Environmental Health Services
Environmental Protection
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577

SUBJECT: Perjury Statement

To Whom It May Concern:

I declare, under penalty of perjury, that the information and/or recommendations contained in the requested attached reports in your letter dated August 8, 2011 are true and correct to the best of my knowledge.

Signed: Jane Anne Allen

JANE A. ALLEN

August 12, 2009

Hydrogen Peroxide Infusion
Pilot Test Workplan

325 Martin Luther King Jr. Way
Oakland, California

Project No. 270308
ACHCSA Case # RO0002930

Prepared On Behalf Of

Mr. and Mrs. Allen
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Prepared By

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AEI

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1.0 INTRODUCTION

The following workplan has been prepared by AEI Consultants (AEI) on behalf of Mr. and Mrs. Allen, the responsible party for the above referenced property. Remedial activities at the site are being carried out under the oversight of Alameda County Environmental Health (ACEH).

This workplan has been prepared to summarize the proposed changes to the remediation at the site following evaluation of the results of the July 2008 pilot-scale evaluation of in-situ chemical oxidation (ISCO) using direct-push injection of RegenOx®, which indicate that multiple injections would be required to fully remediate hydrocarbon impact to the soil and groundwater to acceptable levels.

The following work plan details the scope of work for evaluation pilot-scale gravity infusion of hydrogen peroxide H_2O_2 into the residual source area related to the abandoned underground storage tank (UST) using permanent injection points. The scope of work outlined herein includes the following activities:

- Perform a falling head test in monitoring well MW-3 to evaluate the potential to infuse fluids into sediments.
- Precisely locate tank and backfill with hand probing and geophysical methods as necessary;
- Install three (3) infusion wells (IW-1, IW-2, IW-3) adjacent to or within backfill around UST;
- Perform 3rd quarter 2009 monitoring event immediately before infusion pilot to establish a baseline; Sampling will include proposed infusion wells
- Install three (3) infusion wells (IW-1, IW-2, IW-3) immediately adjacent to or in backfill around UST;
- Perform a falling head test in infusion wells IW-1, IW-2 and IW-3
- Load one infusion well with approximately 50 gallons of 0.5% solution of H_2O_2. Repeat pilot infusion in the wells with increasing concentrations of H_2O_2 in steps of 0.5% concentration to determine maximum concentration that can be infused without formation of a bubble block stoppage to impede infusion.
- Based on results of pilot infusion, infuse 6,000 gallons of H_2O_2 by gravity flow into the three wells.
- Sample monitoring well MW-3 and infusion wells IW-1 through IW-3 on a monthly until DO concentrations reach pre-infusion levels;
- Fourth Quarter 2009 Monitoring event;
- Evaluate data following 4th quarter monitoring event and prepare a report summarizing the results of the infusion pilot test with recommendations for additional investigation and/or remediation as necessary.
- Initiate additional rounds of H_2O_2 infusion if needed

1.1 Site Description and History

The subject property is located on the western corner of the intersection of Martin Luther King Jr. Way and 4th Street in a mixed commercial and industrial area of Oakland. The property measures approximately 100 feet along Martin Luther King and approximately 150 feet along 4th Street with the property building covering approximately 100% of the land area. The northwestern portion of the building along 4th Street has also been historically addressed as 671 4th Street. The property building is currently vacant, but was previously occupied by Pucci Enterprises as warehouse space and cold storage freezers.

A number of site investigations have been performed by several environmental consultants since 2005. A summary of each project is presented below. Approximate soil boring locations are presented on Figure 2 and analytical data available to AEI is presented in Tables 1 and 2.

1.2 Phase I Site Assessment - 1993

Touchstone Developments completed a Phase I Environmental Site Assessment (ESA) of the property dated November 1, 1993 and identified a 10,000-gallon former fuel UST that currently exists below the north side of the building. The fuel UST was used to provide fuel for the Pucci Enterprises truck fleet. Marvin Busby Company, Inc. decommissioned the tank on October 20, 1993 by steam cleaning the tank, pumping remaining sludge out of the tank, and filling the tank with concrete slurry. At the time of the UST closure, the eastern section of the building had not yet been built. The tank could not be removed because of its proximity to the footing of the 671 4th Street building. After tank closure, the eastern portion of the building (325 Martin Luther King) was constructed. Although records show that the UST was abandoned in accordance with proper procedures applicable at that time, no documentation of sampling around the tank prior to abandonment was available.

1.3 Phase II Investigation – AEI, 2005

AEI performed a Phase II Subsurface Investigation in May 2005 as part of environmental due diligence for a potential real estate transaction. A total of two borings (SB-2 and SB-4) were drilled with soil and groundwater samples collected (SB-1 and SB-3 encountered refusal at four feet below ground surface (bgs), possibly the top of the concrete filled UST). A release was discovered during the investigation, which indicated an impact to groundwater. Total petroleum hydrocarbon (TPH) as gasoline (TPH-g), TPH as diesel (TPH-d), and benzene were detected in groundwater at concentrations up to 780 micrograms per liter (µg/l), 420 µg/l, and 53 µg/l, respectively. The locations of the soil boring locations are shown on Figure 2 and analytical data from this investigation AEI is presented in Tables 1 and 2.

1.4 Environmental Investigation – Terra Firma, 2005

In September 2005, an additional investigation was performed, presumably relating to another potential real estate transaction. Groundwater samples were reportedly collected from four (4) soil borings (labeled 50901-1 to 50901-4). Details on the methods, field observations (including soil conditions), or analytical reports were not made available to AEI. Groundwater sample analyses revealed the highest concentrations of TPH-g, TPH-d, and benzene at 20,000 µg/l,

3600 µg/l, and 990 µg/l, respectively from two borings to the south of the UST. The two borings southwest of the UST were found to contain lower, but still detectable, concentrations of fuel contaminants. The locations of the soil boring locations are shown on Figure 2 and analytical data from this investigation AEI is presented in Tables 1 and 2.

1.5 Soil and Groundwater Investigation – Ceres Associates, 2006

In June 2006, Ceres Associates performed another subsurface investigation, apparently for another possible transaction. The project included the analyses of soil and groundwater from an additional five soil borings (labeled SB-5 to SB-9). Significant concentrations of fuel contaminants were detected in both soil and groundwater, particularly in SB-7 (located southeast of the UST). The locations of the soil boring locations are shown on Figure 2 and analytical data from this investigation AEI is presented in Tables 1 and 2. Logs of the borings were not made available to AEI.

1.6 Supplemental Investigation Workplan – LRM Consulting, 2006

A fourth consultant, LRM Consulting, prepared release notification documentation and a workplan for the ACEH in August 2006. The workplan included additional research into possible additional source locations (dispenser, piping, offsite releases, etc) and the installation of three (3) monitoring wells. The wells were proposed as 2" PVC wells with a screen interval of approximately 5 to 20 feet bgs.

1.7 Site Characterization Workplan – AEI, 2007

Following review of the LRM work plan by ACEH, AEI was retained to prepare a comprehensive workplan. The workplan detailed soil boring investigation and well installation activities to effectively characterize the release.

1.8 Site Characterization and Well Installation – AEI 2007

In May of 2007, AEI advanced an additional twelve (12) soil borings at the property. The soil boring locations were chosen to help determine the magnitude and extent of the petroleum release. Low to moderate concentrations of petroleum hydrocarbons were detected in the soil adjacent to the abandoned UST and in groundwater. Contaminant distributions in groundwater suggested that the release of hydrocarbons is limited in extent and confined to the 325 Martin Luther King Jr. Way unit.

On August 10, 2007, AEI installed three (3) groundwater monitoring wells (MW-1 through MW-3) down-gradient of the abandoned UST. Significant concentrations of petroleum hydrocarbons were reported in well MW-3, located immediately down-gradient of the abandoned UST.

1.9 Corrective Action Pilot Test Workplan – AEI, 2008

In response to the ACEH request for a corrective action workplan to evaluate potential remediation methods for the site, a *Corrective Action Pilot Test Workplan*, dated April 7, 2008, was prepared for a pilot-scale evaluation of ISCO for the site and submitted to the ACEH. The

workplan proposed five infusion points in the immediate area of source well MW-3, targeting the saturated zone as well as the lower vadose zone using the product RegenOx manufactured by Regenesis, Inc. The workplan was approved by the ACEH in a letter dated may 13, 2008.

1.10 Corrective Action Pilot Test (ISCO) – AEI Consultants, July 2008

To monitor potential soil vapor intrusion within the building during the pilot test, four (4) twinned vapor probes (implants at 1 foot and 5 feet bgs) were installed on June 4, 2008. On July 17 and 18, 2008, 720 lbs of RegenOx was injected in five locations (IP-1 through IP-5) at spacing approximately five feet away from well MW-3. Baseline sampling on June 18, 2009 (2^{nd} quarter groundwater monitoring event), reported TPH-g, and BTEX at concentrations of 20,000 µg/L, 2,900 µg/L, 1,100 µg/L, 390 µg/L, 990 µg/L, respectively in well MW-3. Analysis of groundwater samples collected from well MW-3 on August 4, 2009, two weeks following RegenOx injection analysis, reported TPH-g, and BTEX at significantly higher at concentrations of 110,000 µg/L, 5,900 µg/L, 9,000100 µg/L, 76 µg/L, 8,100 µg/L, respectively.

Baseline vapor sampling was conducted on all vapor points on July 14, 2009, and post-infusion vapor samples were collected on August 4, 2009. No TPH-g, MTBEX, or EDB were detected at or exceeding laboratory reporting limits in any of the vapor samples collected for baseline or post-infusions.

The marked increase in dissolved hydrocarbons concentrations appears to be the result of hydrocarbons bonded to sediments in the capillary fringe saturated zone that were desorbed from the soil as a result of treatment with RegenOx. This data and review of past soil analytical data indicate that the residual source area around the abandoned in place UST is significantly greater than had been anticipated and that several rounds of injection would be required to remediate the site. Based on the relative high cost of multiple direct push infusions using RegenOx, installation of permanent injection points and alternate remedial approaches were evaluated.

Following evaluation of the pilot test data, AEI has selected H_2O_2 infusion through permanently installed wells as a lower cost approach to remediation. H_2O_2 infusion reacts directly with hydrocarbons as well as well as reacting with naturally-occurring ferrous iron that produce hydroxyl ions which have a high reactivity. Both of these reaction break down hydrocarbons and result in the release of oxygen and no toxic by products. Field parameters of DO and ORP in well MW-2 average below 0.2 mg/l and -175 as compared to clean well MW-2 where DO and ORP are typically 3.5 mg/L and -65 indicate the impacted soil and groundwater a oxygen deficient and that the bio-mass activity is likely oxygen limited. The oxygenation of the soil and groundwater will enhance biologic activity and significantly increase the rate of hydrocarbon destruction.

