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By dehloptoxic at 3:05 pm, Nov 02, 2006



76 Broadway
Sacramento, California 95818

October 31, 2006

Mr. Jerry Wickham
Alameda County Health Agency
1131 Harbor Bay Parkway
Alameda, California 94502

Re: **Report Transmittal
Work Plan – Additional Subsurface Assessment
76 Service Station #4186
1771 First Street
Livermore, CA**

Dear Mr. Wickham:

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

If you have any questions or need additional information, please contact

Shelby S. Lathrop (Contractor)
ConocoPhillips
Risk Management & Remediation
76 Broadway
Sacramento, CA 95818
Phone: 916-558-7609
Fax: 916-558-7639

Sincerely,

A handwritten signature in black ink that reads "Thomas H. Kosel". The signature is written in a cursive, flowing style.

Thomas Kosel
Risk Management & Remediation

Attachment

November 3, 2006

Mr. Jerry Wickham
Alameda County Health Care Services Agency
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577

Re: Work Plan – Additional Subsurface Assessment

76 Service Station No. 4186
1771 First Street
Livermore, California



Dear Mr. Wickham:

This work plan has been prepared by Delta Consultants (Delta) on behalf of ConocoPhillips Company (COP) for the above referenced site. The proposed scope of work is for assessing site conditions through completion of three borings and collection of grab groundwater samples per the Alameda County Health Care Services Agency letter dated September 1, 2006. Figure 1 shows the site location.

Grab groundwater samples collected from the lowermost sand and gravel unit during recent onsite assessment activities showed high concentrations of TPH-G and MTBE; however, no data are available to assess potential downgradient contaminant migration within this unit. The purpose of drilling the borings is to (1) further assess the vertical extent of groundwater contamination to the base of the lowermost sand and gravel unit, (2) assess the downgradient presence of contamination in the lowermost sand and gravel unit, and (3) investigate the presence of a clay layer underlying the lowermost coarse-grained soils which may represent a regional aquitard. Figure 2 shows site facility details and locations of the proposed borings.

In addition, a review of the effectiveness of the remedial system at the site will be initiated and an injection test conducted to evaluate the radius of influence within the underlying stratigraphic units. The test will utilize wells currently onsite both for injection and for evaluating distance of influence.

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SITE DESCRIPTION

The subject site is an operating service station located on the southwest corner of First Street and N Street in Livermore, California (Figure 2). The site is bounded on the north by First Street, on the east by N Street, and on the south and west by commercial buildings. The immediate site vicinity is a mix of commercial properties including restaurants, automobile repair shops, and shopping facilities. The site is located at an elevation of 480 feet above mean sea level (MSL). Current aboveground site facilities consist of four dispenser islands, a canopy and a station building. Two 10,000-gallon gasoline USTs are located in a common pit on the east side of the site.

SITE BACKGROUND AND ACTIVITY

During dispenser and piping replacement activities in June 1996, six soil samples were collected from beneath the fuel dispensers and along the product delivery piping. Analytical results were non-detect (ND) for Total Petroleum Hydrocarbons as gasoline (TPH-G) and benzene, toluene, ethylbenzene and total xylenes (BTEX) for each sample collected from beneath the dispenser islands and product delivery piping.

A soil gas survey was conducted on September 10, 1997, as part of a baseline site evaluation associated with the property transfer from Unocal Corporation to Tosco. Six soil gas probes were advanced and samples collected at 3 or 15 feet below ground surface (bgs) in the vicinity of the UST pit, dispenser islands, and product lines. Analytical results of soil gas samples ranged from 41 to 4,500 parts per billion by volume (ppb-v) TPH-G, ND to 110 ppb-v benzene, and ND to 8,000 ppb-v MTBE. The area of highest soil vapor concentration was localized around the USTs.

Alameda County Zone 7 Water Agency files were reviewed on April 8, 1998, to identify water supply wells located within a one half mile radius of the site. Two municipal wells were identified as present approximately 1,500 feet and 1,800 feet northwest of the site, and two domestic wells were located approximately 1,900 feet and 2,800 feet southwest and west of the site.

On June 16, 1998, three two-inch diameter groundwater monitor wells (U-1 through U-3) were drilled and completed at the site. The wells were installed to depths of 34 feet bgs. Analytical results of soil samples collected from the three well boreholes were reported as ND for TPH-G, benzene, and MTBE.

A site conceptual model (SCM) was completed for the site in May 2000. A groundwater flow velocity was calculated to estimate plume travel time to the nearest downgradient receptor. Groundwater velocity was calculated to be 46 feet

per year. It was concluded that hydrocarbon impact to groundwater appears to fluctuate with the rise and fall of the groundwater surface beneath the site.

Two additional two-inch diameter groundwater monitor wells (U-4 and U-5) were installed offsite on February 21, 2001, at the locations shown on Figure 2. The wells were installed to depths of 45 feet (U-4) and 47 feet (U-5). TPH-G, BTEX and MTBE were not detected in soil samples collected from the boreholes during well drilling. TPH-G and benzene were not detected in groundwater samples collected from wells U-4 and U-5. MTBE was detected in the groundwater samples from both wells U-4 and U-5 at concentrations of 38.2 and 55.4 micrograms per liter (ug/l), respectively.

Monitoring and sampling of the wells at the site was initiated in July 1998, and has continued on a quarterly basis to the present time. Historically, groundwater flow directions have varied from north to southwest. Depth to groundwater has varied from 21.62 feet bgs (U-3) to 46.31 feet bgs (U-5).

On December 5 – 7, 2001, two monitor wells (U-6 and U-7) and eight ozone microsparge points (SP-1 through SP-8) were installed. The monitor wells were installed to 45 feet bgs using 8-inch diameter hollow stem augers. Borings SP-1 through SP-8 were completed as sparge points with the installation of 2-inch diameter KVA sparge points attached to ¾-inch diameter blank schedule 80 PVC casing. The sparge points are composed of 30-inch long microporous plastic. Sparge points SP-1 through SP-4 were installed to depths of 45 feet bgs. Sparge points SP-6S and SP-7S were installed to depths of 25 feet bgs. The remaining two sparge locations contained nested sparge points (SP-5, SP-5S, SP-8 and SP-8S) installed to 25 and 45 feet bgs in each boring. With completion of the sparge point installation, an interim remedial measure system was installed consisting of a K-V Associates, Inc. (KVA) "C-Sparge" ozone microsparge system.

On April 19 – 26, 2006 seven soil borings (B-1 through B-7) were drilled at the site. Analysis of depth-discrete groundwater samples showed contamination present to 65-foot depth.

Groundwater Concentration Trends

The trends of TPH-G and MTBE concentrations versus time were reviewed for quarterly groundwater samples collected from monitor wells U-3 through U-7. Graphs of concentration versus time are presented in Attachment A.

The source area for groundwater contamination at the site is considered to be the area in and around monitor well U-3. TPH-G concentrations are decreasing in monitor well U-3, likely due to the close proximity (10 feet) of sparge wells SP-5/SP-5S; benzene concentrations are decreasing at the same relative rate. Monitor well U-4 has historically very low concentrations of TPH-G with an average 13 ug/l for 21 samples, 17 of the samples being <50 ug/l. TPH-G has been detected in 7 out of 19 samples from monitor well U-5. The initial seven samples were each non-detect (<50 ug/l); TPH-G was first noted in a sample collected in July 2003. A large concentration of TPH-G was noted in one sample (2,400 ug/l) but this was most likely due to cross contamination. Benzene concentrations in groundwater

samples from U-5 have remained <0.50 ug/l for every sample analyzed. TPH-G concentrations in groundwater samples from U-6 are increasing with benzene concentrations increasing at the apparent same rate. This may be due to (1) the source area still contributing to groundwater contamination, (2) a detached contaminant plume moving through the area of U-6, and/or (3) there being no ozone sparge wells nearby to mitigate contamination in and around U-6. TPH-G concentrations in samples from U-7 show no discernible trend although benzene concentrations are decreasing over time. No ozone sparge wells are located in the vicinity of monitor well U-7.

MTBE concentrations are decreasing in groundwater samples from monitor well U-3, likely due to mitigation impacts from the nearby ozone sparge wells SP-5/SP-5S. MTBE has been present at very low concentrations in groundwater samples from monitor wells U-4 through U-7; however, there are no trends in MTBE concentrations over time in the samples from these wells.

Site History Review

Aerial photographs of the site (8 photographs from 1940 to 2002) were reviewed to consider potential past use or activities at the site based on identification of structures on the site property. Photographs from 1940 and 1950 showed what appeared to be two houses on the property. The photograph from 1958 showed one building with what appears to be a large canopy which may identify the site as a service station; the photographs from 1965 and 1974 show the same building. The scale in the photograph from 1982 precludes clear identification of the site buildings. The photographs from 1993 and 1998 show what is clearly a service station with a building and attached canopy.

City directory listings from 1960, 1965, 1970, and 2002 list the site address as a service station.

Environmental Data Resources, Inc. created a radius map of businesses close to the site that are listed in databases for having hazardous or toxic substances, underground storage tanks, or impacts to drinking water. There are four upgradient businesses listed on the radius map within one quarter-mile of the site, all at equal or higher elevation.

Desert Petroleum BP, 2008 First St., 1/8-1/4 mile ENE of site

Company owns the Gasco Service Station #795 at same address. Tank leak was caused by a structure failure. Waste includes unspecified oil-containing waste, waste oil and mixed oil. An MTBE plume was found, with a maximum groundwater concentration of 47,000 ppb. Remediation started 2/5/2001 and is underway.

Livermore Auto Exchange, 174 South L St., 1/8-1/4 mile E of site

Tanks include waste oil and other unknown substances.

Groth Bros Oldsmobile, 59 South L St., 1/8-1/4 mile NE of site

Auto dealership classified as a small quantity generator. Tank leak was caused by a structure failure. Waste includes aqueous solutions with less than 10% organic residues and unspecified solvent mixture waste.

Quality Cleaners, 2048 First St., 1/8-1/4 mile ENE of site

Dry cleaners with wastes classified as halogenated solvents (chloroform, methyl chloride, perchloroethylene).

