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REPORT of SOIL AND GROUNDWATER ASSESSMENT AND CORRECTIVE ACTION PLAN ASE JOB NO. 3934 at Albany Hill Mini Mart 800 San Pablo Avenue Albany, California

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#### **1.0 INTRODUCTION**

This submittal presents Aqua Science Engineers, Inc. (ASE) soil and groundwater assessment and remedial action plan for the Albany Hill Mini Mart located at 800 San Pablo Avenue in Albany, California (Figures 1 and 2). The proposed site assessment activities were initiated by Dr. Joginder Sikand, owner of the property, as requested by the Alameda County Health Care Services Agency (ACHCSA). This report supplements ASE's September 29, 2005 report entitled "Interim Report of Soil and Groundwater Assessment and Workplan for Additional Activities."

#### 2.0 BACKGROUND INFORMATION

The subject site is currently a mini market and gasoline service station. It is ASE's understanding that the site has operated as a gasoline service station since 1930. Dr. Sikand, the present owner, purchased the property in 1973. At that time, three underground fuel storage tanks (USTs) operated at the site. These tanks consisted of two 500-gallon regular gasoline USTs and one 1,000-gallon super gasoline UST. In 1986, the site was remodeled and the three old USTs were removed and were replaced by four new USTs. These new USTs consisted of two 10,000-gallon gasoline USTs, one 6,000-gallon gasoline UST, and one 2,000-gallon diesel UST. The automotive repair operation also ceased at that time.

#### 2.1 March 1997 Underground Storage Tank (UST) Removal

In March 1997, Superior Underground Tank Services removed five USTs. These USTs consisted of the four USTs installed in 1986 and one 750-gallon UST, which was previously unknown and was found during excavation activities at the site. Soil samples collected from the excavations following the UST removal contained up to 3,800 parts per million (ppm) total petroleum hydrocarbons as gasoline (TPH-G), 820 ppm total petroleum hydrocarbons as diesel (TPH-D), and detectable concentrations of benzene, toluene, ethylbenzene and total xylenes (collectively known as BTEX) and methyl tertiary butyl ether (MTBE). Groundwater samples collected from the excavations also contained elevated concentrations of TPH-G, TPH-D, BTEX and MTBE.

#### 2.2 August 1999 Preliminary Soil and Groundwater Assessment

In August 1999, Advanced Assessment and Remediation Services (AARS) conducted a preliminary soil and groundwater assessment at the site. This assessment included the installation of monitoring wells MW-1, MW-2 and MW-3 at the site. Sediments encountered during drilling generally consisted of clay from the ground surface to approximately 13-feet below ground surface (bgs), and sand or silty sand from 13-feet bgs to the total depth explored of 25-feet bgs. Groundwater was encountered at approximately 17-feet bgs and rose to approximately 10.5-feet bgs in the completed monitoring wells. Relatively low concentrations of hydrocarbons were detected in soil samples collected from MW-1, and no hydrocarbons were detected in soil samples collected from MW-3. Groundwater samples collected from the monitoring wells contained up to 1,500 parts per billion (ppb) TPH-G, 1,200 ppb TPH-D, 4.3 ppb benzene, 2.9 ppb toluene, 9.1 ppb ethylbenzene, and 28 ppb total xylenes. The highest

concentrations were in monitoring well MW-1, with much lower or non-detectable concentrations in the other two wells. The groundwater flow direction during this assessment was calculated to be to the southeast.

#### 2.3 June 2001 Soil and Groundwater Assessment

In June 2001, AARS conducted an additional soil and groundwater assessment at the site, which included the drilling of four soil borings (SB-1 through SB-4). Hydrocarbons were detected in soil samples collected from approximately 10-feet bgs in all four borings. The highest concentrations were in SB-1, which contained 2,300 ppm TPH-G, 550 ppm TPH-D, 5.3 ppm benzene, 78 ppm toluene, 45 ppm ethylbenzene, and 330 ppm total xylenes. Elevated petroleum hydrocarbon concentrations were detected in groundwater samples collected in all four borings. The highest concentrations were in SB-2 and SB-4, which contained up to 8,900 ppb TPH-G, 19,000 ppb TPH-D, 1,400 ppb benzene, 1,900 ppb toluene, 280 ppb ethylbenzene, 1,300 ppb total xylenes, and 4,500 ppb MTBE.

#### 2.4 June 2002 Soil and Groundwater Assessment

In June 2002, AARS conducted an additional soil and groundwater assessment at the site, which included the installation of six additional monitoring wells (MW-4 through MW-9) and one additional soil boring (SB-6). Hydrocarbons were detected in soil samples collected from all of these borings, with the highest concentrations detected in the soil samples collected from 11-feet bgs in MW-4 and 15-feet bgs in MW-9. All of the hydrocarbon concentrations in soil were well below the concentrations detected in previous boring SB-2. The groundwater samples collected from these new monitoring wells contained up to 24,100 ppb TPH-G, 19,000 ppb TPH-D, 2,300 ppb benzene, 1,900 ppb toluene, 1,050 ppb ethylbenzene, 5,410 ppb total xylenes, and 12,000 ppb MTBE.

#### 2.5 June 2002 Area Well Survey

In June 2002, AARS also conducted an area well survey that identified wells within a 2,000-foot radius of the site. AARS listed seven wells in the site vicinity. However, all of the wells are over 2,000-feet from the site and none of the wells are domestic, municipal, irrigation or other water supply wells.

#### 2.6 Quarterly Groundwater Monitoring

Between August 1999 and February 2003, groundwater samples were collected from the site monitoring wells on an approximate quarterly sampling schedule. The analytical results are tabulated in Table One.

#### 2.7 October 2003 Area Conduit Study

In October 2003, ASE conducted a study of underground utility conduits in the site vicinity to determine if any of these conduits could be a potential preferred pathway for the movement of groundwater contamination in the site vicinity. This study was conducted by reviewing

Underground Service Alert (USA) markings in the site vicinity, reviewing documents such as asbuilt drawings supplied by the city and individual utility companies, and contacting individuals that would have knowledge of the individual utility lines. None of the water, natural gas, electric, telephone, cable TV, or Caltrans communication conduits could be potential conduits based on their depth and the depth to groundwater in the site vicinity. There is a sewer line beneath San Pablo Avenue that, although currently above all historical depths to water, could potentially have been above the potentiometric surface during periods of extremely high water levels. However, since it appears that the actual water level is well below the potentiometric surface at the site, ASE does not believe that this line presents a potential preferred pathway for the movement of groundwater even during periods of a high water table.

#### 2.8 August and October 2004 Soil and Groundwater Assessment

Between August and October 2004, ASE drilled soil borings BH-A through BH-Q using a Geoprobe hydraulic sampling rig. A dual-wall sampler was advanced to allow drilling through the first water-bearing zone into the second water-bearing zone while minimizing the possibility of cross-contamination. Due to the difficulty in drilling with a dual-wall sampler, all of the borings met with refusal before reaching the planned depth. Analytical results for the soil and groundwater samples are tabulated in Tables Two and Three. In general, the analytical results show that elevated hydrocarbon concentrations are present in street areas immediately adjacent to the site to the north and to the east.

The extent of hydrocarbons appears to be completely defined to the southeast as hydrocarbon concentrations detected in boring BH-Q drilled on the western side of San Pablo Avenue south of the site were below ESLs, and to the east as all of the hydrocarbon concentrations detected in borings drilled on the eastern side of San Pablo Avenue were below ESLs. The extent of hydrocarbons to the west is not yet defined based on the results from BH-M. However, based on the long distance to the next possible drilling location to the west, and based on the topographic gradient and unlikely groundwater flow in that direction, ASE did not recommend any further definition of the extent of hydrocarbons to the north of the site was not yet defined. ASE recommended further definition of the extent of hydrocarbons at the site, and vapor extraction and sparging tests at the site. This report presents the methods and findings of an assessment conducted based on these recommendations.

#### 2.9 Replacement of Monitoring Well MW-5 and Installation of Monitoring Well MW-10

Monitoring well MW-5 was destroyed during a sewer replacement project in San Pablo Avenue. In September 2005, California Trenchless, Inc. contracted Heilshorn Environmental Engineering (HE2) at the request of the City of Albany to replace this well. Initially, the replacement well was installed in the wrong location. This was discovered when the well was already nearing completion. This well is currently on-site and is called MW-10. A new replacement well near the location of destroyed monitoring well MW-5 was also constructed and is known as MW-5R. It should be noted that the original monitoring well MW-5 was not properly destroyed but rather the casing was pulled out by the contractor and then the hole was filled with compacted rock. The new sewer line was then built directly over the old well location. In addition, the contractor that installed the new sewer line mentioned that three USTs were located while installing the sewer line near the site. Two USTs were located adjacent to the gas station in the street. These USTs were left in place. One other UST, filled with cement, was located just south of the gas station. This UST was removed.

#### **3.0 SCOPE OF WORK (SOW)**

The purpose of this assessment was to further define the extent of soil and groundwater contamination at the site and to conduct vapor extraction and sparging tests. The scope of work performed was as follows:

- 1) Obtain drilling permits from the Alameda County Public Works Agency.
- 2) Obtain an encroachment permit from the City of Albany to drill in the San Pablo Avenue sidewalk area.
- 3) Obtain access agreements from the property owners at 810 San Pablo Avenue and 744 San Pablo Avenue to drill soil borings on their properties.
- 4) Drill soil borings in on and off-site locations using a sonic drill rig to a depth of 50-feet bgs collecting soil samples continuously and collecting groundwater samples from adjacent borings using a Hydropunch sampler.
- 5) Following collection of the soil and groundwater samples, backfill the borings described in task 4 with neat cement placed by tremie pipe.
- 6) Analyze soil and groundwater samples collected from each boring described in task 4 at a CAL-DHS certified analytical laboratory for TPH-D by EPA Method 8015 and TPH-G, BTEX, and fuel oxygenates by EPA Method 8260B.
- 7) Install three ozone sparging wells at the site.
- 8) Install three vapor extraction wells at the site.
- 9) Conduct a vapor extraction test at the site.
- 10) Conduct an air sparging test at the site.
- 11) Prepare a report presenting the results from the soil and groundwater assessment and prepare a corrective action plan for the site.

#### 4.0 DRILL SOIL BORINGS AND COLLECT SAMPLES

#### 4.1 Obtain Necessary Permits

Prior to drilling, ASE obtained a drilling permit from the ACPWA. ASE also obtained an encroachment permit from the City of Albany to allow for drilling in their street area. Copies of the permits are presented in Appendix A.

#### 4.2 Obtain Necessary Access Agreements

ASE obtained access agreements from the owners of the properties located at 810 San Pablo Avenue and 744 San Pablo Avenue to allow for drilling on their properties. In addition, ASE drilled a boring on 744 San Pablo Avenue for Steve's Auto Care, the owner of that property. The data from that boring is also included in this report as Tables Four and Five.

#### 4.2 Drilling and Soil Sample Collection

Between January 30, 2006 and February 2, 2006, Precision Sampling of Richmond, California drilled soil borings BH-R through BH-X using an EP Sonic drill rig. The EP Sonic drill rig uses a conductor casing which seals off shallower water-bearing zones to minimize the possibility of cross-contamination. Although more successful with drilling using the EP Sonic rig than previous attempts using a dual-wall sampler, several borings still met with refusal prior reaching the planned depth. The boring locations are shown on Figure 2. The drilling was directed by ASE geologists David Rains and Robert Kitay.

Undisturbed soil samples were collected continuously as drilling progressed for lithologic and hydrogeologic description and for possible chemical analysis. The samples were collected by driving a sampler lined with acetate tubes. Selective soil samples were immediately cut, sealed with Teflon squares and plastic end caps, and labeled with the site location, sample designation, date and time the sample was collected, and the initials of the person collecting the sample. The samples were placed into an ice chest containing wet ice for delivery under chain of custody to a CAL-DHS certified analytical laboratory under chain of custody documentation.

Soil from the remaining tubes was described by the site geologist using the Unified Soil Classification System (USCS) and was screened for VOCs using a photoionization detector (PID). The soil was screened by emptying soil from one of the sample tubes into a plastic bag. The bag was then sealed and placed in the sun for approximately 10 minutes. After the volatile compounds were allowed to volatilize, the PID measured the vapor in the bag through a small hole punched in the bag. PID readings are used as a screening tool only, since the procedures are not as rigorous as those used in the laboratory. The PID readings are listed on the boring logs presented in Appendix C.

#### 4.3 Groundwater Sample Collection

Once groundwater was encountered, a temporary PVC well casing was driven into place for the collection of groundwater samples. Groundwater samples were removed from the boring with a

pre-cleaned bailer. The groundwater samples were contained in 40-ml volatile organic analysis (VOA) vials, preserved with hydrochloric acid, and sealed without headspace. The samples were then labeled and stored in an ice chest with wet ice for transport to the analytical laboratory under chain of custody.

Groundwater samples from deeper water-bearing zones were collected using a Hydropunch. The Hydropunch was driven into the targeted zone in a boring drilled immediately adjacent to the boring drilled for soil samples and lithology, and the rods were then checked to verify that there was no leakage of groundwater prior to opening. Once the rods were shown to be dry, the Hydropunch screen was then opened and groundwater was allowed to enter the rods. Groundwater samples were then collected from within the rods using a bailer. Groundwater samples were then be decanted from the bailer into 40-ml VOA vials, preserved with hydrochloric acid and sealed without headspace. The samples were then labeled with the site location, sample designation, date and time the samples were collected, and the initials of the person collecting the samples. The samples were then sealed in plastic bags and cooled in an ice chest with wet ice for transport to a state-certified analytical laboratory under chain-of-custody.

Additional deeper water samples were obtained in the same boring by placing a closed Hydropunch back into the same boring and continuing into the next deeper targeted zone for sampling, and then repeating the sampling process.

#### 4.4 Decontamination and Borehole Backfilling

Drilling equipment was cleaned with an Alconox solution between sampling intervals and between borings to prevent potential cross-contamination. Following collection of the soil and groundwater samples, each boring was backfilled with neat cement to the ground surface.

#### 5.0 LITHOLOGY AND HYDROGEOLOGY

Boring logs are presented in Appendix C. Geologic cross-section A-A' was prepared for the site. The cross-section location is shown on Figure 3. The geologic cross-section is shown on Figure 4.

#### 6.0 ANALYTICAL RESULTS FOR SOIL AND GROUNDWATER SAMPLES

#### 6.1 Soil Sample Analysis

Selective soil samples were analyzed by Kiff Analytical, LLC (Kiff) of Davis, California (ELAP #2236) for TPH-G, benzene, toluene, ethylbenzene, and total xylenes (collectively known as BTEX), and fuel oxygenates by EPA Method 8260B, and TPH-D by EPA Method 8015. The analytical results are tabulated in Table Two. The certified analytical report and chain of custody are presented in Appendix D.