This workplan details the scope of work for the installation of three infusion wells and the infusion of hydrocarbon peroxide to evaluate combined ISCO and enhanced biodegradation as a more cost-effective approach to remediation at the site.

2.0 GEOLOGY AND HYDROLOGY

The site is located in a urban, primarily light industrial and commercial, area of Oakland. The sits is situated at an elevation of approximately 12 feet above mean sea level (msl). Based on a review of the United States Geological Survey (USGS) Oakland West, California Quadrangle topographic map the topography of the site is relatively flat with a gently slope to the southwest toward the Oakland Inner Harbor. The nearest surface water body is the harbor located approximately ¼ mile (1,300 feet) to the southwest.

The site is located on the San Francisco Bay margin. According to the map Quaternary Geology of Alameda County and Surrounding Areas, California derived from OFR 97-97 (Helley, et al, 1997), the site is underlain by the Holocene and Pleistocene Merritt Sand deposits. The unconsolidated deposits of the area are generally characterized by sequences of alluvial fan and bay margin organic rich clay deposits with interfingered lake, river channel, swamp, and flood plain deposits, and the aeolian Merritt Sands. Depths to the bedrock basement in the vicinity of the site are mapped at approximately 700 feet (Norfleet, 1998).

AEI has drilled and logged a total of fourteen (14) soil borings at the site. Borings have been continuously cored to total depths ranging from 16 feet bgs to 20 feet bgs. Copies of these logs are included in Appendix B. Soils encountered below the concrete generally consist of clayey sand which grades down to medium-grained sand at depths of 10 to 13 feet bgs. Although depth to water in well MW-3 ranges from 7.96 to 8.74 feet bgs, "first water" is not generally identified in direct push soul borings above the top of the coarser more permeable sand. Groundwater flow direction is consistently to the south with a gradient on the order of 10^{-3}. Fence diagrams showing the subsurface sediments underlying the site are presented in Figures 7 and 8. Groundwater elevation data is presented in Table 5.

3.0 SITE CONCEPTUAL MODEL

3.1 Hydrocarbon Source

Soil analyses from boring SB-7 (20,000 mg/kg TPH-g) and groundwater samples from well MW-3 (initial concentration 24,000 µg/L, maximum 130,000 µg/L) indicate a significant residual source of hydrocarbons is present at the southern end of the abandoned UST. Logic suggest that the backfill around the abandoned UST and surrounding soil is also significantly impacted. The primary contaminants detected in soil and groundwater consist of gasoline and diesel range hydrocarbons, BTEX, and the fuel additives EDB and 1,2-DCA. Examination of the 8015 chromatography chart from the latest analysis from well MW-3 shows the presence of significant weathered gasoline which overlaps into the range of typical diesel, but no diesel fuel pattern is present. Qualitative observations by the laboratory chemist noted on TPH-d analytical data support this hypothesis. A copy of the MW-3 chromatograph with the chromatograph of the laboratory diesel standard are attached in Appendix A for comparison. Soil and groundwater analytical data are presented in Tables 1 through 3 and 6.

MTBE was detected for the first time during the May 2007 investigation in boring SB-18 and has been detected in well MW-1 during subsequent groundwater monitoring events at a comparatively low concentration. The presence of the low concentrations of MTBE is believed to be the result of recent leaks of modern gasoline typical of the heavy automobile usage in urban environment. The presence of fuel additives EDB and 1,2-DCA is typical of old, pre-MTBE use gasoline releases.

3.2 Release Extent

The limits of source area and hydrocarbon plume have effectively been delineated in all direction. Soil and groundwater sample analytical data show the release to be limited in area and confined to the 325 Martin Luther King Jr. Way unit, immediately adjacent to the abandoned UST. The widest extent of hydrocarbon reported in the groundwater is low concentrations of diesel range hydrocarbons. This suggests that the hydrocarbon plume currently delineated is the collapsing remnant of an old larger gasoline release.

3.3 Mitigation Pathway and Receptors

A conduit study was performed and documented in AEI's *Soil and Groundwater Investigation Report,* dated September 21, 2007. Based on the results of the conduit study, the possibility exists that the sewer line running underneath the 671 4th Street unit could act as a preferential pathway for contaminants. However, based on depth to groundwater data and analytical data from soil and groundwater samples collected from boring SB-12, which is adjacent to the sewer line, the release does not appear to have followed this potential conduit. An illustration of the results of this study is presented in Figure 3.

A receptor study using records from both the California Department of Water Resources and the Alameda County Public Works Agency (ACPWA) was presented in the same report referenced above. Based on the well survey and the magnitude of the site fuel release, none of the identified wells appear to risk acting as preferential vertical conduits for migration of site contaminants nor does there appear to be active use of groundwater in the area that would be threatened by the release.

4.0 INSTALLATION OF INFUSION WELLS

4.1 MW-3 Fluid Acceptance Test

Prior to installation of the infusion wells or any other field activities, a fluid acceptance test will be performed on well MW-3. A poly tank will be attached to the well and 50 gallons of water will be gravity infused into the well from a tank while the rate of flow into the well is measured. The rate of acceptance will be evaluated and used to confirm that gravity infusion is feasible and determine whether 2-inch diameter wells can be used or whether 4-inch diameter wells will be preferable.

4.2 Tank Location Investigation

A geophysical survey was performed by Cruz Brothers Locators, Inc. on January 8, 2008, in an attempt to confirm the location of the abandoned UST and to locate associated product piping. Ground-penetrating radar and a magnetometer were unable to provide a clear image of the tanks location or the tank excavation limits.

In order to verify the location of the abandoned UST and to assist with placement of the infusion well locations, AEI proposes locating the tank using traditional hand driven probes. A pattern of holes will be drilled in the concrete slab and a rod driven into the soil to determine the location of the abandoned UST, its orientation, and if possible the nature of the backfill material. This will allow installation of one or more of the infusion wells within the backfill of the abandoned UST.

4.3 Infusion Well Locations

AEI proposes to install three gravity wells (IW-1 through IW-3) adjacent to the abandoned UST. Two of the wells will be located against the southwest side of the UST on the southeast and northwest ends of the tank preferably within the associated backfill material. The third well will be located near borings 50901-2 and 50901-3 near the center of the 1,000 µg/L contour on Figure 4. These infusion wells will allow repeated infusion of H_2O_2 into the aquifer and vadose zone to directly degrade the hydrocarbons, while at the same time enhance biological degradation of the hydrocarbons. The tentative locations of the infusion wells are shown on Figure 2.

4.4 Infusion Well Installation

Well installation work will be performed under ACPW permit by a C57 licensed drilling contractor. The 4-inch diameter wells will be installed unless overhead clearance limits the drilling rig size, in which case 2-inch diameter wells will be installed. Overhead clearance may also not allow collection of soil samples while drilling 10" diameter borings. If rig availability and clearance allows soil sample collection, samples will be collected every five feet and in native soil at two foot intervals between depths of 6 and 12 feet bgs. If collected, selected soil samples will be analyzed for TPH-g, TPH-d, BTEX, and fuel oxygenated MTBE, EDB, and 1,2-DCA.

The wells will be installed at a total depth of 15 feet bgs with approximately 10 feet of factory slotted 0.010 inch screen. The wells will be constructed using flush threaded schedule 40 PVC casing. An annular sand pack consisting of 2/12 or 2/16 Monterey sand will be installed to a depth approximately 1 foot above the top of screened interval, in 1-foot lifts. A bentonite seal will be placed above the sand and hydrated with tap water. The remainder of the boring will be sealed with neat cement grout. Each well will be finished with a threaded cap and a flush-mounted well box.

The wells will be developed no sooner than 3 days after setting the well seals by surging, bailing, and purging to stabilize the sand pack and remove accumulated fines from the casing

and sand pack. Each well will be surveyed relative to each other and existing wells by a California licensed land surveyor, to Geotracker standards.

Drill cuttings and other investigation-derived waste (IDW) will be stored onsite in sealed 55-gallon drums, pending the results of sample analyses. Equipment rinse water and well purge water will be stored in 55-gallon drums. Upon receipt of necessary analytical results, the waste will be profiled for disposal and transported from the site under appropriate manifest to approved disposal or recycling facility(s).

5.0 PROPOSED PILOT TEST

The scope of work for this investigation consists of a more cost-effective approach to injecting H_2O_2 into the saturated and the unsaturated soil in the area of the abandoned UST. The objective of the infusion of H_2O_2 is to destroy sufficient hydrocarbons by direct chemical oxidation and enhanced biogradation resulting from the oxygen released during breakdown of the H_2O_2.

5.1 Fluid Acceptance Test

Prior to initial infusion testing, a fluid acceptance, or clear water, test will be performed on each infusion well. A poly tank will be attached to each well and 50 gallons of water will be gravity infused into the each well from a tank and the rate of flow into the well will be measured to allow determination of possible bubble blocking effects during H_2O_2 infusion.

Depth to water (DTW) in wells IW-1 through IW-3 and MW-3 will be measured prior to adding a fluid to any of the wells using an electronic water level meter.

5.2 Optimum Solution Concentration Test

Prior to initiation of testing groundwater samples will be collected from wells IW-1 through IW-3 using a peristaltic pimp and standard low flow purge protocols. If more than 30 days have passed since the last quarterly monitoring event well MW-3 will be sampled also.

To determine the optimum concentration of H_2O_2 solution to be used, a stepped infusion test will be done starting with a 0.5% H_2O_2 solution. The H_2O_2 solution concentration will be increased in steps of 0.5% until bubble blocking effects reduce the infusion rate.

The H_2O_2 solution will be made up by adding a 30% to 50% H_2O_2 solution to 10 to 20 gallons of water in a poly tank. The poly tank will be equipped with a bottom drain and will be placed at an elevation of approximately 3.5 feet above the well head to will allow the solution to be gravity drained directly into the well. The flow rate into the well will be calculated by measuring changes in fluid volume in the poly tank.

5.3 H_20_2 Infusion Pilot Test

After evaluation of the data from the optimum solution test, H_2O_2 will be added to the infusion wells IW-1 through IW-3 as follows:

- 5,000 gallons of the appropriate strength H_2O_2 solution will be mixed in a 6,500 gallon poly Baker Tank.
- Each well will be directly connected to the tank through a manifold.
- Each well head will be equipped with a gas vent line to allow venting of any oxygen bubbles that may form in the piping or well casing.
- H_2O_2 solution will be initially allowed to flow into each well in turn at approximately 1 gallon per minute. Once it is determined that infusion into all of the wells is proceeding properly and the approximate acceptance rate into each well is determined, H_2O_2 solution infusion into all three wells will proceed under gravity flow at whatever rate each well will accept fluid.
- The combined flow rate will be determined by measuring fluid depth remaining in the poly tank on an hourly basis.
- Once the stable infusion rate has been established fluid measurements will be taken twice a day. Infusion of 5,000 gallons is expected to take from 24 hours to 48 hours.

