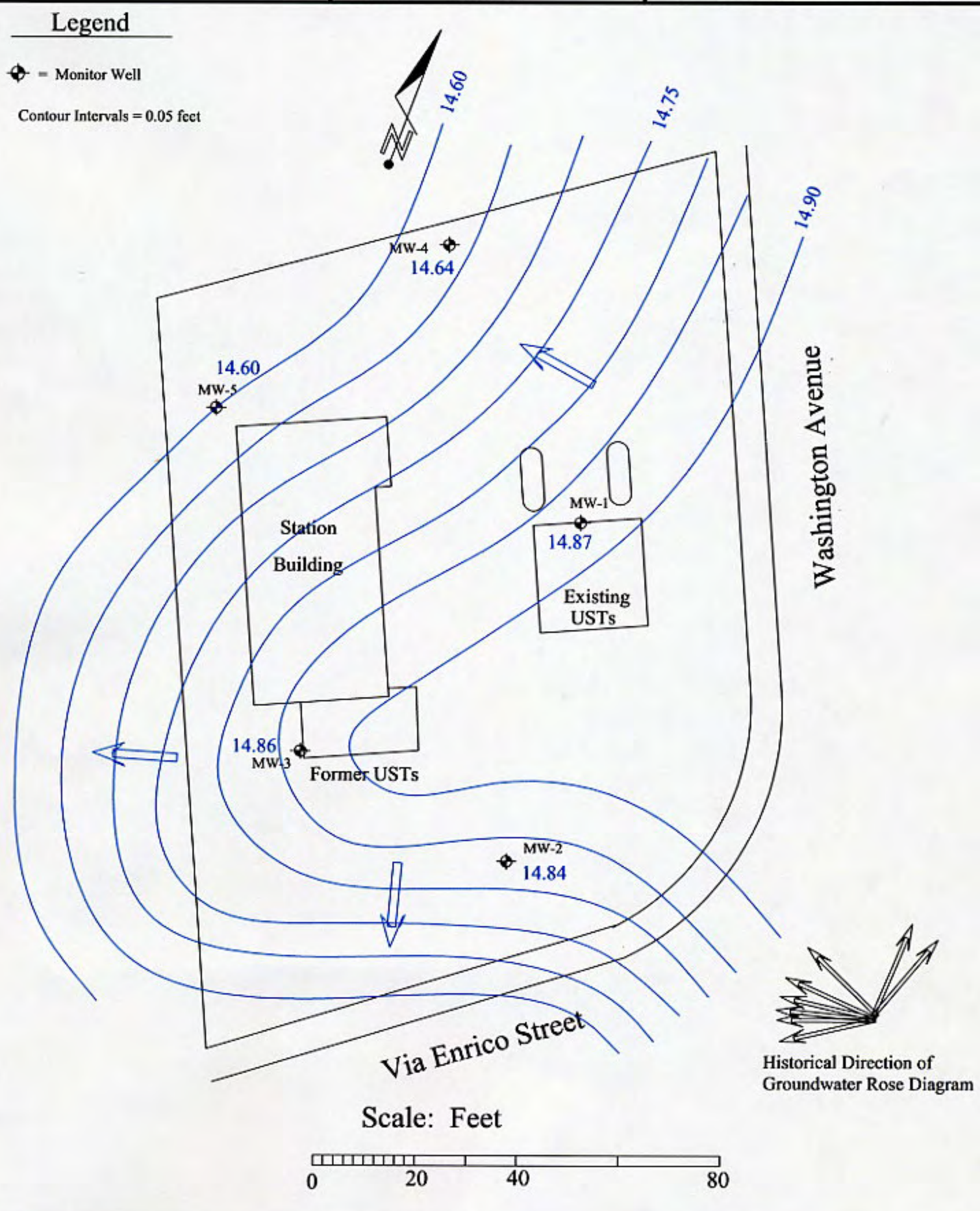
Enviro Soil Tech Consultants 131 Tully Road San Jose, CA 95112	PROJECT 15595 Washington Avenue San Lorenzo, California PROJECT # 12-99-702-SI DATE: 4/27/2007	Figure 7 Isopach of Sand Bed "A"



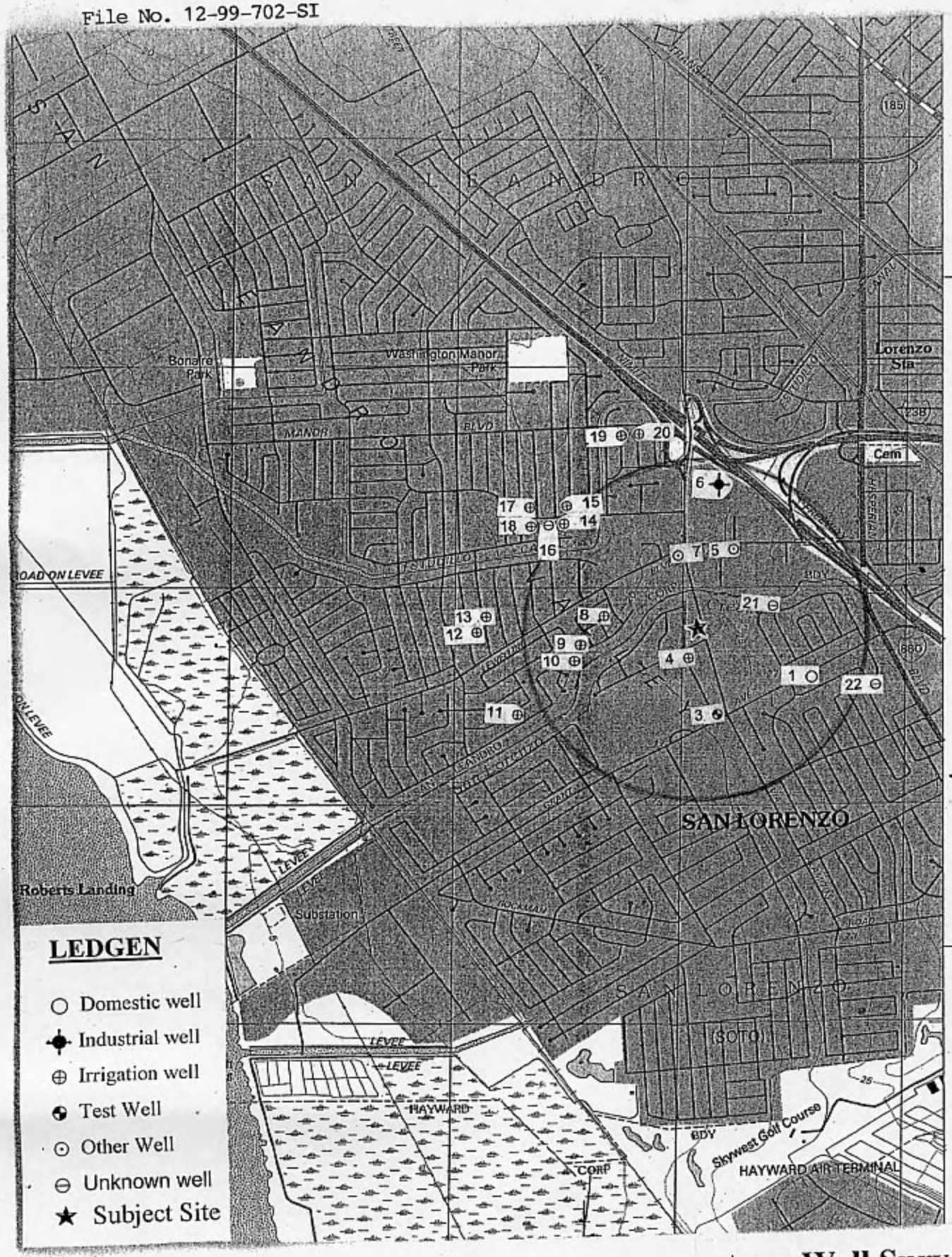
Enviro Soil Tech Consultants	PROJECT	Figure 8
131 Tully Road San Jose, CA 95112	15595 Washington Avenue San Lorenzo, California PROJECT # 12-99-702-SI DATE: 8/17/2007	Groundwater Elevation June 14, 2007



Enviro Soil Tech Consultants	PROJECT	Figure 9
131 Tully Road San Jose, CA 95112	15595 Washington Avenue San Lorenzo, California PROJECT # 12-99-702-SI DATE: 8/17/2007	Groundwater Elevation December 14, 2006