In general, hydrocarbons were only detected in soil samples collected at depths above 20.5-feet bgs. None of the deeper soil samples contained concentrations of hydrocarbons exceeding Environmental Screening Levels (ESLs) for residential soil in areas where groundwater is not a

current or potential source of drinking water. The ESLs are established by the California Regional Water Quality Control Board, San Francisco Bay Region and are presented in the "Screening for Environmental Concerns at Sites with Contaminated Soil and Groundwater" dated February 2005.

#### 6.2 Groundwater Sample Analysis

The groundwater samples were analyzed by Kiff for TPH-G, BTEX, and fuel oxygenates by EPA Method 8260B, and TPH-D by EPA Method 8015. The analytical results are tabulated in Table Three. The certified analytical report and chain of custody are presented in Appendix D. Isoconcentration maps for the highest concentrations of TPH-G, benzene and MTBE in groundwater samples collected from borings between 20 and 35-feet bgs are presented as Figures 5, 6 and 7, respectively. ASE urges extreme caution in interpreting these maps as data was (a) collected only from borings and not monitoring wells, (b) collected from samples from different depths between 20 and 30-feet bgs, and (c) collected on different dates and therefore does not consist of a single snapshot in time. Although ASE urges caution in reading these maps, ASE has included the maps since some trends in the distribution of different constituents may be noted from them. Monitoring well data was not used in these maps as it was believed that monitoring well data may add additional uncertainties especially since hydrocarbon concentrations are usually higher in samples collected from borings than in samples collected from monitoring wells.

High concentrations of TPH-G and BTEX were detected in groundwater samples collected from boring BH-V north of the site. These concentrations are higher than hydrocarbon concentrations closer to the site. Relatively high MTBE concentrations were detected in boring BH-T, northwest of the site. Moderate TPH-G and total xylene concentrations were detected in groundwater samples collected from boring BH-X, south of the site. No significant MTBE concentrations have been detected in groundwater samples collected from boring SH-X, south of the site.

#### 7.0 INSTALLATION OF VAPOR EXTRACTION AND OZONE SPARGING WELLS

#### 7.1 Drilling Permits

Prior to drilling, ASE obtained drilling permits from the ACPWA. Copies of the permits are presented in Appendix A. ASE also notified USA to have underground public utilities in the vicinity of the site marked prior to drilling.

#### 7.2 Vapor Extraction Well Installation

ASE installed vapor extraction wells VE-1 through VE-3 to allow a vapor extraction test to be conducted at the site. Details of the well construction are presented below.

#### 7.2.1 Drill Borings for the Installation of Vapor Extraction Wells

On December 21 and 22, 2005, Precision Sampling of Richmond, California drilled borings VE-1 through VE-3 at the site using a drill rig equipped with 8-inch diameter hollow-stem augers (Figure 8). Vapor extraction wells VE-1 through VE-3 were subsequently constructed in these borings. The drilling was directed by ASE geologist Robert E. Kitay, P.G.

Undisturbed soil samples were collected continuously as drilling progressed for lithologic and hydrogeologic description. The samples were collected by driving a sampler lined with acetate tubes using hydraulic direct push. Boring logs are presented in Appendix C. Drilling equipment was cleaned with an Alconox solution between sampling intervals to prevent potential cross-contamination.

#### 7.2.2 Vapor Extraction Well Construction

Vapor extraction wells VE-1 through VE-3 were constructed within the hollow-stem augers using 2-inch diameter flush-threaded, schedule 40, 0.020-inch slotted PVC well screen and blank casing. VE-1 and VE-2 were screened between 6 and 16-feet bgs, and VE-3 was screened between 5 and 10-feet bgs since water was present in VE-1 and VE-2 on the day following their installation. The well casing was lowered through the augers and #3 filter pack sand was placed in the annular space between the well casing and the borehole from the bottom of the boring to 1-foot above the screened interval. A 0.5-foot thick layer of bentonite pellets was placed on top of the sand pack. The bentonite was hydrated with water prior to placing the cement sanitary seal. Cement was used to fill the annular space between the bentonite layer and the surface to prevent surface water from infiltrating into the well. The well head is protected with a locking well plug beneath an atgrade, traffic-rated well box. Well construction details are shown on the boring log in Appendix C.

#### 7.3 Ozone Sparging Well Installation

ASE installed ozone sparging wells OS-1 through OS-3 to conduct an air sparging test at the site. Details of the well construction are presented below.

#### 7.3.1 Drill Borings for the Installation of an Air Spaging Well

On December 21 and 22, 2005, Precision Sampling of Richmond, California drilled borings OS-1 through OS-3 at the site using a drill rig equipped with 8-inch diameter hollow-stem augers (Figure 8). Ozone sparging wells OS-1 through OS-3 were subsequently constructed in these borings. The drilling was directed by ASE geologist Robert Kitay, P.G.

Undisturbed soil samples were collected continuously as drilling progressed for lithologic and hydrogeologic description. The samples were collected by driving a sampler lined with acetate tubes using hydraulic direct push. Boring logs are presented in Appendix C. Drilling equipment was cleaned with an Alconox solution between sampling intervals to prevent potential cross-contamination.

#### 7.3.2 Ozone Sparging Well Construction

Ozone sparging wells OS-1 through OS-3 were constructed within the hollow stem augers. The ozone-sparging wells were constructed with 3/4-inch diameter PVC well casing with a 2-inch diameter by 30-inch long sparge point with 10-50 micron perforations at the bottom. These sparge points were placed in the location of the permeable water-bearing zone between 17.5-feet bgs and 20-feet in OS-1, and between 19.5 and 22-feet bgs in OS-2 and OS-3. Lonestar #2/16 sand was placed between the sparge point and the boring from the bottom of the boring to 1-foot above the top of the sparge point. A 0.5-foot thick bentonite layer was placed between the sandpack and the overlying cement sanitary seal. A Portland cement sanitary seal was placed above the bentonite layer using a tremie pipe to prevent surface water from infiltrating into the well. The well heads are protected with a locking well plug beneath an at-grade, traffic-rated well box

#### 8.0 VAPOR EXTRACTION TEST

#### 8.1 Scope of Work

On March 27, 2006, ASE employees Brad Mann and David Rains conducted a vapor-extraction (VE) test at the site. The test was designed to (a) remove soil gas from vapor extraction well VE-2 using a rotron-type, electric vacuum-blower, (b) measure vacuum and the amount of air flowing from VE-2, and (c) determine if that vacuum can influence the vadose zone in nearby observation wells. Just prior to the removal of soil gas from well VE-2, vapor extraction wells VE-1 and VE-3, and monitoring wells MW-2, MW-3, and MW-6 were fitted with sealed caps and negative-pressure gauges to record any increase in negative pressure within these wells located at various distances from VE-2.

#### 8.2 Vapor-Extraction System Test Components

The equipment used during this test included:

- A 5-Hp, electric, rotron-type vacuum blower that is capable of a maximum of 80-inches of water column (IWC) vacuum, and a maximum of 150 cubic feet per minute (cfm) flow rate
- A moisture knock-out drum
- Four (4) 250 pound activated carbon units, plumbed in series,
- Various valves, pressure and negative-pressure gauges, and an air-flow gauge,
- A water level meter,
- A PID

#### 8.3 Operating Parameters

- The blower operated at a vacuum ranging from 40 to 50 IWC on vapor extraction well VE-2 during the test.
- The airflow extracted from well VE-2 never measured higher than 5 cfm during the entire test. For the most part, the flowmeter never showed a measurable flow of air being extracted from well VE-2.

- A soil gas temperature ranging from 62 to 66 degrees farenheight.
- The depth to groundwater within well VE-2 was measured at 6.75 feet prior to initiation of the test.

The test began at 0800 and continued until 1600 when it was obvious that the subsurface soil was not permeable enough to support the use of VE technology.

Test data is included in Appendix E. The following conditions were achieved during the test.

- The vacuum imposed on extraction well VE-2 ranged from 50 IWC at the beginning of the test to 40 IWC near the end of the test.
- The airflow coming from VE-2 was basically immeasurable during the entire length of the test, allowing only approximately 5 cfm of air from VE-2 for only a brief period at the start of the test.
- Only 5 gallons of groundwater were removed from well VE-2 during the entire duration of the test.
- The influence of the extraction well was measured on the surrounding observation wells during the test. None of the wells showed any increase of negative pressure, due to the inability to remove air from the extraction well because of low-permeability soils.
- PID readings were taken from the extracted air on an hourly basis during the test. PID readings ranged from a high of 275 ppm to a low of 12 ppm at the end of the test.
- The groundwater elevation was measured at 6.50-feet in VE-2 at the end of the test.
- A vapor sample was collected from the influent vapor stream in a Tedlar bag during the test. This sample was analyzed for TPH-G by modified EPA Method 8015, BTEX by EPA Method 8021B, and oxygenates by EPA Method 8260B by McCampbell Analytical, Inc. of Pacheco, California (ELAP #1644). The certified analytical report is attached in Appendix F. The only hydrocarbons detected were 0.92 ug/L benzene, 0.84 ug/L toluene, 0.33 ug/L ethylbenzene, and 1.2 ug/L total xylenes. No TPH-G or oxygenates were detected.
- All extracted hydrocarbon vapors were passed through the activated carbon canisters prior to venting to the atmosphere.

The data gathered during the vapor-extraction test proved that the technology of vapor extraction would not be a useful tool to capture a sizeable radius of impacted vadose zone hydrocarbons.

#### 9.0 OZONE SPARGING TEST

#### 9.1 Scope of Work

An air sparging test was conducted to determine whether ozone-sparging may be an effective method of remediation for the site. The ozone-sparging test was conducted by injecting compressed air into ozone-sparging well OS-2 at a rate of approximately 3-4 cubic feet per minute (cfm) and 20-50 pounds per square inch (PSI). This flow and pressure are typical operating parameters of current ozone-sparging generation systems on the market today. Pressure and water levels in the other ozone sparge wells and surrounding monitoring wells were monitored to determine whether there is any pressure increase in the vadose zone or mounding of the water table. Injected air pressure and flow was adjusted to determine future design criteria of the ozone sparging system.

An alternate test technique was also used whereby we injected a tracer gas, helium, into the air stream at a rate of approximately 15 - 25 cubic feet per hour (cfh). A helium detector was then used to measure the concentration of helium, if any, in the surrounding observation wells. The presence of helium in the surrounding wells would be an indication of the area of influence.

On April 26, 2006, ASE employees David Allen and Robert Kitay, conducted the air sparging test at the site. Air-sparging well OS-2 was chosen as the injection well due to its proximity in relation to air-sparging wells OS-1 and OS-3. Two monitoring wells MW-2 and MW-6 and vapor extraction well VE-2 were used for observation of influence form the injected air/helium mixture.

#### 9.2 System Test Components

The equipment used during this test included:

- A 5.75-Hp, 13-gallon, oil-free electric air compressor,
- A 300 cubic foot compressed helium tank and regulator,
- Various valves, pressure gauges and flow gauges,
- A water level meter,
- A helium detector
- A PID

#### 9.3 Operating Parameters

- The electric air-compressor was fitted with a regulator and flowmeter that allowed for an initial discharge pressure of approximately 50 psi, and a flow of approximately 3-4 cfm.
- The compressed helium tank was outfitted with a regulator that could meter the volume of helium released into the injection well. Initially, the test was designed for approximately 20-25 cfh of helium. The regulator had a fixed-point pressure of 25 psi.
- The top of the injection well was outfitted with a pressure gauge, which measured the total pressure of the air/helium mixture. ASE initially projected an operating pressure of approximately 50 psi.

• The observation wells were outfitted with a cap that housed a sample port for helium readings, and a pressure gauge.

#### 9.4 Performance of the Test

Prior to injection of air/helium mixture into ozone-sparge well OS-2, the water level was measured in monitoring wells MW-2, MW-3 and MW-6.

After the water levels were measured and the fittings were in place on the injection well and observation wells, the test was started. The test began at 0940. The injected air was regulated to 52 psi, the injected air flow was 3.5 cfm. The helium flow was regulated to 15 cfh. The pressure at the injection well, OS-2, was measured at 35 psi.

Readings were collected every hour as the test went on, and data sheets are included as Appendix G. The data was as follows:

- The air compressor tank pressure started at 52 psi, but decreased gradually each hour until it ended up at 18 psi at the end of the test. The air flow from the tank was measured at a high of 3.5 cfm, to a low of 3.0 cfm after four hours, at which the flowmeter malfunctioned, and had to be removed from the system. The air pressure at the injection well started at 35 psi, but decreased gradually each hour until it ended up at 12 psi at the end of the test. Helium was injected at 15 cfh for the first 4 hours, and then increased to a high of 25 cfh by the end of the test.
- Positive pressure was only identified in monitoring well MW-2 for only approximately one hour. For the duration of the test, positive pressure was no longer present in MW-2, approximately 20-feet away from the injection well. Positive pressure was immediately present in vapor extraction well VE-2, only 2-feet away from the injection well. Positive pressure was present in VE-2 for the duration of the test.
- Helium was primarily observed in only one of the observation wells, OS-3, which is approximately 20-feet away from the injection well. Helium was measured at concentrations ranging from 0.20% at the beginning of the test to a low of 0.08% during the duration of the test. Helium was present in OS-3 for the duration of the test. Helium was also identified in VE-2 immediately at 1.0% and then 7.3% one hour later. Helium readings were not taken from VE-2 for the remainder of the test. A helium detection of 0.03% to 0.04% was identified in wells MW-3, MW-6 and VE-3, but only once at different times, where the rest of the test showed no helium detections in those wells.

#### 9.5 Water Level Measurements

After the air-injection activities were completed, the water levels were again measured in monitoring wells MW-2, MW-3 and MW-6. The water level rose 0.01-feet in MW-2, and 0.02-feet in MW-3 and MW-6.

#### 9.6 Test Findings

As for positive pressure, the test showed a brief influence 20-feet away in MW-2, however, that influence was only measured for a period of approximately one hour. As for helium measurements, the test indicates a radius of influence of approximately 20-feet in OS-3.

#### **10.0 GROUNDWATER ELEVATIONS**

The top of casing elevation, ground surface elevation and horizontal location of each well was surveyed to Geotracker standards by CSS Environmental Services, Inc. of Novato, California on April 26, 2006. A copy of the survey is included as Appendix H.

On March 6, 2006, ASE measured the depth to groundwater in all ten site monitoring wells using an electric water level sounder. The surface of the groundwater was also checked for the presence of free-floating hydrocarbons or sheen. No sheen or free-floating hydrocarbons were observed in any of the monitoring wells. Groundwater elevation data is presented in Table Six. A groundwater potentiometric surface map is presented as Figure 9. The groundwater flow direction and gradient beneath the site is very inconsistent this quarter with flow direction components to the north, east, and south.