5.4 Water Sampling

Following completion of infusion activities groundwater samples will be collected on a monthly from wells IW-1 through IW-3 and MW-3 until both DO and groundwater temperature return to pre-infusion levels.

Water sampling will be done with a peristaltic pump as follows:

- Pump rate will be maintained at less than 0.5 liter per minute.
- The draw tube will be placed at a of approximately 10 feet bgs.
- The standard groundwater parameters of pH, temperature, conductivity and oxidation-reduction potential (ORP) will be measured.
- Groundwater sampled will be collected when the groundwater parameters stabilize.

Groundwater samples collected for evaluation of infusion progress will be analyzed for TPH-g and MBTEX. Quarterly groundwater monitoring samples will be analyzed for TPH-g, MBTEX, EDB, and 1,2-DCA.

6.0 WASTE AND CHEMICAL STORAGE

Purge water will be stored in DOT approved 55-gallon drums in a secure location onsite, pending the results of sample analyses. Upon receipt of analytical data, wastewater disposal will be arranged with a properly licensed waste hauler and disposal facility(s).

No chemicals will be stored on site. Chemicals to be injected will be purchased as needed and transported to the site for use.

7.0 SITE CLEANUP GOALS

Target cleanup goals are selected to be protective of human health and groundwater resources. Proposed site cleanup goals are based on the Environmental Screening Levels (ESLs) in the San Francisco Bay RWQCB's document *Screening for Environmental Concerns at Site with Contaminated Soil and Groundwater* (Interim Final, Feb. 2008). Commercial/Industrial, drinking water land use ESLs have been selected for groundwater goals at the site. Once source treatment has been completed, a revision of cleanup goals based on a site specific fate and transport analysis and human health risk assessment may be warranted. Proposed cleanup goals are presented below:

Contaminant	**Proposed Groundwater Goals**	
	Soil (mg/kg)	**Groundwater (µg/L)**
TPH-g	83	100
TPH-d	83	100
Benzene	0.044	1.0
Toluene	2.9	40
Ethylbenzene	3.3	30
Xylenes	2.3	20
MTBE	0.023	5.0

Proposed Cleanup Goals

8.0 SITE SAFETY

AEI will prepare a site specific Health and Safety Plan conforming to Part 1910.120 (i) (2) of 29 CFR. Prior to commencement of field activities, a site safety meeting will be held at a designated command post near the working area. The Health and Safety plan will be reviewed and emergency procedures will be outlined at this meeting, including an explanation of the hazards of the known or suspected chemicals of interest.

All site personnel will be in Level D personal protection equipment, with waterproof coveralls, nitrile gloves and splash protection for eyes, which is the anticipated maximum amount of protection needed. A sufficient supply of eyewash water will be maintained onsite at all times. A working area will be established with barricades and warning tape to delineate the zone where hard hats, steel-toed shoes and safety glasses must be worn, and where unauthorized personnel will not be allowed. The site Health and Safety Plan will be on site at all times during the project.

9.0 PILOT TEST REPORTING

Upon completion of 2 months monitoring and sampling following pilot test field activities, a pilot test report will be prepared for the ACEH. The report will include site plans, logs of boring and wells, a review of site clean up goals, infusion concentrations and rates, data obtained, and contaminant concentrations trends. Any alterations made to this plan will be documented.

10.0 CLOSING STATEMENT AND SIGNATURES

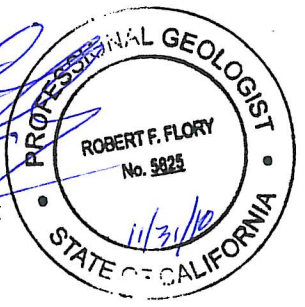
This plan has been prepared by AEI on behalf of Mr. and Mrs. Allen to address the release of petroleum hydrocarbons from the abandoned UST system on the property located at 325 Martin Luther King, Jr. Way in the City of Oakland, California. This document outlines potentially appropriate options for mitigating the release and recommends a scope of work. The recommendations rendered in this report were based on previous field investigations and laboratory testing of soil and groundwater samples. This document does not reflect subsurface variations that may exist between sampling points. These variations cannot be anticipated, nor could they be entirely accounted for, in spite of exhaustive additional testing. This plan should not be regarded as a guarantee that no further contamination, beyond that which could have been detected within the scope of past investigations is present beneath the said property or that all contamination present at the site will be treated or removed. Undocumented, unauthorized releases of hazardous materials, the remains of which are not readily identifiable by visual inspection and are of different chemical constituents, are difficult and often impossible to detect within the scope of a chemical specific investigation that may or may not become apparent at a later time. All specified work would be performed in accordance with generally accepted practices in geotechnical and environmental engineering, engineering geology, and hydrogeology and will be performed under the direction of appropriate registered professional(s).

We look forward to comment on the scope of work outlined herein. Should you have any questions or need additional information, please contact us at 800/801-3224.

Sincerely,
AEI Consultants

Adrian M. Angel, GIT
Project Geologist

Robert F. Flory, PG
Senior Project Geologist



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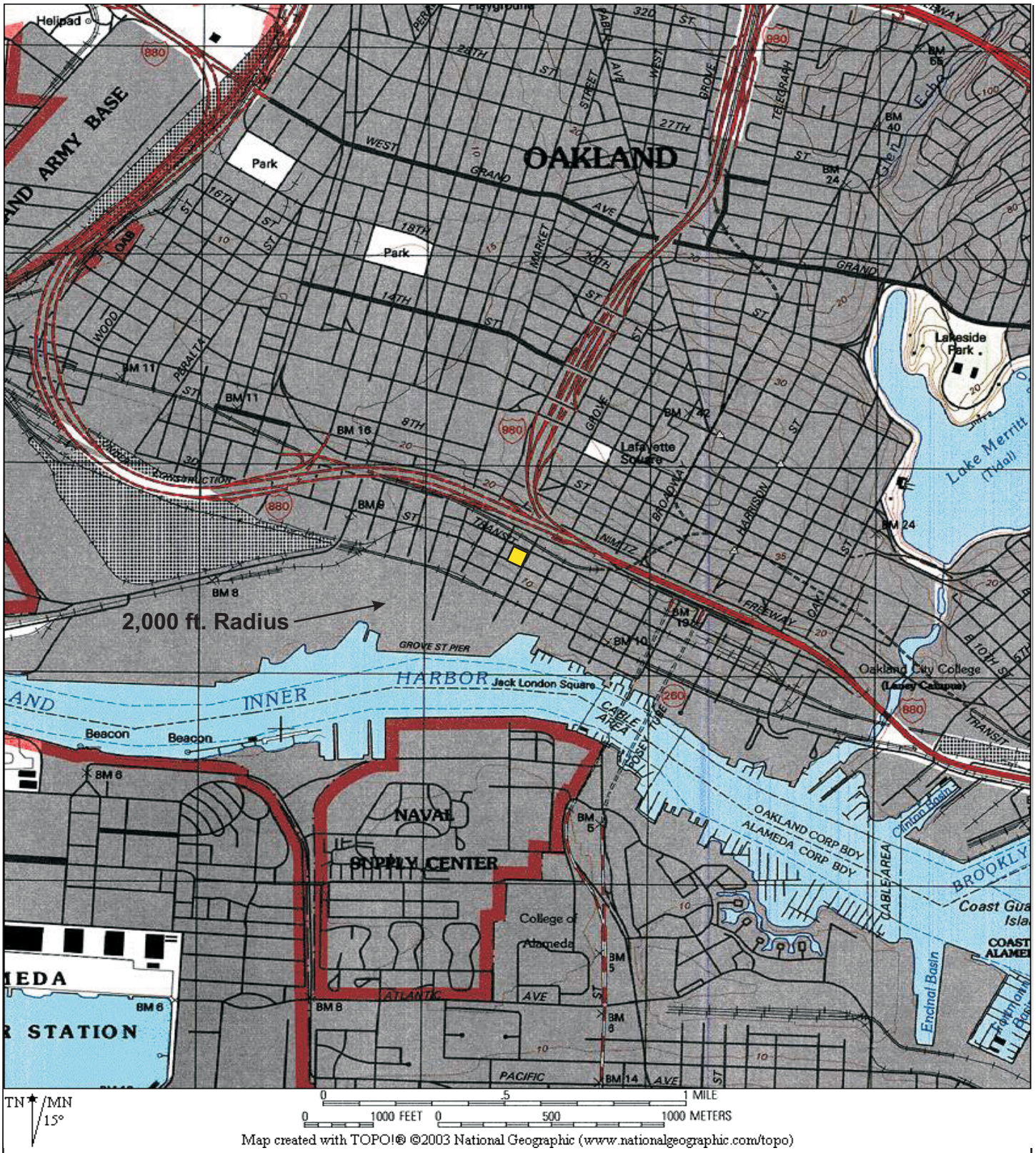
GeoTracker (electronic)

FIGURES



Map created with TOPO!® ©2003 National Geographic (www.nationalgeographic.com/topo)