Remedial System Effectiveness

Currently, the remediation system present at the site injects ozone into ten sparge wells placed throughout the site. The sparge wells are screened at shallow depths (25 feet bgs) and at deeper depths (45 feet bgs). However, the screens are placed in the less permeable silt and clay units and it is unclear how effective the remediation treatment has been.

The remediation system was shut down during the week of October 16, 2006, and will remain off for three months to test whether a "rebound" in groundwater hydrocarbon concentrations will occur due to no ozone injection being conducted. Additionally, an overhaul of the remediation system is being planned that will involve re-drilling the sparge wells such that the screens are placed within more permeable units.

SITE GEOLOGY AND HYDROGEOLOGY

During previous field investigations, it was determined that the unsaturated (vadose) zone is composed predominantly of gravel with varying amounts of clay, silt and sand. The saturated zone is composed of clay, silty sand, and gravel.

Soil encountered during the April 2006 soil boring assessment consisted primarily of gravel with varying amounts of clay and silt near the surface, and continued to a depth of approximately 25 feet bgs. A clay unit with various amounts of silt and sand continued from approximately 25 feet to 36 feet bgs. A saturated layer generally consisting of silty sand with gravel and comprised of multiple smaller units consisting of various amounts of gravel, sand and silt was encountered at approximately 36 feet bgs and continued to a depth of approximately 43 feet bgs. A clay unit with varying amounts of silt and sand was present from approximately 43 feet to 55 feet bgs. Underlying the clay unit and continuing to total depth explored was silty sand with gravel and gravel with sandy silt. Groundwater was initially encountered between depths of 32 to 42 feet bgs. Zones of saturated soil varied in thickness and lithology within and between borings.

Historical monitoring data show the static depth to water onsite varies from 23 to 31 feet bgs. The historical groundwater flow direction has varied from north to southwest with an average gradient of 0.02 foot per foot (ft/ft). The nearest surface water to the site is the Arroyo Mocho Creek, located approximately 2,900 feet south of the site.

Cross sections of the site, showing subsurface lithologic contacts, well construction details, and soil and groundwater sample analytical results, are presented in Attachment B.

PROPOSED SCOPE OF WORK

The proposed scope of work includes the following activities:

- Conduct utility clearance and obtain drilling permit from the Zone 7 Water Agency and Alameda County Public Works Agency;
- Drill three borings to a lower clay unit at the base of the lowermost sand and gravel unit with the initial five feet cleared by "air-knife" technology;
- Measure volatile organic compounds (VOCs) in soil samples using a photoionization detector (PID) as a screening method to evaluate soil contamination in the soil column; soil samples will be collected for analysis if PID measurements show high concentrations of VOCs.
- Using the CPT logs, collect depth discrete grab groundwater samples from each borehole within the lower sand and gravel unit at the contact with the underlying clay unit;
- Conduct injection tests to evaluate radius of influence in underlying stratigraphic units and to investigate if possible the approximate level of background aerobic microbial activity;
- Upload analytical laboratory data into the State of California Geotracker System per requirements of AB 2886; and
- Prepare a report of findings.

Pre-Field Investigation Activities

A utility survey will be completed prior to conducting the field investigation. Underground Services Alert (USA) will be notified at least 48 hours prior to drilling operations, and the services of a private utility locating company will be utilized to reduce the risk of damage to utilities beneath the property. Additionally, the first five feet of each borehole will be cleared before drilling is begun.

Delta will prepare a site-specific Health and Safety (H&S) plan in accordance Title 8, Section 5192 of the California Code of Regulations. The H&S plan will contain a list of emergency contacts, as well as a hospital route map to the nearest emergency facility.

A drilling permit will be obtained from the Zone 7 Water Agency and Alameda County Public Works Agency prior to scheduling the field work.

Boring and Sampling Procedures

Three proposed borings (Figure 2) will be drilled by a licensed contractor using a cone penetrometer (CPT) rig. Three boreholes will be advanced for each proposed soil boring location. The initial borehole will be drilled to provide a CPT log of subsurface lithologies. The second borehole will be drilled to log soil samples, measure VOC concentrations, and collect soil samples for analysis. The third borehole will be drilled to collect a depth-discrete groundwater sample. Each boring will be advanced to the base of the lowermost sand and gravel unit, terminating at

the contact with a lower clay unit which is anticipated to be a maximum 100 feet bgs. Each boring will be backfilled with grout following completion.

Soil samples will be collected using a direct push piston sampler. A sealed pointed piston will be advanced within the core barrel of the CPT to the desired sample depth. The piston will then be opened and driven to further depth to collect a soil sample at which time the piston assembly will be removed and the soil sample recovered. The sample tube from each interval will be sealed with Teflon tape and plastic end caps and placed in an ice chest cooled with ice for delivery to the analytical laboratory for analysis under chain-of-custody protocol. The remaining soil collected from the sample tubes will be used for field screening and lithologic description purposes. Soil samples from each sample interval will be field screened for the presence of volatile organic compounds (VOCs) using a PID. It is anticipated that a minimum three soil samples per boring will be collected for laboratory analysis. Additional soil samples will be submitted for analysis if the PID measurements show evidence of substantial contamination. The PID measurements will be recorded on the soil boring log by the field geologist. Each soil sample will be logged using the Unified Soil Classification System (USCS).

A groundwater sample will be collected from each borehole at the contact of the lowermost sand and gravel unit and the underlying clay unit using a closed screen sampler. The assembly is driven with the outer tube casing in place. When the desired groundwater sample depth is reached, the outer casing is retracted to expose the screen to groundwater. A small-diameter bailer will then be lowered through the drill casing and a groundwater sample collected. The expendable drive point is left in place when the drill casing and sampling assembly are removed.

Each groundwater sample will be decanted from the bailer into an appropriately labeled container, sealed, and placed in an ice chest cooled with ice and transported to a state-certified laboratory for analysis under chain-of-custody protocol.

Laboratory Analysis

Soil and groundwater samples will be submitted under chain of custody protocol to a California-certified laboratory. The groundwater samples will be analyzed for TPH-G, BTEX, MTBE, TBA, ETBE, TAME, DIPE, and ethanol by United States Environmental Protection Agency (US EPA) Method 8260B. In addition, for waste profiling purposes one soil sample will be analyzed for total lead by EPA Method 6010.

Injection Test

An injection test will be conducted using sparge wells SP-5S, SP-5, and SP-6S and monitor well U-3. Monitor well U-3 is screened 14-34 feet bgs in gravel with clay and sand (GW-GC) and underlying clay (CL). Sparge well SP-5S is screened 23-25.5 feet bgs at the contact of gravel with sand and clay (GW-GC) and underlying clay (CL); it is 23 feet lateral distance from U-3. Sparge well SP-5 is screened from 43-45.5 feet bgs in fine-grained soils. Sparge well SP-6S is screened 22.5-25 feet bgs in the sand with gravel (SW) unit; it is 57 feet lateral distance from U-3.

Oxygen will be used instead of the ozone system for this test, because due to the piping manifolds which are part of the ozone system it is not certain that individual wells can be sufficiently isolated for test purposes. Also, the ozone system is sufficiently complex that its operation requires specialized training, which is not needed in a simple injection test. It is expected that the results of the injection test using oxygen can be correlated with ozone system operation such that the ozone system can be appropriately optimized.

The test will be conducted sequentially, by injecting into each of the sparge wells SP-6S, SP5-S, and SP-5 separately.

Initially, dissolved oxygen (DO) and hydrocarbon vapor measurements will be collected in well U-3 to establish background conditions, using a photoionization detector or flame ionization detector to measure hydrocarbon vapors, and a downhole sonde to measure DO. Then, oxygen will be first injected into SP-6S at pressures (pounds per square inch, or PSI) similar to those of the ozone injection system for a period of up to two hours total. Dissolved oxygen (DO) and hydrocarbon vapor concentrations will be measured in U-3 with field instruments 15 minutes after starting injection and every 15 minutes during the injection test segments. Following completion of injection into SP-6S, the process will be repeated with SP-5S, and then SP-5. A maximum 150 ft³ oxygen will be injected into each sparge well during the injection test.

After completion of the test, DO readings will be collected from well U-3 at the end of the field day, 24 hours after injection, one week after injection, and two weeks after injection. This data will be used to evaluate short-term and long-term subsurface response to the injection process. Increases in short-term DO levels will be used to calculate the radius of influence of injection. Increases in hydrocarbon vapor concentrations during the test will indicate that sparging at the selected PSI is vigorous enough to effect breakthrough into the vadose zone, and the injection pressure at the wellhead may need to be reduced to limit migration of ozone into the vadose zone under similar injection pressures. If increases in DO are observed initially that decline to background conditions within a few days or two weeks, it can be inferred that DO is being consumed by aerobic microbial activity.

The results of the injection test will assist in optimizing the remediation process, including desired injection pressure, performance of the existing sparge well array, and information relevant to locating and constructing any new sparge wells at the site.

Waste Disposal

Soil cuttings generated during this investigation will be temporarily stored onsite in appropriately labeled 55-gallon Department of Transportation (DOT)-approved drums pending disposal arrangements. The soil will be transported offsite by a licensed waste hauler once an approved destination for the waste is found.

Report

The findings of the field investigation will be presented in a report that will include a sample location map, copies of the analytical laboratory data sheets, boring logs, and conclusions and recommendations for additional investigation, monitoring, and/or remediation.

If you have questions regarding this work plan, please call Daniel Davis at (916) 503-1260.

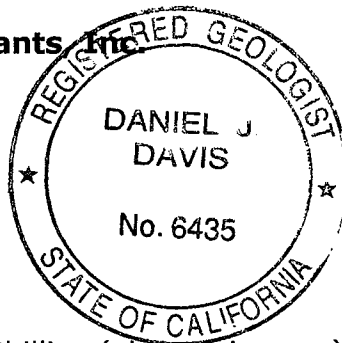
Sincerely,

Delta Environmental Consultants, Inc.



Daniel J. Davis, R.G.