#### **11.0 REMEDIAL OPTIONS**

The following lists typical remediation options for soil and groundwater contamination from petroleum-hydrocarbons currently in use in northern California.

#### 11.1 Soil Overexcavation

This remedial option involves the excavation of contaminated soil and either treating the soil onsite or transporting the soil to an off-site treatment or disposal facility. On-site soil treatment is usually by aeration or bioremediation. Advantages of this method is that it is the fastest and most effective method in treating contaminated soil, and removes contaminated soil which could act as a source for groundwater contamination. The disadvantages of this method are that (a) it would require the closure of the on-site business for an extended period of time, (b) it may require the removal of soil surrounding the UST and fuel dispensing system (possibly endangering the integrity of these systems), (c) it may cause significant nuisance odors, and possibly unhealthy hydrocarbon concentrations in the air in the site vicinity, (d) it does not directly remediate contaminated groundwater beneath the site, and (e) is very expensive at properties where USTs are still in service.

Given the disadvantages of this method, this method is not seen as a viable remediation alternative for the site at this time.

#### 11.2 Air Sparge and Soil Vapor Extraction

Soil vapor extraction remediation entails the removal of hydrocarbons from the ground in-situ. These vapors are removed through vapor extraction wells placed in contaminated areas. The

vapors are removed through wells by a vacuum source and abated by one of several methods such as an internal combustion (IC) engine, a thermal oxidizer, or carbon absorption.

Vapor extraction technology is often used in conjunction with air sparging. Air sparging is the injection of air beneath the water table, generally at the bottom of an unconfined aquifer. Air bubbles rise through the saturated zone volatilizing hydrocarbons and forcing the hydrocarbons into the vadose (unsaturated) zone. The hydrocarbons are then subsequently removed from the vadose zone using soil vapor extraction. The addition of air through air sparging may also stimulate bioremediation.

ASE conducted a vapor extraction feasibility test at the site that showed that the site was not conducive to vapor extraction due to the low permeability of the clay rich sediments in the vadose zone. Conventional air sparging remediation requires the removal of hydrocarbons from the vadose zone with soil vapor extraction once they have volatilized from the saturated zone; therefore, it does not appear that air sparging/soil vapor extraction would be a suitable remediation alternative for the site.

Based on the soil conditions in the vadose zone, conventional air sparging and soil vapor extraction should be eliminated for consideration as a remediation alternative for the site.

#### 11.3 Groundwater "Pump and Treat"

Groundwater "pump and treat" is a method in which contaminated groundwater is pumped from a pumping well to the surface and then treated in one of several ways such as air stripping, carbon absorption, ultraviolet (UV) peroxidation, etc. prior to disposal. Historically, "pump and treat" has had limited success in groundwater remediation for several reasons, particularly that hydrocarbons have a high affinity to soil, that soil in the capillary zone often goes untreated, and that it takes long periods of time to remove significant volumes of hydrocarbons when the hydrocarbon concentrations in groundwater are in the parts per billion range. "Pump and treat" is, however, considered an effective method of containing a plume and preventing further migration of contamination downgradient. This is because the water table is drawn down and groundwater surrounding the pumping wells flow toward the pumping well.

Although no pumping tests have been conducted at the site, it appears that there is a significant volume of hydrocarbon mass in the vadose zone that will be completely unaffected by "pump and treat" since the water table is drawn down. The addition of vapor extraction to form "dual-phase extraction" to alleviate this problem does not appear to be a viable solution due to the reason stated in section 11.2. Although "pump and treat" could be used to control the hydrocarbon plume from leaving the site, it appears that a significant mass of hydrocarbons have already left the site, and although a pumping test has not been conducted, it is safe to say that pumping will not be able to draw the plume back to the site.

For these reasons, "pump and treat" should not be considered as a remediation option for the site at this time until other potential remediation alternatives are explored. Although some plume control may be possible, it would be more cost effective and efficient to treat hydrocarbons beneath the site using other form of soil and groundwater remediation.

#### 11.4 In-Situ Bioremediation

There are several options to achieve in-situ bioremediation, which involves increasing the amount of dissolved oxygen in the groundwater to enhance naturally occurring aerobic bacterial degradation of petroleum hydrocarbons in-situ. It has been known for some time that naturally occurring bacteria readily degrade (digest) petroleum hydrocarbons into harmless byproducts. Although anaerobic bacteria will degrade petroleum hydrocarbons, the rate is much slower than with aerobic bacteria. Depleted levels of oxygen appear to be the primary limiting factor for aerobic bacterial activity. Two common methods of increasing dissolved oxygen in groundwater are injection of hydrogen peroxide and one-time application of Oxygen Releasing Compound (ORC). Advantages for this type of remediation include (a) it is very low cost, (b) it is a passive, unintrusive method for groundwater remediation, (c) there is little or no equipment to maintain, and (d) it often works very quickly. Disadvantages include (a) it is not effective at all sites since it is very dependent on groundwater flow rates, (b) soil remediation is also required using these methods, (c) in-situ bioremediation is not typically as effective on MTBE as on other hydrocarbons, and (d) additional applications may be required if using ORC.

Since there is a significant mass of MTBE beneath the site and in-situ bioremediation is not as effective on MTBE as on other hydrocarbons, ASE is not considering the use of in-situ bioremediation as a primary remediation option for the site at this time.

#### 11.5 In-Situ Chemical Oxidation

In-situ chemical oxidation/reduction involves injecting an oxidant to the subsurface, which will destroy organic hydrocarbons. The three most common oxidants are peroxide, permanganate and ozone. Oxidation using liquid hydrogen peroxide in the presence of ferrous iron (native or supplemental) produces Fenton's Reagent, which yields free hydroxyl radicals, which is a strong oxidizer. These strong oxidants can rapidly degrade a variety of organic compounds. Permanganate can cause numerous complex reactions that can destroy organic compounds. The use of either peroxide or permanganate requires the injection of liquid into the water bearing zone and/or vadose zone. The low permeability clay-rich soils in the vadose zone beneath the site will not accept these liquids. This would allow potential remediation in the water-bearing zone, but will have little effect in the potential source of hydrocarbons in the vadose zone.

Ozone, however, is injected as a gas into sparging wells. Ozone can oxidize contaminants directly or through the formation of hydroxyl radicals, much the same way as peroxide. In situ decomposition of ozone can also lead to beneficial oxygenation and biostimulation. Although conventional air sparging was ruled out as a feasible remediation alternative for the site due to the inability to vapor extract in the vadose zone, sparging itself may work for ozone injection since soil vapor extraction is not required. In addition, since a gas is injected, it may be possible for some remediation to also take place in the vadose zone as well. An air sparging test has been completed for the site that confirmed the site's ability transmit gasses in the subsurface. Based on this test, it is likely that ozone sparging would be possible at the site.

In-situ chemical oxidation, namely by ozone sparging, appears to be a viable means of remediation for the site. This method would be much more cost effective than "pump and treat" and may also allow for remediation in the vadose zone in the source areas.

#### 12.0 SELECTION OF REMEDIATION TECHNOLOGY

Based on the available remediation options, ASE recommends ozone sparging as a remediation alternative for the site. This remediation alternative should allow for remediation in the waterbearing zone, and possibly may have some effect on remediation in the vadose zone as well. Assuming that the ACHCSA concurs with this selection, ASE recommends that a remedial action plan (RAP) be prepared presenting a specific and detailed design for an ozone sparging system.

#### **13.0 CONCLUSIONS**

- In general, the analytical results show that elevated hydrocarbon concentrations continue to be present both on and off-site.
- High concentrations of TPH-G and BTEX were detected in groundwater samples collected from boring BH-V north of the site. These concentrations are higher than hydrocarbon concentrations closer to the site. Relatively high MTBE concentrations were detected in boring BH-T, northwest of the site. Moderate TPH-G and total xylene concentrations were detected in groundwater samples collected from boring BH-X, south of the site. No significant MTBE concentrations have been detected in groundwater samples collected from boring south of the site.
- The site appears to be suitable for remediation using ozone sparging technology.
- Vapor extraction does not appear to be a suitable remediation alternative for the site.
- The extent of hydrocarbons to the north of the site is not yet defined. Additional borings are needed north of the site to complete the definition of the extent of hydrocarbons to the north.
- The extent of hydrocarbons to the west is not yet defined based on the results from BH-M. However, based on the long distance to the next possible drilling location to the west, and based on the topographic gradient and unlikely groundwater flow in that direction, ASE does not recommend any further definition of the extent of hydrocarbons to the west at this time.

#### 14.0 RECOMMENDATIONS

ASE recommends the following.

- Prepare a Remedial Action Plan (RAP) designing an ozone sparging groundwater remediation system for the site.
- Drill an additional boring north of BH-V to further define the extent to hydrocarbons to the north.

#### **15.0 REPORT LIMITATIONS**

The results of this assessment represent conditions at the time of the soil and groundwater sampling, at the specific locations at which the samples were collected, and for the specific parameters analyzed by the laboratory.

This report does not fully characterize the site for contamination resulting from unknown sources or for parameters not analyzed by the laboratory. All of the laboratory work cited in this report was prepared under the direction of an independent CAL-DHS certified laboratory. The independent laboratory is solely responsible for the contents and conclusions of the chemical analysis data.

Aqua Science Engineers appreciates the opportunity provide environmental consulting services for this project. Should you have any questions or comments, please feel free to call us at (925) 820-9391.

Respectfully submitted,

AQUA SCIENCE ENGINEERS, INC.

David Allen, R.E.A. Vice President

Ra & C. Kita

Robert E. Kitay, R.G., R.E.A. Senior Geologist

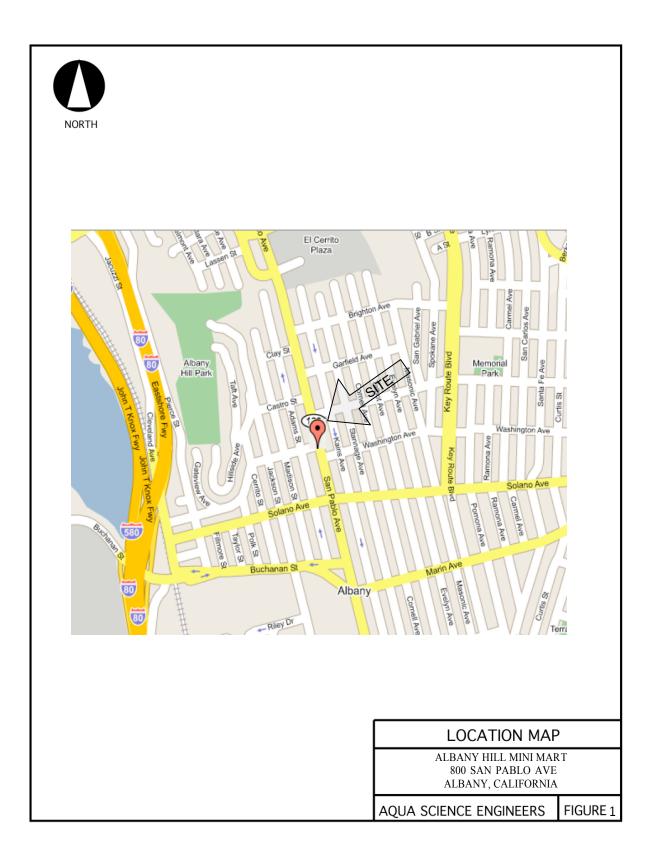
Attachments: Figures 1 through 9 Tables One through Six Appendices A through H