LEGEND

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SITE LOCATION

AEI CONSULTANTS
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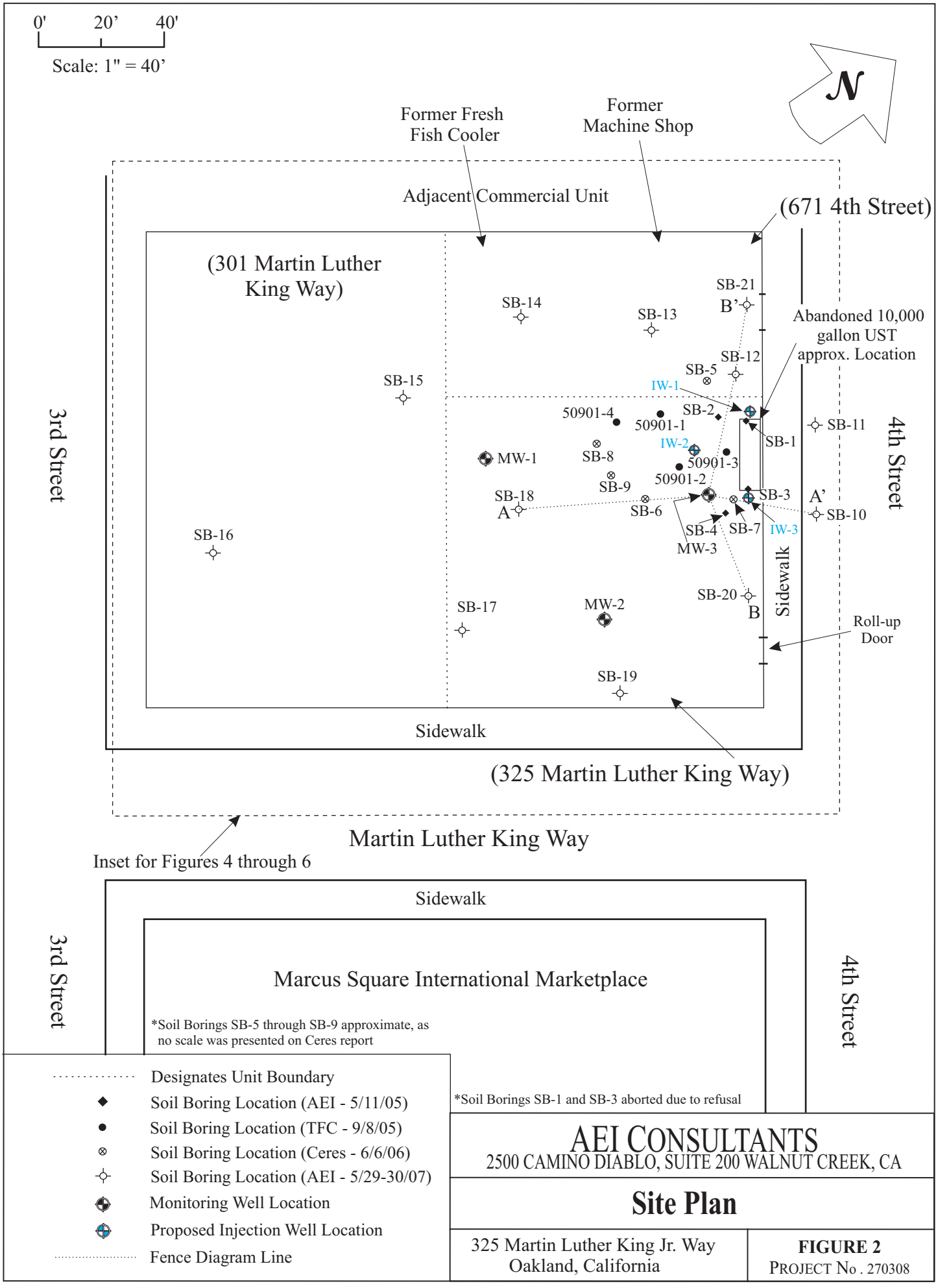
Well Survey

325 Martin Luther King Jr. Way
Oakland, CA 94607

FIGURE 1
Job No: 270308

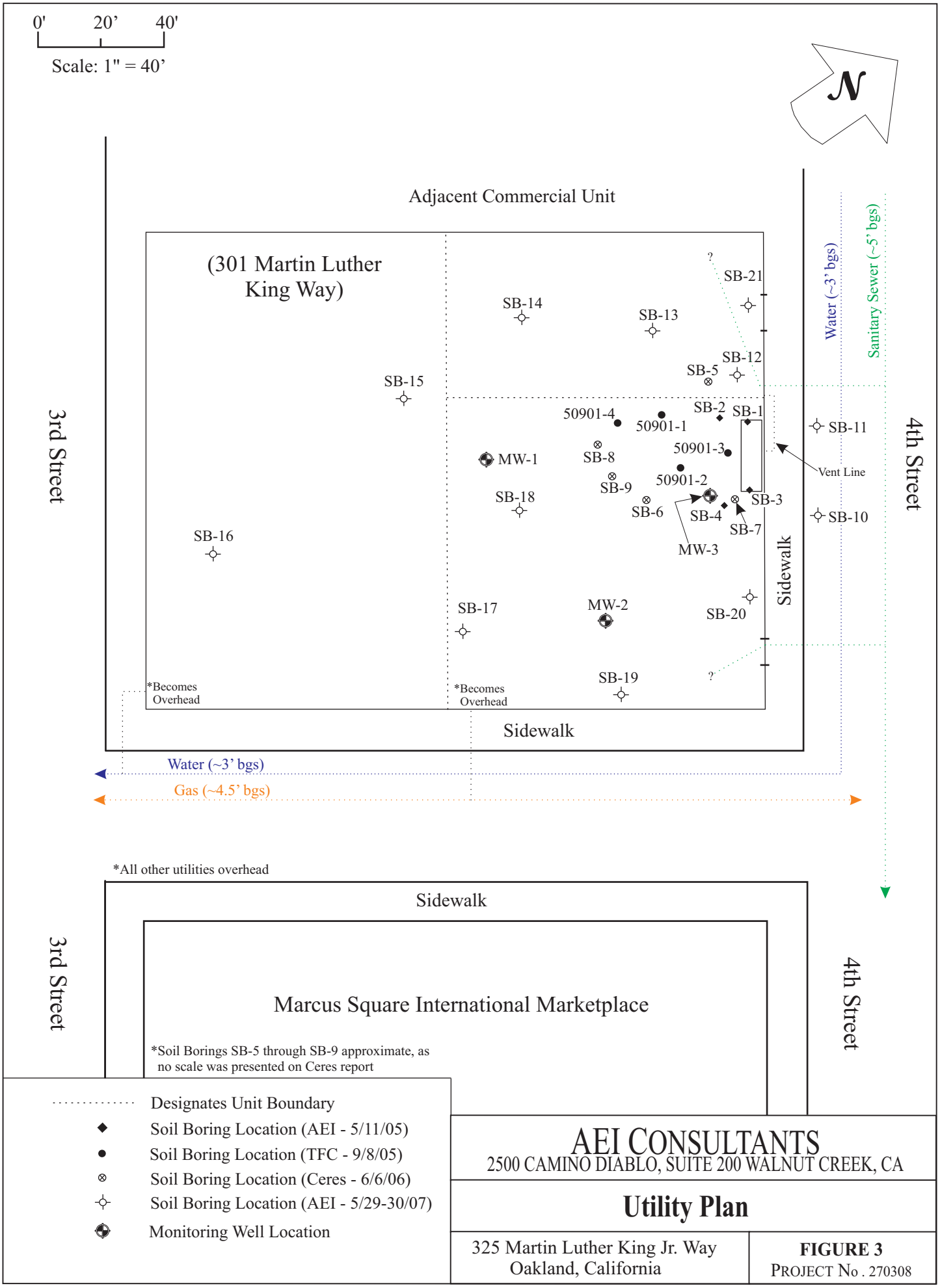


AEI CONSULTANTS
2500 CAMINO DIABLO, SUITE 200 WALNUT CREEK, CA

Site Plan

325 Martin Luther King Jr. Way
Oakland, California

FIGURE 2
PROJECT No . 270308



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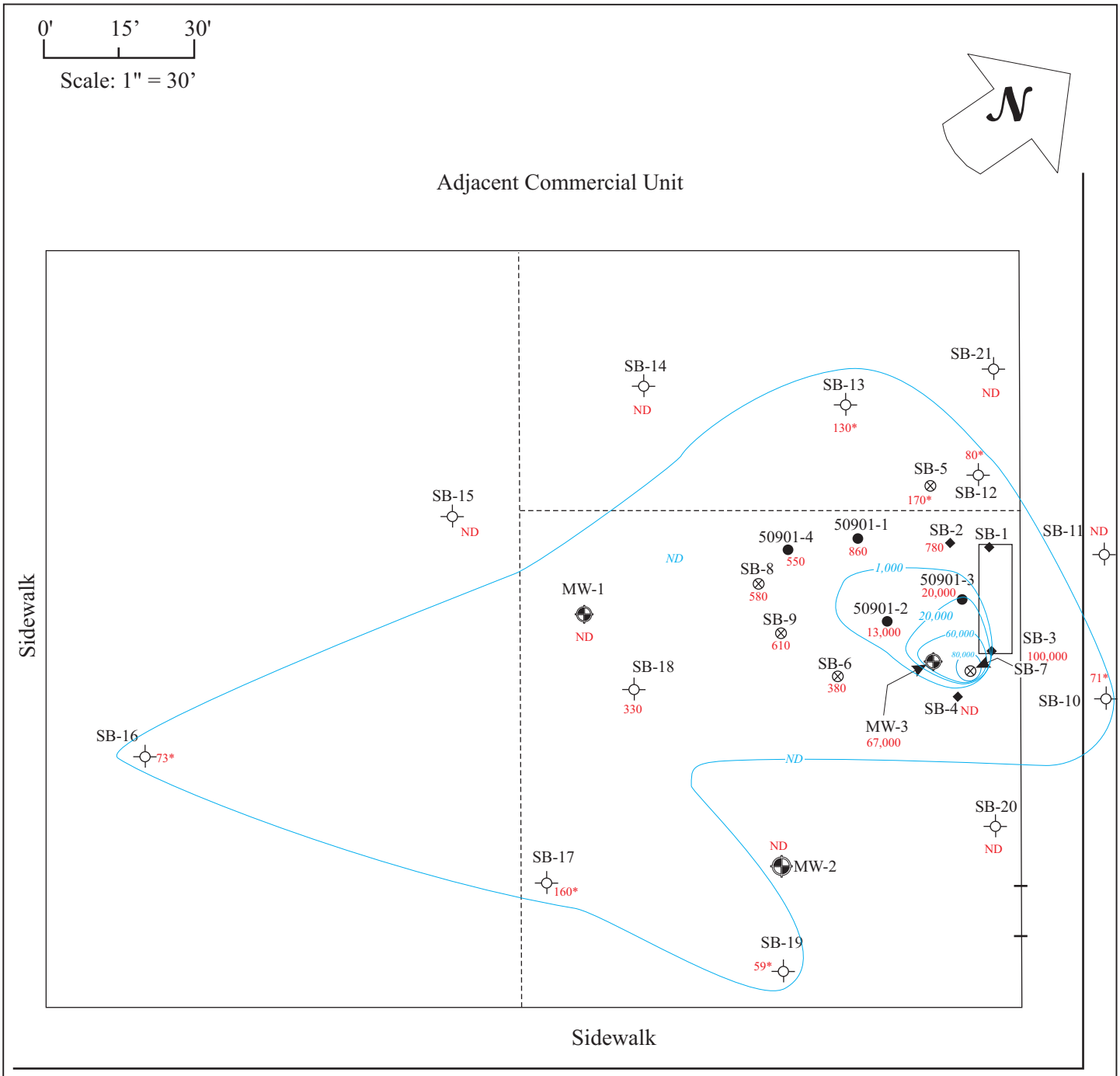
2500 CAMINO DIABLO, SUITE 200 WALNUT CREEK, CA

Utility Plan

325 Martin Luther King Jr. Way
Oakland, California

FIGURE 3
PROJECT No . 270308



TPH-g concentrations expressed in ug/L
(Refer to Tables 2, 3 and 6 for details)

Orange Values = Detected contamination concentrations
Blue Values = Isoconcentration contour value
*Value reported as TPH-d by lab; however, analysis of chromatographs indicate heavily weathered gasoline showing up as TPH-d

- ---------- Designates Unit Boundary
- ◆ Soil Boring Location (AEI - 5/11/05)
- ● Soil Boring Location (TFC - 9/8/05)
- ⊗ Soil Boring Location (Ceres - 6/6/06)
- ⊹ Soil Boring Location (AEI - 5/29-30/07)
- ⊕ Monitoring Well Location