File No. 12-99-702-SI

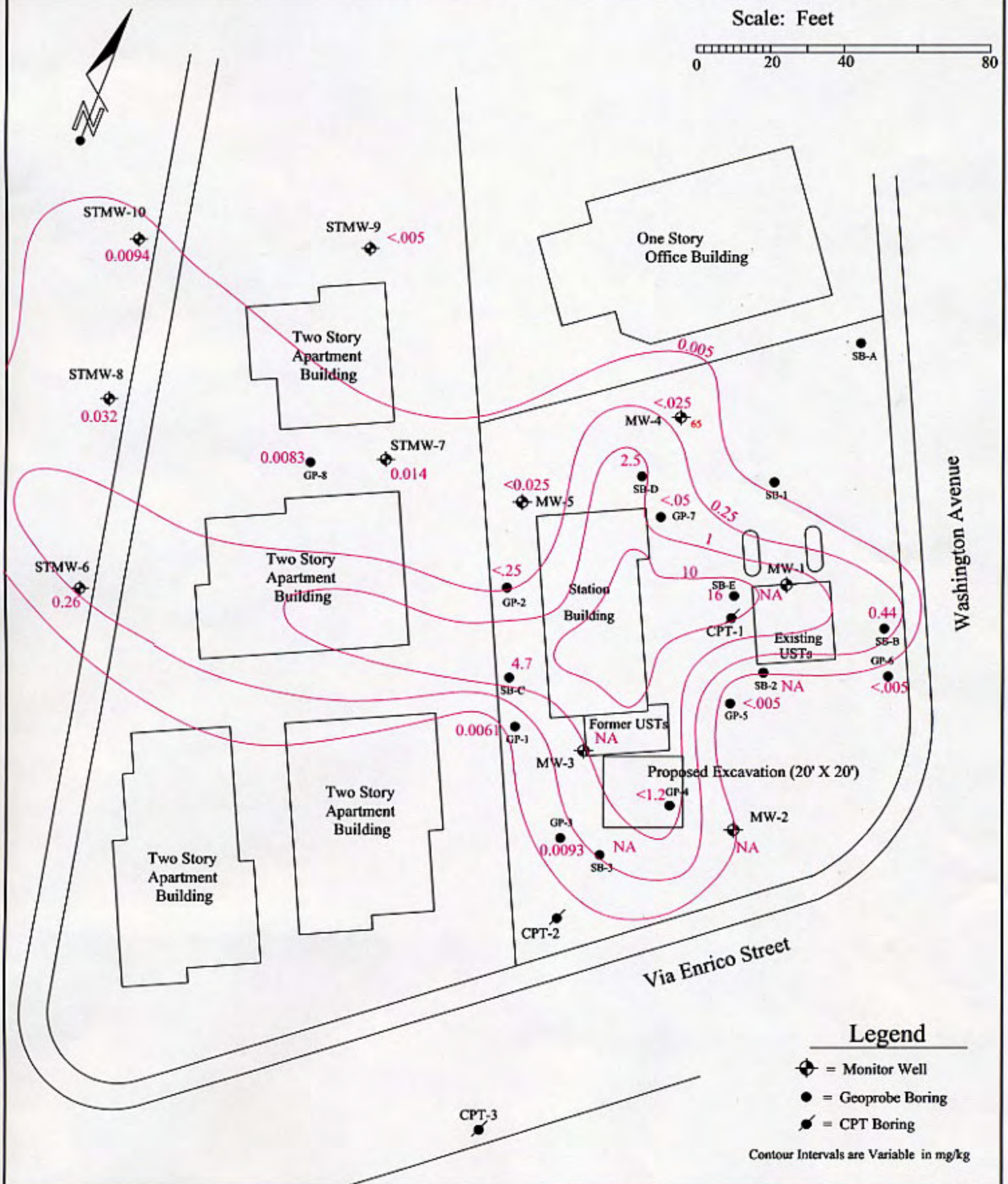


Area Well Survey

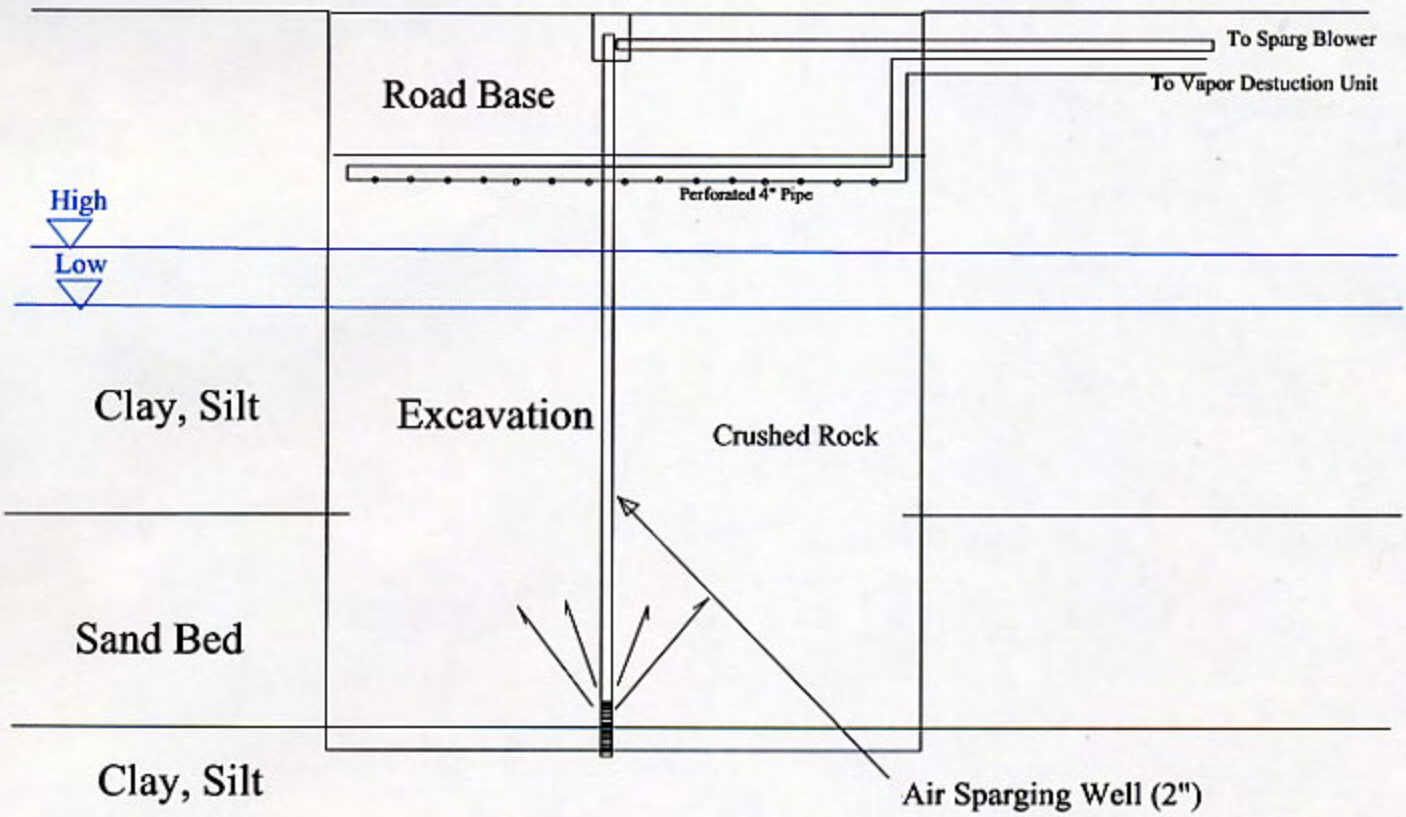
½ Mile Radius

Figure 10

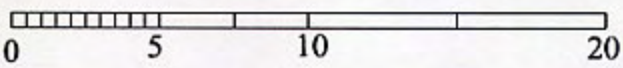
Enviro Soil Tech Consultants	PROJECT	Figure 11
131 Tully Road San Jose, CA 95112	15595 Washington Avenue San Lorenzo, California PROJECT # 12-99-702-SI DATE: 8/15/2007	Proposed Soil Remediation Plan



Enviro Soil Tech Consultants 131 Tully Road San Jose, CA 95112	PROJECT 15595 Washington Avenue San Lorenzo, California PROJECT # 12-99-702-SI DATE: 8/15/2007	Figure 12 Proposed AS/SVE Test Configuration

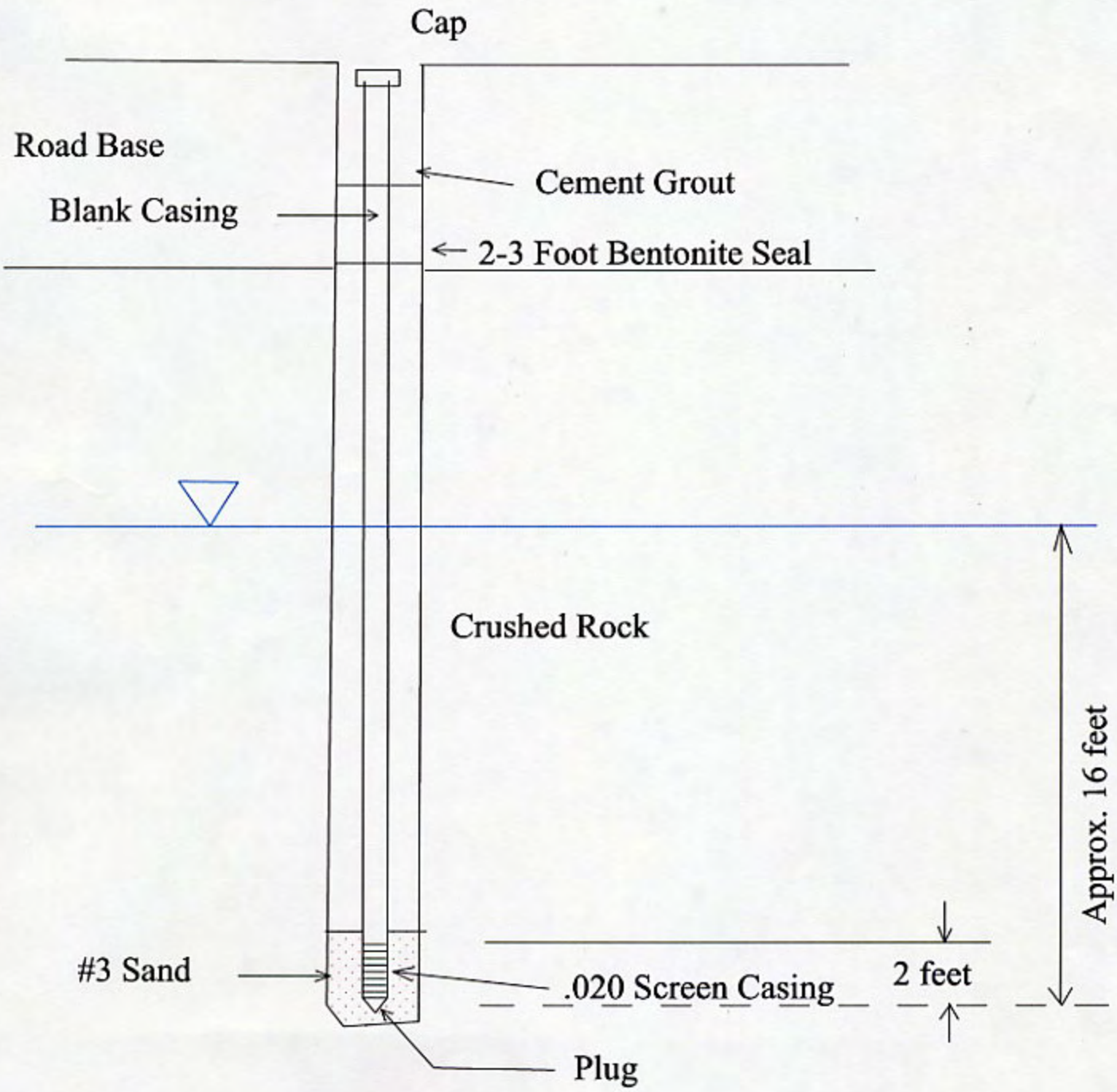


Scale: Feet (Vertical and Horizontal)



M12

Enviro Soil Tech Consultants 131 Tully Road San Jose, CA 95112	PROJECT 15595 Washington Avenue San Lorenzo, California PROJECT # 12-99-702-SI DATE: 8/15/2007	Figure 13 Sparging Well Construction



A P P E N D I X "C"

BORING LOGS

GROUNDWATER TECHNOLOGY

Division of Oil Recovery Systems, Inc.

Drilling

Well Number MW 1

Project: Texaco/San Lorenzo Owner: Texaco U.S.A.

Location: 15595 Washington Project Number: 20-8132

Date Drilled: 8/8/86 Total Depth of Hole: 15 ft. Diameter: 8 in.

Surface Elevation: _____ Water Level, Initial: 11.5 ft 24-hrs. _____

Screen: Dia. 2 in. Length: 10 ft. Slot Size: .020 in

Casing: Dia. 2 in. Length: 5 ft. Type: P.V.C.

Drilling Company: HEW Drilling Drilling Method: h. s. auger

Driller: A. Boden Log by: A. Sager

Sketch Map

Notes

Depth (Feet)	Well Construction	Notes	Sample Number	Graphic Log	Description/Soil Classification (Color, Texture, Structures)
0		roadbox		SP	Light gray sand and gravel, very dry
1		cement seal			
2					Brown sandy clay, moist, slight odor
3		bentonite seal		CL	
4			4-4-5 MW-1 A		
5		gravel pack			Orange-brown medium sand, loose, moist, slight odor
6				SW	
7					
8					Dark brown stiff clay, moist, strong odor
9			5-6-11 MW-1 B		
10				CH	
11					
12					
13					
14					
15			4-5-9 MW-1 C		Dark brown firm clay, moist, strong odor.

GROUNDWATER TECHNOLOGY

Division of Oil Recovery Systems, Inc.

Well Number MW-2 — Drilling

Project: Texaco/San Lorenzo — Owner: Texaco U.S.A

Location: 15595 Washington — Project Number: 20-8132

Date Drilled: 8/8/86 — Total Depth of Hole: 15 ft. — Diameter: 8 in.

Surface Elevation: — — Water Level Initial: 9 ft. — 24-hrs.

Screen Dia: 2 in. — Length: 10 ft. — Slot Size: 0.020 in.

Casing Dia: 2 in. — Length: 5 ft. — Type: P.V.C.

Drilling Company: HEW Drilling — Drilling Method: h. s. auger

Driller: A. Boden — Log by: A. Sager

Sketch Map

Notes

Depth (Feet)	Well Construction	Notes	Sample Number	Graphic Log	Description/Soil Classification (Color, Texture, Structures)
0–1		roadbox, cement		SP	Light brown medium sand, loose, dry
2–3		bentonite seal		CL	Dark brown sandy clay, moist, slight odor
4–5		gravel pack	MW-2 A		Orangish brown medium sand with some clay, loose, moist.
6–8				SW	Dark brown stiff clay (some with orange stains)
9–10			4-6-10 MW-2 B	CL	Dark brown firm clay, moist, slight odor
11–14				CH	Light brown clay, pliable, very moist, no odor
15			5-6-10 MW-2 C		Light brown clay, stiff, no odor.

GROUNDWATER TECHNOLOGY

Division of Oil Recovery Systems, Inc.

Drilling

Well Number MW 3

Project Texaco/San Leandro Owner Texaco U.S.A

Location 15595 Washington Project Number 20-8132

Date Drilled 8/8/86 Total Depth of Hole 16 ft. Diameter 8 in.

Surface Elevation _____ Water Level Initial 12 ft 24-hrs. _____

Screen: Dia. 2 in. Length 10 ft. Slot Size 0.020 in.

Casing: Dia. 2 in. Length 5 ft. Type P.V.C.

Drilling Company HEW Drilling Drilling Method h. s. auger

Driller A. Boden Log by A. Sager

Sketch Map

Notes

Depth (Feet)	Well Construction	Notes	Sample Number	Graphic Log	Description/Soil Classification (Color, Texture, Structures)
0		roadbox		SP	Light brown sand and gravel, loose, dry
1		cement			
2				SW	Light brown medium sand
3		bentonite seal			
4				CH	Dark brown pliable clay, moist, no petrole odor
5			5-4-3 MW-3 A		
6		gravel pack		SW	Light brown medium sand with some clay, firm, no petroleum odor.
7					
8					
9					
10			0-2-2 MW-3 B		
11				CL	Dark brown gritty clay, pliable, very soft wet, strong petroleum odor.
12					
13					
14					
15			4-5-7 MW-3 C		Dark gray stiff clay, slight petroleum odor
16					

GROUNDWATER TECHNOLOGY

Division of Oil Recovery Systems, Inc.

SOIL BORING SB 1

Drillin

Project Texaco/San Lorenzo Owner Texaco U.S.A

Location 15505 Washington Project Number 20-8122

Date Drilled 8/8/86 Total Depth of Hole 15 ft. Diameter 8 in.

Surface Elevation _____ Water Level, Initial 11 ft. 24-hrs. _____

Screen: Dia. _____ Length _____ Slot Size _____

Casing: Dia. _____ Length _____ Type _____

Drilling Company UEM Drilling Drilling Method h. s. auger

Driller A. Boden Log by A. Sager

Sketch Map

Notes

Depth (Feet)	Well Construction	Notes	Sample Number	Graphic Log	Description/Soil Classification (Color, Texture, Structures)
0	NO WELL CONSTRUCTED			SP	Light brown medium sand and gravel, dry
1					
2				CL	Dark brown silty clay with some sand, moi
3					
4					
5			2-1-2	SW	Greenish-gray medium sand with occassiona pebble, loose, moist, slight petroleum od
6					
7			SB-1 A	CL	Mottled greenish and dark gray stiff clay strong petroleum odor
8				CH	
9			4-6-10 SB-1 B	CL	Dark gray very stiff clay, moist, slight petroleum odor
10					
11					
12					
13				CH	Light greenish gray pliable clay, very moi strong petroleum odor
14			3-7-10 SB-1 C		
15				CL	Dark gray, very stiff clay, moist, slight petroleum odor

GROUNDWATER TECHNOLOGY

Division of Oil Recovery Systems, Inc.

SOIL BORING SB 2

Drilling

Project Texaco/San Lorenzo Owner Texaco U.S.A.

Location 15505 Washington Project Number 20-8122

Date Drilled 8/8/86 Total Depth of Hole 15 ft. Diameter 8 in.

Surface Elevation _____ Water Level, Initial 11.5 24-hrs. _____

Screen: Dia. 2 in. Length 10 ft. Slot Size .020 in.

Casing: Dia. 2 in. Length 5 ft. Type P.V.C.

Drilling Company [illegible] Drilling Method h. s. auger

Driller A. Boden Log by A. Sager

Sketch Map

Notes

Depth (Feet)	Well Construction	Notes	Sample Number	Graphic Log	Description/Soil Classification (Color, Texture, Structures)
0	NO WELL CONSTRUCTED			SP	Light brown medium sand and gravel, dry
1					
2					
3				SM	Dark brown silty sand, moist, slight petrol odor
4			3-4-6 SB-2 A		
5					
6				SW	Dark brown medium sand with few pebbles, lo
7					
8				CL	Dark brown stiff clay, moist, slight petroleum odor
9			4-8-12 SB-2 B		
10				CL	Dark brown very stiff clay, moist, strong petroleum odor
11					
12					
13				CH	Light chocolate brown pliable clay, wet, no petroleum odor
14			3-7-9 SB-2 C	CL	Dark brown very stiff clay, moist
15					

GROUNDWATER TECHNOLOGY
Division of Oil Recovery Systems, Inc.

SOIL BORING SB - 3 Drillin

Project Texaco/San Lorenzo Owner Texaco U.S.A.