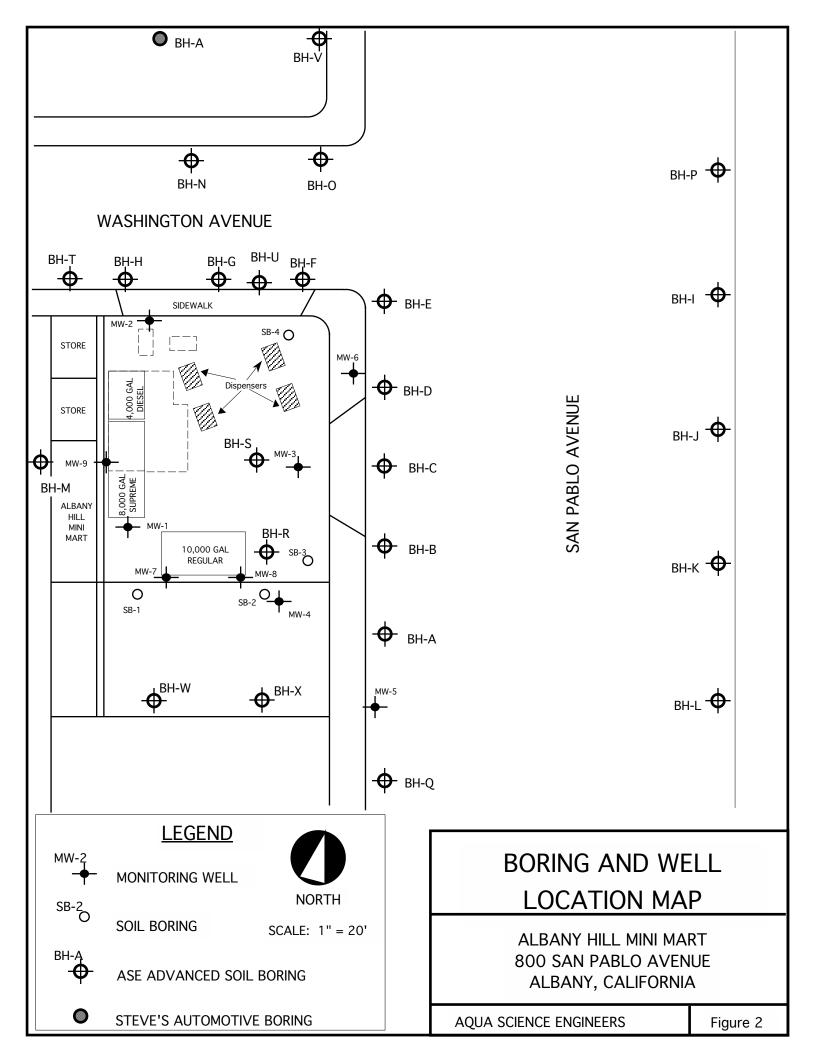


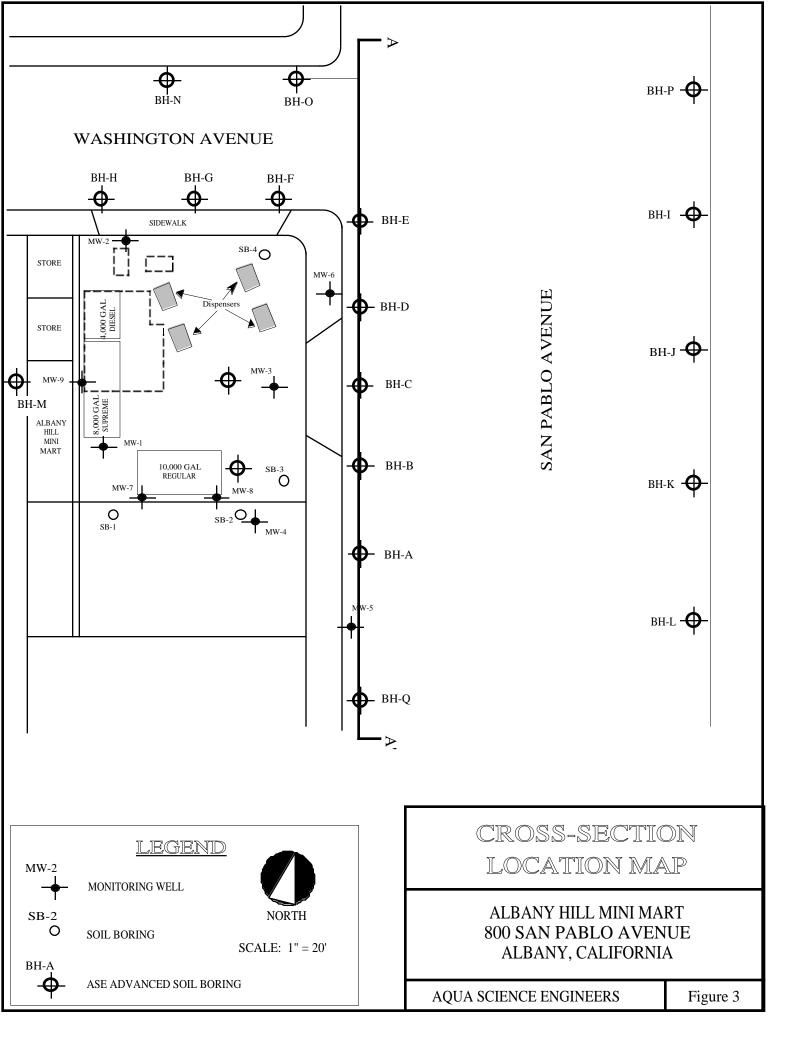


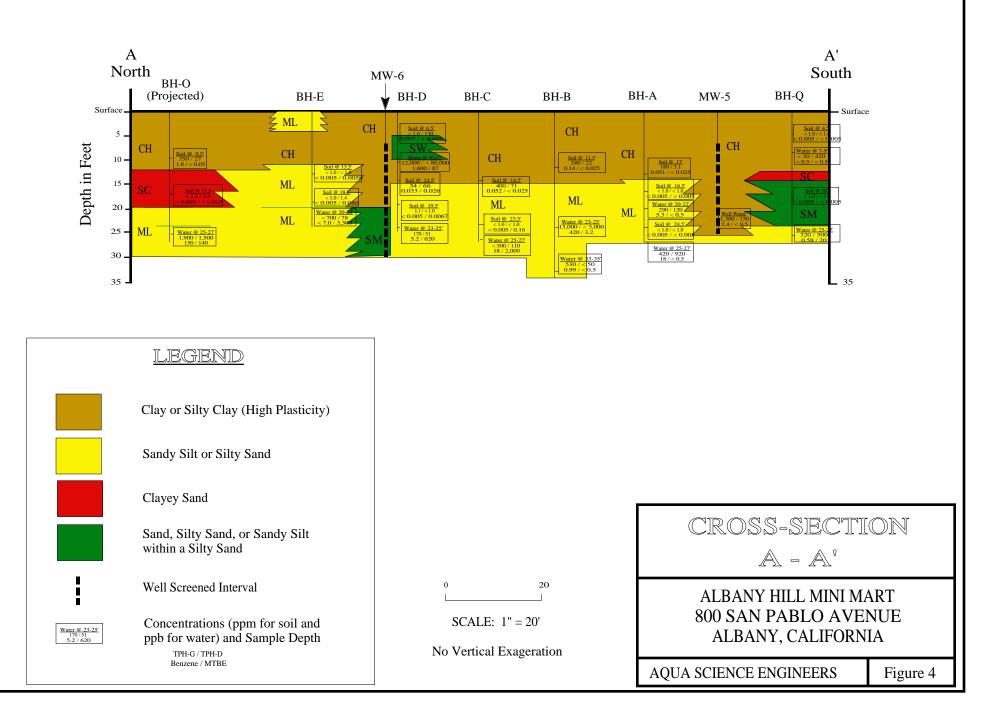
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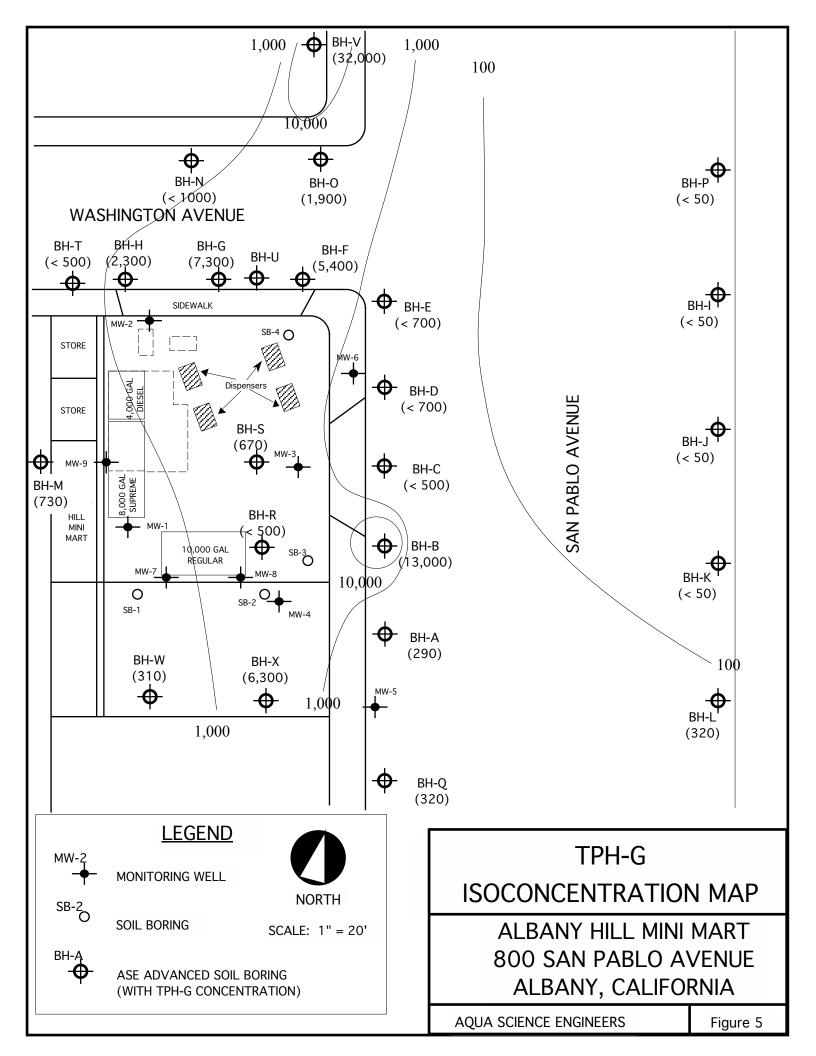
## **FIGURES**