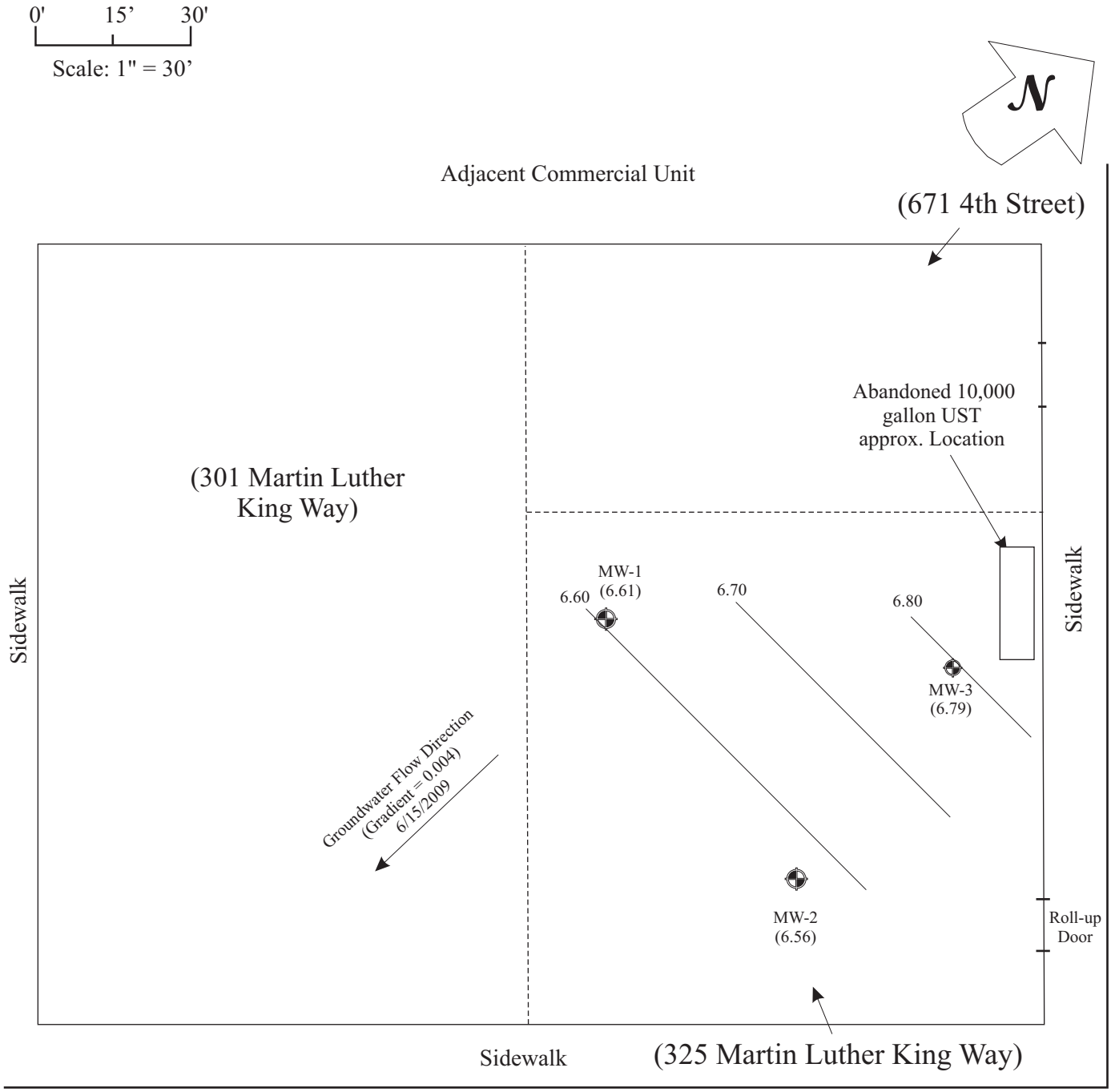
*Data for wells MW-1 through MW-3 collected on 6/15/09

AEI CONSULTANTS
2500 CAMINO DIABLO, SUITE 200 WALNUT CREEK, CA

Groundwater Sample Data

325 Martin Luther King Jr. Way
Oakland, California

FIGURE 4
PROJECT No . 270308



Monitoring Well Locations

MW-2 (6.49) Water table elevations shown in parentheses in feet ams (above mean sea level)

Contour Interval = 0.1 feet

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2500 CAMINO DIABLO, SUITE 200 WALNUT CREEK, CA

Water Table Elevations (6/15/09)

325 Martin Luther King Jr. Way
Oakland, California

FIGURE 5
PROJECT No . 270308

AEI CONSULTANTS

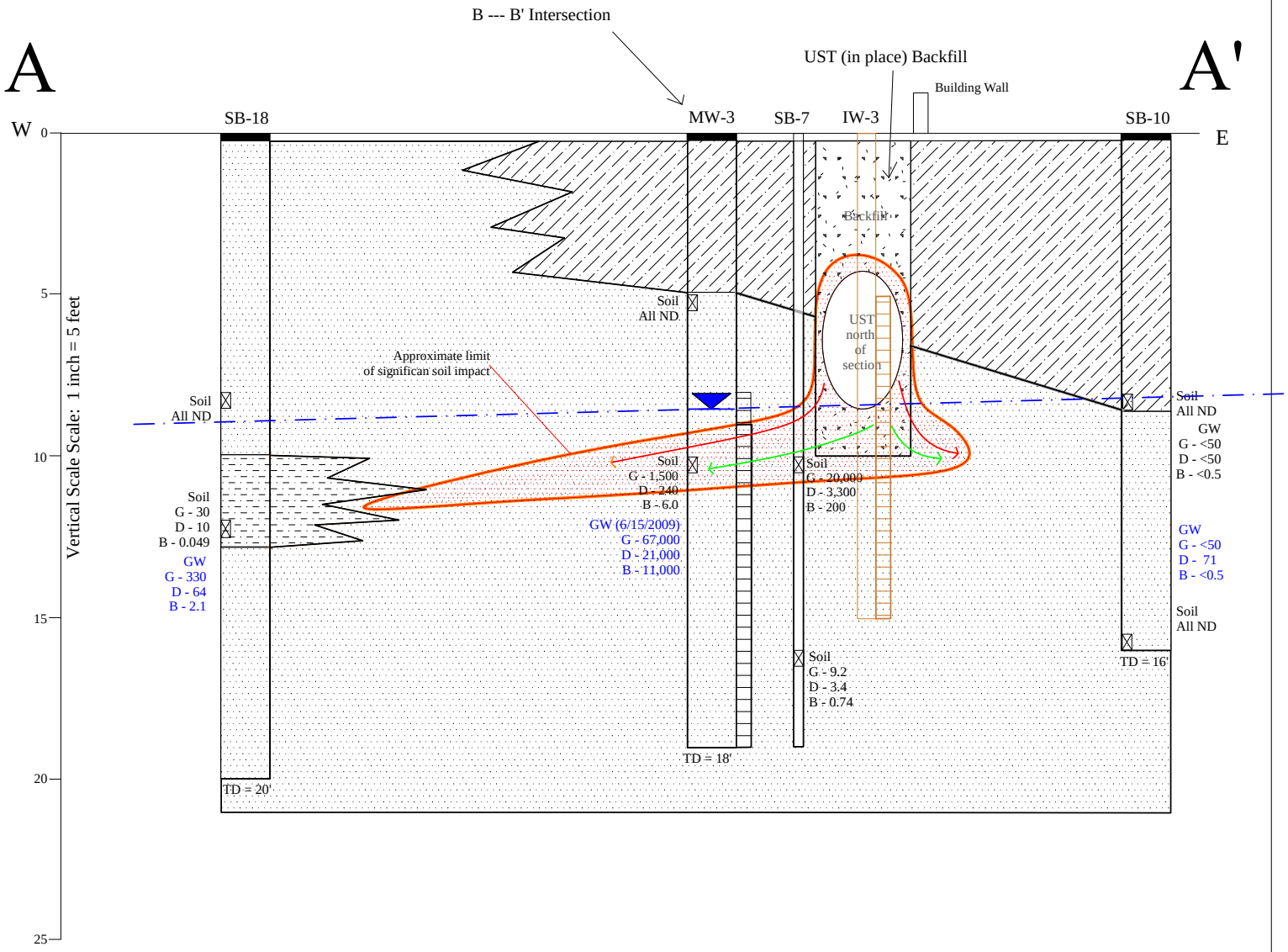
2500 CAMINO DIABLO, SUITE 200 WALNUT CREEK, CA

Proposed Injection Well Locations

325 Martin Luther King Jr. Way
Oakland, California

FIGURE 6

PROJECT No . 270308



Legend:

- Sand
- Silty Sand
- Clayey Silt
- Clayey Sand
- Inferred Contact
- Soil Sample
- Groundwater Level (ATD or static in well)
- Contamination Migration Pathways
- Peroxide Migration Pathways
- Well Screen Interval (8'-18' bgs)
- UST (In place) and Backfill

NOTE:
Soil concentrations in milligrams per kilogram (mg/kg)
Groundwater concentrations in micrograms per liter (ug/L)
G - Gasoline, D - Diesel, B - Benzene
TD = total depth