Senior Project Manager



Cc: Shelby Lathrop – ConocoPhillips (electronic copy)

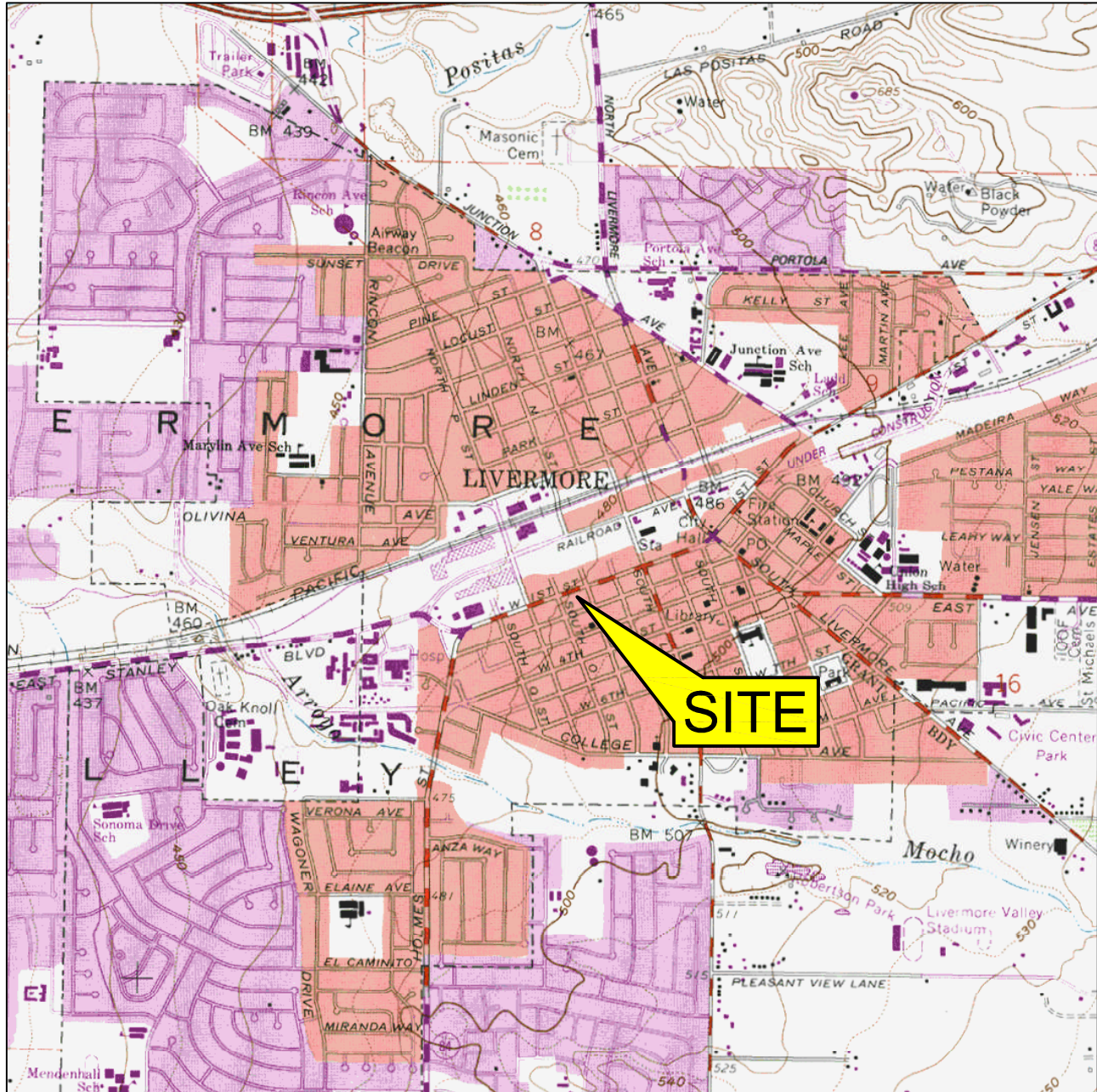
Figure 1 – Site Vicinity Map

Figure 2 – Site Plan and Proposed Soil Borings

Attachment A – Graphs of Groundwater Sample Concentration vs. Time

Attachment B – Cross Sections

Figure 1 – Site Vicinity Map



0 1000 FT 2000 FT
SCALE: 1 : 24,000

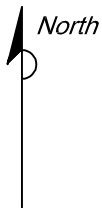


FIGURE 1

SITE LOCATION MAP

76 STATION NO. 4186
1771 FIRST STREET
LIVERMORE, CA

PROJECT NO. C104-186	DRAWN BY MC 12/28/05
FILE NO. Site Locator 4186	PREPARED BY MC
REVISION NO. 1	REVIEWED BY