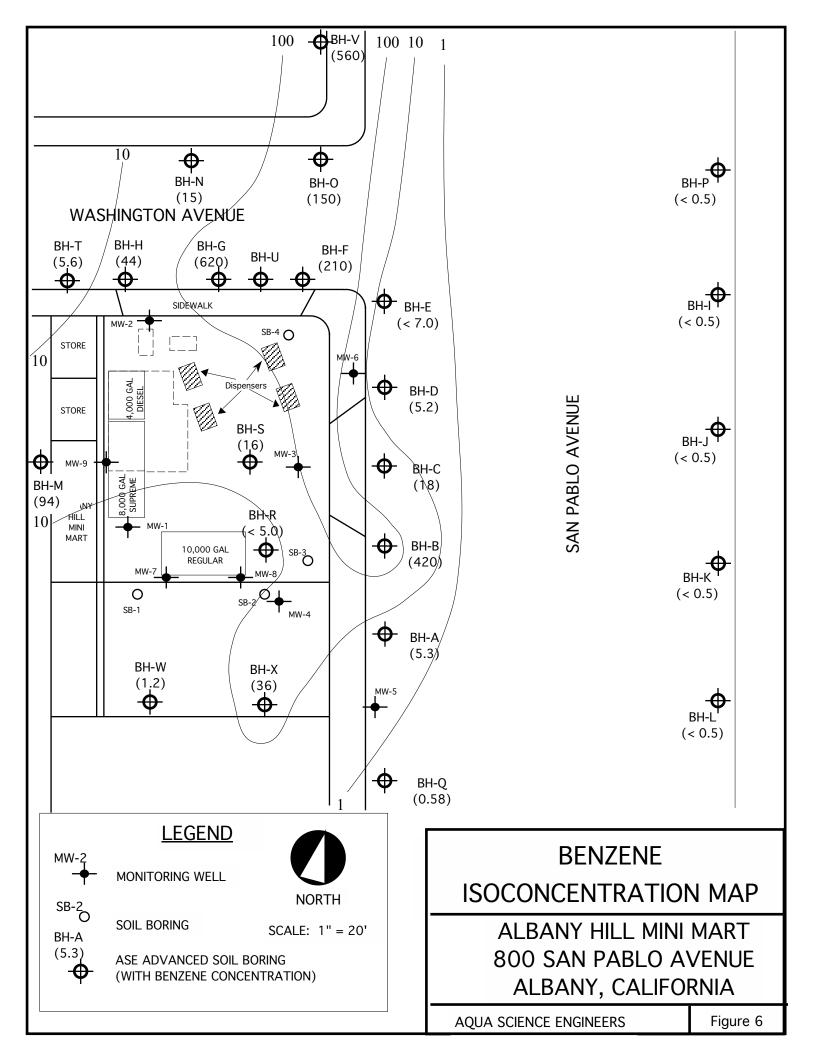


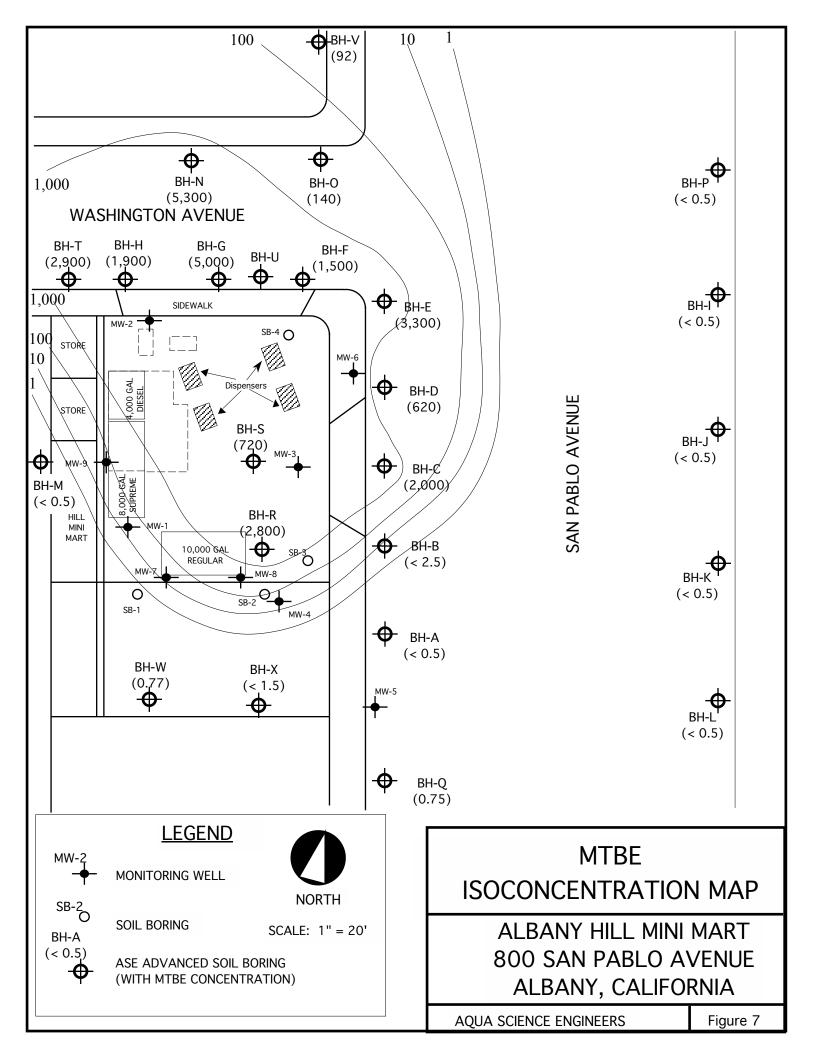


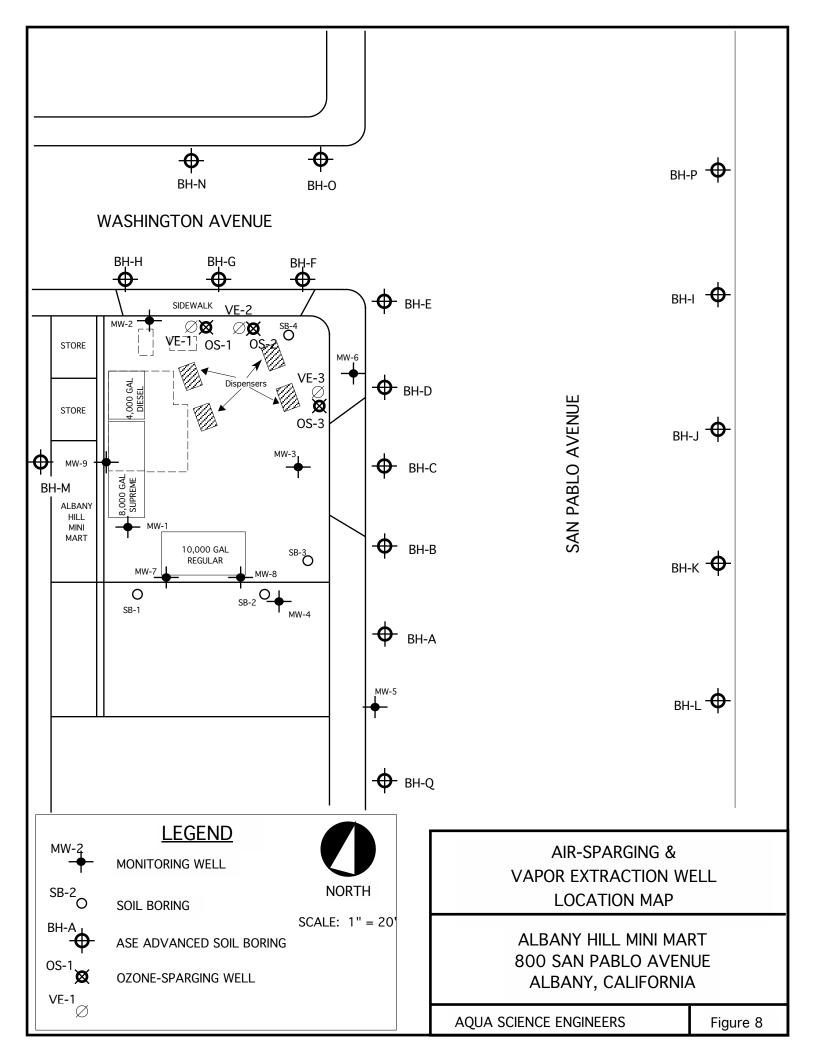


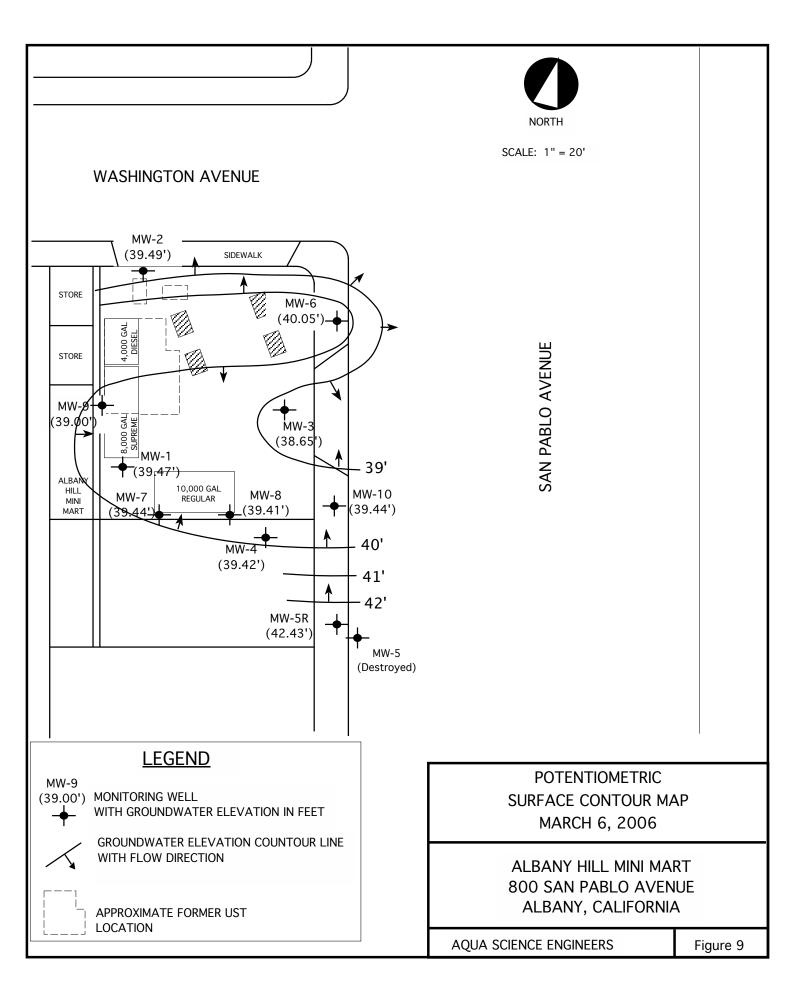












# TABLES

TABLE ONE
Summary of Analytical Results for <b>GROUNDWATER</b> Samples
Albany Hill Mini Mart
800 San Pablo Avenue, Albany, CA
All results are in <b>parts per billion (ppb)</b>

Well ID or	Date	TPH	TPH			Ethyl-	Total				Other
Sample Point	Sampled	Gasoline	Diesel	Benzene	Toluene	benzene	Xylenes	TAME	TBA	MTBE	VOCs
MW-1	8/6/99	1,500	1,200	4.3	2.9	9.1	28			ND	
	11/5/99	1,800	1,400	5.1	3.2	8.9	33			ND	
	2/7/00	1,100	890	3.3	1.9	5.6	21			ND	
	5/7/00	970	650	2.9	1.7	4.9	18			ND	
	8/3/00	1,200	270*	190	43.0	41	160			360	
	11/8/00	4,200	230*	990	200.0	130	560			840**	
	2/8/01	2,800	380*	630	130.0	51	250			390	
	6/7/01	650	190	97	13.0	20	62			320	
	9/7/01	970	400	260	17.0	44	140			460	
	12/13/01	291	< 50	91.7	1.4	17.4	7.2			499	
	6/13/02	5,120	2,160*	1,860	22.0	316	318			325	
	11/11/02	824	< 50	216	< 5	22	20			290	
	2/14/03	1,783	590*	546	5.0	90	52			321	
	9/10/04	900	82	210	8.4	52	23	< 0.5	5.1	220	< 0.5
	12/7/04	540	< 80	130	3.1	24	14	< 0.5	< 5.0	240	< 0.5
	4/18/05	1,600	< 200	390	3.6	32	57	< 0.5	< 5.0	240	0.53 1,2-DCA
	6/20/05	2,500	< 300	740	12.0	110	69	< 0.5	5.7	240	< 0.50
	10/7/05	520	130	97	26.0	11	28	< 0.50	<5.0	190	< 0.50
	12/7/05	220	86	42	11	6.2	12	< 0.50	<5.0	230	< 0.50
	3/6/06	180	69	63	1.6	3.8	2.3	< 0.50	<5.0	180	< 0.50
MW-2	8/6/99	ND	340	ND	ND	ND	ND			ND	
	11/5/99	ND	420	ND	ND	ND	0.7			ND	
	2/7/00	ND	310	ND	ND	ND	0.6			ND	
	5/7/00	ND	280	ND	ND	ND	< 1			ND	
	8/3/00	460	70*	79	3.0	43	8			3,300	
	11/8/00	200	120	57	2.0	13	8			3,000	
	2/8/01	290	80	50	1.0	0.6	4			3,100	
	6/7/01	210	80	18	0.6	3	5			2,000	
	9/7/01	230	ND	51	ND	8	8			2,400	
	12/13/01	172	ND	53	1.2	7.7	8.4			1,780	
	6/13/02	86	< 50	6	6.7	1.1	4.5			1,830	
	11/11/02	1,040	< 50	5	1.0	< 1	5			1,250	
	2/14/03	82	< 50	8	< 1	1	< 3			1,520	
	9/10/04	< 100	72	1.6	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	620	< 1.0
	12/7/04	< 150	86	17	< 1.5	< 1.5	< 1.5	< 1.5	< 7.0	540	< 1.5
	4/18/05	280	130	55	< 1.5	4.4	< 1.5	< 1.5	< 20	840	< 1.5
	6/20/05	200	100	34	< 0.90	2.4	2.7	< 0.90	5.2	540	< 0.90
	10/7/05	< 90	150	11	< 0.90	< 0.90	< 0.90	< 0.90	< 5.0	360	< 0.90
	12/7/05	< 90	110	1.5	< 0.90	< 0.90	< 0.90	< 0.90	< 5.0	500	< 0.90
	3/6/06	< 90	88	7.0	< 0.90	< 0.90	< 0.90	< 0.90	5.2	610	< 0.90

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Well ID or	Date	TPH	TPH			Ethyl-	Total				Other
Sample Point	Sampled	Gasoline	Diesel	Benzene	Toluene	benzene	Xylenes	TAME	TBA	MTBE	VOCs
	0 10 100		NE		ND	ND					
MW-3	8/6/99	ND	ND	ND	ND	ND	ND			ND	
	11/5/99	92	54	ND	ND	0.6	1.7			ND	
	2/7/00	120	71	ND	0.6	0.8	2.2			ND	
	5/7/00	100	68	ND	ND	0.7	1.9			ND	
	8/3/00	910	300*	220	9.0	35	16			11,000**	
	11/8/00	990	200	320	0.8	18	9			8,000	
	2/8/01	990	110	180	21.0	7	24			5,200**	
	6/7/01	370	140	62	4.0	8	13			6.600**	
	9/7/01	460	ND	87	1.0	11	25			9,400**	
	12/13/01	251	ND	66.8	0.9	2.6	8.4			6,610	
	6/13/02	3,630	< 50	41	60.0	41	187			8,820**	
	11/11/02	6,210	< 50	150	< 1	5	< 3			7,770	
	2/14/03	176	< 50	31	< 1	2	< 3			5,040	
	9/10/04	< 1,000	140	110	< 10	< 10	21	20	200	4,400	< 10
	12/7/04	1,000	150	310	19.0	24	50	21	< 100	4,000	< 10
	4/18/05	750	150	170	16.0	33	36	6.1	< 50	1,700	< 5.0
	6/20/05	680	120	140	9.7	20	38	7.4	< 20	1,900	< 4.0
	10/7/05	630	160	140	10.0	11	34	9.2	<20	2,000	< 4.0
	12/7/05	550	200	120	6.4	7.2	10	11	56	2,400	< 4.0
	3/6/06	< 200	88	36	< 2.0	5.3	2.1	4.2	13	1,000	< 2.0
4W-4	6/13/02	4,460	1,500*	425	409.0	115	730			32	
	11/11/02	5,150	2,380*	2,010	74.0	399	252			< 20	
	2/14/03	6,360	2,410*	1,560	82.0	274	573			< 1	
	9/10/04	1,600	180	370	6.5	68	93	< 1.0	10	13	1.1 (DIPE)
	12/7/04	1,900	< 200	450	8.2	72	100	< 0.9	5.4	9.5	< 0.9
	4/18/05	10,000	< 800	1,500	27.0	420	900	< 1.5	15	18	< 1.5
	6/20/05	6,100	< 600	830	19.0	280	400	< 1.5	17	22	< 1.5
	10/7/05	3,200	<500	660	8.7	110	140	< 1.5	12	14	< 1.5
	12/7/05	1,000	< 200	220	2.5	48	37	< 0.5	< 5.0	12	< 0.5
	3/6/06	1,000	< 300	220 280	2.3 2.1	40 32	77	< 0.3 0.65	< 3.0 15	75	1.0 (DIPE), 0.57 (1,2-DCA)
	3/0/00	1,200	< 300	200	2.1	32	"	0.05	15	75	1.0 (DIFE), 0.37 (1,2-DCP)
1W-5	6/13/02	536	< 50	6.4	0.6	22	23			11	
	11/11/02	3,270	1,230*	< 1	< 1	28	8			< 1	
	2/14/03	1,260	610*	9	7.0	22	5			< 1	
	9/10/04	1,300	150	2.4	< 0.50	0.77	< 0.50	< 0.50	< 5.0	< 0.50	< 0.50
	12/7/04	1,000	< 200	4.1	< 0.50	1.4	< 0.50	< 0.50	< 5.0	< 0.50	< 0.50
	4/18/05			Im	properly Des	troyed by C	ity of Alban	y During St	reet Impro	vements	
MW-5R	10/7/05	760	<800	2.4	< 0.50	8.3	1.2	< 0.50	< 5.0	< 0.50	< 0.50
-111 - JI	12/7/05	5,200	< 2,000	36	1.0	320	15	< 0.50	< 5.0 < 5.0	< 0.50	< 0.50
	3/6/06	6,300	< <b>3,000</b>	44	1.0	320 370	19	< 0.30	< 5.0 5.9	< 0.30	< 0.30
	3/0/00	0,300	< 3,000	44	1.4	570	19	< 0.90	5.9	< 0.90	< 0.90

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Sample Point	Sampled	Gasoline	Diesel	Benzene	Toluene	benzene	Xylenes	TAME	TBA	MTBE	VOCs
MW-6	6/13/02	2,980	1,460*	31	2.3	3.8	12			310	
	11/11/02	3,570	1,210*	336	5	< 5	< 15			95	
	2/14/03	3,770	1,620*	429	12	7	10			122	
	9/10/04	< 1,000	390	2.7	< 0.50	< 0.50	< 0.50	2.3	48	280	< 0.50
	12/7/04	1,800	< 600	32	1.7	< 0.50	1.1	2.2	49	160	< 0.50
	4/18/05	1,200	1,400	34	1.3	< 0.50	0.90	0.86	19	36	< 0.50
	6/20/05	590	1,300	3.3	< 0.50	< 0.50	< 0.50	< 0.50	5.5	8.5	< 0.50
	10/7/05	470	1,300	6.8	< 0.50	< 0.50	< 0.50	0.67	20	82	< 0.50
	12/7/05	420	910	10	< 0.50	< 0.50	< 0.50	< 0.50	7.3	22	< 0.50
	3/6/06	790	590	3.2	< 0.50	< 0.50	< 0.50	< 0.50	< 5.0	4.3	< 0.50
MW-7	6/13/02	24,100	1,570*	2,310	657	945	5,430			951	
	11/11/02	4,760	2,160*	1,820	21	316	1,141			702	
	2/14/03	4,320	2,380*	1,020	7	223	293			1,410	
	9/10/04	4,800	< 300	640	16	250	490	< 1.5	31	590	< 1.5
	12/7/04	990	< 300	140	3.4	49	70	4.0	< 20	960	< 2.0
	4/18/05	1,400	< 300	260	1.3	96	16	< 1.0	20	370	< 1.0
	6/20/05	1,900	< 200	320	1.0	130	24	< 0.50	17	370	< 0.50
	10/7/05	2,600	< 800	190	4.7	91	200	0.73	8.0J	310	< 0.50
	12/7/05	_,									
	3/6/06	640	< 200	85	0.88	24	impled. Ina <b>30</b>	< 0.5	8.0	150	< 0.50
MW-8	6/13/02	20,000	7,760*	2,200	1,140	1,050	4,090			12,000	
	11/11/02	5,010	2,010*	187	< 1	15	< 3			16,600	
	2/14/03	1,980	< 50	607	6	113	40			11,500	
	9/10/04	< 2,000	200	110	< 20	26	49	25	< 200	8,600	< 20
	12/7/04	2,000	280	420	< 10	40	61	31	100	6,800	< 10
	4/18/05	< 1000	250	76	< 10	23	< 10	17	< 100	3,700	< 10
	6/20/05	1,300	300	190	< 7.0	21	40	19	< 40	3,400	< 7.0
	10/7/05	<700	200	85	< 7.0	9.3	8.3	23	<40	4,400	< 7.0
	12/7/05	1,400	300	250	8.7	41	90	18	<40	4,400	< 7.0
	3/6/06	,					mpled. Ina			,	