Location 15505 Washington Project Number 20-8132

Date Drilled 8/8/86 Total Depth of Hole 15 ft. Diameter 8 in

Surface Elevation _____ Water Level, Initial 9.5 ft. 24-hrs. _____

Screen: Dia. _____ Length _____ Slot Size _____

Casing: Dia. _____ Length _____ Type _____

Drilling Company [illegible] Drilling Method h. s. auger

Driller A. Boden Log by A. Sager

Sketch Map

Notes

Depth (Feet)	Well Construction	Notes	Sample Number	Graphic Log	Description/Soil Classification (Color, Texture, Structures)
0	NO WELL CONSTRUCTED			SP	Light brown sand and gravel, loose, dry
1					
2				SC	Dark brown medium sand with some clay, mo slight petroleum odor
3					
4			2-3-4 SB-3 A		
5				SW	Light brown medium sand, very loose, moist
6					
7				SC	Dark brown medium sand with some clay, mo slight petroleum odor
8					
9			4-6-9 SB-3 B	CL	Dark brown firm clay, moist, no petroleu odor
10					
11					
12					
13				CL	Light greenish-gray stiff clay, moist, no
14			4-5-8 SB-3 C		
15				CH	Light greenish-gray pliable clay, wet, no Dark gray stiff clay, moist, no odor

File No. 12-99-702-SI

Logged By: Frank Hamedi	Exploratory Boring Log	Boring No. B-1
Date Drilled: 4/18/2000	Approx. Elevation	Boring Diameter 2-inch
Drilling Method: Geoprobe	Sampling Method	

Depth, Ft.	Sample No.	Field Test for Total Ionization	Penetration Resistance Blows/6"	Unified Soil Classification	DESCRIPTION
1					Gray sandy gravel (baserock).
					More sand (loose).
					Dark brown sandy gravel (crush rock).
2					Light gray clayey gravely sand, moist, dense.
3					Dark brown clayey silt with minor fine sand.
4					Dark gray silty sand.
5					More sand.
					Dark gray sandy silty clay, damp, stiff.
6					
7					
8	B-1-8			CL	Dark brown silty clay, moist, stiff.
9	▽	Groundwater @ 9 feet			
10					Light brown silty clay, moist, stiff.
11					
12					Boring terminated at 12 feet.
13					
14					
15					
16					

Remarks

File No. 12-99-702-SI

Logged By: Frank Hamedi	Exploratory Boring Log	Boring No. B-2
Date Drilled: 4/18/2000	Approx. Elevation	Boring Diameter 2-inch
Drilling Method: Geoprobe		Sampling Method

Depth, Ft.	Sample No.	Field Test for Total Ionization	Penetration Resistance Blows/6"	Unified Soil Classification	DESCRIPTION
1					Dark brown gravel, asphalt.
					Light brown silty sand with some clay and pea gravel, dense, damp.
2					More clay, less gravel.
					Sandy silt.
3					More sand.
4					Light gray silty sand (coarse sand).
5					
6					
7					Sandy silt with some clay.
8	B-2-8			CL	Dark brown silty clay with some coarse sand, moist, stiff.
9	▽	Groundwater @ 9 feet			
10					
11					Light silty clay with minor fine sand, moist, stiff.
12					Boring terminated at 12 feet.
13					
14					
15					
16					

Remarks

File No. 12-99-702-SI

Logged By: Frank Hamedi	Exploratory Boring Log	Boring No. B-3
Date Drilled: 4/18/2000	Approx. Elevation	Boring Diameter 2-inch
Drilling Method: Geoprobe		Sampling Method

Depth, Ft.	Sample No.	Field Test for Total Ionization	Penetration Resistance Blows/6"	Unified Soil Classification	DESCRIPTION
1					Light gray gravely sand (loose), damp.
2					Darker color clayey silty very fine sand, damp, dense.
3					Silty sand.
4					Light gray gravely sand (coarse sand, pea gravel).
5					
6					Sandy silty clay.
7					Light brown silty clay, moist, stiff.
8	B-3-8			CL	Sandy clay.
9	▽	Groundwater @ 9 feet			
10					Dark brown silty clay, stiff, moist.
11					
12					Boring terminated at 12 feet.
13					
14					
15					
16					

Remarks

File No. 12-99-702-SI

Logged By: Frank Hamedi	Exploratory Boring Log	Boring No. B-4
Date Drilled: 4/18/2000	Approx. Elevation	Boring Diameter 2-inch
Drilling Method: Geoprobe	Sampling Method	

Depth, Ft.	Sample No.	Field Test for Total Ionization	Penetration Resistance Blows/6"	Unified Soil Classification	DESCRIPTION
1					Dark brown sandy gravel.
					Sandy clayey silt (fine sand), moist, stiff.
2					Clayey sandy silt.
3					
4					Sandy silt, moist, dense.
					More sand.
5					
6					Dark gray silty sand, moist, dense.
7					
8	B-4-8			CL	Dark gray silty sandy clay, moist, stiff.
9	▽	Groundwater @ 9		feet	Silty clay.
10					
11					
12					Boring terminated at 12 feet.
13					
14					
15					
16					

Remarks

File No. 12-99-702-SI

Logged By: Frank Hamedi	Exploratory Boring Log	Boring No. B-5
Date Drilled: 4/18/2000	Approx. Elevation	Boring Diameter 2-inch
Drilling Method: Geoprobe		Sampling Method

Depth, Ft.	Sample No.	Field Test for Total Ionization	Penetration Resistance Blows/6"	Unified Soil Classification	DESCRIPTION
1					Dark brown sandy gravel. Dark brown sandy silt with some clay (fine sand).
2					
3					Dark brown silty sand.
4					More sand, moist, dense.
5					
6					Dark brown silty clay, moist, stiff.
7					Sandy silty clay.
8	B-5-8			CL	More clay.
9	▽	Groundwater @ 9 feet			Dark brown silty clay, moist, stiff.
10					
11					
12					Boring terminated at 12 feet.
13					
14					
15					
16					

Remarks

File No. 12-99-702-SI

Logged By: Frank Hamedi	Exploratory Boring Log	Boring No. B-6
Date Drilled: 4/18/2000	Approx. Elevation	Boring Diameter 2-inch
Drilling Method: Geoprobe	Sampling Method	

Depth, Ft.	Sample No.	Field Test for Total Ionization	Penetration Resistance Blows/6"	Unified Soil Classification	DESCRIPTION
1					Light brown gravely sand.
					Dark brown sandy silty clay, moist, stiff.
2					More silt.
3					Lighter color silty clay.
4					
5					Dark brown silty clay, moist, stiff.
6					
7					
8	B-6-8½			SC	
9	▽	Groundwater @ 9½ feet			Light gray sand (60% medium, 30% fine, 10% silty clay), moist, dense.
10					Sandy silty clay, moist, stiff.
11					More clay.
12					Silty clay. Boring terminated at 12 feet.
13					
14					
15					
16					

Remarks

File No. 12-99-702-SI

Logged By: Frank Hamedi	Exploratory Boring Log	Boring No. B-7
Date Drilled: 4/18/2000	Approx. Elevation	Boring Diameter 2-inch
Drilling Method: Geoprobe	Sampling Method	

Depth, Ft.	Sample No.	Field Test for Total Ionization	Penetration Resistance Blows/6"	Unified Soil Classification	DESCRIPTION
1					Light brown sandy gravel.
					Dark brown silty sandy clay, damp, stiff.
2					
					Darker brown.
3					Light brown silty sand, dense, moist.
4					More sand (fine sand).
5					Dark brown silty clay, moist, stiff.
6					
7					
8	B-7-8½			CL	
9	▽ Groundwater @ 9½ feet				Light brown silty sandy clay.
					More sand.
10					Light brown sand (fine sand).
11					Dark brown silty clay, moist, stiff.
12					Boring terminated at 12 feet.
13					
14					
15					
16					

Remarks

File No. 12-99-702-SI

Logged By: Frank Hamedi	Exploratory Boring Log	Boring No. B-8
Date Drilled: 4/18/2000	Approx. Elevation	Boring Diameter 2-inch
Drilling Method: Geoprobe		Sampling Method:

Depth, Ft.	Sample No.	Field Test for Total Ionization	Penetration Resistance Blows/6"	Unified Soil Classification	DESCRIPTION
1					Gray sandy gravel.
					Light brown sandy silty clay, damp, dense.
2					
3					Dark brown silty clay.
					Sandy silt.
4					Dark brown sandy gravel.
5					Dark brown sandy silt.
6					Dark brown silty clay, moist, stiff.
7					
8	B-8-8½			CL	Dark brown clayey sandy silt, moist stiff.
9	▽	Groundwater @ 9½ feet			Dark brown silty clay, moist, stiff.
10					
11					
12					Boring terminated at 12 feet.
13					
14					
15					
16					

Remarks

File No.
12-99-702-SI

Logged By: Frank Hamedi	Exploratory Boring Log	Boring No. B-9
Date Drilled: 4/18/2000	Approx. Elevation	Boring Diameter 2-inch
Drilling Method: Geoprobe		Sampling Method

Depth, Ft.	Sample No.	Field Test for Total Ionization	Penetration Resistance Blows/6"	Unified Soil Classification	DESCRIPTION
1					Olive-gray sandy gravel. Dark brown sandy silty clay, damp, stiff.
2					Dark brown silty clay, moist, medium stiff.
3					Light brown clayey silt, moist, medium stiff.
4					Light brown silty sand, moist, medium dense.
5					Light brown sandy silty clay.
6					Dark brown to dark gray silty clay, moist, stiff.
7					
8					Light brown sandy silt, moist, dense.
9	B-9-9			CL	
10	▽	Groundwater @ 10 feet			Dark brown silty clay, moist, stiff.
11					
12					Boring terminated at 12 feet.
13					
14					
15					
16					

Remarks

File No. 12-99-702-SI

Logged By: Frank Hamedi	Exploratory Boring Log	Boring No. B-10
Date Drilled: 4/18/2000	Approx. Elevation	Boring Diameter 2-inch
Drilling Method: Geoprobe		Sampling Method

Depth, Ft.	Sample No.	Field Test for Total Ionization	Penetration Resistance Blows/6"	Unified Soil Classification	DESCRIPTION
1					4-inch asphalt; 6-inch light gray baserock.
					Brown sandy silty clay, dense, damp.
2					
3					Dark gray sandy silt, damp, stiff.
4					
5					Dark brown silty clay, moist, stiff.
6					
7					
8					
9	B-10-9½			CL	Light brown sandy silty clay, moist, dense.
10					Brown silty sand (fine sand), moist, medium dense.
	▽ Groundwater @ 10½ feet				
11					Dark brown silty clay.
12					Boring terminated at 12 feet.
13					
14					
15					
16					

Remarks

File No.
12-99-702-SI

Logged By: Frank Hamedi	Exploratory Boring Log	Boring No. B-11
Date Drilled: 4/18/2000	Approx. Elevation	Boring Diameter 2-inch
Drilling Method: Geoprobe		Sampling Method

Depth, Ft.	Sample No.	Field Test for Total Ionization	Penetration Resistance Blows/6"	Unified Soil Classification	DESCRIPTION
1					Dark brown sandy silty clay.
2					Light brown clayey silt, damp, stiff.
3					
4					Light brown silty sand (pea gravel).
5					Light brown clayey silt.
6					Dark brown silty clay.
7					
8					
9	B-11-9½			CL	
10					Light gray sandy clay.
	▽	Groundwater @ 10½ feet			Gray silty sand (fine sand).
11					Dark brown silty clay, moist, stiff.
12					Boring terminated at 12 feet.
13					
14					
15					
16					

Remarks

File No.
12-99-702-SI

Logged By: Frank Hamedi	Exploratory Boring Log	Boring No. B-12
Date Drilled: 4/18/2000	Approx. Elevation	Boring Diameter 2-inch
Drilling Method: Geoprobe		Sampling Method

Depth, Ft.	Sample No.	Field Test for Total Ionization	Penetration Resistance Blows/6"	Unified Soil Classification	DESCRIPTION
1					2-inch grass and roots.
					Brown sandy silty clay (roots), moist, stiff.
2					Dark brown clayey sandy silt, damp, stiff.
					Sandy silt, damp, stiff.
3					Silty sand.
4					Light brown sand with minor gravel.
5					Sandy silty clay.
6					Dark brown silty clay, moist, stiff.
7					
8					Some roots and root holes.
9					Light brown to gray silty clay, moist, stiff.
10	B-12-10			CL	
11	▽	Groundwater @ 11 feet			
12					Boring terminated at 12 feet.
13					
14					
15					
16					

Remarks

File No. 12-99-702-SI

Logged By: Frank Hamedi	Exploratory Boring Log	Boring No. B-13
Date Drilled: 4/18/2000	Approx. Elevation	Boring Diameter 2-inch
Drilling Method: Geoprobe		Sampling Method

Depth, Ft.	Sample No.	Field Test for Total Ionization	Penetration Resistance Blows/6"	Unified Soil Classification	DESCRIPTION
1					2-inch grass and roots. Dark brown sandy gravel. Dark brown sandy silty clay, damp, stiff.
2					Silty clay, damp, stiff.
3					Light brown silty sand, damp, dense.
4					
5					Dark gray silty clay, moist, stiff.
6					More clay.
7					
8					2-inch brown sand (60% fine and 40% coarse). Dark brown silty clay, moist, stiff.
9					
10					Light gray silty clay, moist, stiff.
11	B-13-11			CL	
12	▽	Groundwater @ 12 feet			Dark brown silty clay, moist, stiff.
13					More clay.
14					
15					
16					Boring terminated at 16 feet.

Remarks

File No. 12-00-702-SI

Logged By: Frank Hamedi	Exploratory Boring Log	Boring No. B-14
Date Drilled: 4/18/2000	Approx. Elevation	Boring Diameter 2-inch
Drilling Method: Geoprobe		Sampling Method

Depth, Ft.	Sample No.	Field Test for Total Ionization	Penetration Resistance Blows/6"	Unified Soil Classification:	DESCRIPTION
1					4-inch concrete; 4-inch light gray sandy gravel. Dark gray silty sandy clay.
2					
3					Dark brown silty clay, moist, stiff.
4					Gray silty sand, dense, moist.
5					Dark brown silty clay, moist, stiff.
6					
7					Light gray silty clay, moist, stiff.
8					Light gray silty sand, moist, dense.
9					Sandy clay.
10					Dark brown to gray silty clay, moist, stiff.
11	B-14-11			CL	
12	▽ Groundwater @ 12 feet				
13					
14					
15					
16					Boring terminated at 16 feet.