0 20 40 60 80

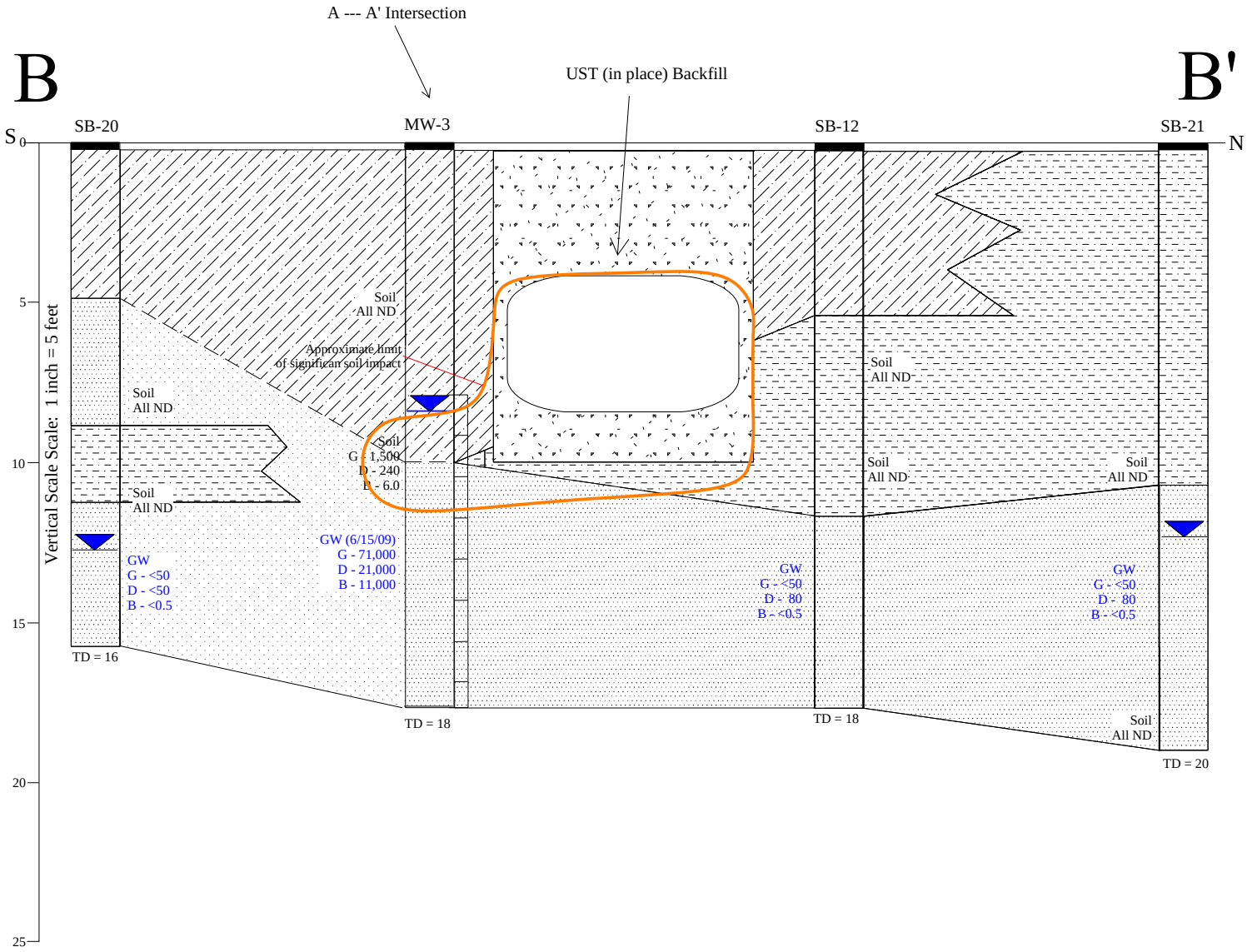
Scale 1" = 20"

AEI CONSULTANTS
2500 CAMINO DIABLO, STE. 100, WALNUT CREEK, CA

A - A' Fence Diagram

325 Martin Luther King Jr Way
Oakland, CA

Figure 7
PROJECT NO. 270308



Legend:

- Sand
- Silty Sand
- Clayey Silt
- Clayey Sand
- Groundwater Level (ATD or static in well)
- Well Screen Interval (8'-18' bgs)
- UST (In place) and Backfill
- Inferred Contact

NOTE:
Soil concentrations in milligrams per kilogram (mg/kg)
Groundwater concentrations in micrograms per liter (ug/L)
G - Gasoline, D - Diesel, B - Benzene
TD - total depth

0 60 120

Scale 1" = 30"

AEI CONSULTANTS
2500 CAMINO DIABLO, STE. 100, WALNUT CREEK, CA

B - B' Fence Diagram

325 Martin Luther King Jr Way
Oakland, CA

Figure 8
PROJECT NO. 270308

TABLES

Table 1 - AEI Project # 270308
Soil Sample Analytical Data

Sample ID	Consultant	Date Collected	TPH-g mg/Kg	TPH-d mg/Kg	MTBE mg/Kg	Benzene mg/Kg	Toluene mg/Kg	Ethylbenzene mg/Kg	Xylenes mg/Kg
					EPA Method SW8021B/8015Cm				
SB-2 12'	AEI	5/11/2005	10	5.6	<0.05	0.25	0.071	0.33	1.6
SB-4 12'	AEI	5/11/2005	<1.0	<1.0	<0.05	<0.005	<0.005	<0.005	<0.005
SB-5-10	Ceres	6/6/2006	<1.0	<1.0	<0.05	<0.005	<0.005	<0.005	<0.005
SB-6-10	Ceres	6/6/2006	5.0	3.1	<0.05	0.023	0.025	0.027	0.64
SB-7-10	Ceres	6/6/2006	20,000	3,300	<45	200	980	320	1,400
SB-7-17	Ceres	6/6/2006	9.2	3.4	<0.1	0.74	0.64	0.16	0.70
SB-8-10	Ceres	6/6/2006	4.7	3.0	<0.05	0.058	0.030	0.083	0.48
SB-9-10	Ceres	6/6/2006	7.5	4.2	<0.05	0.068	0.22	0.21	1.1
SB-10-8'	AEI	5/29-30/07	<1.0	<1.0	<0.05	<0.005	<0.005	<0.005	<0.005
SB-10-16'	AEI	5/29-30/07	<1.0	<1.0	<0.05	<0.005	<0.005	<0.005	<0.005
SB-11-11'	AEI	5/29-30/07	<1.0	<1.0	<0.05	<0.005	<0.005	<0.005	<0.005
SB-11-16'	AEI	5/29-30/07	<1.0	<1.0	<0.05	<0.005	<0.005	<0.005	<0.005
SB-12-7'	AEI	5/29-30/07	<1.0	<1.0	<0.05	<0.005	<0.005	<0.005	<0.005
SB-12-12'	AEI	5/29-30/07	<1.0	<1.0	<0.05	<0.005	<0.005	<0.005	<0.005
SB-13-8'	AEI	5/29-30/07	<1.0	<1.0	<0.05	<0.005	<0.005	<0.005	<0.005
SB-13-14'	AEI	5/29-30/07	<1.0	<1.0	<0.05	<0.005	<0.005	<0.005	<0.005
SB-14-8'	AEI	5/29-30/07	<1.0	<1.0	<0.05	<0.005	<0.005	<0.005	<0.005
SB-14-12'	AEI	5/29-30/07	<1.0	<1.0	<0.05	<0.005	<0.005	<0.005	<0.005
SB-15-8'	AEI	5/29-30/07	<1.0	<1.0	<0.05	<0.005	<0.005	<0.005	<0.005
SB-15-12'	AEI	5/29-30/07	<1.0	<1.0	<0.05	<0.005	<0.005	<0.005	<0.005
SB-16-8'	AEI	5/29-30/07	<1.0	<1.0	<0.05	<0.005	<0.005	<0.005	<0.005
SB-16-12'	AEI	5/29-30/07	<1.0	<1.0	<0.05	<0.005	<0.005	<0.005	<0.005
SB-17-9'	AEI	5/29-30/07	<1.0	<1.0	<0.05	<0.005	<0.005	<0.005	<0.005
SB-17-12'	AEI	5/29-30/07	<1.0	2.7	<0.05	<0.005	<0.005	<0.005	<0.005
SB-18-8'	AEI	5/29-30/07	<1.0	<1.0	<0.05	<0.005	<0.005	<0.005	<0.005
SB-18-12'	AEI	5/29-30/07	30	10	<0.17	0.049	0.22	0.36	1.8
SB-19-8'	AEI	5/29-30/07	<1.0	<1.0	<0.05	<0.005	<0.005	<0.005	<0.005
SB-19-12'	AEI	5/29-30/07	<1.0	<1.0	<0.05	<0.005	<0.005	<0.005	<0.005
SB-20-8'	AEI	5/29-30/07	<1.0	<1.0	<0.05	<0.005	<0.005	<0.005	<0.005
SB-20-12'	AEI	5/29-30/07	<1.0	<1.0	<0.05	<0.005	<0.005	<0.005	<0.005
SB-21-12'	AEI	5/29-30/07	<1.0	<1.0	<0.05	<0.005	<0.005	<0.005	<0.005
SB-21-17'	AEI	5/29-30/07	<1.0	<1.0	<0.05	<0.005	<0.005	<0.005	<0.005
MW-3-5'	AEI	8/10/2007	<1.0	<1.0	<0.05	<0.005	<0.005	<0.005	<0.005
MW-3-10'	AEI	8/10/2007	1,500	240	<10	6.0	42	12	120
RL	-	-	1.0	1.0	0.05	0.005	0.005	0.005	0.005

Notes:
mg/Kg - milligrams per kilogram
TPH - g - Total Petroleum Hydrocarbons as gasoline
TPH - d - Total Petroleum Hydrocarbons as diesel
RL - Reporting Limit
AEI - AEI Consultants
Ceres - Ceres Associates
No known soil data for Terra Firma Consulting report

Table 2 - AEI Project # 270308
Groundwater Sample Analytical Data

Sample ID	Consultant	Date Collected	TPH-g ug/L	TPH-d ug/L	MTBE ug/L	Benzene ug/L	Toluene ug/L	Ethylbenzene ug/L	Xylenes ug/L
					EPA Method SW8021B/8015Cm				
SB-2W	AEI	5/11/2005	780	420	<5.0	53	9.0	35	100
SB-4W	AEI	5/11/2005	<50	<50	<5.0	<0.5	<0.005	<0.005	0.76
50901-1	TFC	9/8/2005	860	740	-	6.0	7.5	22	100
50901-2	TFC	9/8/2005	13,000	3,600	-	410	1,200	390	1,700
50901-3	TFC	9/8/2005	20,000	2,000	-	990	3,100	590	2,300
50901-4	TFC	9/8/2005	550	230	-	20	17	19	56
SB5-GW	Ceres	6/6/2006	<50	170	<5.0	<0.5	<0.5	<0.5	1.8
SB6-GW	Ceres	6/6/2006	380	290	<5.0	3.4	1.8	3.8	51
SB7-GW	Ceres	6/6/2006	100,000	110,000	<100	3,300	11,000	2,100	20,000
SB8-GW	Ceres	6/6/2006	580	550	<5.0	8.4	3.6	18	47
SB9-GW	Ceres	6/6/2006	610	360	<5.0	10	15	21	70
SB-10-W	AEI	5/29-30/07	<50	71	<5.0	<0.5	<0.5	<0.5	<0.5
SB-11-W	AEI	5/29-30/07	<50	<50	<5.0	<0.5	<0.5	<0.5	<0.5
SB-12-W	AEI	5/29-30/07	<50	80	<5.0	<0.5	<0.5	<0.5	<0.5
SB-13-W	AEI	5/29-30/07	<50	130	<5.0	<0.5	<0.5	<0.5	<0.5
SB-14-W	AEI	5/29-30/07	<50	<50	<5.0	<0.5	<0.5	<0.5	<0.5
SB-15-W	AEI	5/29-30/07	<50	<50	<5.0	<0.5	<0.5	<0.5	<0.5
SB-16-W	AEI	5/29-30/07	<50	73	<5.0	<0.5	<0.5	<0.5	<0.5
SB-17-W	AEI	5/29-30/07	<50	160	<5.0	<0.5	<0.5	<0.5	<0.5
SB-18-W	AEI	5/29-30/07	330	64	14	2.1	5.4	8.9	31
SB-19-W	AEI	5/29-30/07	<50	59	<5.0	<0.5	<0.5	<0.5	<0.5
SB-20-W	AEI	5/29-30/07	<50	<50	<5.0	<0.5	<0.5	<0.5	<0.5
SB-21-W	AEI	5/29-30/07	<50	<50	<5.0	<0.5	<0.5	<0.5	<0.5
RL	-	-	50	50	5.0	0.5	0.5	0.5	0.5