# TABLE ONE Summary of Analytical Results for GROUNDWATER Samples Albany Hill Mini Mart 800 San Pablo Avenue, Albany, CA All results are in parts per billion (ppb)

Date	TPH	TPH			Ethyl-	Total				Other	
Sampled	Gasoline	Diesel	Benzene	Toluene	benzene	Xylenes	TAME	TBA	MTBE	VOCs	
6/27/02	19,000		1,430	1,750	501	5,410			< 0.5		
11/11/02	19,000	13,200*	3,390	4,540	1,020	9,050			549		
2/14/03	21,300	8,200*	1,700	2,200	701	4,970			< 1		
9/10/04	12,000	< 1,500	890	37	280	2,000	< 5.0	< 50	< 5.0	< 5.0	
12/7/04	13,000	< 1,500	950	580	480	2,900	< 5.0	< 50	< 5.0	< 5.0	
4/18/05	9,600	< 1,000	620	180	260	1,400	< 2.5	< 25	< 2.5	< 2.5	
6/20/05	9,800	< 1,500	760	260	430	1,400	< 2.0	< 9.0	< 2.0	< 2.0	
10/7/05	3,400	<1000	350	170	100	480	< 0.50	< 5.0	< 0.50	< 0.50	
12/7/05	5,600	<1000	320	97	200	580	< 0.90	< 5.0	< 0.90	< 0.90	
3/6/06	4,200	< 800	460	120	97	600	< 0.90	< 5.0	< 0.90	< 0.90	
10/7/05	470	330	17	< 0.50	2	11	1.2	9.4J	210	< 0.50	
12/7/05			Not sampled. Inaccessable								
3/6/06	130	130	4.2	< 0.50	< 0.50	< 0.50	4.9	13	820	0.55 (DIPE)	
	500	640	46	130	290	13	NE	NE	1,800	Varies	
	Sampled 6/27/02 11/11/02 2/14/03 9/10/04 12/7/04 4/18/05 6/20/05 10/7/05 12/7/05 3/6/06 10/7/05 12/7/05	Sampled         Gasoline           6/27/02         19,000           11/11/02         19,000           2/14/03         21,300           9/10/04         12,000           12/7/04         13,000           4/18/05         9,600           6/20/05         9,800           10/7/05         3,400           12/7/05         5,600           3/6/06         4,200           10/7/05         470           12/7/05         3/6/06	Sampled         Gasoline         Diesel           6/27/02         19,000            11/11/02         19,000         13,200*           2/14/03         21,300         8,200*           9/10/04         12,000         1,500           12/7/04         13,000         1,500           12/7/04         13,000         1,500           6/20/05         9,800         < 1,500	Sampled         Gasoline         Diesel         Benzene           6/27/02         19,000          1,430           11/11/02         19,000         13,200*         3,390           2/14/03         21,300         8,200*         1,700           9/10/04         12,000         <1,500	Sampled         Gasoline         Diesel         Benzene         Toluene           6/27/02         19,000          1,430         1,750           11/11/02         19,000         13,200*         3,390         4,540           2/14/03         21,300         8,200*         1,700         2,200           9/10/04         12,000         <1,500	Sampled         Gasoline         Diesel         Benzene         Toluene         benzene           6/27/02         19,000          1,430         1,750         501           11/11/02         19,000         13,200*         3,390         4,540         1,020           2/14/03         21,300         8,200*         1,700         2,200         701           9/10/04         12,000         <1,500	Sampled         Gasoline         Diesel         Benzene         Toluene         benzene         Xylenes           6/27/02         19,000          1,430         1,750         501         5,410           11/11/02         19,000         13,200*         3,390         4,540         1,020         9,050           2/14/03         21,300         8,200*         1,700         2,200         701         4,970           9/10/04         12,000         <1,500	Sampled         Gasoline         Diesel         Benzene         Toluene         benzene         Xylenes         TAME           6/27/02         19,000          1,430         1,750         501         5,410            11/11/02         19,000         13,200*         3,390         4,540         1,020         9,050            2/14/03         21,300         8,200*         1,700         2,200         701         4,970            9/10/04         12,000         <1,500	Sampled         Gasoline         Diesel         Benzene         Toluene         benzene         Xylenes         TAME         TBA           6/27/02         19,000          1,430         1,750         501         5,410             11/11/02         19,000         13,200*         3,390         4,540         1,020         9,050             2/14/03         21,300         8,200*         1,700         2,200         701         4,970             9/10/04         12,000         1,500         890         37         280         2,000         <5.0	Sampled         Gasoline         Diesel         Benzene         Toluene         benzene         Xylenes         TAME         TBA         MTBE           6/27/02         19,000          1,430         1,750         501         5,410           < 0.5	

#### Notes:

Data prior to August 2004 is based on a table compiled by AARS - ASE has not checked results against original laboratory reports.

\* Does not match diesel pattern

\*\* Confirmed by GC/MS method 8260

ESL = Environmental screening levels presented in the "Screening For Environmental Concerns at Sites With Contaminated Soil and Groundwater (February 2005)" document prepared by the California Regional Water Quality Control Board, San Francisco Bay Region.

#### Most recent concentrations are in Bold.

Non-detectable concentrations noted by the less than sign (<) followed by the laboratory detection limit.

NE indicates that no ESL has been established for this compound.

	Sample										
Boring	Depth	TPH	TPH			Ethyl-	Total				Other
ID	(feet)	Gasoline	Diesel	Benzene	Toluene	benzene	Xylenes	TAME	TBA	MTBE	VOCs
BH-A	13	180	3.1*	0.0510	< 0.025	2.8	4.7	< 0.025	< 0.25	< 0.025	< 0.025
	16.5	< 1.0	< 1.0	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.015	< 0.0050	< 0.0050
	24.5	< 1.0	< 1.0	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050
BH-B	11.5	240	22*	0.14	< 0.025	3.8	4.9	< 0.025	< 0.15	< 0.025	< 0.025
BH-C	14.5	400	71*	0.052	< 0.025	< 0.025	< 0.025	< 0.025	< 0.15	< 0.025	< 0.025
	23.5	< 1.0	< 1.0	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.015	0.16	< 0.0050
BH-D	6.5	< 1.0	130	0.0070	0.020	0.0064	0.058	< 0.0050	0.047	< 0.0050	< 0.0050
	14.5	34	66	0.033	0.052	< 0.0060	0.024	< 0.0060	< 0.030	0.026	< 0.0060
	19.5	1.1	< 1.0	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	0.0066	0.0067	< 0.0050
BH-E	13.5	< 1.0	< 1.0	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.025	0.0058	< 0.0050
	18.5	< 1.0	1.4*	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.025	0.086	< 0.0050
BH-F	14.0	210	69*	2.7	14	4.7	24	< 0.025	< 0.25	0.026	< 0.025
BH-G	14.5	170	25*	2.7	7.8	3.1	16	< 0.025	< 0.25	0.060	< 0.025
BH-H	14.5	45	51*	0.28	0.39	0.74	3.0	< 0.025	< 0.25	< 0.025	< 0.025
BH-I	24.5	< 1.0	< 1.0	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.025	< 0.0050	< 0.0050
ВН-К	23.5	< 1.0	< 1.0	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.025	< 0.0050	< 0.0050

	Sample										
Boring	Depth	TPH	TPH			Ethyl-	Total				Other
ID	(feet)	Gasoline	Diesel	Benzene	Toluene	benzene	Xylenes	TAME	TBA	MTBE	VOCs
BH-L	23.5	< 1.0	1.4	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.025	< 0.0050	< 0.0050
BH-M	14.5 20.5	<b>180</b> < 1.0	61* < 1.0	<b>1.4</b> < 0.0050	0.19 < 0.0050	3.0 < 0.0050	<b>15</b> < 0.0050	< 0.050 < 0.0050	< 0.25 < 0.0050	< 0.050 < 0.0050	< 0.050 < 0.0050
BH-O	9.5 17.7	<b>350</b> < 1.0	27* 3.4*	<b>1.8</b> < 0.0050	0.25 < 0.0050	<b>5.3</b> < 0.0050	<b>16</b> < 0.0050	< 0.025 < 0.0050	< 0.25 < 0.0050	< 0.050 < 0.0050	< 0.025 < 0.0050
BH-P	21.5	< 1.0	< 1.0	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050
BH-Q	4.5 18	< 1.0 < 1.0	< 1.0 < 1.0				< 0.0050 < 0.0050				< 0.0050 < 0.0050
BH-R	15 20 24.5 29.5 34.5 39	< 1.0 1.7 < 1.0 < 1.0 < 1.0 < 1.0	51 55 < 1.0 < 1.0 < 1.0 3.0*	< 0.0050 0.023 < 0.0050 < 0.0050 < 0.0050 < 0.0050	< 0.0050 0.034 < 0.0050 < 0.0050 < 0.0050 < 0.0050	< 0.0050 0.029 < 0.0050 < 0.0050 < 0.0050 < 0.0050	< 0.0050 0.16 < 0.0050 < 0.0050 < 0.0050 0.014	< 0.0050 < 0.0050 < 0.0050 < 0.0050 < 0.0050 < 0.0050	0.0097 0.11 0.11 < 0.0050 < 0.0050 0.0078	< 0.0050 0.11 0.26 0.056 0.0081 0.018	< 0.0050 < 0.0050 < 0.0050 < 0.0050 < 0.0050 < 0.0050
BH-S	14.5 19.5 29.5 35.0 37.5	8.1 4.0 < 1.0 < 1.0 < 1.0	21* 24* < 1.0 < 1.0 < 1.0	0.15 0.018 < 0.0050 < 0.0050 < 0.0050	< 0.0050 0.0097 < 0.0050 < 0.0050 < 0.0050	0.13 0.15 < 0.0050 < 0.0050 < 0.0050	0.29 0.86 < 0.0050 < 0.0050 < 0.0050	< 0.0050 < 0.0050 < 0.0050 < 0.0050 < 0.0050	0.019 0.045 < 0.0050 < 0.0050 < 0.0050	0.018 0.078 0.037 0.0067 < 0.0050	< 0.0050 < 0.0050 < 0.0050 < 0.0050 < 0.0050

	Sample										
Boring	Depth	TPH	TPH			Ethyl-	Total				Other
ID	(feet)	Gasoline	Diesel	Benzene	Toluene	benzene	Xylenes	TAME	TBA	MTBE	VOCs
BH-T	15	2.5	15*	0.030			< 0.0050		0.040	0.058	< 0.0050
	20	< 1.0	< 1.0	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	0.28	< 0.0050
	25	< 1.0	< 1.0	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	0.12	< 0.0050
	31	< 1.0	< 1.0	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	0.060	< 0.0050
	37.5	< 1.0	< 1.0	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	0.0085	< 0.0050
	40	< 1.0	< 1.0	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050
	43.5	< 1.0	< 1.0	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050
	50.5	< 1.0	< 1.0	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050
BH-U	10	87	64*	0.59	0.059	1.8	4.8	< 0.0050	0.024	< 0.0050	< 0.0050
	15	< 1.0	< 1.0	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050
	20	< 1.0	< 1.0	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050
	25	< 1.0	< 1.0	< 0.0050	< 0.0050	< 0.0050	0.0076	< 0.0050	< 0.0050	< 0.0050	< 0.0050
	31	22	14	0.21	0.64	0.44	2.5	< 0.0050	< 0.015	< 0.0050	< 0.0050
	36	< 1.0	< 1.0	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050
	40	< 1.0	< 1.0	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050
	45	< 1.0	< 1.0	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050
	50	< 1.0	< 1.0	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050
BH-V	10	13	22	0.16	0.0076	0.22	0.29	< 0.0050	< 0.015	< 0.0050	< 0.0050
	15	< 1.0	< 1.0	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	0.0063	< 0.0050

	Sample										
Boring	Depth	TPH	TPH			Ethyl-	Total				Other
ID	(feet)	Gasoline	Diesel	Benzene	Toluene	benzene	Xylenes	TAME	TBA	MTBE	VOCs
BH-W	10	17	7.5*	0.088	< 0.0050	0.34	0.12	< 0.0050	0.017	< 0.0050	< 0.0050
	15	< 1.0	< 1.0	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050
	20	< 1.0	< 1.0	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050
	30	< 1.0	< 1.0	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050
	40	< 1.0	< 1.0	< 0.0050	< 0.0050	< 0.0050	0.0084	< 0.0050	< 0.0050	< 0.0050	< 0.0050
	50	< 1.0	< 1.0	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050
BH-X	10.5	< 1.0	< 1.0	0.018	< 0.0050	0.030	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050
	15	< 1.0	< 1.0	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050
	20.5	5.8	3.1*	0.018	< 0.0050	0.11	0.26	< 0.0050	< 0.0050	< 0.0050	< 0.0050
	30.5	< 1.0	< 1.0	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050
	40	< 1.0	< 1.0	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050
ESL		100	500	0.18	9.3	4.7	1.5	NE	NE	2	Varies

Notes:

ESL = Environmental screening levels presented in the "Screening For Environmental Concerns at Sites With Contaminated Soil and Groundwater (February 2005)" document prepared by the California Regional Water Quality Control Board, San Francisco Bay Region.

Concentrations exceeding ESLs are in Bold.

Non-detectable concentrations noted by the less than sign (<) followed by the laboratory detection limit.

NE means that no ESL has been established for this compound.

\* = Hydrocarbons reported as TPH-D do not exhibit a typical diesel chromatographic pattern.