Remarks

File No. 12-99-702-SI

Logged By: Frank Hamedi	Exploratory Boring Log	Boring No. B-15
Date Drilled: 4/18/2000	Approx. Elevation	Boring Diameter 2-inch
Drilling Method: Geoprobe		Sampling Method

Depth, Ft.	Sample No.	Field Test for Total Ionization	Penetration Resistance Blows/6"	Unified Soil Classification	DESCRIPTION
1					4-inch concrete; 6-inch sandy gravel. Dark gray sandy clay, damp, stiff.
2					Dark brown silty clay, damp, stiff.
3					
4					Dark brown sandy silty with some gravel, dense, moist.
5					
6					Dark brown gravely silty sand, dense, moist.
7					Dark brown silty clay, moist, stiff.
8					
9					
10					
11	B-15-11			CL	
12	▽ Groundwater @ 12 feet				
13					Dark gray sandy silty clay, very moist, medium stiff.
14					Dark brown silty clay, moist, stiff.
15					
16					Boring terminated at 16 feet.

Remarks

ENVIRO SOIL TECH CONSULTANTS

BORING LOCATION	15595 Washington Avenue, San Lorenzo		GROUND SURFACE ELEVATION: TOP OF WELL CASING ELEVATION:
DRILLING AGENCY	Vironex, Inc.	DRILLER John McAssey	DATE STARTED: 10/24/06 DATE FINISHED: 10/24/06
DRILLING EQUIPMENT	Geoprobe		COMPLETION DEPTH (ft) 24 feet
DRILLING METHOD	Direct Push	DRILL BIT	HAMMER SAMPLER 2" Polyethylene
SIZE AND TYPE OF CASING			NUMBER OF SAMPLES BULK: DRIVE:
TYPE OF PERFORATION		FROM TO	WATER FIRST: DEPTH COMPL.: 24 hrs.
SIZE AND TYPE OF PACK		FROM TO	LOGGED BY Clyde Hebbron CHECKED BY Lawrence Koo

TYPE OF SEAL	TYPE	FR	TO	TYPE	FR	TO
	No. 1:			No. 3:		
	No. 2:			No. 4:		

LOG OF BORING 702-GP-1

DEPTH (feet)	MATERIAL DESCRIPTION	USCS	SOIL GRAPHIC	WELL GRAPHIC	PID, ppm	WATER LEVEL	DEPTH (feet)	SAMPLES: NUMBER TYPE	SAMPLES: POCKET PEN. tsf	SAMPLES: BLOWS/foot	INDEX PROPERTIES: MOISTURE CONTENT (%)	INDEX PROPERTIES: DRY DENSITY (pcf)	INDEX PROPERTIES: UNCONFINED COMPRESSIVE STRENGTH (psf)
0	Fill material.	FILL					0						
	Dark brown silt, firm.	ML											
5	Yellow-brown silty sand, loose.	SM			0		5						
	Yello-brown silty sand, loose. More clayey at 7 feet.	ML											
	Olive-gray clay (slightly plasticity) with trace of sand and cobbles.	CL											
10	Occasionally sandy/gravelly stringers.				0	▽	10	1-9					
15		ML					15						
	Olive-gray silt (slightly plasticity) with trace of sand and cobbles.							1-17					
	Olive-gray silty clay (slightly plasticity), more clayey than above.	CL-ML			0								
20	Olive-gray sand (very fine to medium grained) with trace of cobbles.	SM					20	1-21					
	Boring terminated.												
25							25						
30							30						
35							35						

12-99-702-SI	PROJECT NO. 12-99-702-SI	FIGURE:

ENVIRO SOIL TECH CONSULTANTS

BORING LOCATION	15595 Washington Avenue, San Lorenzo		GROUND SURFACE ELEVATION: TOP OF WELL CASING ELEVATION:
DRILLING AGENCY	Vironex, Inc.	DRILLER John McAssey	DATE STARTED: 10/24/06 DATE FINISHED: 10/24/06
DRILLING EQUIPMENT	Geoprobe		COMPLETION DEPTH (ft) 25 feet
DRILLING METHOD	Direct Push	DRILL BIT	HAMMER SAMPLER 2" Polyethylene
SIZE AND TYPE OF CASING			NUMBER OF SAMPLES BULK: DRIVE:
TYPE OF PERFORATION		FROM TO	WATER FIRST: DEPTH COMPL.: 24 hrs.
SIZE AND TYPE OF PACK		FROM TO	LOGGED BY Clyde Hebbron CHECKED BY Lawrence Koo

TYPE OF SEAL	TYPE	FR	TO	TYPE	FR	TO
	No. 1:			No. 3:		
	No. 2:			No. 4:		

LOG OF BORING 702-GP-2

DEPTH (feet)	MATERIAL DESCRIPTION	USCS	SOIL GRAPHIC	WELL GRAPHIC	PID, ppm	WATER LEVEL	DEPTH (feet)	SAMPLES: NUMBER TYPE	SAMPLES: POCKET PEN, tsf	SAMPLES: BLOWS/foot	INDEX PROPERTIES: MOISTURE CONTENT (%)	INDEX PROPERTIES: DRY DENSITY (pcf)	INDEX PROPERTIES: UNCONFINED COMPRESSIVE STRENGTH (psf)
0	Fill material.	FILL					0						
	Dark brown silt with fine grained sand, loose.	ML											
5	Brown sand (very fine to fine grain, good sorting), loose.	SM					5						
10						▽	10						
					50			2-13					
15	Dark gray clay (plasticity), trace of sand and cobbles, hydrocarbon odor.	CL					15						
	Dark gray sand (very fine grained), fair hydrocarbons odor.	SC			105			2-17					
20	Olive-gray plasticity clay.	CL			10		20	1-9½					
	Light brown fine to coarse grained sand.	SC			0								
25	Gravel to gravelly mix ore (grades to slightly gravelly mixture).						25	2-24					
	Boring terminated.												
30							30						
35							35						

12-99-702-SI	PROJECT NO. 12-99-702-SI	FIGURE:

ENVIRO SOIL TECH CONSULTANTS

BORING LOCATION	15595 Washington Avenue, San Lorenzo		GROUND SURFACE ELEVATION: TOP OF WELL CASING ELEVATION:
DRILLING AGENCY	Vironex, Inc.	DRILLER John McAssey	DATE STARTED: 10/24/06 DATE FINISHED: 10/24/06
DRILLING EQUIPMENT	Geoprobe		COMPLETION DEPTH (ft) 24 feet
DRILLING METHOD	Direct Push	DRILL BIT	HAMMER SAMPLER 2" Polyethylene
SIZE AND TYPE OF CASING			NUMBER OF SAMPLES BULK: DRIVE:
TYPE OF PERFORATION		FROM TO	WATER FIRST: DEPTH COMPL.: 24 hrs.
SIZE AND TYPE OF PACK		FROM TO	LOGGED BY Clyde Hebbron CHECKED BY Lawrence Koo

TYPE OF SEAL	TYPE	FR	TO	TYPE	FR	TO
	No. 1:			No. 3:		
	No. 2:			No. 4:		

LOG OF BORING 702-GP-3

DEPTH (feet)	MATERIAL DESCRIPTION	USCS	SOIL GRAPHIC	WELL GRAPHIC	PID, ppm	WATER LEVEL	DEPTH (feet)	SAMPLES: NUMBER TYPE	SAMPLES: POCKET PEN, tsf	SAMPLES: BLOWS/foot	INDEX PROPERTIES: MOISTURE CONTENT (%)	INDEX PROPERTIES: DRY DENSITY (pcf)	INDEX PROPERTIES: UNCONFINED COMPRESSIVE STRENGTH (psf)
0	Fill material.	FILL					0						
	Dark gray clayey sand with trace of cobbles.	SC											
5	Light brown sand (fine medium grain, well-sorted), loose.	SP			5		5	3-7					
10	Dark gray clay (slighlly plasticity).	CL			5		10						
	Light brown silty clayey sand (very fine grain).	SC-SM											
15	Dark gray clay (slightly plasticity) with trace of sand and cobbles.	CL					15	3-14					
	Brown sand (fine to medium grain, well sorted). Low sample recovery.	SP											
20							20						
	Boring terminated.							3-23					
25							25						
30							30						
35							35						

12-99-702-SI	PROJECT NO. 12-99-702-SI	FIGURE:

ENVIRO SOIL TECH CONSULTANTS

BORING LOCATION	15595 Washington Avenue, San Lorenzo			GROUND SURFACE ELEVATION: TOP OF WELL CASING ELEVATION:	
DRILLING AGENCY	Vironex, Inc.	DRILLER	John McAssey	DATE STARTED: 10/24/06 DATE FINISHED: 10/24/06	
DRILLING EQUIPMENT	Geoprobe			COMPLETION DEPTH (ft)	32 feet
DRILLING METHOD	Direct Push	DRILL BIT		HAMMER	SAMPLER 2" Polyethylene
SIZE AND TYPE OF CASING				NUMBER OF SAMPLES	BULK: DRIVE:
TYPE OF PERFORATION		FROM	TO	WATER FIRST: DEPTH	COMPL.: 24 hrs.
SIZE AND TYPE OF PACK		FROM	TO	LOGGED BY Clyde Hebbron	CHECKED BY Lawrence Koo

TYPE OF SEAL	TYPE	FR	TO	TYPE	FR	TO
	No. 1:			No. 3:		
	No. 2:			No. 4:		

LOG OF BORING 702-GP-4

DEPTH (feet)	MATERIAL DESCRIPTION	USCS	SOIL GRAPHIC	WELL GRAPHIC	PID, ppm	WATER LEVEL	DEPTH (feet)	SAMPLES NUMBER TYPE	SAMPLES POCKET PEN, tsf	SAMPLES BLOWS/foot	INDEX PROPERTIES MOISTURE CONTENT (%)	INDEX PROPERTIES DRY DENSITY (pcf)	INDEX PROPERTIES UNCONFINED COMPRESSIVE STRENGTH (psf)
0	Fill material.	FILL					0						
	Dark gray gravelly clay (low plasticity).	CL											
5	DArk gray gravelly clay (low plasticity) , less gravel and more coarse sand.				60		5	4-7 4-8					
10	Dark gray clayey sand (fine to coarse grain), hydrocarbon odor. Strong hydrocarbon odor at contact.	SC					10						
	Dark gray clay (slightly plasticity), slightly hydrocarbon odor.	CL			1500			4-14					
15					5		15						
	Dark gray sandy (very fine) clayey (low plasticity) silt.	ML											
	Dark gray sand (very fine to medium grain), hydrocarbon odor.	SC											
20					80		20	4-19					
	Brown sand (fine-grained, well-sorted).	SP			5			4-23½					
25	Light brown clay (slightly plasticity).	CL					25	4-27					
30	Light brown clayey sand (very fine to fine grain).	SC			0		30	4-31					
	Boring terminated.												
35							35						

12-99-702-SI	PROJECT NO. 12-99-702-SI	FIGURE:

ENVIRO SOIL TECH CONSULTANTS

BORING LOCATION	15595 Washington Avenue, San Lorenzo		GROUND SURFACE ELEVATION: TOP OF WELL CASING ELEVATION:
DRILLING AGENCY	Vironex, Inc.	DRILLER John McAssey	DATE STARTED: 10/24/06 DATE FINISHED: 10/24/06
DRILLING EQUIPMENT	Geoprobe		COMPLETION DEPTH (ft) 25 feet
DRILLING METHOD	Direct Push	DRILL BIT	HAMMER SAMPLER 2" Polyethylene
SIZE AND TYPE OF CASING			NUMBER OF SAMPLES BULK: DRIVE:
TYPE OF PERFORATION		FROM TO	WATER FIRST: DEPTH COMPL.: 24 hrs.
SIZE AND TYPE OF PACK		FROM TO	LOGGED BY Clyde Hebbron CHECKED BY Lawrence Koo

TYPE OF SEAL	TYPE	FR	TO	TYPE	FR	TO
	No. 1:			No. 3:		
	No. 2:			No. 4:		

LOG OF BORING 702-GP-5

DEPTH (feet)	MATERIAL DESCRIPTION	USCS	SOIL GRAPHIC	WELL GRAPHIC	PID, ppm	WATER LEVEL	DEPTH (feet)	SAMPLES: NUMBER TYPE	SAMPLES: POCKET PEN, tsf	SAMPLES: BLOWS/foot	INDEX PROPERTIES: MOISTURE CONTENT (%)	INDEX PROPERTIES: DRY DENSITY (pcf)	INDEX PROPERTIES: UNCONFINED COMPRESSIVE STRENGTH (psf)
0	Fill material.	FILL					0						
	Dark gray silty sand.	SM											
5	Dark brown sand (fine to medium grain, well sorted), coarse downward.	SP					5						
	Slightly clayey, sandy gravel.	GC						5-9					
10	Dark gray clay (slightly plasticity).	CL					10						
	Gray-brown clayey sand (very fine to fine grained).	SC			0			5-14					
15							15						
	Dark gray clay (low plasticity).	CL											
20	Gray-brown silt with trace of coarse sand and cobbles.	ML					20						
	Light brown fine grained sand.	SP						5-24					
25	Boring terminated.						25						
30							30						
35							35						

12-99-702-SI	PROJECT NO. 12-99-702-SI	FIGURE:

ENVIRO SOIL TECH CONSULTANTS

BORING LOCATION	15595 Washington Avenue, San Lorenzo		GROUND SURFACE ELEVATION: TOP OF WELL CASING ELEVATION:
DRILLING AGENCY	Vironex, Inc.	DRILLER John McAssey	DATE STARTED: 10/24/06 DATE FINISHED: 10/24/06
DRILLING EQUIPMENT	Geoprobe		COMPLETION DEPTH (ft) 24 feet
DRILLING METHOD	Direct Push	DRILL BIT	HAMMER SAMPLER 2" Polyethylene
SIZE AND TYPE OF CASING			NUMBER OF SAMPLES BULK: DRIVE:
TYPE OF PERFORATION		FROM TO	WATER FIRST: DEPTH COMPL.: 24 hrs.
SIZE AND TYPE OF PACK		FROM TO	LOGGED BY Clyde Hebbron CHECKED BY Lawrence Koo