Notes:
ug/L - microgram per liter
TPH-g - Total Petroleum Hydrocarbons as gasoline
TPH-d - Total Petroleum Hydrocarbons as diesel
MTBE = methyl tertiary butyl ether
RL - reporting limit
AEI - AEI Consultants
TFC - Terra Firma Consulting
Ceres - Ceres Associates

Table 3 - AEI Project # 270308
Soil and Groundwater Sample Analytical Data - Fuel Additives

Sample ID	Date Collected	MTBE ug/L	TAME ug/L	TBA ug/L	DIPE ug/L *EPA 8260B*	ETBE ug/L	Ethanol ug/L	Methanol ug/L	EDB ug/L	1,2-DCA ug/L
Soil		mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
SB-12-12'	5/29-30/2007	<0.005	<0.005	<0.05	<0.005	<0.005	<0.25	<2.5	<0.005	<0.005
SB-17-12'	5/29-30/2007	<0.005	<0.005	<0.05	<0.005	<0.005	<0.25	<2.5	<0.005	<0.005
SB-18-12'	5/29-30/2007	<0.010	<0.010	<0.10	<0.010	<0.010	<0.5	<5.0	<0.010	<0.010
Groundwater		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
SB-10-W	5/29-30/2007	<0.5	<0.5	<5.0	<0.5	<0.5	<50	<500	<0.5	<0.5
SB-11-W	5/29-30/2007	<0.5	<0.5	<5.0	<0.5	<0.5	<50	<500	<0.5	<0.5
SB-12-W	5/29-30/2007	<0.5	<0.5	<5.0	<0.5	<0.5	<50	<500	<0.5	<0.5
SB-13-W	5/29-30/2007	<0.5	<0.5	<5.0	<0.5	<0.5	<50	<500	<0.5	<0.5
SB-14-W	5/29-30/2007	<0.5	<0.5	<5.0	<0.5	<0.5	<50	<500	<0.5	<0.5
SB-15-W	5/29-30/2007	<0.5	<0.5	<5.0	<0.5	<0.5	<50	<500	<0.5	4.5
SB-16-W	5/29-30/2007	<0.5	<0.5	<5.0	<0.5	<0.5	<50	<500	<0.5	2.7
SB-17-W	5/29-30/2007	<0.5	<0.5	<5.0	<0.5	<0.5	<50	<500	<0.5	0.52
SB-18-W	5/29-30/2007	19	<0.5	<5.0	<0.5	<0.5	<50	<500	<0.5	1.2
SB-19-W	5/29-30/2007	<0.5	<0.5	<5.0	<0.5	<0.5	<50	<500	<0.5	<0.5
SB-20-W	5/29-30/2007	<0.5	<0.5	<5.0	<0.5	<0.5	<50	<500	<0.5	<0.5
SB-21-W	5/29-30/2007	<0.5	<0.5	<5.0	<0.5	<0.5	<50	<500	<0.5	<0.5
RL	-	0.5	0.5	5	0.5	0.5	50	500	0.5	0.5

Notes:
mg/kg - milligrams per kilogram
µg/L - micrograms per liter
RL - Reporting Limit (before any dilution)
MTBE - methyl tertiary butyl ether
TAME - tert-amyl methyl ether
TBA - tert-butyl alcohol
DIPE - diisopropyl ether
ETBE - ethyl tert-butyl ether
1,2-DCA - 1,2 - dichloroethane
EDB - 1,2 - dibromoethane

Table 4 - AEI Project # 270308
Monitoring Well Construction Details

Well ID	Date Installed	Top of Casing Elevation (ft amsl)	Well Depth (ft)	Slotted Casing (ft)	Slot Size (in)	Sand Interval (ft)	Sand Size	Bentonite Interval (ft)	Grout Interval (ft)
MW-1	08/10/07	14.92	18.0	8 - 18	0.010	7 - 18	# 2/12	7 - 8	0.75 - 7
MW-2	08/10/07	15.27	17.0	7 - 17	0.010	6 - 17	# 2/12	6 - 7	0.75 - 6
MW-3	08/10/07	15.26	18.0	8 - 18	0.010	7 - 18	# 2/12	7 - 8	0.75 - 7

Notes:
ft amsl = feet above mean sea level

Table 5 - AEI Project # 270308

Groundwater Elevation Data

Well ID (Screen Interval)	Date Collected	Well Elevation *(ft amsl)*	Depth to Water *(ft)*	Groundwater Elevation *(ft amsl)*
MW-1	8/21/2007	14.92	8.38	6.54
(8 - 18)	11/21/2007	14.92	8.37	6.55
	2/26/2008	14.92	7.98	6.94
	6/18/2008	14.92	8.41	6.51
	9/19/2008	14.92	8.56	6.36
	12/29/2008	14.92	8.66	6.26
	3/17/2009	14.92	7.84	7.08
	6/15/2009	**14.92**	**8.31**	**6.61**
MW-2	8/21/2007	15.27	8.78	6.49
(7 - 17)	11/21/2007	15.27	8.72	6.55
	2/26/2008	15.27	8.37	6.90
	6/18/2008	15.27	8.82	6.45
	9/19/2008	15.27	8.92	6.35
	12/29/2008	15.27	8.87	6.40
	3/17/2009	15.27	8.27	7.00
	6/15/2009	**15.27**	**8.71**	**6.56**
MW-3	8/21/2007	15.26	8.59	6.67
(8 - 18)	11/21/2007	15.26	8.55	6.71
	2/26/2008	15.26	8.11	7.15
	6/18/2008	15.26	8.62	6.64
	8/4/2008	15.26	8.65	6.61
	8/20/2008	15.26	8.68	6.58
	9/19/2008	15.26	8.74	6.52
	12/29/2008	15.26	8.67	6.59
	3/17/2009	15.26	7.96	7.30
	6/15/2009	**15.26**	**8.47**	**6.79**

Event #	Date	Average Water Table Elevation (ft amsl)	Change from Previous Episode (ft)	Flow Direction (gradient) (ft/ft)
1	8/21/2007	6.57	NA	S (0.003)
2	11/21/2007	6.60	0.04	S (0.005)
3	2/26/2008	7.00	0.39	S (0.005)
4	6/18/2008	6.53	-0.46	SSE (0.004)
5	9/19/2008	6.41	-0.12	S (0.003)
6	12/29/2008	6.42	0.01	SSW (0.005)
7	3/17/2009	7.13	0.71	SSW (0.006)
8	**6/15/2009**	**6.65**	**-0.47**	**SSW (0.004)**

ft amsl = feet above mean sea level

Table 6 - AEI Project # 270308

Groundwater Monitoring Sample Analytical Data

Sample ID	Date	TPHg µg/L	TPHd µg/L	MTBE µg/L	Benzene µg/L	Toluene µg/L	Ethylbenzene µg/L	Xylenes µg/L
MW-1	8/21/2007	<50	<50	15	<0.5	<0.5	<0.5	<0.5
	11/21/2007	<50	<50	12	<0.5	<0.5	<0.5	<0.5
	2/26/2008	<50	<50	-	<0.5	<0.5	<0.5	<0.5
	6/18/2008	<50	<50	-	<0.5	<0.5	<0.5	<0.5
	9/19/2008	<50	<50	-	<0.5	<0.5	<0.5	<0.5
	12/29/2008	<50	<50	-	<0.5	<0.5	<0.5	<0.5
	3/17/2009	<50	<50	-	<0.5	<0.5	<0.5	<0.5
	6/15/2009	**<50**	**<50**	**-**	**<0.5**	**<0.5**	**<0.5**	**<0.5**
MW-2	8/21/2007	<50	<50	<5.0	<0.5	<0.5	<0.5	<0.5
	11/21/2007	<50	<50	<5.0	<0.5	<0.5	<0.5	<0.5
	2/26/2008	<50	<50	-	<0.5	<0.5	<0.5	<0.5
	6/18/2008	<50	<50	-	<0.5	<0.5	<0.5	<0.5
	9/19/2008	<50	<50	-	<0.5	<0.5	<0.5	<0.5
	12/29/2008	<50	<50	-	<0.5	<0.5	<0.5	<0.5
	3/17/2009	<50	<50	-	<0.5	<0.5	<0.5	<0.5
	6/15/2009	**<50**	**<50**	**-**	**<0.5**	**<0.5**	**<0.5**	**<0.5**
MW-3	8/21/2007	24,000	2,100	<180	2,600	3,500	450	2,400
	11/21/2007	36,000	3,800	<500	4,900	1,200	230	2,700
	2/26/2008	31,000	5,400	-	4,200	1,900	590	2,200
	6/18/2008	20,000	3,000	-	2,900	1,100	390	990
	8/4/2008	110,000	27,000	-	5,900	9,000	76	8,100
	8/20/2008	120,000	6,500	-	8,900	18,000	930	12,000
	9/19/2008	64,000	4,500	-	6,200	9,200	660	6,600
	12/29/2008	130,000	7,900	-	11,000	19,000	1,800	11,000
	3/17/2009	83,000	8,000	-	7,400	10,000	1,100	8,500
	6/15/2009	**67,000**	**21,000**	**-**	**11,000**	**9,100**	**1,200**	**6,800**

Notes:
TPHd = total petroleum hydrocarbons as diesel (C10-C23) using EPA Method 8015
TPHg = total petroleum hydrocarbons as gasoline (C6-C12) using EPA Method 8015
Benzene, toluene, ethylbenzene, and xylenes using EPA Method 8021B
MTBE = methyl-tertiary butyl ether using EPA Method 8021B
µg/L= micrograms per liter
ND<50 = non detect at respective reporting limit