SOURCE: USGS 7.5 MINUTE TOPOGRAPHIC MAP, CALABASAS QUADRANGLE, 1967

Figure 2 – Site Plan and Proposed Soil Borings

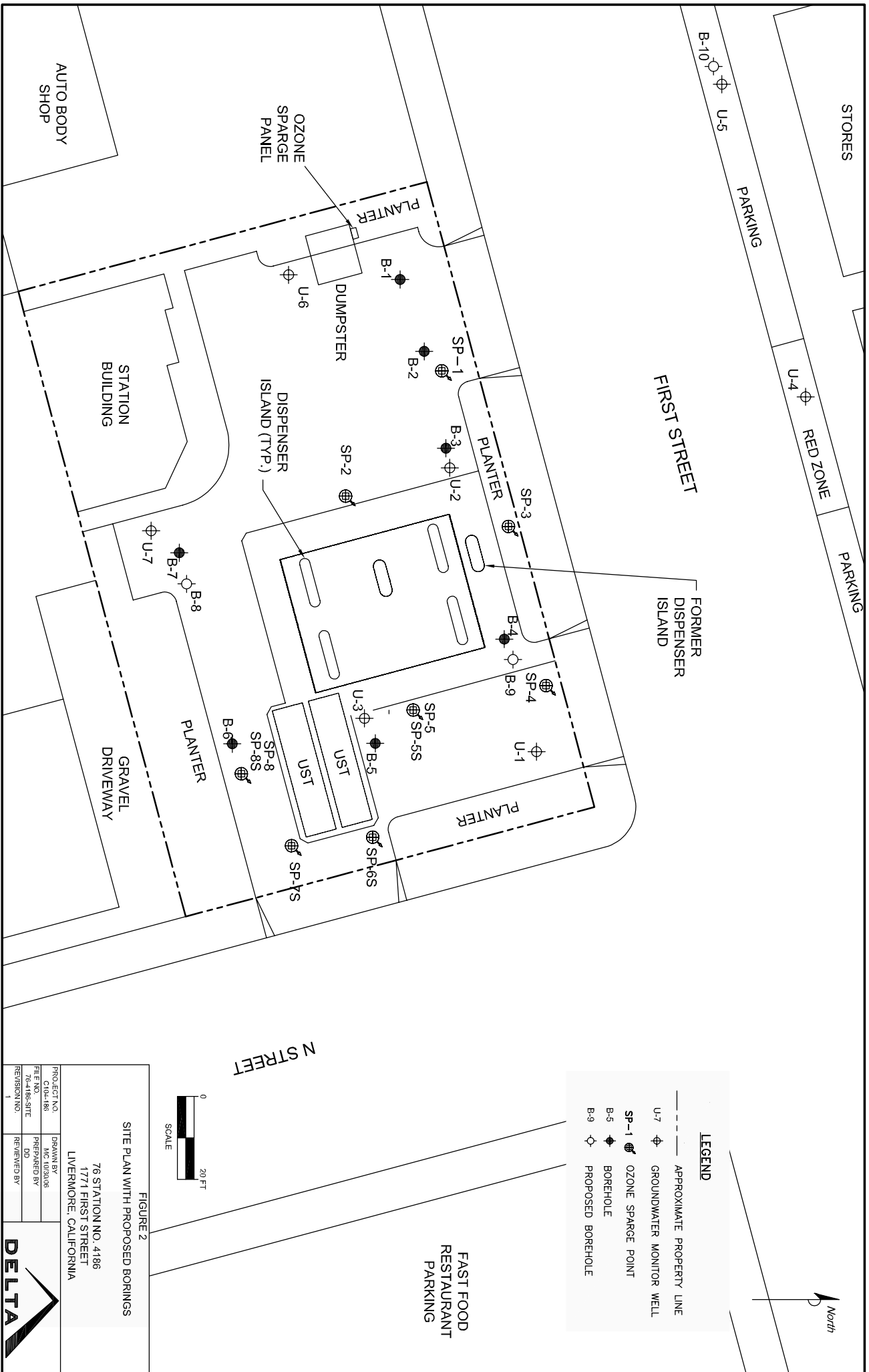


FIGURE 2
SITE PLAN WITH PROPOSED BORINGS

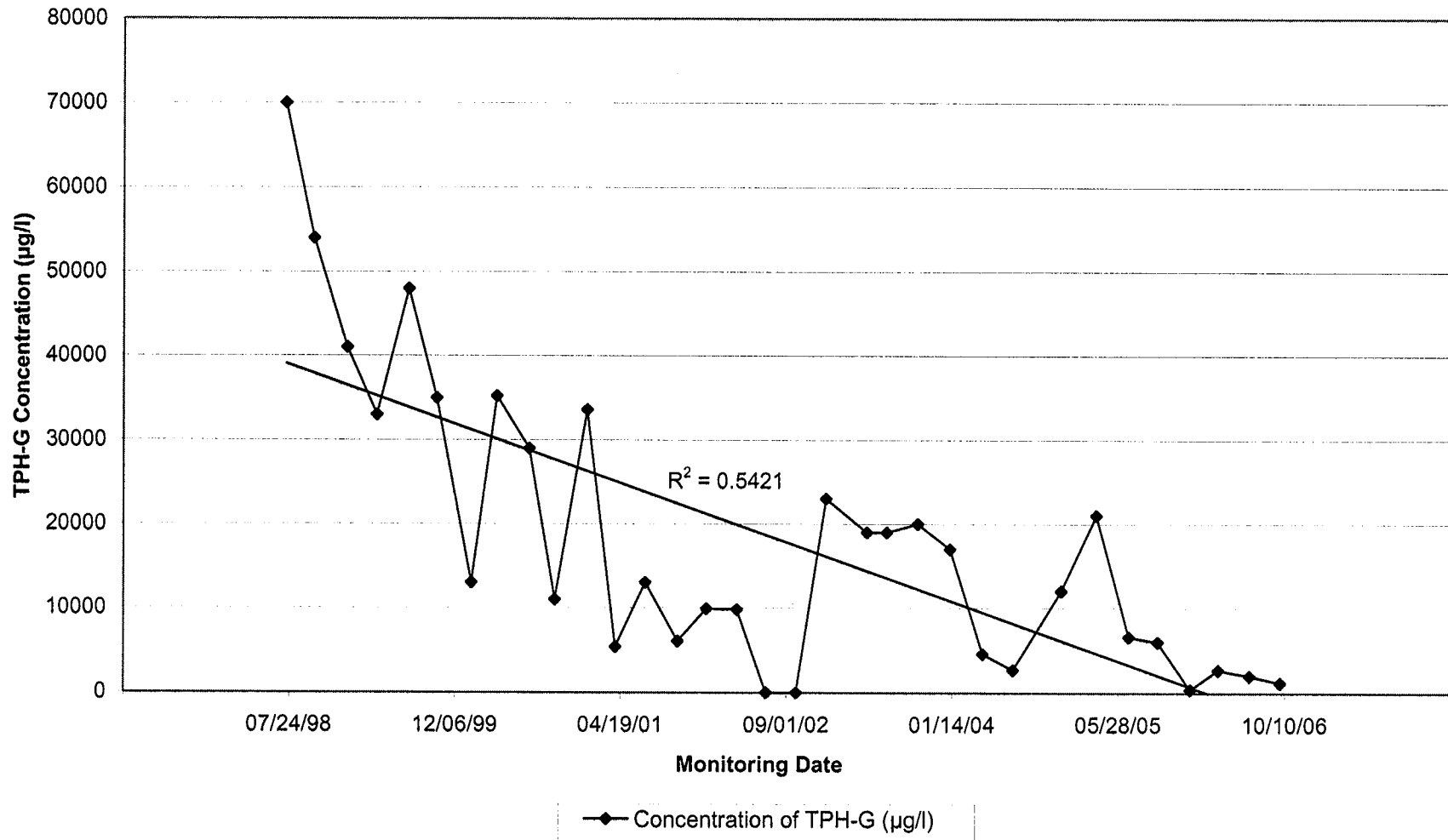
76 STATION NO. 4186
1771 FIRST STREET
LIVERMORE, CALIFORNIA

PROJECT NO.	DRAWN BY
CNCL-186	MC/10/30/06
FILE NO. 186-SITE	PREPARED BY
REVISION NO.	REVIEWED BY
1	

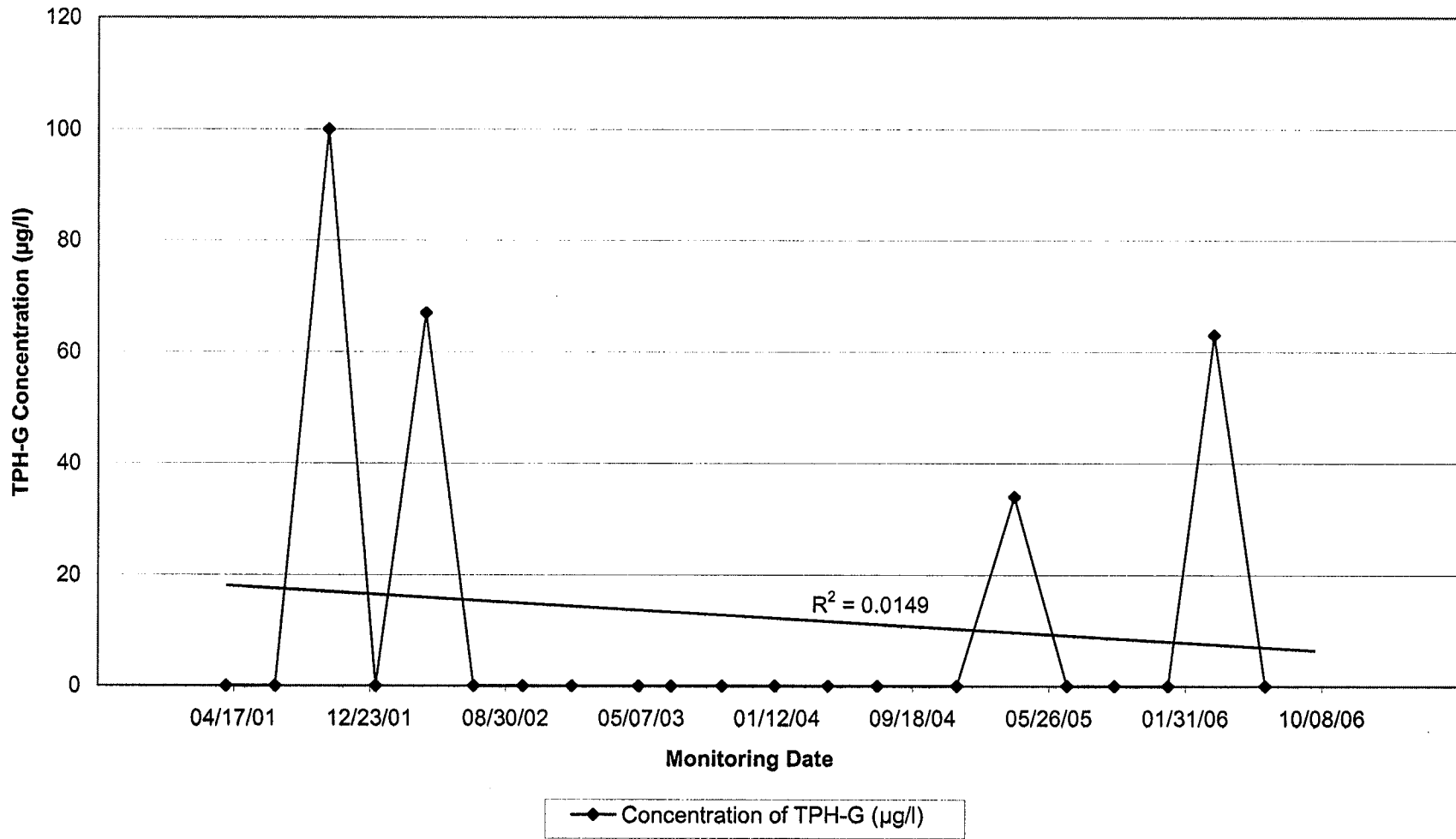
DELTA

**Attachment A – Graphs of Groundwater
Sample Concentration vs. Time**

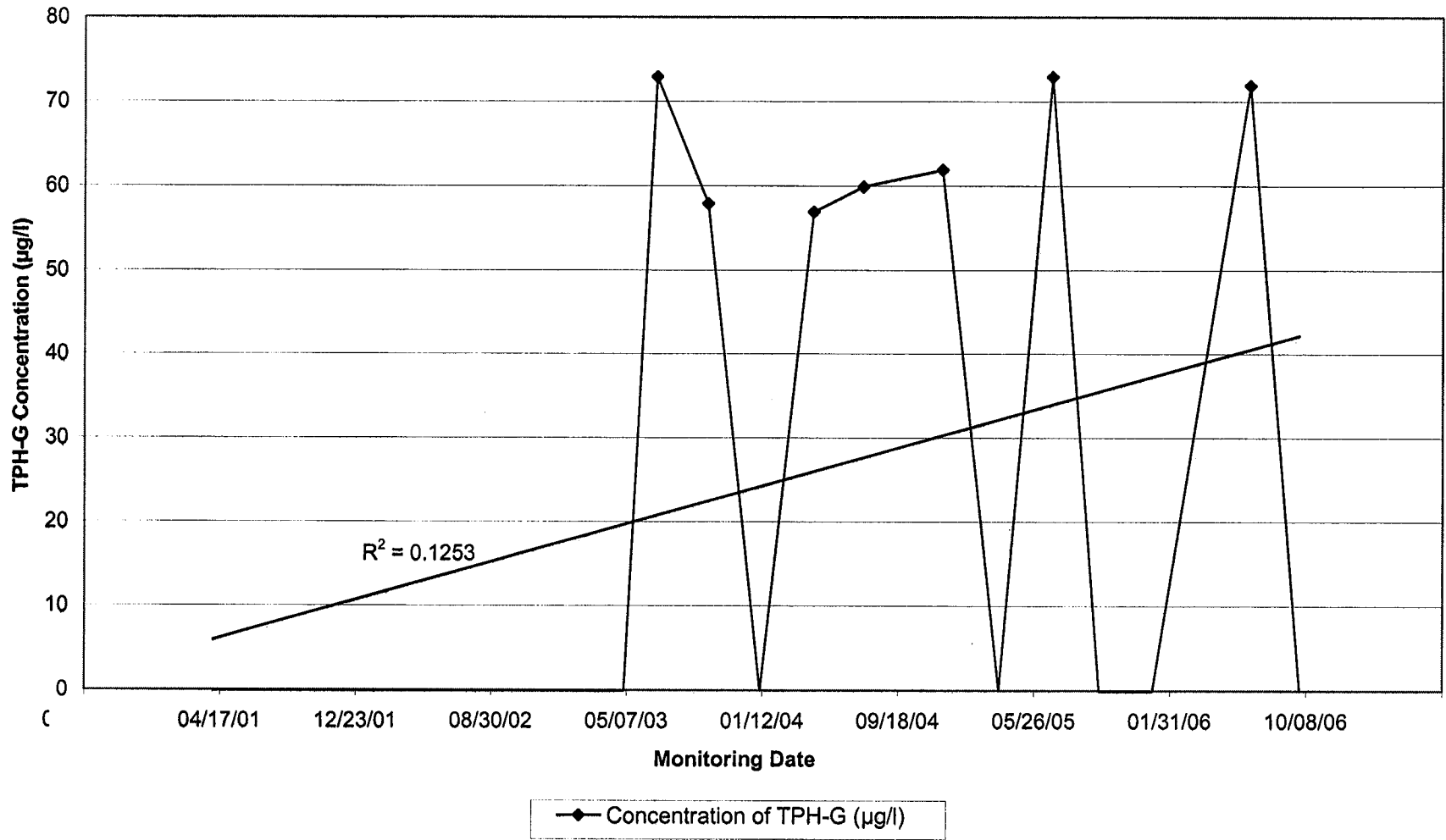
Concentration of TPH-G vs. Time
Monitor Well U-3
COP Site No. 4186
1771 First St., Livermore, California