TYPE OF SEAL	TYPE	FR	TO	TYPE	FR	TO
	No. 1:			No. 3:		
	No. 2:			No. 4:		

LOG OF BORING 702-GP-6

DEPTH (feet)	MATERIAL DESCRIPTION	USCS	SOIL GRAPHIC	WELL GRAPHIC	PID, ppm	WATER LEVEL	DEPTH (feet)	SAMPLES: NUMBER TYPE	SAMPLES: POCKET PEN, tsf	SAMPLES: BLOWS/foot	INDEX PROPERTIES: MOISTURE CONTENT (%)	INDEX PROPERTIES: DRY DENSITY (pcf)	INDEX PROPERTIES: UNCONFINED COMPRESSIVE STRENGTH (psf)
0	Fill material.	FILL					0						
	Clayey sand (very fine to fine-grain).	SC											
5							5	6-6					
	Dark gray clay (slightly plasticity) with trace of sand.	CL											
10							10	6-11½					
	Light brown sand (fine to medium grain, moderately well-sorted), loose.	SC			0								
15							15						
	Gray-brown silt (firm, non-plasticity) with some sand.	ML											
20							20	6-18					
	Brown very clayey sand (fine to fine-grained), loose.	SC											
								6-23					
25	Boring terminated.						25						
30							30						
35							35						

12-99-702-SI	PROJECT NO. 12-99-702-SI	FIGURE:

ENVIRO SOIL TECH CONSULTANTS

BORING LOCATION	15595 Washington Avenue, San Lorenzo		GROUND SURFACE ELEVATION: TOP OF WELL CASING ELEVATION:
DRILLING AGENCY	Vironex, Inc.	DRILLER John McAssey	DATE STARTED: 10/24/06 DATE FINISHED: 10/24/06
DRILLING EQUIPMENT	Geoprobe		COMPLETION DEPTH (ft) 25 feet
DRILLING METHOD	Direct Push	DRILL BIT	HAMMER SAMPLER 2" Polyethylene
SIZE AND TYPE OF CASING			NUMBER OF SAMPLES BULK: DRIVE:
TYPE OF PERFORATION		FROM TO	WATER FIRST: DEPTH COMPL.: 24 hrs.
SIZE AND TYPE OF PACK		FROM TO	LOGGED BY Clyde Hebbron CHECKED BY Lawrence Koo

TYPE OF SEAL	TYPE	FR	TO	TYPE	FR	TO
	No. 1:			No. 3:		
	No. 2:			No. 4:		

LOG OF BORING 702-GP-7

DEPTH (feet)	MATERIAL DESCRIPTION	USCS	SOIL GRAPHIC	WELL GRAPHIC	PID, ppm	WATER LEVEL	DEPTH (feet)	SAMPLES: NUMBER TYPE	SAMPLES: POCKET PEN, tsf	SAMPLES: BLOWS/foot	INDEX PROPERTIES: MOISTURE CONTENT (%)	INDEX PROPERTIES: DRY DENSITY (pcf)	INDEX PROPERTIES: UNCONFINED COMPRESSIVE STRENGTH (psf)
0	Fill material.	FILL					0						
	Dark gray clay (non-plasticity).	ML											
5	Gray sand (fine to medium grain, good sorted) with trace of cobbles, loose.	SP			0		5						
10	Dark gray clay (slightly plasticity), slight hydrocarbon odor.	CL			5		10	7-9 7-12					
15	Brown sand (fine to medium-grain, well-sorted). Low recovery.	SP			0		15						
20	Dark gray clay, moderate gravel, hydrocarbon odor. Graded to at 22 feet.	CL			25 70		20	7-21					
		ML											
	Brown sand (fine to coarse-grain, fairly sorted).	SP			0			7-24					
25	Boring terminated.						25						
30							30						
35							35						

12-99-702-SI	PROJECT NO. 12-99-702-SI	FIGURE:

ENVIRO SOIL TECH CONSULTANTS

BORING LOCATION	15595 Washington Avenue, San Lorenzo		GROUND SURFACE ELEVATION: TOP OF WELL CASING ELEVATION:
DRILLING AGENCY	Vironex, Inc.	DRILLER John McAssey	DATE STARTED: 10/24/06 DATE FINISHED: 10/24/06
DRILLING EQUIPMENT	Geoprobe		COMPLETION DEPTH (ft) 25 feet
DRILLING METHOD	Direct Push	DRILL BIT	HAMMER SAMPLER 2" Polyethylene
SIZE AND TYPE OF CASING			NUMBER OF SAMPLES BULK: DRIVE:
TYPE OF PERFORATION		FROM TO	WATER FIRST: DEPTH COMPL.: 24 hrs.
SIZE AND TYPE OF PACK		FROM TO	LOGGED BY Clyde Hebbron CHECKED BY Lawrence Koo

TYPE OF SEAL	TYPE	FR	TO	TYPE	FR	TO
	No. 1:			No. 3:		
	No. 2:			No. 4:		

LOG OF BORING 702-GP-8

DEPTH (feet)	MATERIAL DESCRIPTION	USCS	SOIL GRAPHIC	WELL GRAPHIC	PID, ppm	WATER LEVEL	DEPTH (feet)	SAMPLES NUMBER TYPE	SAMPLES POCKET PEN, tsf	SAMPLES BLOWS/foot	INDEX PROPERTIES MOISTURE CONTENT (%)	INDEX PROPERTIES DRY DENSITY (pcf)	INDEX PROPERTIES UNCONFINED COMPRESSIVE STRENGTH (psf)
0	Fill material.	FILL					0						
	Dark brown silt with trace of cobbles.	ML			0								
5							5						
10	Gray clayey sand (very fine grained).	SC			0		10	8-10					
15	Numerous thin (6" to 12") alterating silt and very fine sand.	ML			5		15	8-15					
		SC			0								
20							20						
	Gray-brown clay, 10" sand stringer at 22 feet.	CL			0			8-22					
25	Boring terminated.						25						
30							30						
35							35						

12-99-702-SI	PROJECT NO. 12-99-702-SI	FIGURE:

ENVIRO SOIL TECH CONSULTANTS

BORING LOCATION	15595 Washington Avenue, San Lorenzo		GROUND SURFACE ELEVATION: TOP OF WELL CASING ELEVATION:
DRILLING AGENCY	Vironex, Inc.	DRILLER John McAssey	DATE STARTED: 4/05/07 DATE FINISHED: 4/05/07
DRILLING EQUIPMENT	Geoprobe		COMPLETION DEPTH (ft) 22 feet
DRILLING METHOD	Direct Push	DRILL BIT	HAMMER SAMPLER 2" Polyethylene
SIZE AND TYPE OF CASING	2-inch PVC Schedule 40		NUMBER OF SAMPLES BULK: 4 DRIVE:
TYPE OF PERFORATION	0.020-inch PVC Schedule 40	FROM 7 feet TO 22 feet	WATER FIRST: DEPTH COMPL.: 24 hrs.
SIZE AND TYPE OF PACK	Sand #2/12	FROM 6 feet TO 22 feet	LOGGED BY Frank Hamedi CHECKED BY Lawrence Koo

TYPE OF SEAL	TYPE	FR	TO	TYPE	FR	TO
	No. 1: Cement	0 foot	5 feet	No. 3:		
	No. 2: Bentonite	5 feet	6 feet	No. 4:		

LOG OF BORING STMW-6

DEPTH (feet)	MATERIAL DESCRIPTION	USCS	SOIL GRAPHIC	WELL GRAPHIC	PID, ppm	WATER LEVEL	DEPTH (feet)	SAMPLES: NUMBER TYPE	SAMPLES: POCKET PEN. tsf	SAMPLES: BLOWS/foot	INDEX PROPERTIES: MOISTURE CONTENT (%)	INDEX PROPERTIES: DRY DENSITY (pcf)	INDEX PROPERTIES: UNCONFINED COMPRESSIVE STRENGTH (psf)
0	4-inch Asphalt.						0						
	Brown gravely Sand, dense, moist.	SP											
	Brown silty Sand, damp, dense.	SM-ML											
5	Dark brown well-graded Sand (miner pea gravel), moist, dense.	SW					5	6-5'					
	Dark brown silty Clay.	CL-ML											
	Dark brown silty Clay.	CL-ML											
	Chocolate-brown silty Clay (high PI), moist, stiff.	CH											
10	Brown sandy Silt (very fine sand), moist, stiff.	ML				▽	10	6-10					
	Dark brown silty Clay (medium PI), moist, stiff.	CL-CH											
15	Very dark brown silty Clay (high PI), very stiff, moist.	CH					15	6-15					
	Yellowish-brown silty Clay with miner gravel, very stiff, moist.	CL-ML											
20	Boring terminated.						20	6-20					
25							25						
30							30						
35							35						

ENVIRO SOIL TECH CONSULTANTS

BORING LOCATION	15595 Washington Avenue, San Lorenzo		GROUND SURFACE ELEVATION: TOP OF WELL CASING ELEVATION:
DRILLING AGENCY	Vironex, Inc.	DRILLER John McAssey	DATE STARTED: 4/04/07 DATE FINISHED: 4/04/07
DRILLING EQUIPMENT	Geoprobe		COMPLETION DEPTH (ft) 22 feet
DRILLING METHOD	Direct Push	DRILL BIT	HAMMER SAMPLER 2" Polyethylene
SIZE AND TYPE OF CASING	2-inch PVC Schedule 40		NUMBER OF SAMPLES BULK: 4 DRIVE:
TYPE OF PERFORATION	0.020-inch PVC Schedule 40	FROM 7 feet TO 22 feet	WATER FIRST: DEPTH COMPL.: 24 hrs.
SIZE AND TYPE OF PACK	Sand #2/12	FROM 6 feet TO 22 feet	LOGGED BY Frank Hamedi CHECKED BY Lawrence Koo

TYPE OF SEAL	TYPE	FR	TO	TYPE	FR	TO
	No. 1: Cement	0 foot	5 feet	No. 3:		
	No. 2: Bentonite	5 feet	6 feet	No. 4:		

LOG OF BORING STMW-7

DEPTH (feet)	MATERIAL DESCRIPTION	USCS	SOIL GRAPHIC	WELL GRAPHIC	PID, ppm	WATER LEVEL	DEPTH (feet)	SAMPLES: NUMBER TYPE	SAMPLES: POCKET PEN, tsf	SAMPLES: BLOWS/foot	INDEX PROPERTIES: MOISTURE CONTENT (%)	INDEX PROPERTIES: DRY DENSITY (pcf)	INDEX PROPERTIES: UNCONFINED COMPRESSIVE STRENGTH (psf)
0	4-inch Concrete.						0						
	Dark brown sandy Gravel, dense, moist.	GP											
	Dark brown gravely silty Sand, dense, moist.	SM											
5	Light brown silty Sand, dense, moist.	SM					5	7-5					
	Dark brown silty Clay, moist, stiff.	CL-ML											
10	Brownish-gray sandy Silt (very fine sand), moist, dense.	ML					10	7-10					
	Dark brown silty Clay, moist, very stiff.	CL-ML											
15	Light brown clayey sandy Silt, moist, very dense.	ML					15	7-15					
	Dark brown silty Clay (high PI), moist, stiff.	CH											
20	Boring terminated.						20	7-20					
25							25						
30							30						
35							35						

12-99-702-SI	PROJECT NO. 12-99-702-SI	FIGURE:

ENVIRO SOIL TECH CONSULTANTS

BORING LOCATION	15595 Washington Avenue, San Lorenzo		GROUND SURFACE ELEVATION: TOP OF WELL CASING ELEVATION:
DRILLING AGENCY	Vironex, Inc.	DRILLER John McAssey	DATE STARTED: 4/04/07 DATE FINISHED: 4/04/07
DRILLING EQUIPMENT	Geoprobe		COMPLETION DEPTH (ft) 23 feet
DRILLING METHOD	Direct Push	DRILL BIT	HAMMER SAMPLER 2" Polyethylene
SIZE AND TYPE OF CASING	2-inch PVC Schedule 40		NUMBER OF SAMPLES BULK: 4 DRIVE:
TYPE OF PERFORATION	0.020-inch PVC Schedule 40	FROM 8 feet TO 23 feet	WATER FIRST: DEPTH COMPL.: 24 hrs.
SIZE AND TYPE OF PACK	Sand #2/12	FROM 7 feet TO 23 feet	LOGGED BY Frank Hamedi CHECKED BY Lawrence Koo

TYPE OF SEAL	TYPE	FR	TO	TYPE	FR	TO
	No. 1: Cement	0 foot	6 feet	No. 3:		
	No. 2: Bentonite	6 feet	7 feet	No. 4:		