NTOF	Other
MTBE	VOCs
< 0.5	< 0.5
< 0.5	< 0.5
5 3.2	< 2.5
0 < 0.5	< 0.5
<b>2,000</b>	< 5.0
87	< 7.0
620	< 0.90
<b>3,300</b>	< 7.0
1,500	< 2.5
0 <b>5,000</b>	< 10
0 <b>4,800</b>	< 10
5 1,400	< 2.5
<b>1,900</b>	< 5.0
0 < 0.5	< 0.5
0 < 0.5	< 0.5
0 < 0.5	< 0.5
0 < 0.5	< 0.5
0 < 0.5	1.4 (DIPE)
<b>5,300</b>	< 10
0 140	< 0.5
0 < 0.5	< 0.5
	0 < 0.5 0 < 0.5 0 < 0.5 0 <b>5,300</b> 0 140

TABLE THREE
Certified Analytical Results for <b>GROUNDWATER</b> Samples
Albany Hill Mini Mart
800 San Pablo Avenue, Albany, CA
All results are in <b>parts per billion (ppb)</b>

Boring ID	Sample Depth (feet)	TPH Gasoline	TPH Diesel	Benzene	Toluene	Ethyl- benzene	Total Xylenes	TAME	ТВА	MTBE	Other VOCs
BH-Q	7-9 25-27	< 50 320	420 500	< 0.5 0.58	< 0.5 0.74	< 0.5 < 0.5	< 0.5 0.62	< 0.5 < 0.5	< 5.0 < 5.0	< 0.5 20	< 0.5 0.75 (1,2-DCA)
BH-R	25	< 500	400	< 5.0	< 5.0	< 5.0	< 5.0	11	< 25	2,800	< 5.0
BH-S	25	670	< 200	16	1.4	17	99	3.1	34	720	< 1.0
BH-T	25-27 34-37	< 500 75**	640 450	5.6 0.65	< 5.0 0.64	< 5.0 < 0.5	5.4 0.85	6.3 < 0.5	30 < 5.0	2,900 180	< 5.0 < 0.5
BH-V	20-24 30-32	32,000 23,000	< 10,000 < 4,000	560 330	150 93	1,100 730	5,400 3,600	< 7.0 < 5.0	< 40 < 25	92 < 5.0	< 7.0 < 5.0
BH-W	30-32	310	< 50	1.2	1.2	6.2	20	< 0.5	< 5.0	0.77	< 0.5
ВН-Х	32-34	6,300	< 500	36	4.9	200	560	< 1.5	< 7.0	< 1.5	< 1.5
MW-1		900	82	210	8.4	52	23	< 0.5	5.1		< 0.5
MW-2		< 100	72	1.6	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	620	< 1.0
MW-3		< 1,000	140	110	< 10	< 10	21	20	200	4,400	< 10
MW-4		1,600	180	370	6.5	68	93	< 1.0	10	13	1.1 (DIPE)
MW-5		1,300	150	2.4	< 0.5	0.77	< 0.5	< 0.5	< 5.0	< 0.5	< 0.5
MW-6		1,000	390	2.7	< 0.5	< 0.5	< 0.5	2.3	48	280	< 0.5
MW-7		4,800	< 300	640	16	250	490	< 1.5	31	590	< 1.5

Boring ID	Sample Depth (feet)	TPH Gasoline	TPH Diesel	Benzene	Toluene	Ethyl- benzene	Total Xylenes	TAME	ТВА	MTBE	Other VOCs
MW-8		< 2,000	200	110	< 20	26	49	25	< 200	8,600	< 20
MW-9		12,000	< 1,500	890	37	280	2,000	< 5.0	< 50	< 5.0	< 5.0
ESL		500	640	46	130	290	13	NE	NE	1,800	Varies

Notes:

ESL = Environmental screening levels presented in the "Screening For Environmental Concerns at Sites With Contaminated Soil and Groundwater (February 20005)" document prepared by the California Regional Water Quality Control Board, San Francisco Bay Region.

Concentrations exceeding ESLs are in Bold.

Non-detectable concentrations noted by the less than sign (<) followed by the laboratory detection limit.

NE means that no ESL has been established for this compound.

\* = Hydrocarbons reported as TPH-D do not exhibit a typical diesel chromatographic pattern.

\*\* = Hydrocarbons reported as TPH-G do not exhibit a typical gasoline chromatographic pattern.

#### TABLE FOUR

Certified Analytical Results for **SOIL** Samples Steve's Auto Care 744 San Pablo Avenue, Albany, CA All results are in **parts per million (ppm)** 

Boring ID	Sample Depth (feet)	TPH Gasoline	TPH Diesel	TPH Motor Oil	Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE	Chloroform	Other VOCs
BH-A	15.0	< 1.0	< 1.0	< 10	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050
ESL		500	640	640	0.38	9.3	32	11	5.6	1.9	Varies

Notes:

ESL = Environmental screening levels presented in the "Screening For Environmental Concerns at Sites With Contaminated Soil and Groundwater (February 2005)" document prepared by the California Regional Water Quality Control Board, San Francisco Bay Region.

Concentrations exceeding ESLs are in Bold.

Non-detectable concentrations noted by the less than sign (<) followed by the laboratory detection limit.

# TABLE FIVECertified Analytical Results for GROUNDWATER Samples<br/>Steve's Auto Care744 San Pablo Avenue, Albany, CA<br/>All results are in parts per billion (ppb)

Boring ID	Sample Depth (feet)	TPH Gasoline	TPH Diesel	TPH Motor Oil	Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE	Chloroform	Other VOCs
BH-A	20-24	1,400	< 800	< 100	0.62	5.1	36	15	5.3	4.8	< 0.5 - < 20
ESL		500	640	640	46	130	290	100	1,800	330	Varies

Notes:

ESL = Environmental screening levels presented in the "Screening For Environmental Concerns at Sites With Contaminated Soil and Groundwater (February 2005)" document prepared by the California Regional Water Quality Control Board. San Francisco Bay Region. Concentrations exceeding ESLs are in **Bold.** 

Non-detectable concentrations noted by the less than sign (<) followed by the laboratory detection limit.

### TABLE SIX

#### Groundwater Elevation Data Albany Hill Mini Mart 800 San Pablo Avenue, Albany, CA

		Top of Casing	Depth to	Groundwater
Well	Date of	Elevation*	Water	Elevation
ID	Measurement	(feet)	(feet)	(feet)
MW-1	8/6/99	101.68	11.95	89.73
	11/5/99		12.72	88.96
	2/7/00		10.34	91.34
	5/5/00		10.59	91.09
	8/3/00		11.75	89.93
	11/8/00		11.67	90.01
	2/8/01		11.20	90.48
	6/7/01		11.35	90.33
	9/7/01		11.71	89.97
	12/13/01		10.67	91.01
	6/13/02		11.42	90.26
	9/11/02		12.42	89.26
	2/14/03	46.42	10.69	35.73
	9/10/04		13.83	32.59
	12/7/04		12.18	34.24
	4/18/05		9.92	36.50
	6/20/05		10.64	35.78
	10/7/05		12.42	34.00
	12/7/05		11.51	34.91
	3/6/06	48.82	9.35	39.47
MW-2	8/6/99	101.57	10.83	90.74
	11/5/99		11.66	89.91
	2/7/00		9.23	92.34
	5/5/00		9.54	92.03
	8/3/00		10.69	90.88
	11/8/00		10.62	90.95
	2/8/01		10.17	91.40
	6/7/01		10.30	91.27
	9/7/01		10.65	90.92
	12/13/01		9.65	91.92
	6/13/02		10.37	91.20
	9/11/02		11.32	90.25
	2/14/03	45.31	9.59	35.72
	9/10/04		11.78	33.53
	12/7/04		11.13	34.18
	4/18/05		8.71	36.60
	6/20/05		9.60	35.71
	10/7/05		11.39	33.92
	12/7/05		11.49	33.82
	3/6/06	47.71	8.22	39.49

### TABLE SIX

#### Groundwater Elevation Data Albany Hill Mini Mart 800 San Pablo Avenue, Albany, CA

Well ID	Date of Measurement	Top of Casing Elevation* (feet)	Depth to Water (feet)	Groundwater Elevation (feet)
MW-3	8/6/99	100.33	10.58	89.75
	11/5/99		11.39	88.94
	2/7/00		9.05	91.28
	5/5/00		9.29	91.04
	8/3/00		10.43	89.90
	11/8/00		10.33	90.00
	2/8/01		9.94	90.39
	6/7/01		10.04	90.29
	9/7/01		10.31	90.02
	12/13/01		9.38	90.95
	6/13/02		10.03	90.30
	9/11/02		11.02	89.31
	2/14/03	45.08	9.40	35.68
	9/10/04		12.51	32.57
	12/7/04		11.86	33.22
	4/18/05		8.49	36.59
	6/20/05		9.34	35.74
	10/7/05		11.11	33.97
	12/7/05	47.40	10.22	34.86
	3/6/06	47.49	8.84	38.65
MW-4	6/13/02	100.05	10.18	89.87
	9/11/02		11.12	88.93
	2/14/03	45.20	9.51	35.69
	9/10/04		11.59	33.61
	12/7/04		10.91	34.29
	4/18/05		8.62	36.58
	6/20/05		9.45	35.75
	10/7/05		11.20	34.00
	12/7/05		10.30	34.90
	3/6/06	47.61	8.19	39.42
MW-5	6/13/02	98.37	8.88	89.49
	9/11/02		9.95	88.42
	2/14/03	44.12	8.66	35.46
	9/10/04		10.26	33.86
	12/7/04		10.79	33.33
	4/18/05	Well Destroyed by City Du	ring Street Const	truction
	6/20/05	Well Destroyed by City Du		
MW-5R	10/7/05		10.94	
	12/7/05		9.97	
	3/6/06	47.36	4.93	42.43

#### TABLE SIX

#### Groundwater Elevation Data Albany Hill Mini Mart 800 San Pablo Avenue, Albany, CA

Well	Date of	Top of Casing Elevation*	Depth to Water	Groundwater Elevation
ID	Measurement	(feet)	(feet)	(feet)
MW-6	6/13/02	99.36	8.85	90.51
	9/11/02		9.82	89.54
	2/14/03	43.88	8.21	35.67
	9/10/04		10.33	33.55
	12/7/04		9.83	34.05
	4/18/05		7.08	36.80
	6/20/05		7.52	36.36
	10/7/05		10.92	32.96
	12/7/05		8.85	35.03
	3/6/06	46.27	6.22	40.05
MW-7	6/13/02	100.96	10.95	90.01
	9/11/02		11.90	89.06
	2/14/03	45.59	10.25	35.34
	9/10/04		12.35	33.24
	12/7/04		11.42	34.17
	4/18/05		9.34	36.25
	6/20/05		10.19	35.40
	10/7/05		12.96	32.63
	12/7/05		not sampled	
	3/6/06	48.36	8.92	39.44
MW-8	6/13/02	100.54	10.57	89.97
	9/11/02		11.53	89.01
	2/14/03	45.59	9.98	35.61
	9/10/04		11.98	33.61
	12/7/04		11.42	34.17
	4/18/05		8.99	36.60
	6/20/05		9.83	35.76
	10/7/05		11.60	33.99
	12/7/05		11.69	33.90
	3/6/06	47.99	8.58	39.41
MW-9	2/14/03	46.86	10.84	36.02
	9/10/04		12.97	33.89
	12/7/04		12.84	34.02
	4/18/05		9.75	37.11
	6/20/05		10.83	36.03
	10/7/05		12.59	34.27
	12/7/05		12.56	34.30
	3/6/06	49.24	10.24	39.00
MW-10	10/7/05		10.52	
	12/7/05		not sampled	
	3/6/06	46.90	7.46	39.44

Notes:

Data prior to September 10, 2004, including survey data, is based on tables compiled by AARS. \* Top of casing elevations were initially surveyed to an arbitrary benchmark. The elevations were resurveyed on November 11, 2002 with respect mean sea level.

## **APPENDIX** A

Permits

#### Alameda County Public Works Agency - Water Resources Well Permit

PUBLIC	399 Elmhurst Street Hayward, CA 94544-139 Telephone: (510)670-6633 Fax:(51	
Application Approved Permits Issued:	l on: 01/23/2006 By jamesy W2006-0034	Receipt Number: WR2006-0025 Permits Valid from 01/31/2006 to 03/10/2006
Application Id:	1137798989385	City of Project Site: Albany
Site Location: Project Start Date:	800 San Pablo Avenue 01/31/2006	Completion Date:03/10/2006
Applicant:	Aqua Science Engineers - Robert Kitay 208 West El Pintado, Suite C, Danville, CA 945	<b>Phone:</b> 925-820-9391
Property Owner:	Joginder Sikand 1300 Ptarmigan Drive #1, Walnut Creek, CA 94	Phone:
Client:	** same as Property Owner **	
Contact:	Robert Kitay	Phone: 925-413-8604 Cell:
		Total Due:

Total Du	<b>Je:</b> \$200.00
	mount Paid:\$200.00
Paid By: MC	PAID IN FULL

#### Works Requesting Permits:

Borehole(s) for Investigation-Contamination Study - 8 Boreholes Driller: Precision Sampling - Lic #: 636387 - Method: other

Work Total: \$200.00

#### Specifications

Permit	Issued Dt	Expire Dt	#	Hole Diam	Max Depth
Number			Boreholes		
W2006-	01/23/2006	05/01/2006	8	2.00 in.	60.00 ft
0034					

#### **Specific Work Permit Conditions**

1. Backfill bore hole by tremie with cement grout or cement grout/sand mixture. Upper two-three feet replaced in kind or with compacted cuttings. All cuttings remaining or unused shall be containerized and hauled off site.

2. Boreholes shall not be left open for a period of more than 24 hours. All boreholes left open more than 24 hours will need approval from Alameda County Public Works Agency, Water Resources Section. All boreholes shall be backfilled according to permit destruction requirements and all concrete material and asphalt material shall be to Caltrans Spec or County/City Codes. No borehole(s) shall be left in a manner to act as a conduit at any time.

3. Permittee shall assume entire responsibility for all activities and uses under this permit and shall indemnify, defend and save the Alameda County Public Works Agency, its officers, agents, and employees free and harmless from any and all expense, cost, liability in connection with or resulting from the exercise of this Permit including, but not limited to, properly damage, personal injury and wrongful death.

4. Applicant shall contact George Cashen for an inspection time at 510-760-6610 at least five (5) working days prior to starting, once the permit has been approved. Confirm the scheduled date(s) at least 24 hours prior to drilling.

5. Copy of approved drilling permit must be on site at all times. Failure to present or show proof of the approved permit application on site shall result in a fine of \$500.00.

6. Permit is valid only for the purpose specified herein. No changes in construction procedures, as described on this permit application. Boreholes shall not be converted to monitoring wells, without a permit application process.

## **PROGRAMS AND SERVICES**

Well Standards Program

The Alameda County Public Works Agency, Water Resources is located at: 399 Elmhurst Street Hayward, CA 94544 For Driving Directions or General Info, Please Contact 510-670-5480 or wells@acpwa.org For Drilling Permit information and process contact James Yoo at Phone: 510-670-6633 FAX: 510-782-1939 Email: Jamesy@acpwa.org

Alameda County Public Works is the administering agency of General Ordinance Code, Chapter 6.88. The purpose of this chapter is to provide for the regulation of groundwater wells and exploratory holes as required by California Water Code. The provisions of these laws are administered and enforced by Alameda County Public Works Agency through its Well Standards Program.

Drilling Permit Jurisdictions in Alameda County: There are four jurisdictions in Alameda County.