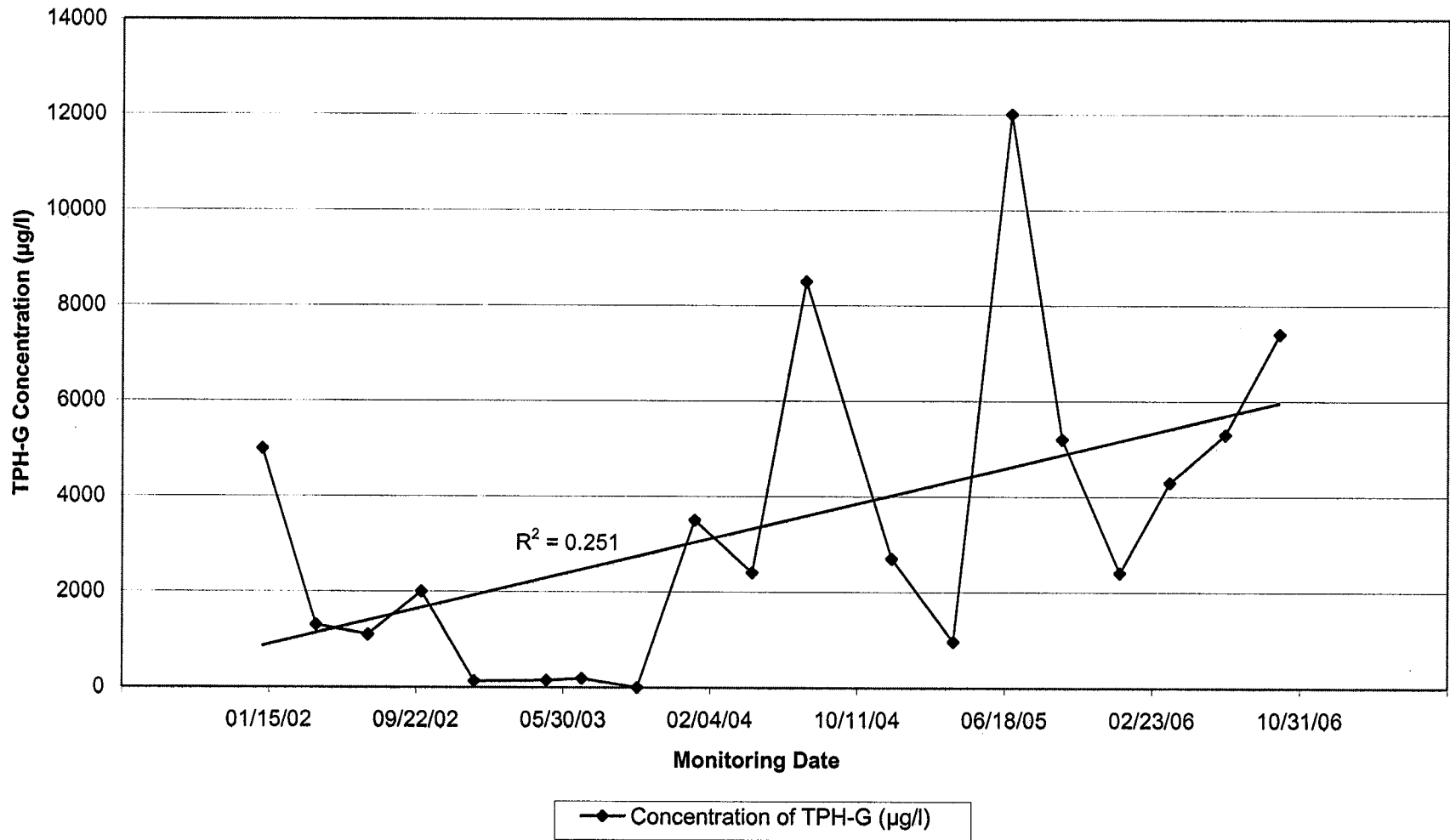
Concentration of TPH-G vs. Time
Monitor Well U-4
COP Site No. 4186
1771 First St., Livermore, California



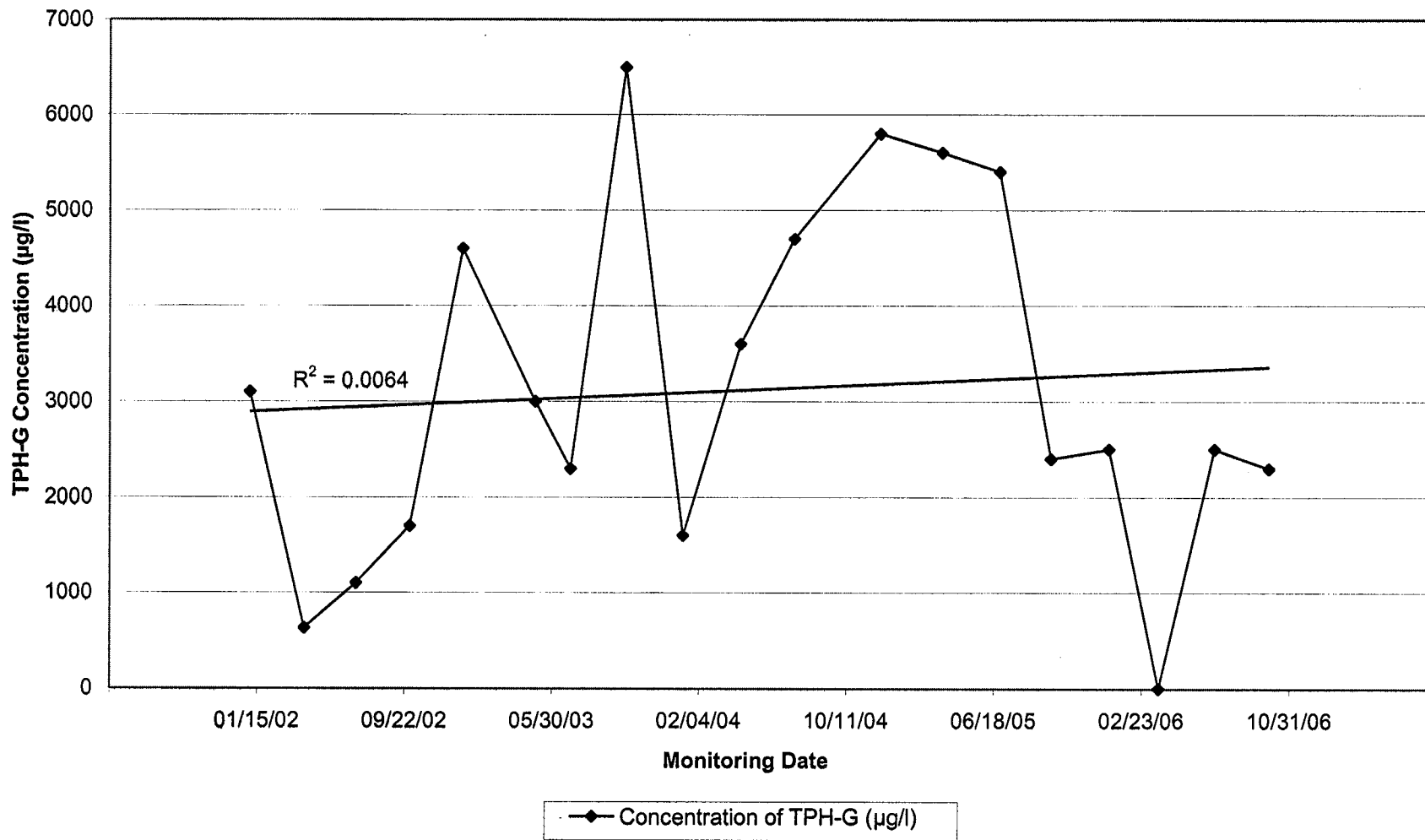
Concentration of TPH-G vs. Time
Monitor Well U-5
COP Site No. 4186
1771 First St., Livermore, California



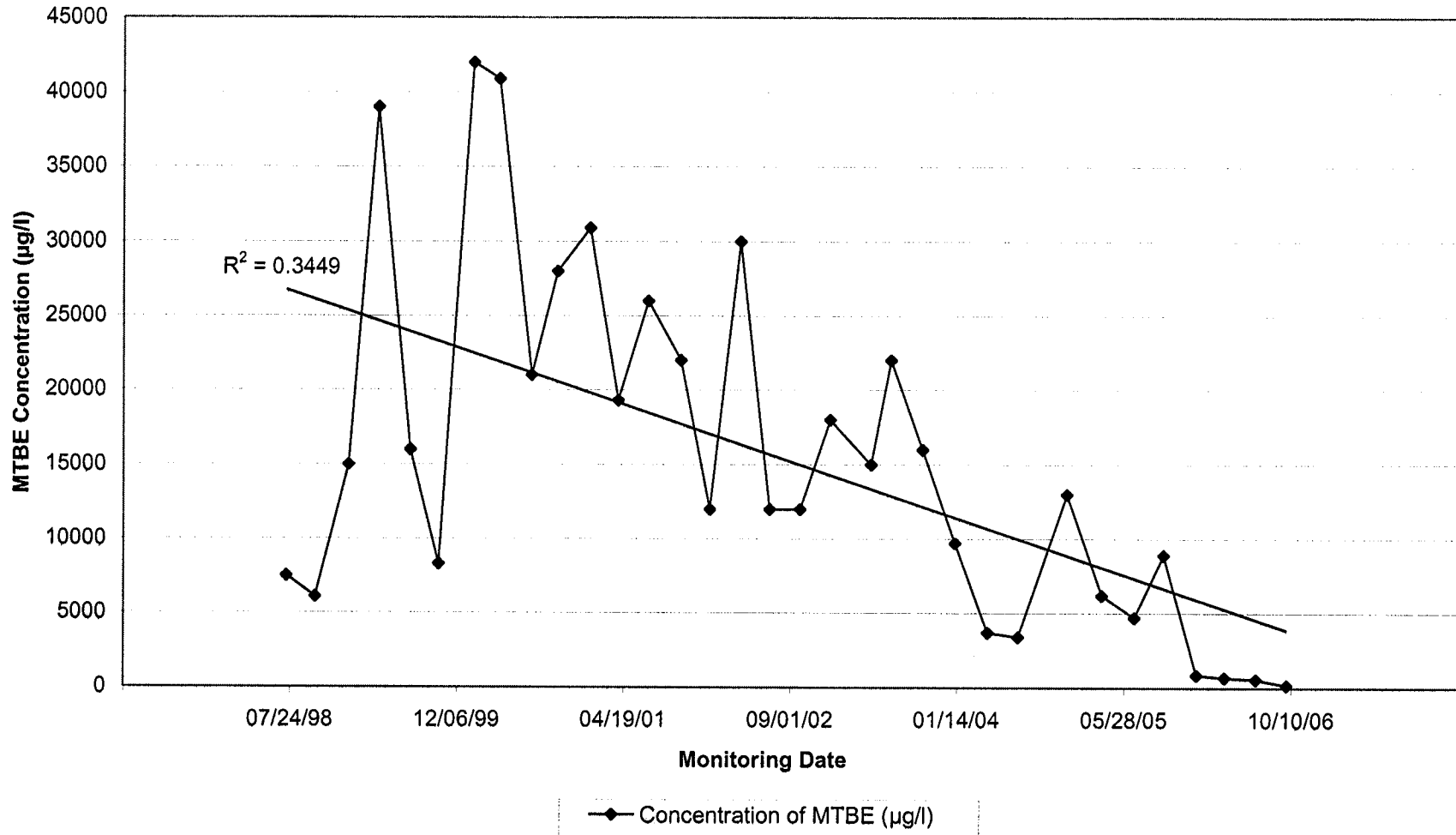
Concentration of TPH-G vs. Time
Monitor Well U-6
COP Site No. 4186
1771 First St., Livermore, California