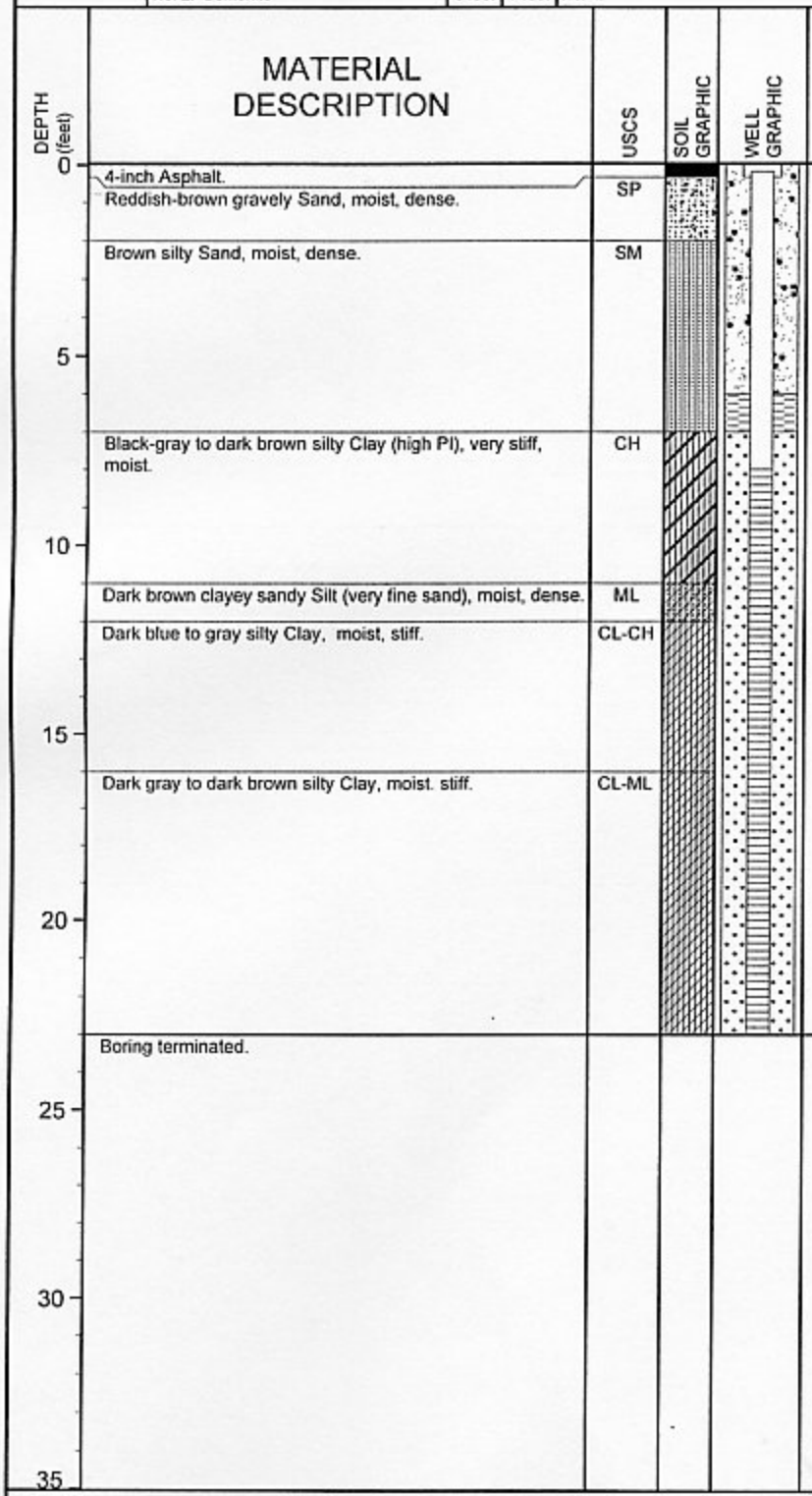
LOG OF BORING STMW-8

DEPTH (feet)	MATERIAL DESCRIPTION	USCS
0	4-inch Asphalt.	
	Reddish-brown gravely Sand, moist, dense.	SP
	Brown silty Sand, moist, dense.	SM
5		
	Black-gray to dark brown silty Clay (high PI), very stiff, moist.	CH
10		
	Dark brown clayey sandy Silt (very fine sand), moist, dense.	ML
	Dark blue to gray silty Clay, moist, stiff.	CL-CH
15		
	Dark gray to dark brown silty Clay, moist. stiff.	CL-ML
20		
	Boring terminated.	
25		
30		
35		

SOIL GRAPHIC | WELL GRAPHIC | PID, ppm | WATER LEVEL | DEPTH (feet)

SAMPLES: NUMBER TYPE | POCKET PEN, tsf | BLOWS/foot

INDEX PROPERTIES: MOISTURE CONTENT (%) | DRY DENSITY (pcf) | UNCONFINED COMPRESSIVE STRENGTH (psf)



12-99-702-SI	PROJECT NO. 12-99-702-SI	FIGURE:

ENVIRO SOIL TECH CONSULTANTS

BORING LOCATION	15595 Washington Avenue, San Lorenzo		GROUND SURFACE ELEVATION: TOP OF WELL CASING ELEVATION:
DRILLING AGENCY	Vironex, Inc.	DRILLER John McAssey	DATE STARTED: 4/05/07 DATE FINISHED: 4/05/07
DRILLING EQUIPMENT	Geoprobe		COMPLETION DEPTH (ft) 22 feet
DRILLING METHOD	Direct Push	DRILL BIT	HAMMER SAMPLER 2" Polyethylene
SIZE AND TYPE OF CASING	2-inch PVC Schedule 40		NUMBER OF SAMPLES BULK: 4 DRIVE:
TYPE OF PERFORATION	0.020-inch PVC Schedule 40	FROM 7 feet TO 22 feet	WATER FIRST: DEPTH COMPL.: 24 hrs.
SIZE AND TYPE OF PACK	Sand #2/12	FROM 6 feet TO 22 feet	LOGGED BY Frank Hamedi CHECKED BY Lawrence Koo

TYPE OF SEAL	TYPE	FR	TO	TYPE	FR	TO
	No. 1: Cement	0 foot	5 feet	No. 3:		
	No. 2: Bentonite	5 feet	6 feet	No. 4:		

LOG OF BORING STMW-9

DEPTH (feet)	MATERIAL DESCRIPTION	USCS	SOIL GRAPHIC	WELL GRAPHIC	PID, ppm	WATER LEVEL	DEPTH (feet)	SAMPLES: NUMBER TYPE	SAMPLES: POCKET PEN, tsf	SAMPLES: BLOWS/foot	INDEX PROPERTIES: MOISTURE CONTENT (%)	INDEX PROPERTIES: DRY DENSITY (pcf)	INDEX PROPERTIES: UNCONFINED COMPRESSIVE STRENGTH (psf)
0	4-inch Concrete.						0						
	Brown gravely silty Sand with pea gravel (well-graded), moist, dense.	SW											
	Light brown well-graded Sand, moist, dense.	SW											
5							5	9-5					
	Dark brown silty Clay (high PI), moist, stiff.	CH											
10							10	9-10					
	Brown Clayey Silt, moist, stiff.	ML											
15							15	9-15					
	Dark gray to brown sandy silty Clay, wet, stiff.	CL-ML											
	Gray/light brown silty Clay with few sandstone, moist, very stiff.	CL-ML											
20	Yellowish-brown gravely sandy Clay, stiff, moist.	CL					20	9-20					
	Boring terminated.												
25							25						
30							30						
35							35						

12-99-702-SI	PROJECT NO. 12-99-702-SI	FIGURE:

ENVIRO SOIL TECH CONSULTANTS

BORING LOCATION	15595 Washington Avenue, San Lorenzo		GROUND SURFACE ELEVATION: TOP OF WELL CASING ELEVATION:
DRILLING AGENCY	Vironex, Inc.	DRILLER John McAssey	DATE STARTED: 4/05/07 DATE FINISHED: 4/05/07
DRILLING EQUIPMENT	Geoprobe		COMPLETION DEPTH (ft) 22 feet
DRILLING METHOD	Direct Push	DRILL BIT	HAMMER SAMPLER 2" Polyethylene
SIZE AND TYPE OF CASING	2-inch PVC Schedule 40		NUMBER OF SAMPLES BULK: 4 DRIVE:
TYPE OF PERFORATION	0.020-inch PVC Schedule 40	FROM 7 feet TO 22 feet	WATER FIRST: DEPTH COMPL.: 24 hrs.
SIZE AND TYPE OF PACK	Sand #2/12	FROM 6 feet TO 22 feet	LOGGED BY Frank Hamedi CHECKED BY Lawrence Koo

TYPE OF SEAL	TYPE	FR	TO	TYPE	FR	TO
	No. 1: Cement	0 feet	5 feet	No. 3:		
	No. 2: Bentonite	5 feet	6 feet	No. 4:		

LOG OF BORING STMW-10

DEPTH (feet)	MATERIAL DESCRIPTION	USCS
0	4-inch Asphalt.	
	Dark brown gravely Sand, dense, moist.	SP
	Light brown silty Sand (very fine sand), dense, moist.	SM-ML
5	Brown well-graded Sand, dense, moist.	SW
	Light brown silty Clay, moist, stiff.	CL-ML
	Dark brown silty Clay (high PI), very stiff, less moist.	CH
10		
	Chocolate-brown silty Clay (high PI), very stiff, moist.	CH
15	Light brown silty Clay with miner sand, wet, stiff.	CH
	Yellowish-brown silty Clay with miner gravel, moist, stiff.	CL-ML
20		
	Boring terminated.	
25		
30		
35		

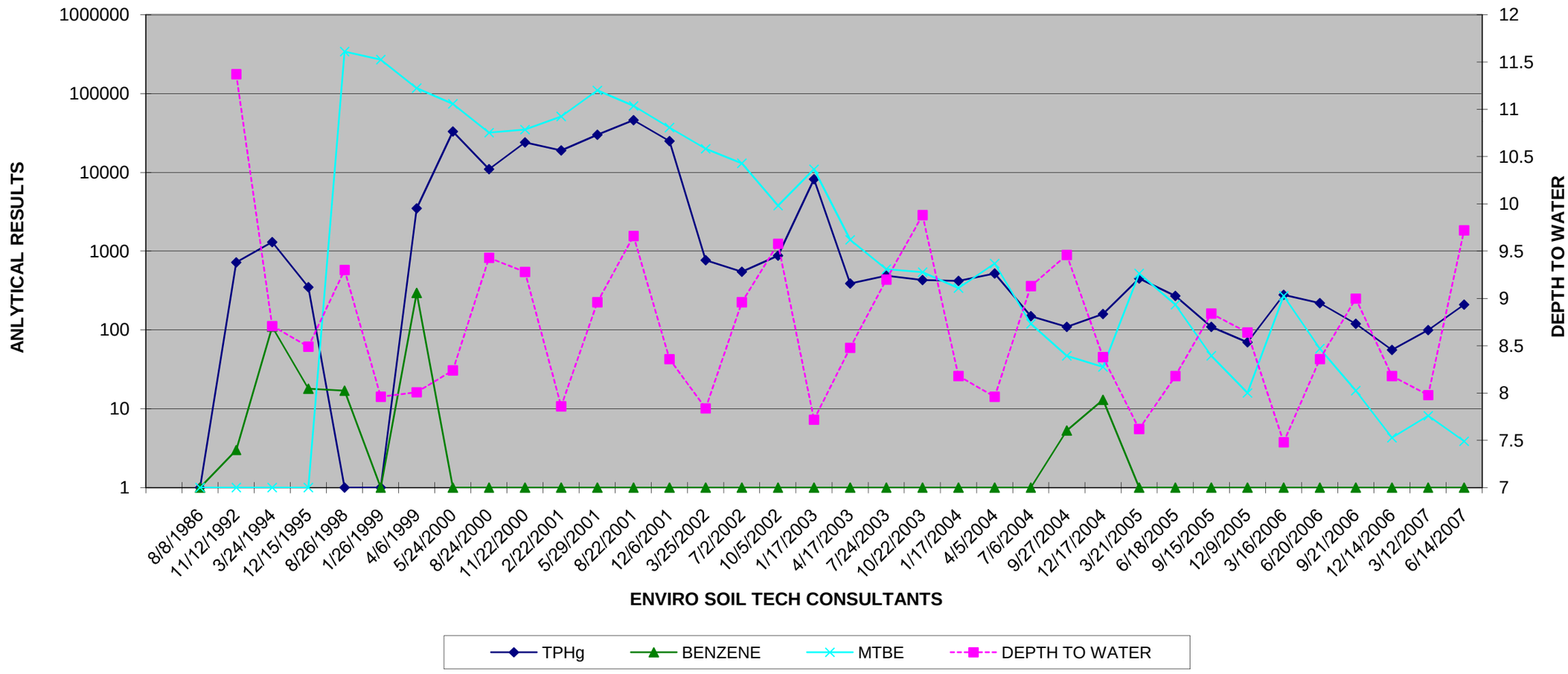
SOIL GRAPHIC | WELL GRAPHIC | PID, ppm | WATER LEVEL

DEPTH (feet)	SAMPLES: NUMBER TYPE	POCKET PEN, tsf	BLOWS/foot	INDEX PROPERTIES: MOISTURE CONTENT (%)	DRY DENSITY (pcf)	UNCONFINED COMPRESSIVE STRENGTH (psf)
0						
5	10-5					
10	10-10					
15	10-15					
20	10-20					
25						
30						
35						

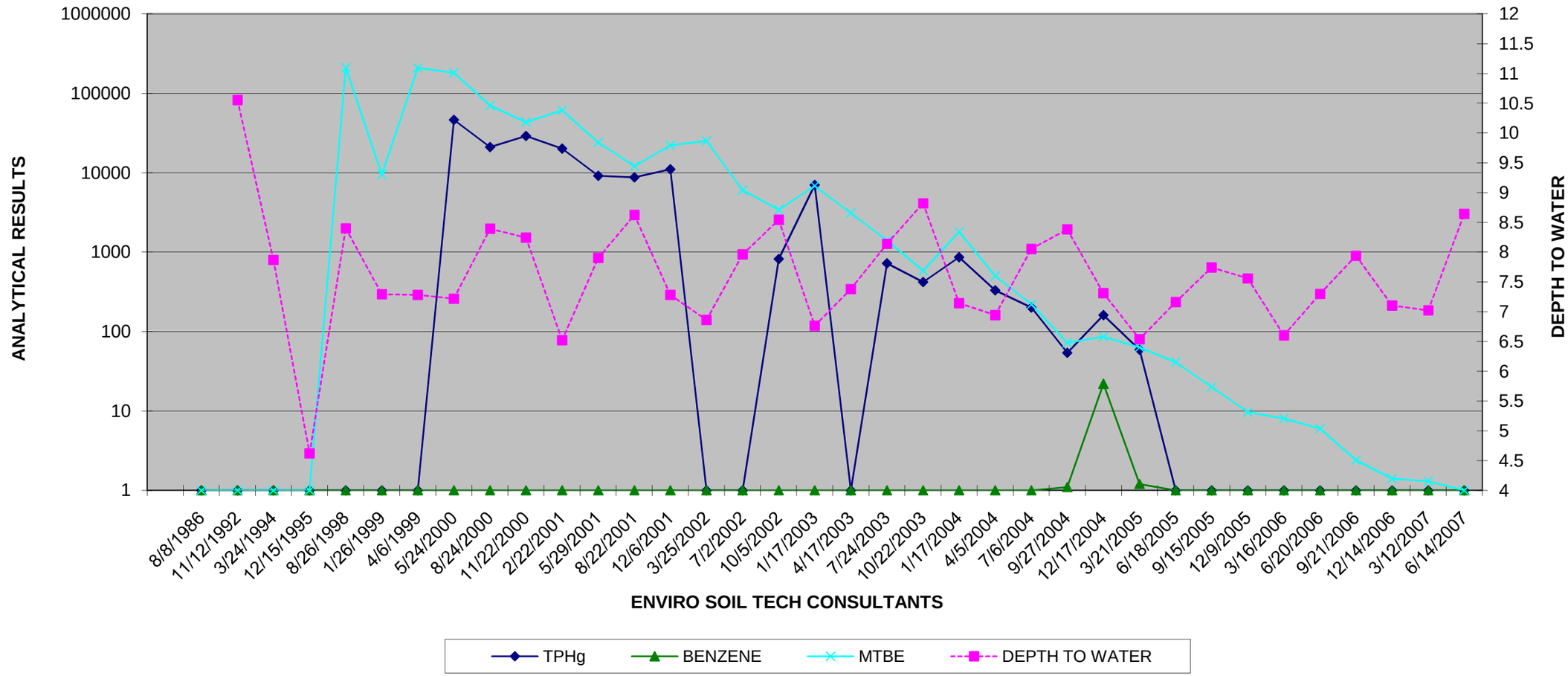
A P P E N D I X "D"