Table 7 - AEI Project # 270308

Groundwater Monitoring Sample Analytical Data

Fuel Additives

Sample ID	Date	MTBE µg/L	TAME µg/L	TBA µg/L	DIPE µg/L	ETBE µg/L	Ethanol µg/L	Methanol µg/L	EDB µg/L	1,2-DCA µg/L
MW-1	8/21/2007	18	<0.5	<5.0	<0.5	<0.5	<50	<500	<0.5	5.2
	11/21/2007	-	-	-	-	-	-	-	-	-
	2/26/2008	16	-	-	-	-	-	-	<0.5	6.9
	6/18/2008	15	-	-	-	-	-	-	<0.5	5.4
	9/19/2008	4.2	-	-	-	-	-	-	<0.5	6.8
	12/29/2008	0.62	-	-	-	-	-	-	<0.5	6.8
	3/17/2009	11	-	-	-	-	-	-	<0.5	4.6
	6/15/2009	**8.1**	**-**	**-**	**-**	**-**	**-**	**-**	**<0.5**	**5.8**
MW-2	8/21/2007	<0.5	<0.5	<5.0	<0.5	<0.5	<50	<500	<0.5	<0.5
	11/21/2007	-	-	-	-	-	-	-	-	-
	2/26/2008	<0.5	-	-	-	-	-	-	<0.5	<0.5
	6/18/2008	<0.5							<0.5	<0.5
	9/19/2008	<0.5							<0.5	<0.5
	12/29/2008	<0.5							<0.5	<0.5
	3/17/2009	<0.5							<0.5	<0.5
	6/15/2009	**<0.5**							**<0.5**	**<0.5**
MW-3	8/21/2007	<5.0	<5.0	<50	<5.0	<5.0	<500	<5000	34	140
	11/21/2007	-	-	-	-	-	-	-	-	-
	2/26/2008	<12	-	-	-	-	-	-	31	220
	6/18/2008	<5.0	-	-	-	-	-	-	21	190
	8/4/2008	<50	-	-	-	-	-	-	220	410
	8/20/2008	<50	-	-	-	-	-	-	330	410
	9/19/2008	<17	-	-	-	-	-	-	160	320
	12/29/2008	<50	-	-	-	-	-	-	200	440
	3/17/2009	<25	-	-	-	-	-	-	98	370
	6/15/2009	**<50**	**-**	**-**	**-**	**-**	**-**	**-**	**87**	**490**

Notes:
µg/L= micrograms per liter
ND<50 = non detect at respective reporting limit
MTBE - methyl tertiary butyl ethe
TAME - tert-amyl methyl ethe
TBA - tert-butyl alcohol
DIPE - diisopropyl ethe
ETBE - ethyl tert-butyl ethe
1,2-DCA - 1,2 - dichloroethane
EDB - 1,2 - dibromoethane

Table 8 - AEI Project # 270308

Groundwater Monitoring Sample Analytical Data

Metals

Sample ID	Date	As µg/L	Ba µg/L	Cd µg/L	Cr (total) / Cr VI µg/L	Cu µg/L	Fe (total) µg/L	Pb µg/L	Se µg/L
MW-1	8/21/2007	-	-	-	-	-	-	<0.5	-
	6/18/2008*	0.83	17	<0.25	3.9 / 2.9	<5.0	<20	0.70	<0.5
MW-2	8/21/2007	-	-	-	-	-	-	<0.5	-
	6/18/2008*	0.90	16	<0.25	5.8 / 4.6	<5.0	56	<0.5	<0.5
MW-3	8/21/2007	-	-	-	-	-	-	8.6	-
	6/18/2008*	9.9	26	<0.25	<0.5 / <0.2	<5.0	3,700	4.3	<0.5
	8/4/2008	75	64	<0.25	120 / 130	45	-	30	14
	8/20/2008	77	42	<0.25	73 / 54	21	260	34	9.6
	9/19/2008	62	<50	<2.5	13 / 5.0	19	390	28	5.8

Notes:
µg/L= micrograms per liter
ND<50 = non detect at respective reporting limit
As - arsenic
Ba - barium
Cd - cadmium
Cr - chromium
Cr VI - hexavalent chromium
Cu - copper
Fe - iron
Pb - lead
Se - selenium
Hexavalent chromium analyzed by E218.6, all others by E200.8
*Sample for hexavalent chromium (E218.6) gathered on 6/19/08, others on 6/18/08

Table 9 - AEI Project # 270308
Soil Vapor Sample Analytical Data

Sample ID	Date	Depth	TPH-g (µg/m^3)	MTBE (µg/m^3)	EDB (µg/m^3)	Benzene (µg/m^3)	Toluene (µg/m^3)	Ethylbenzene (µg/m^3)	Xylenes (µg/m^3)	*Isopropy Alcohol (µg/m^3)
VS-1-Shallow	7/14/08	0.5	<1,800	<7.3	<16	<6.5	<7.7	<8.8	<27	<10
VS-1-Shallow	8/4/08	0.5	<1,800	<7.3	<16	<6.5	<7.7	<8.8	<27	<10
VS-1-Deep	7/14/08	5	<1,800	<7.3	<16	<6.5	<7.7	<8.8	<27	<10
VS-1-Deep	8/4/08	5	<1,800	<7.3	<16	<6.5	<7.7	<8.8	<27	<10
VS-2-Shallow	7/14/08	0.5	<1,800	<7.3	<16	<6.5	<7.7	<8.8	<27	<10
VS-2-Shallow	8/4/08	0.5	<1,800	<7.3	<16	<6.5	<7.7	<8.8	<27	<10
VS-2-Deep	7/14/08	5	<1,800	<7.3	<16	<6.5	<7.7	<8.8	<27	<10
VS-2-Deep	8/4/08	5	<1,800	<7.3	<16	<6.5	<7.7	<8.8	<27	<10
VS-3-Shallow	7/14/08	0.5	<1,800	<7.3	<16	<6.5	<7.7	<8.8	<27	<10
VS-3-Shallow	8/4/08	0.5	<1,800	<7.3	<16	<6.5	<7.7	<8.8	<27	<10
VS-3-Deep	7/14/08	5	<1,800	<7.3	<16	<6.5	<7.7	<8.8	<27	<10
VS-3-Deep	8/4/08	5	<1,800	<7.3	<16	<6.5	<7.7	<8.8	<27	<10
VS-4-Shallow	7/14/08	0.5	<1,800	<7.3	<16	<6.5	<7.7	<8.8	<27	<10
VS-4-Shallow	8/4/08	0.5	<1,800	<7.3	<16	<6.5	<7.7	<8.8	<27	<10
VS-4-Deep	7/14/08	5	<1,800	<7.3	<16	<6.5	<7.7	<8.8	<27	<10
VS-4-Deep	8/4/08	5	<1,800	<7.3	<16	<6.5	<7.7	<8.8	<27	<10
DL	-	1,800	1,800	7.3		6.5	7.7	8.8	27	10

NOTES:

µg/m^3 = micrograms per cubic meter

TPH-g = total petroleum hydrocarbons as gasoline

MTBE = methyl tertiary butyl ether

DL = detection limit

Labeling Convention = Soil Gas-[probe number]-[depth]

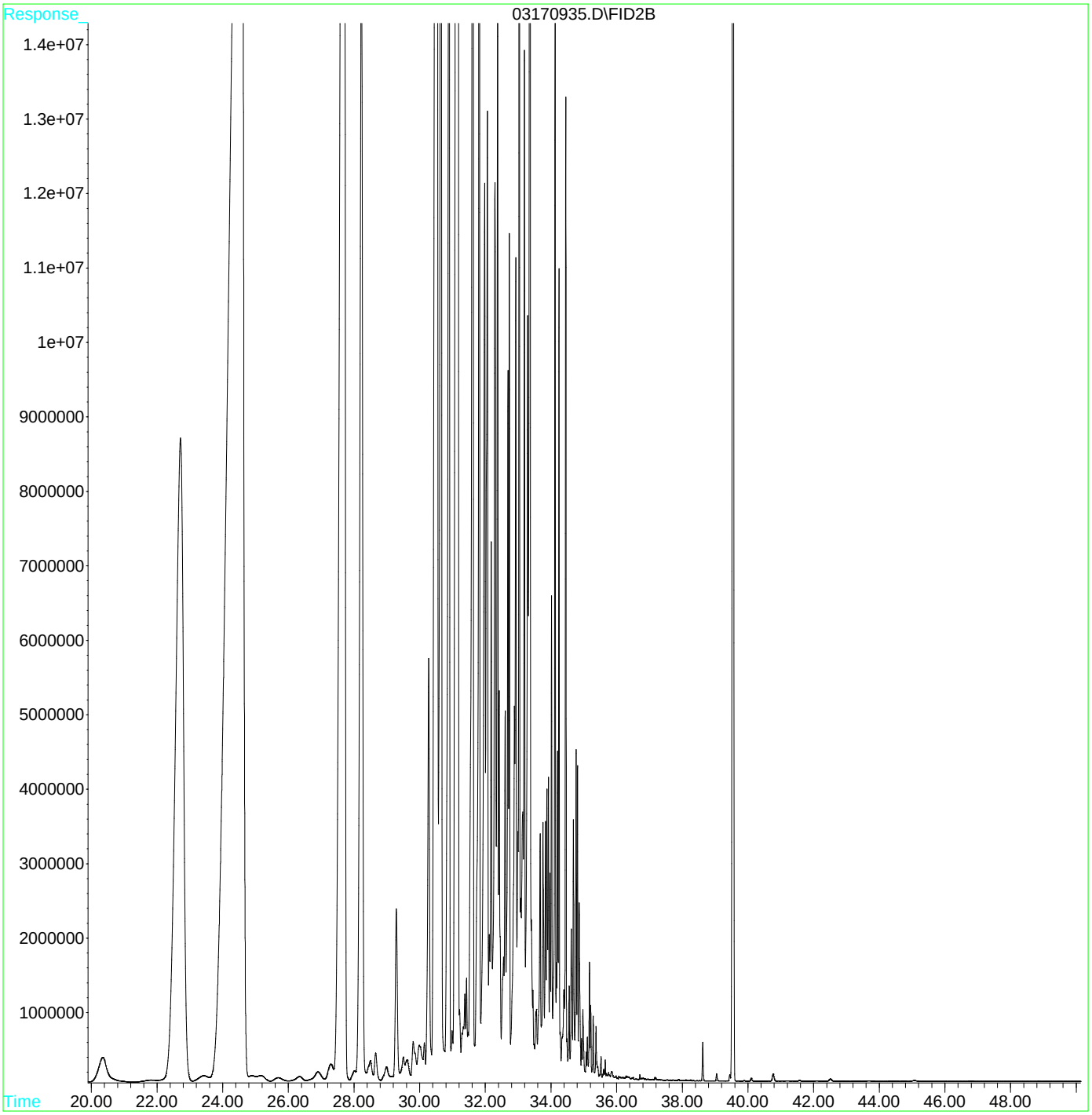
Shallow = 0.5 feet bgs (subslab); Deep = 5 feet bgs

EDB = 1,2-Dibromoethane

*Isopropyl Alcohol = leak check compound

APPENDIX A

File : D:\HPCHEM\GC11\DATAB\03170935.D
Operator : Thu
Acquired : 18 Mar 2009 6:52 am using AcqMethod GC11AW.M
Instrument : GC-11
Sample Name: 0903439-003A W
Misc Info : TPH(D)WSG_W
Vial Number: 68



File : D:\HPCHEM\GC2\DATAB\01040709.D
Operator :
Acquired : 4 Jan 2007 2:42 pm using AcqMethod GC2AT.M
Instrument : GC-2
Sample Name: B
Misc Info :
Vial Number: 55