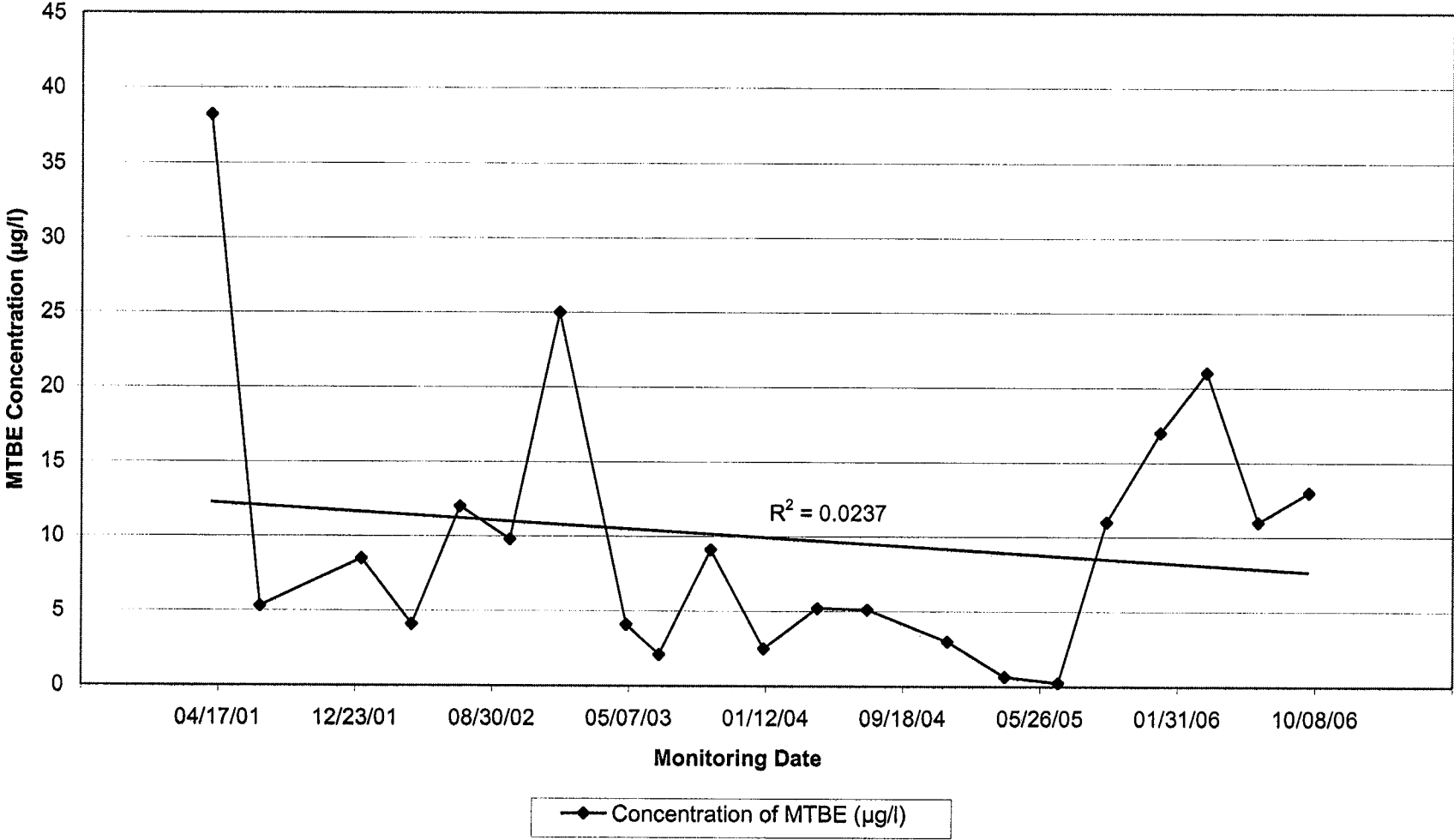
Concentration of TPH-G vs. Time
Monitor Well U-7
COP Site No. 4186
1771 First St., Livermore, California



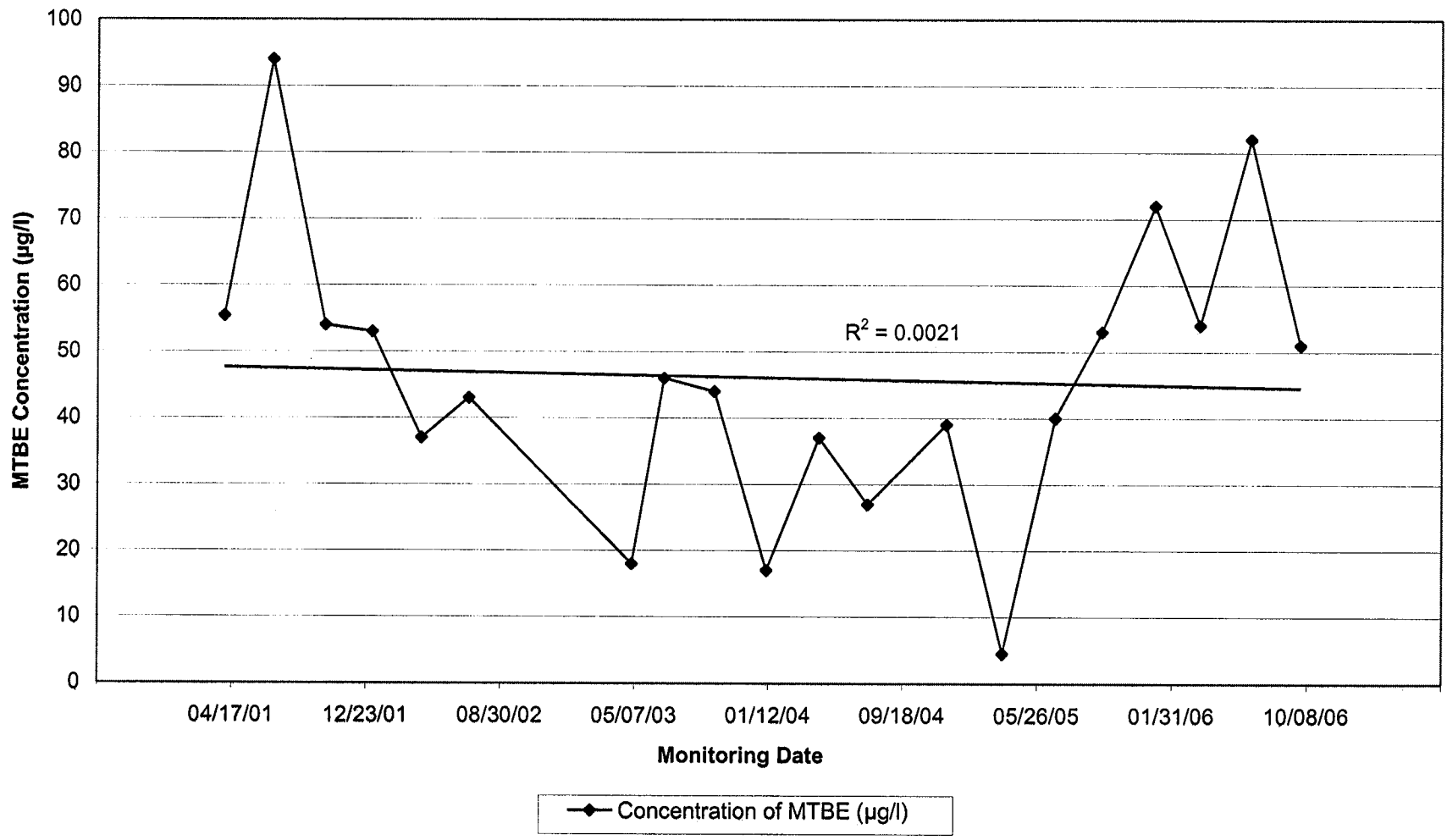
Concentration of MTBE vs. Time
Monitor Well U-3
COP Site No. 4186
1771 First St., Livermore, California