HYDROGRAPHS

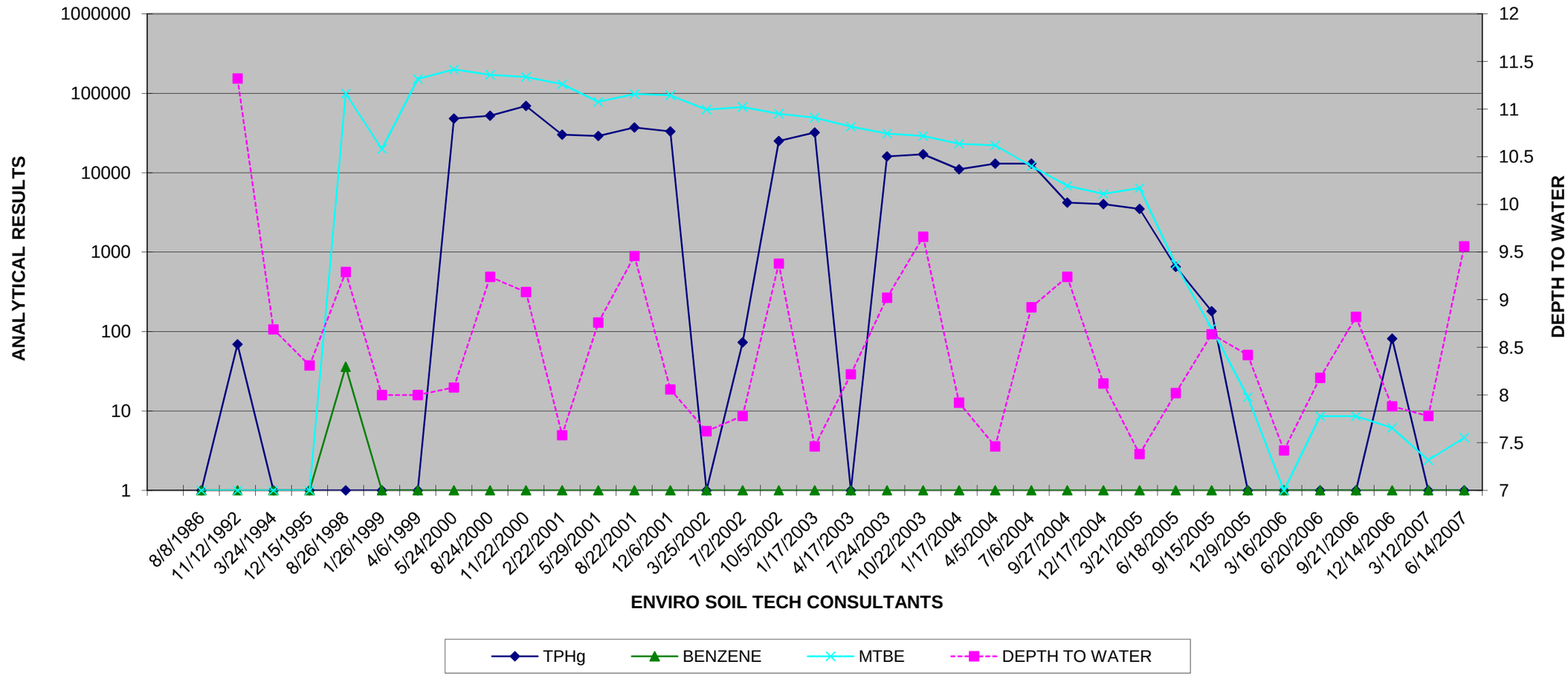
File No.: 12-99-702-SI
TPHg, BENZENE & MTBE FOR MW-1 (µg/L)
AND DEPTH TO WATER MEASUREMENT (Feet)



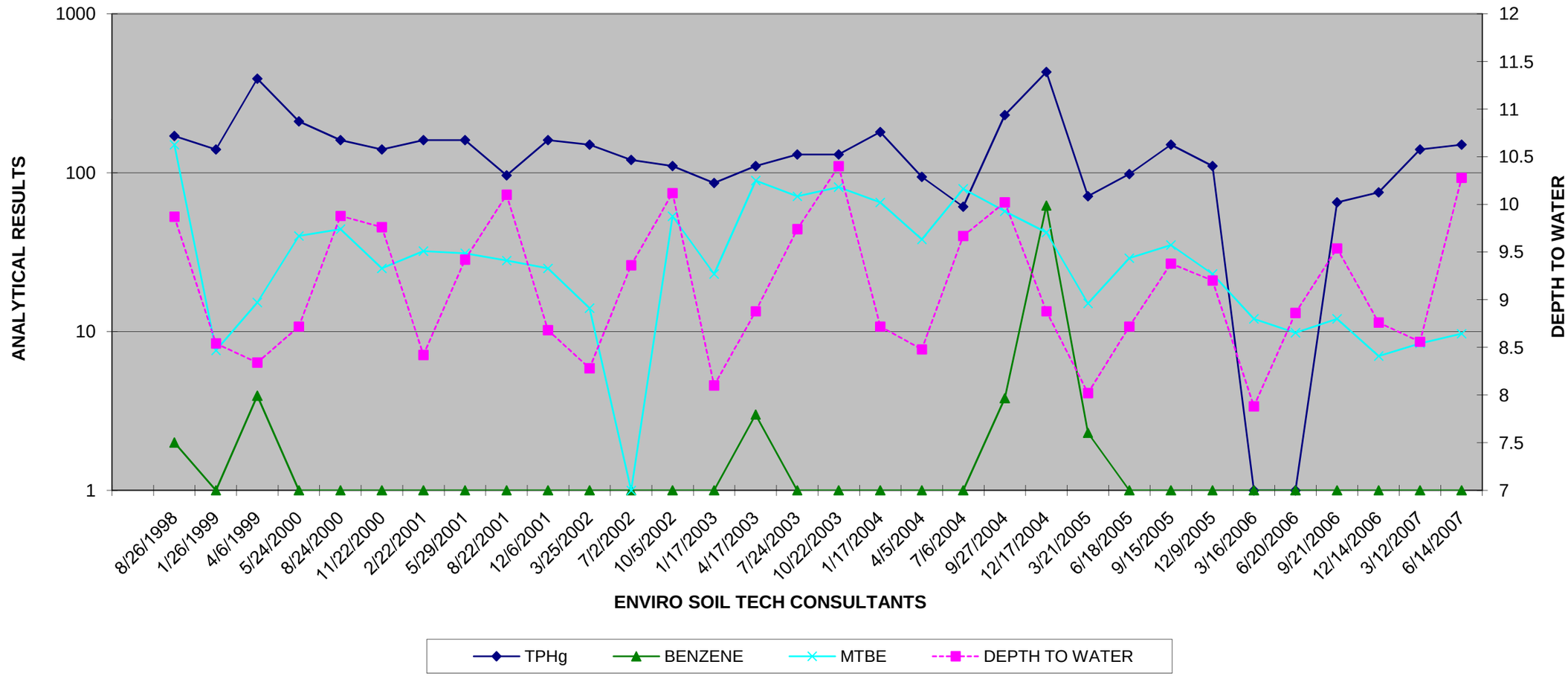
File No.: 12-99-702-SI
TPHg, BENZENE & MTBE RESULTS FOR MW-2 (µg/L)
AND DEPTH TO WATER MEASUREMENT (Feet)



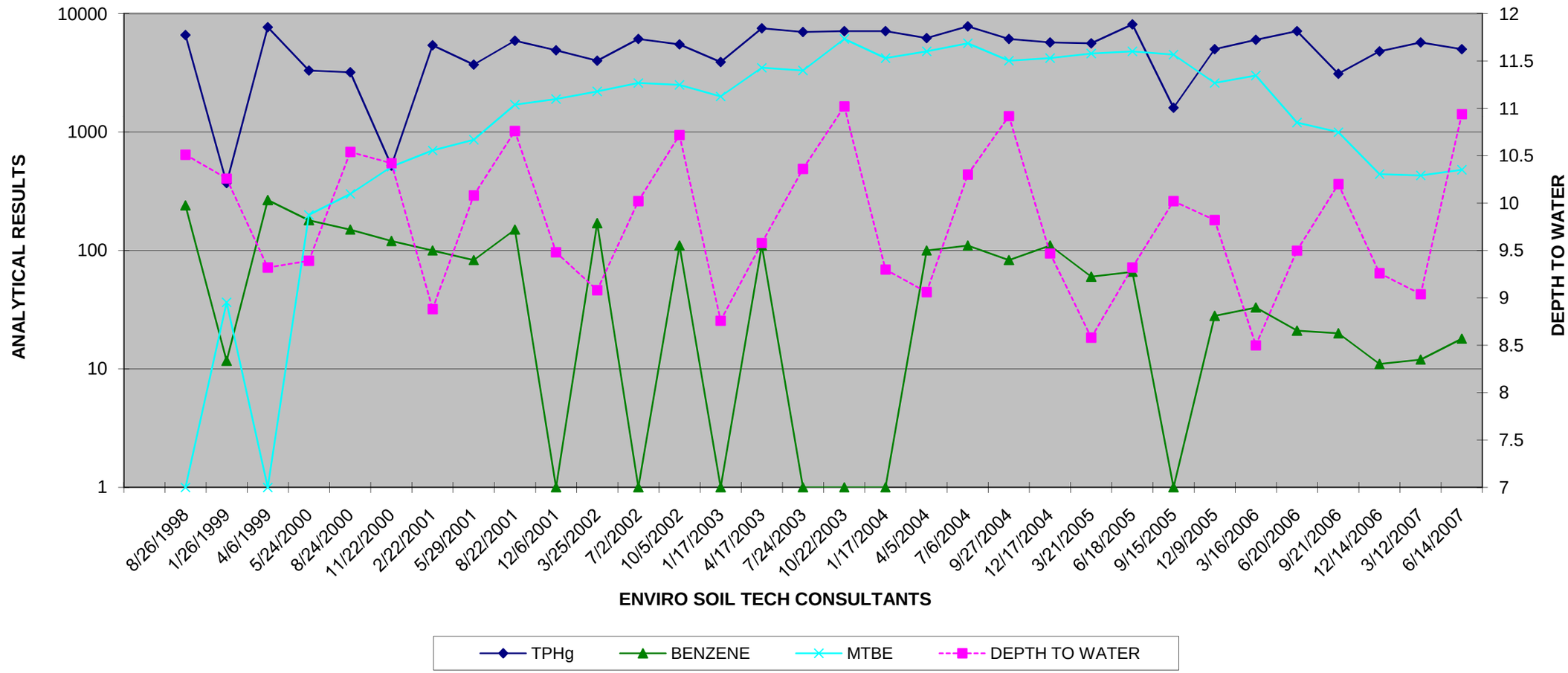
File No.: 12-99-702-SI
TPHg, BENZENE & MTBE RESULTS FOR MW-3 (µg/L)
AND DEPTH TO WATER MEASUREMENT (Feet)



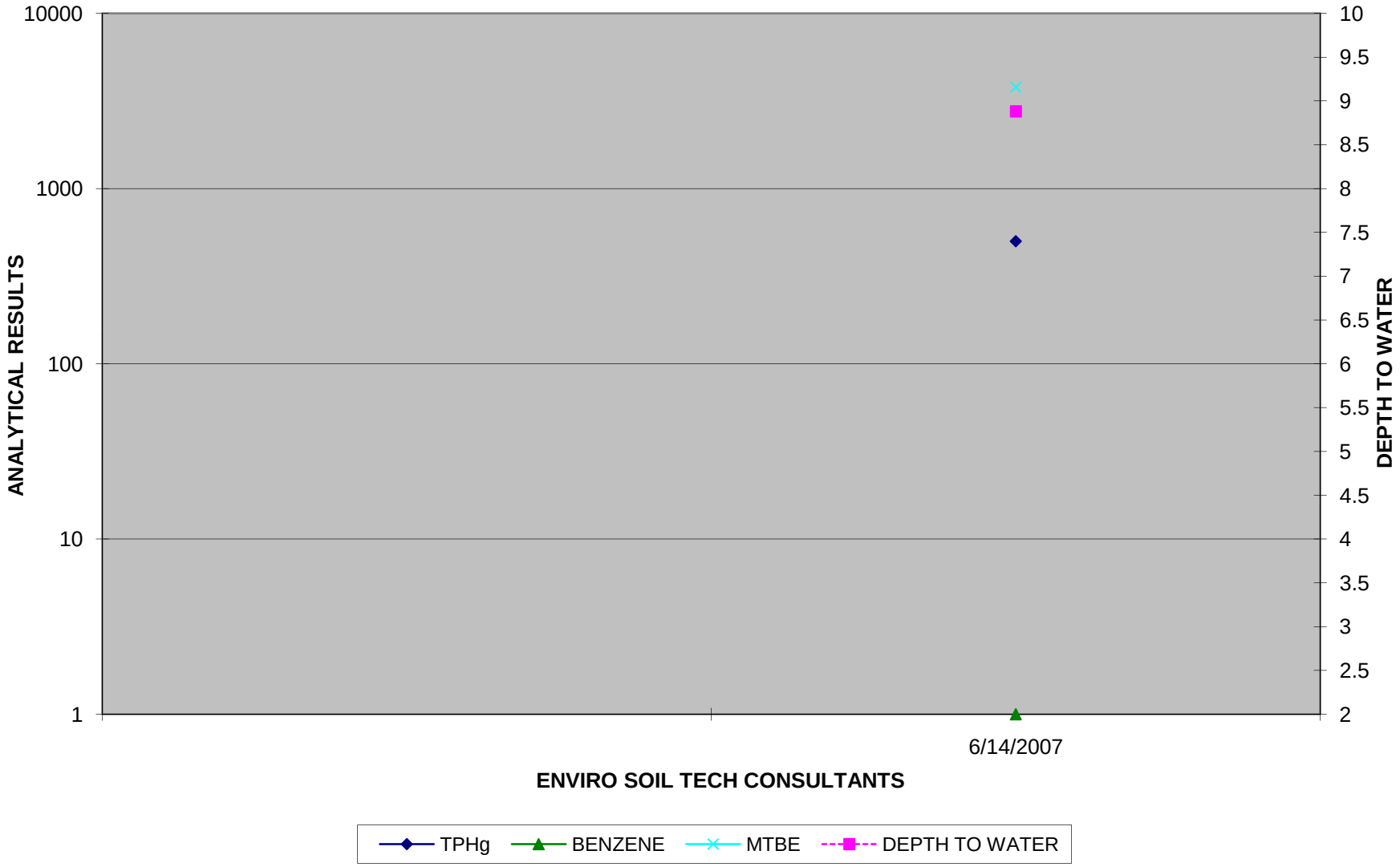
File No.: 12-99-702-SI
TPHg, BENZENE & MTBE RESULTS FOR MW-4 (µg/L)
AND DEPTH TO WATER MEASUREMENT (Feet)



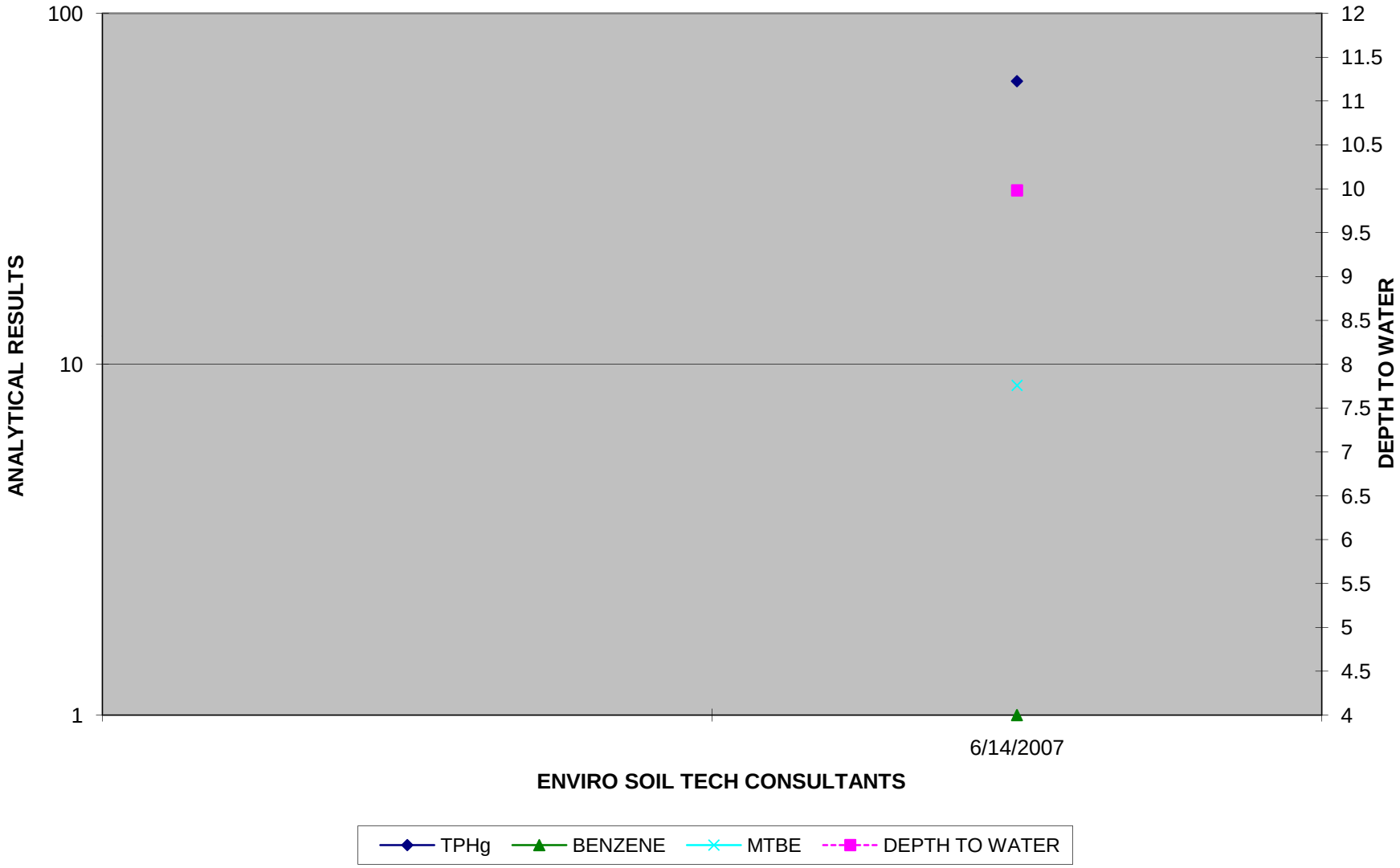
File No.: 12-99-702-SI
TPHg, BENZENE & MTBE RESULTS FOR MW-5 (µg/L)
AND DEPTH TO WATER MEASUREMENT (Feet)



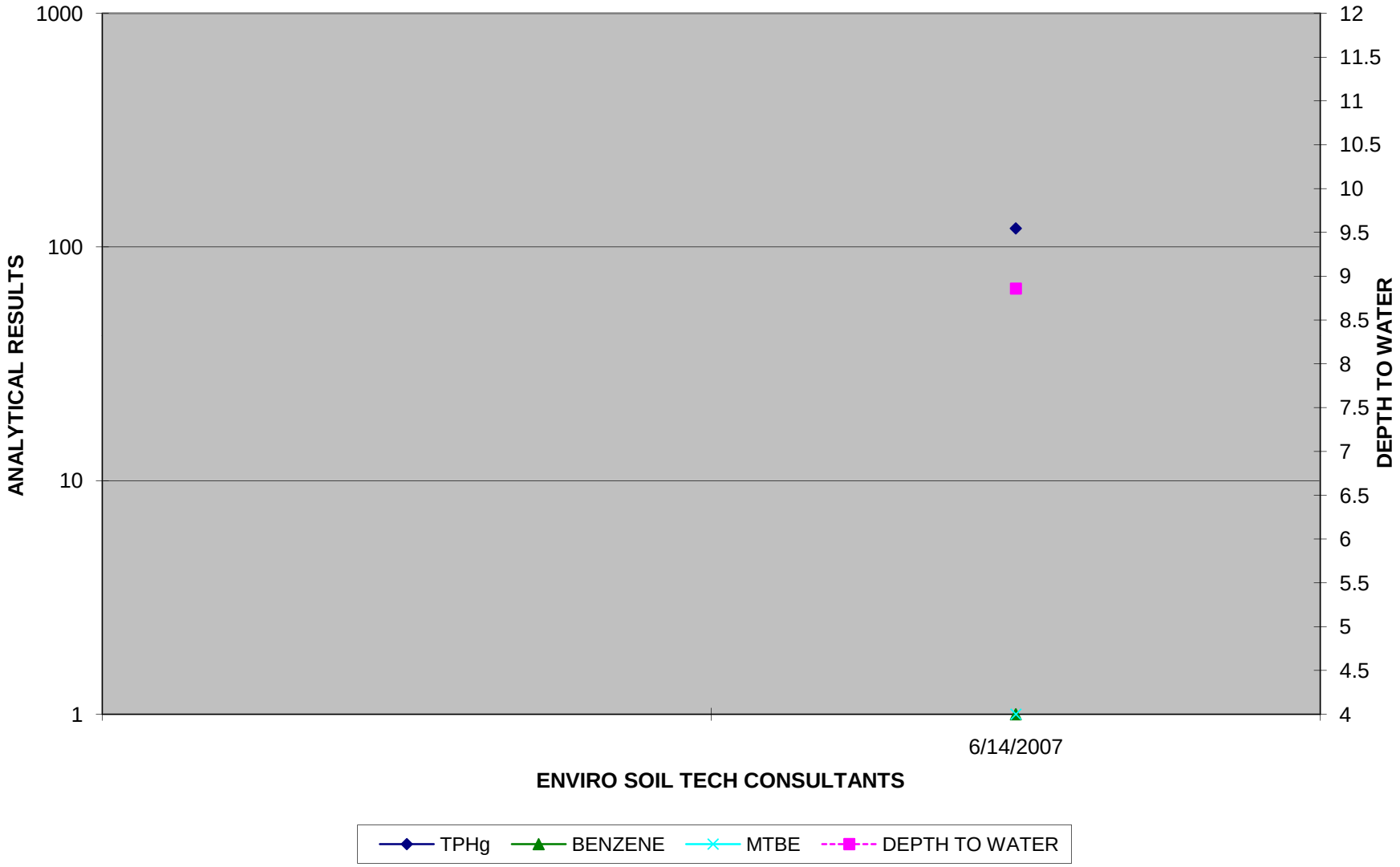
File No.: 12-99-702-SI
TPHg, BENZENE & MTBE RESULTS FOR STMW-6 (µg/L)
AND DEPTH TO WATER MEASUREMENT (feet)



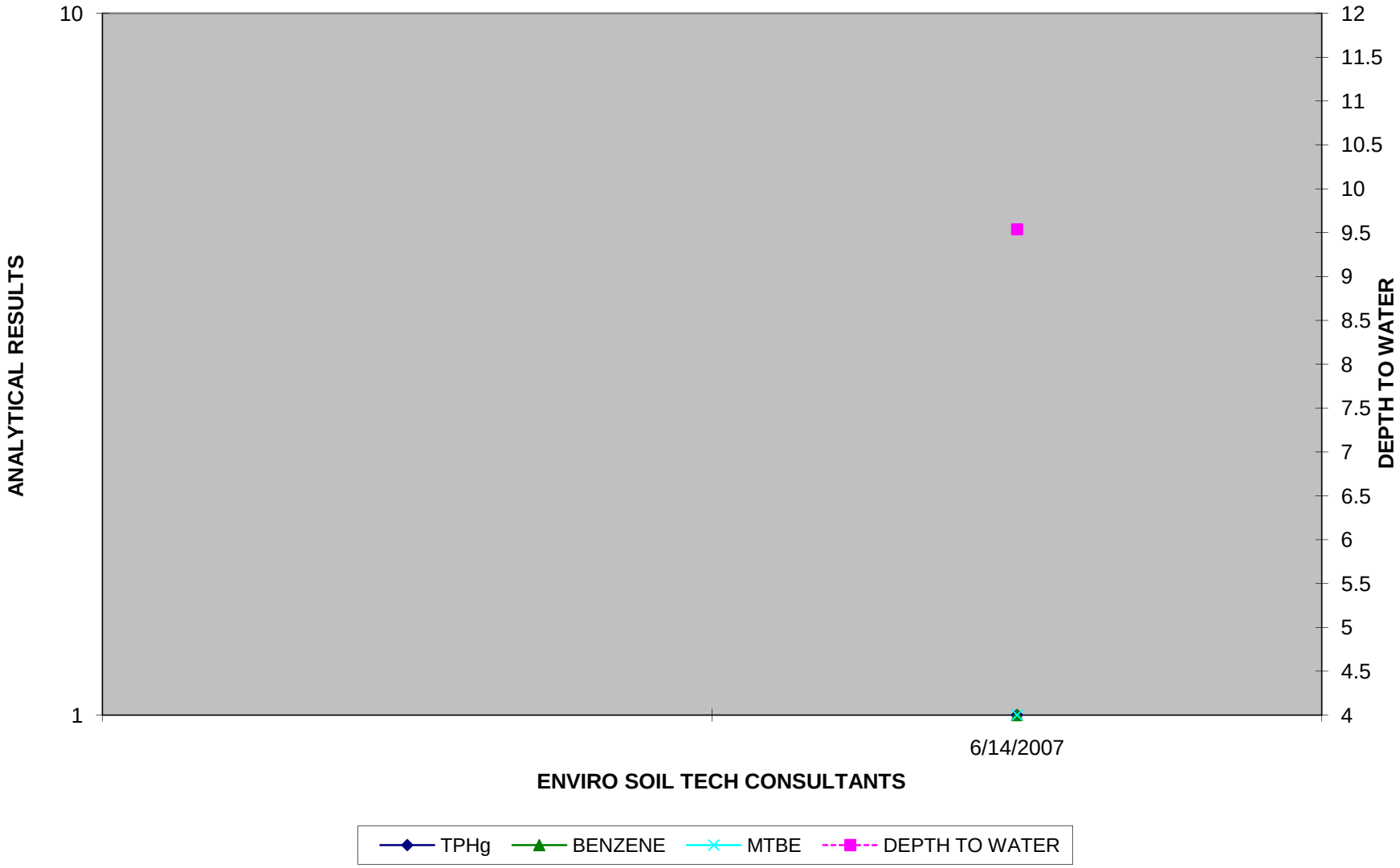
File No.: 12-99-702-SI
TPHg, BENZENE & MTBE RESULTS FOR STMW-7 (µg/L)
AND DEPTH TO WATER MEASUREMENT (feet)



File No.: 12-99-702-SI
TPHg, BENZENE & MTBE RESULTS FOR STMW-8 (µg/L)
AND DEPTH TO WATER MEASUREMENT (feet)



File No.: 12-99-702-SI
TPHg, BENZENE & MTBE RESULTS FOR STMW-9 (µg/L)
AND DEPTH TO WATER MEASUREMENT (feet)



File No.: 12-99-702-SI
TPHg, BENZENE & MTBE RESULTS FOR STMW-10 (µg/L)
AND DEPTH TO WATER MEASUREMENT (feet)