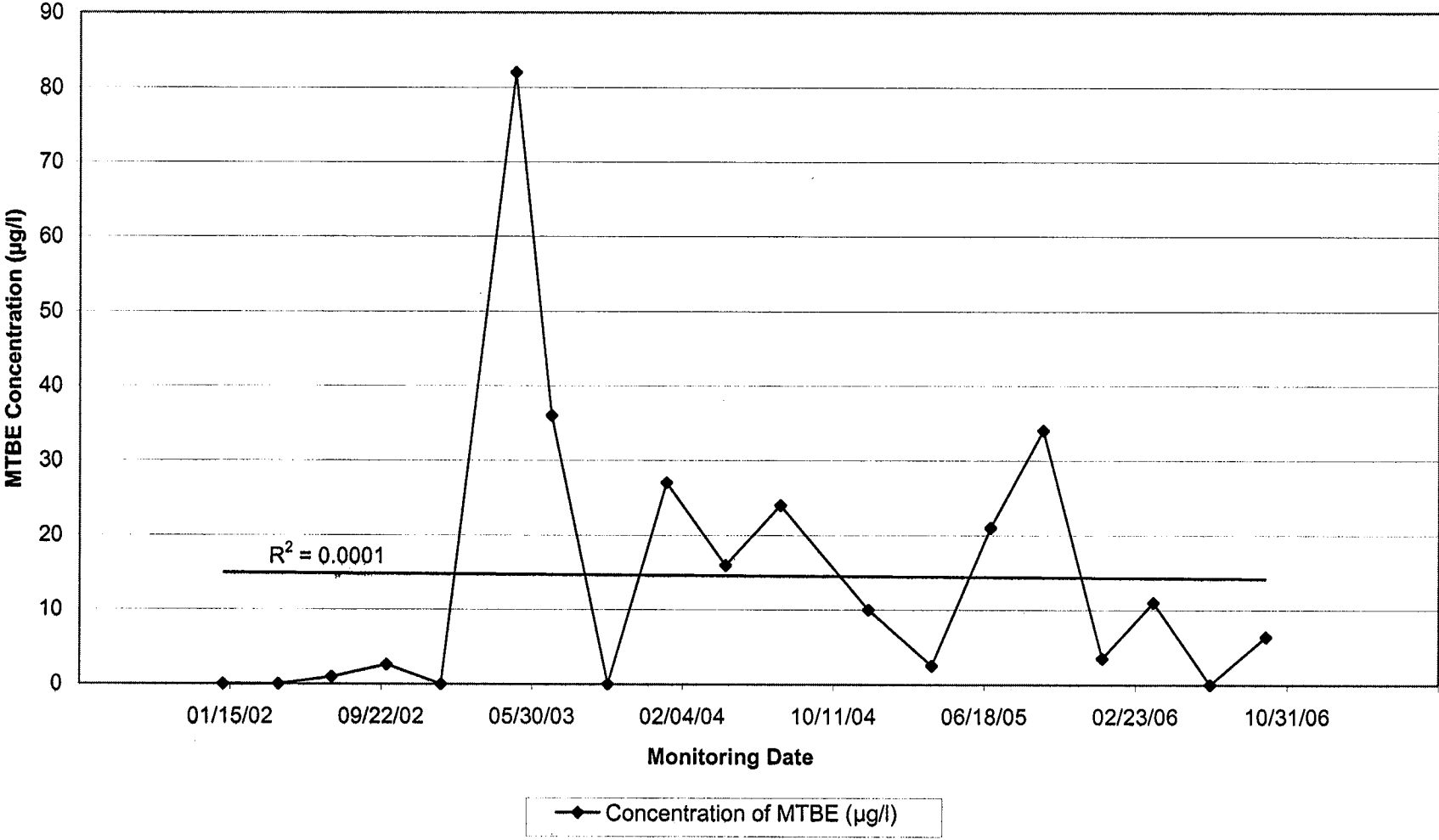
Concentration of MTBE vs. Time
Monitor Well U-4
COP Site No. 4186
1771 First St., Livermore, California



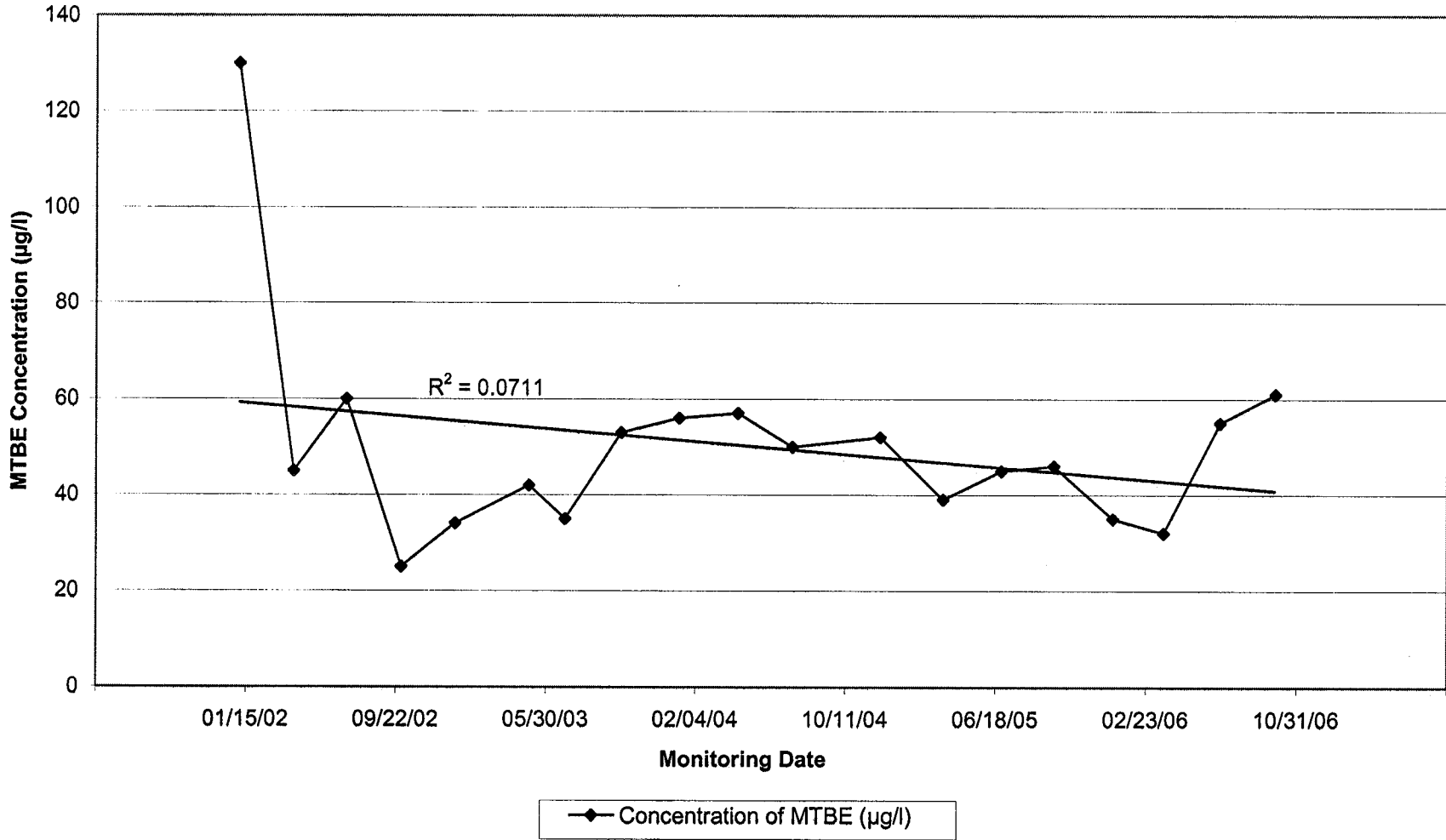
Concentration of MTBE vs. Time
Monitor Well U-5
COP Site No. 4186
1771 First St., Livermore, California




Concentration of MTBE vs. Time
Monitor Well U-6
COP Site No. 4186
1771 First St., Livermore, California



Concentration of MTBE vs. Time
Monitor Well U-7
COP Site No. 4186
1771 First St., Livermore, California

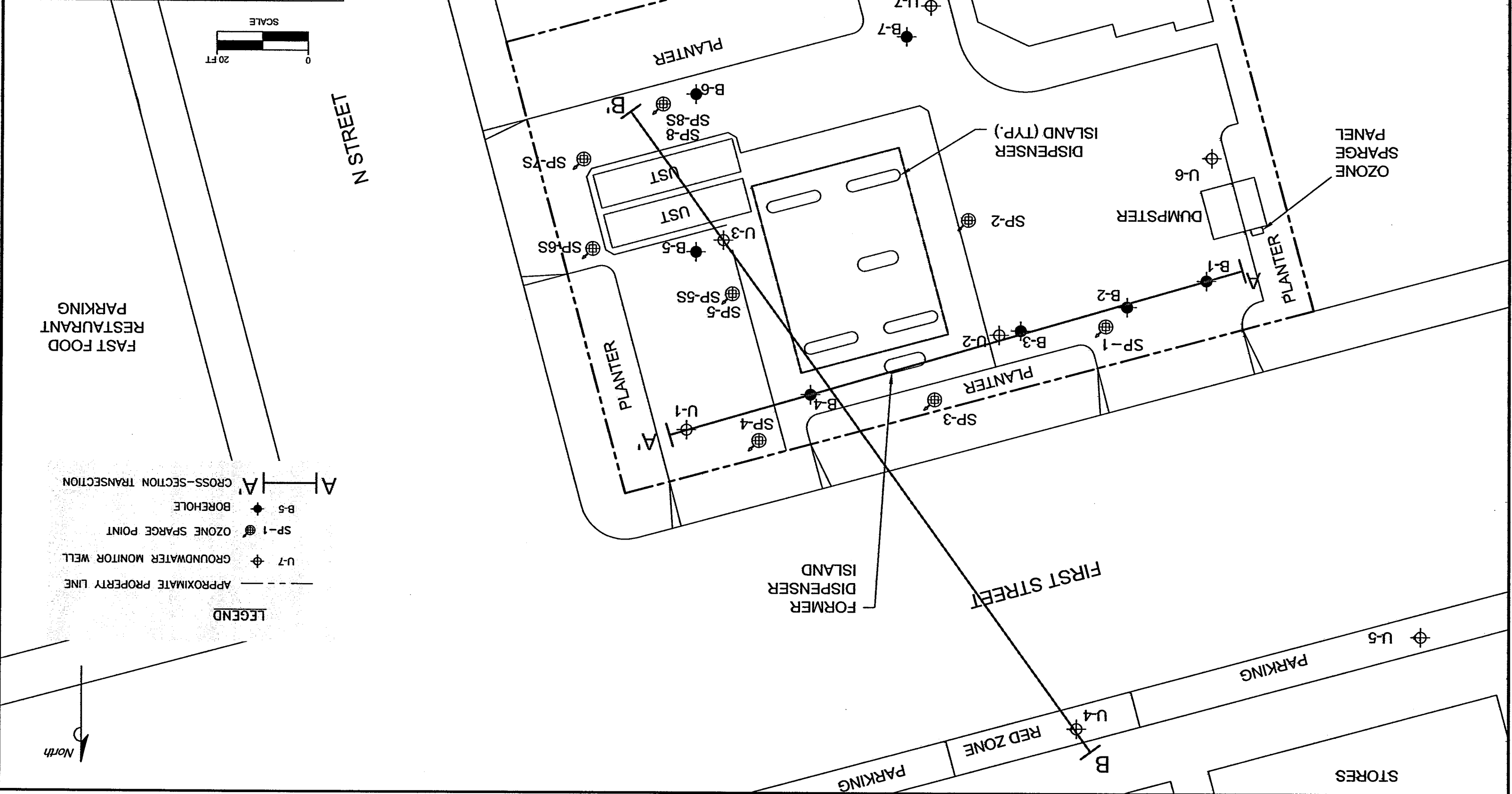
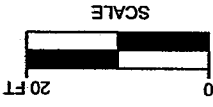


Attachment B – Cross Sections

	PROJECT NO.	C104-186
	DRAWN BY	MC 8/22/06
	PREPARED BY	BW
REVISION NO.		1
FILE NO.		76-4186-SITE

76 STATION NO. 4186
 1771 FIRST STREET
 LIVERMORE, CALIFORNIA

FIGURE 2
 SITE PLAN



- LEGEND**
- APPROXIMATE PROPERTY LINE
 - ⊕ U-7 GROUNDWATER MONITOR WELL
 - ⊗ SP-1 OZONE SPARGE POINT
 - ◆ B-5 BOREHOLE
 - A—A' CROSS-SECTION TRANSACTION





REVISION NO.	1
REVIEWED BY	BW
FILE NO.	76-4186-XS
PREPARED BY	MC 10/22/06
PROJECT NO.	C104-186
DRAWN BY	

76 STATION NO. 4186
1771 FIRST STREET
LIVERMORE, CALIFORNIA

FIGURE 3

APPROXIMATE STRATIGRAPHIC BOUNDARY

FINE-GRAINED (SILT AND/OR CLAY)

 SAND WITH GRAVEL, SILT AND CLAY

 GRAVEL WITH SAND, SILT AND CLAY

 ASPHALT AND BASEROCK

MONITOR WELL GROUNDWATER SAMPLE DATE (7/13/98 Q)

 DATA: TPH-G, BENZENE, MTBE (mg/kg)

 SOIL SAMPLE LOCATION WITH ANALYTICAL

 GROUNDWATER SAMPLE LOCATION WITH ANALYTICAL DATA: TPH-G, BENZENE, MTBE (ug/L)

 DEPTH OF FIRST ENCOUNTERED GROUNDWATER (9/26/06)

 TD= TOTAL DEPTH (DRILLING DATE)

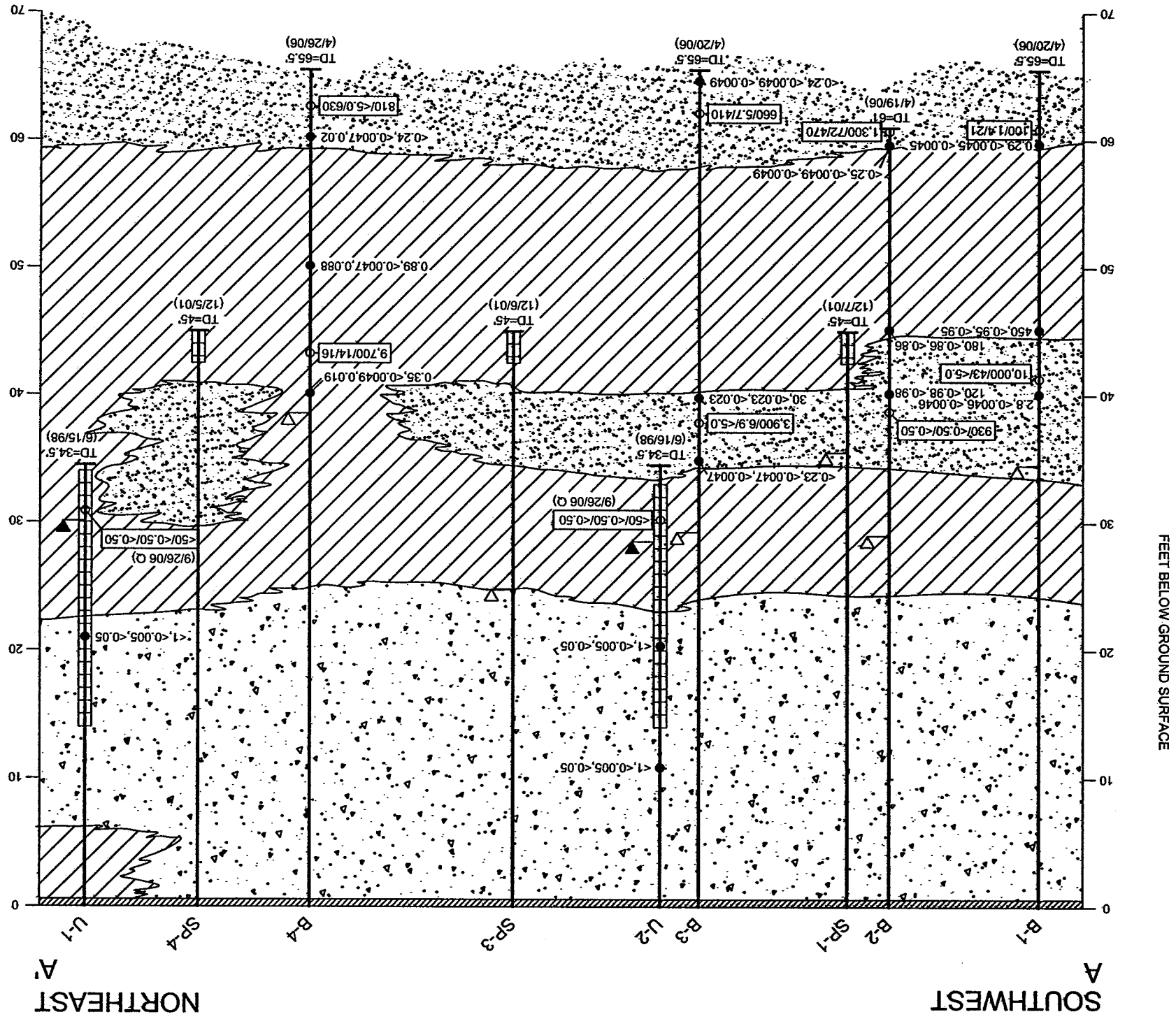
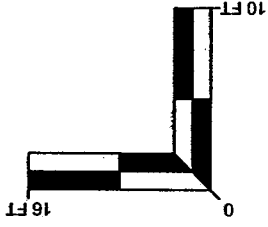
 WELL SCREEN

 SOIL SAMPLE LOCATION


 WELL CASING, EXPLORATORY BORING

 MONITORING WELL, BORING NAME, SPARGE POINT

LEGEND

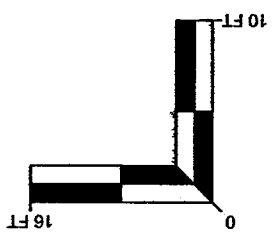


- NOTES:
- 1) TPH-G = TOTAL PETROLEUM HYDROCARBONS AS GASOLINE
ug/L = MICROGRAMS PER LITER
mg/kg = MILLIGRAMS PER KILOGRAM
 - 2) STRATIGRAPHY BETWEEN BORINGS IS INTERPRETIVE
 - 3) GROUNDWATER SAMPLES FROM BORINGS WERE COLLECTED ON THE DRILLING DATE

	REVIEWED BY	1
	PREPARED BY	76-4186-XS
	DRAWN BY	MC 10/2/06
PROJECT NO.		C104-186

76 STATION NO. 4186
 1771 FIRST STREET
 LIVERMORE, CALIFORNIA
 GEOLOGIC CROSS SECTION B-B'
 FIGURE 4

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- 1) TPH-G = TOTAL PETROLEUM HYDROCARBONS AS GASOLINE
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LEGEND

- MONITORING WELL, BORING NAME, SPARGE POINT: U-2
- WELL CASING, EXPLORATORY BORING: [Symbol]
- SOIL SAMPLE LOCATION: [Symbol]
- WELL SCREEN: [Symbol]
- TD = TOTAL DEPTH (DRILLING DATE): TD=34.5' (6/16/98)
- DEPTH OF FIRST ENCOUNTERED GROUNDWATER (9/26/06): [Symbol]
- GROUNDWATER SAMPLE LOCATION WITH ANALYTICAL DATA: TPH-G, BENZENE, MTBE (ug/L): 100/1.4/21 [Symbol]
- SOIL SAMPLE LOCATION WITH ANALYTICAL DATA: TPH-G, BENZENE, MTBE (mg/kg): 120-<0.98,470 [Symbol]
- MONITOR WELL GROUNDWATER SAMPLE DATE Q = QUARTERLY SAMPLE: (7/13/98 Q) [Symbol]
- ASPHALT AND BASEROCK: [Symbol]
- GRAVEL WITH SAND, SILT AND CLAY: [Symbol]
- SAND WITH GRAVEL, SILT AND CLAY: [Symbol]
- FINE-GRAINED (SILT AND/OR CLAY): [Symbol]
- APPROXIMATE STRATIGRAPHIC BOUNDARY: [Symbol]