Location:	Agency with Jurisdiction	Contact Number
Berkeley	City of Berkeley	Ph: 510-981-7460 Fax: 510-540-5672
Fremont, Newark, Union City	Alameda County Water District	Ph: 510-668-4460 Fax: 510-651-1760
Pleasanton, Dublin, Livermore, Sunol	Zone 7 Water Agency	Ph: 925-454-5000 Fax: 510-454-5728

The Alameda County Public Works Agency, Water Resources has the responsibility and authority to issue drilling permits and to enforce the County Water Well Ordinance 73-68. This jurisdiction covers the western Alameda County area of Oakland, Alameda, Piedmont, Emeryville, Albany, San Leandro, San Lorenzo, Castro Valley, and Hayward. The purpose of the drilling permits are to ensure that any new well or the destruction of wells, including geotechnical investigations and environmental sampling within the above jurisdiction and within Alameda County will not cause pollution or contamination of ground water or otherwise jeopardize the health, safety or welfare of the people of Alameda County.

**Permits** are required for all work pertaining to wells and exploratory holes at any depth within the jurisdiction of the Well Standards Program. A completed permit application (*30 Kb*)<sup>\*</sup>, along with a site map, should be submitted at least **ten (10) working days prior to the planned start of work**. Submittals should be sent to the address or fax number provided on the application form. When submitting an application via fax, please use a high resolution scan to retain legibility.

Complete Permit Application Check List (24 Kb)\*

#### Fees

Beginning April 11, 2005, the following fees shall apply:

A permit to construct, rehabilitate, or destroy wells, including cathodic protection wells, but excluding dewatering wells, shall cost \$300.00 per well.

A permit to bore exploratory holes, including temporary test wells, shall cost \$200 per site. A site includes the project parcel as well as any adjoining parcels.

Please make checks payable to: Treasurer, County of Alameda

#### Permit Fees are exempt to State & Federal Projects

Applicants shall submit a letter from the agency requesting the fee exemption.

#### Scheduling Work/Inspections:

Alameda County Public Works Agency (ACPWA), Water Resources Section requires scheduling and inspection of permitted work. All drilling activities must be scheduled in advance. Availability of inspections will vary from week to week and will come on a first come, first served bases. To ensure inspection availability on your desired or driller scheduled date, the following procedures are required:

Please contact **George Bolton at 510-670-5594** to schedule the inspection date and time (You must have drilling permit approved prior to scheduling).

Schedule the work as far in advance as possible (at least 5 days in advance); and confirm the scheduled drilling date(s) at least 24 hours prior to drilling.

Once the work has been scheduled, an ACPWA Inspector will coordinate the inspection requirements as well as how the Inspector can be reached if they are not at the site when Inspection is required. Expect for special circumstances given, all work will require the inspection to be conducted during the working hours of 8:30am to 2:30pm., Monday to Friday, excluding holidays.

#### **Request for Permit Extension:**

Permits are only valid from the start date to the completion date as stated on the drilling permit application and Conditions of Approval. To request an extension of a drilling permit application, applicants must request in writing prior to the completion date as set forth in the Conditions of Approval of the drilling permit application. Please send fax or email to Water Resources Section, Fax 510-782-1939 or email at wells@acpwa.org. There are no additional fees for permit extensions or for re-scheduling inspection dates. You may not extend your drilling permit dates beyond 90 days from the approval date of the permit application. **NO refunds** shall be given back after 90 days and the permit shall be deemed voided.

#### **Cancel a Drilling Permit:**

Applicants may cancel a drilling permit only in writing by mail, fax or email to Water Resources Section, Fax 510-782-1939 or email at wells@acpwa.org. If you do not cancel your drilling permit application before the drilling completion date or notify in writing within 90 days, Alameda County Public Works Agency, Water Resources Section may void the permit and No refunds may be given back.

#### **Refunds/Service Charge:**

A service charge of \$25.00 dollars for the first check returned and \$35.00 dollars for each subsequent check returned.

Applicants who cancel a drilling permit application **before** we issue the approved permit(s), will receive a **FULL** refund (at any amount) and will be mailed back within two weeks.

Applicants who cancel a drilling permit application **after** a permit has been issued will then be charged a service fee of \$50.00 (fifty Dollars). To collect the remaining funds will be determined by the amount of the refund to be refunded (see process below).

Board of Supervisors Minute Order, File No. 9763, dated January 9, 1996, gives blanket authority to the Auditor-Controller to process claims, from all County departments for the refund of fees which do not exceed \$500 (Five Hundred Dollars)(with the exception of the County Clerk whose limit is \$1,500).

Refunds over the amounts must be authorized by the Board of Supervisors Minute Order, File No. 9763 require specific approval by the Board of Supervisors.

The forms to request for refunds under \$500.00 (Five Hundred Dollars) are available at this office or any County Offices.

If the amount is exceeded, a Board letter and Minute Order must accompany the claim. Applicant shall fill out the request form and the County Fiscal department will process the request.

#### Enforcement

Penalty. Any person who does any work for which a permit is required by this chapter and who fails to obtain a permit shall be guilty of a misdemeanor punishable by fine not exceeding Five Hundred Dollars (\$500.00) or by imprisonment not exceeding six months, or by both such fine and imprisonment, and such person shall be deemed guilty of a separate offense for each and every day or portion thereof during which any such violation is committed, continued, or permitted, and shall be subject to the same punishment as for the original offense. (Prior gen. code §3-160.6)

#### Enforcement actions will be determined by this office on a case-by-case basis

Drilling without a permit shall be the cost of the permit(s) and a fine of \$500.00 (Five Hundred Dollars).

**Well Completion Reports** (State DWR-188 forms) must be filed with the Well Standards Program within 60 days of completing work. Staff will review the report, assign a state well number, and then forward it to the California Department of Water Resources (DWR). Drillers should not send completed reports to DWR directly. Failure to file a Well Completion Report or deliberate falsification of the information is a misdemeanor; it is also grounds for disciplinary action by the Contractors' State License Board. Also note that filed Well Completion Reports are considered private record protected by state law and can only be released to the well owner or those specifically authorized by government agencies. Links to pertinent forms are provided below.

Well Completion Report Form\* Well Owner's Request Form for Previously Filed Forms (41Kb)\* Government Authorization Form for the Release of Forms (46 Kb)\* Site Hazard Information Form (51 Kb)\*

\* Adobe PDF Reader is Required.

#### Alameda County Public Works Agency - Water Resources Well Permit

PUBLIC	399 Elmhurst Stree Hayward, CA 94544-1 Telephone: (510)670-6633 Fax:(	395	
Application Approved Permits Issued:	d on: 12/08/2005 By jamesy W2005-1176 to W2005-1177	Receipt Number: WR2005-2236 Permits Valid from 12/21/2005 to 07	1/30/2006
Application Id: Site Location:	1134080819231 800 San Pablo Avenue	City of Project Site: Albany	
Project Start Date:	12/21/2005	Completion Date:01/30/2006	
Applicant:	Aqua Science Engineers - Robert Kitay 208 West El Pintado, Suite C, Danville, CA 94	Phone: 925-820-939	1
Property Owner:	Joginder Sikand	Phone:	
Client:	1300 Ptarmingan Drive #1, Walnut Creek, CA ** same as Property Owner **	94595	
		Total Due:	\$400.00

 Paid By: VISA	PAID IN FULL
Total Due: Total Amount Paid:	\$400.00

#### Works Requesting Permits:

Remedian Well Construction-Injection - 3 Wells Driller: Precision Sampling - Lic #: 636387 - Method: hstem

#### Specifications

Permit #	Issued Date	Expire Date	Owner Well Id	Hole Diam.	Casing Diam.	Seal Depth	Max. Depth
W2005- 1176	12/08/2005	03/21/2006	AS-1	5.00 in.	0.75 in.	20.00 ft	30.00 ft
W2005- 1176	12/08/2005	03/21/2006	AS-2	5.00 in.	0.75 in.	20.00 ft	30.00 ft
W2005- 1176	12/08/2005	03/21/2006	AS-3	5.00 in.	0.75 in.	20.00 ft	30.00 ft

#### **Specific Work Permit Conditions**

1. Permittee shall assume entire responsibility for all activities and uses under this permit and shall indemnify, defend and save the Alameda County Public Works Agency, its officers, agents, and employees free and harmless from any and all expense, cost, liability in connection with or resulting from the exercise of this Permit including, but not limited to, properly damage, personal injury and wrongful death.

2. Permitte, permittee's contractors, consultants or agents shall be responsible to assure that all material or waters generated during drilling, boring destruction, and/or other activities associated with this Permit will be safely handled, properly managed, and disposed of according to all applicable federal, state, and local statutes regulating such. In no case shall these materials and/or waters be allowed to enter, or potentially enter, on or off-site storm sewers, dry wells, or waterways or be allowed to move off the property where work is being completed.

3. Compliance with the well-sealing specifications shall not exempt the well-sealing contractor from complying with appropriate State reporting-requirements related to well destruction (Sections 13750 through 13755 (Division 7, Chapter 10, Article 3) of the California Water Code). Contractor must complete State DWR Form 188 and mail original to the Alameda County Public Works Agency, Water Resources Section, within 60 days. Including permit number and site map.

4. Applicant shall contact George Bolton for an inspection time at 510-670-5594 at least five (5) working days prior to starting, once the permit has been approved. Confirm the scheduled date(s) at least 24 hours prior to drilling.

#### Work Total: \$200.00

## **PROGRAMS AND SERVICES**

Well Standards Program

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Location:	Agency with Jurisdiction	Contact Number
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Fremont, Newark, Union City	Alameda County Water District	Ph: 510-668-4460 Fax: 510-651-1760
Pleasanton, Dublin, Livermore, Sunol	Zone 7 Water Agency	Ph: 925-454-5000 Fax: 510-454-5728

The Alameda County Public Works Agency, Water Resources has the responsibility and authority to issue drilling permits and to enforce the County Water Well Ordinance 73-68. This jurisdiction covers the western Alameda County area of Oakland, Alameda, Piedmont, Emeryville, Albany, San Leandro, San Lorenzo, Castro Valley, and Hayward. The purpose of the drilling permits are to ensure that any new well or the destruction of wells, including geotechnical investigations and environmental sampling within the above jurisdiction and within Alameda County will not cause pollution or contamination of ground water or otherwise jeopardize the health, safety or welfare of the people of Alameda County.

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Complete Permit Application Check List (24 Kb)\*

#### Fees

Beginning April 11, 2005, the following fees shall apply:

A permit to construct, rehabilitate, or destroy wells, including cathodic protection wells, but excluding dewatering wells, shall cost \$300.00 per well.

A permit to bore exploratory holes, including temporary test wells, shall cost \$200 per site. A site includes the project parcel as well as any adjoining parcels.

Please make checks payable to: Treasurer, County of Alameda

#### Permit Fees are exempt to State & Federal Projects

Applicants shall submit a letter from the agency requesting the fee exemption.

#### Scheduling Work/Inspections:

Alameda County Public Works Agency (ACPWA), Water Resources Section requires scheduling and inspection of permitted work. All drilling activities must be scheduled in advance. Availability of inspections will vary from week to week and will come on a first come, first served bases. To ensure inspection availability on your desired or driller scheduled date, the following procedures are required:

Please contact George Bolton at 510-670-5594 to schedule the inspection date and time (You must have drilling permit approved prior to scheduling).

Schedule the work as far in advance as possible (at least 5 days in advance); and confirm the scheduled drilling date(s) at least 24 hours prior to drilling.

Once the work has been scheduled, an ACPWA Inspector will coordinate the inspection requirements as well as how the Inspector can be reached if they are not at the site when Inspection is required. Expect for special circumstances given, all work will require the inspection to be conducted during the working hours of 8:30am to 2:30pm., Monday to Friday, excluding holidays.

#### **Request for Permit Extension:**

Permits are only valid from the start date to the completion date as stated on the drilling permit application and Conditions of Approval. To request an extension of a drilling permit application, applicants must request in writing prior to the completion date as set forth in the Conditions of Approval of the drilling permit application. Please send fax or email to Water Resources Section, Fax 510-782-1939 or email at wells@acpwa.org. There are no additional fees for permit extensions or for re-scheduling inspection dates. You may not extend your drilling permit dates beyond 90 days from the approval date of the permit application. **NO refunds** shall be given back after 90 days and the permit shall be deemed voided.

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Applicants may cancel a drilling permit only in writing by mail, fax or email to Water Resources Section, Fax 510-782-1939 or email at wells@acpwa.org. If you do not cancel your drilling permit application before the drilling completion date or notify in writing within 90 days, Alameda County Public Works Agency, Water Resources Section may void the permit and No refunds may be given back.

#### Refunds/Service Charge:

A service charge of \$25.00 dollars for the first check returned and \$35.00 dollars for each subsequent check returned.

Applicants who cancel a drilling permit application **before** we issue the approved permit(s), will receive a **FULL** refund (at any amount) and will be mailed back within two weeks.

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If the amount is exceeded, a Board letter and Minute Order must accompany the claim. Applicant shall fill out the request form and the County Fiscal department will process the request.

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Penalty. Any person who does any work for which a permit is required by this chapter and who fails to obtain a permit shall be guilty of a misdemeanor punishable by fine not exceeding Five Hundred Dollars (\$500.00) or by imprisonment not exceeding six months, or by both such fine and imprisonment, and such person shall be deemed guilty of a separate offense for each and every day or portion thereof during which any such violation is committed, continued, or permitted, and shall be subject to the same punishment as for the original offense. (Prior gen. code §3-160.6)

#### Enforcement actions will be determined by this office on a case-by-case basis

Drilling without a permit shall be the cost of the permit(s) and a fine of \$500.00 (Five Hundred Dollars).

Well Completion Reports (State DWR-188 forms) must be filed with the Well Standards Program within 60 days of completing work. Staff will review the report, assign a state well number, and then forward it to the California Department of Water Resources (DWR). Drillers should not send completed reports to DWR directly. Failure to file a Well Completion Report or deliberate falsification of the information is a misdemeanor; it is also grounds for disciplinary action by the Contractors' State License Board. Also note that filed Well Completion Reports are considered private record protected by state law and can only be released to the well owner or those specifically authorized by government agencies. Links to pertinent forms are provided below.

Well Completion Report Form\* Well Owner's Request Form for Previously Filed Forms (41Kb)\* Government Authorization Form for the Release of Forms (46 Kb)\* Site Hazard Information Form (51 Kb)\*

\* Adobe PDF Reader is Required.

	City of Alb	any		
PERMANENT	ENCROACHMENT PER OR TEMPORARY CONSTRUCTION PERMITNO.	MIT I WITHIN CITY RIGH	IT OF WAY	
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plicant La Science Engineurs	208 W.El Pintalo, Stec, Denville, CA 94	nig. tearing or scarring or	6550 437000 /01KR00 312	699 96
vner: ginder Sikand	1300 Ptarmigan Dr, #1, Walnut Cruck, CA 945	595 925-256-1385	Waterwayer, The C	
igineer / Architect	208 W.El Pintado, Ster C, Danville, CA 945	lower contained and	48700076550/ GIKR0031296	
ision Sampling	1081 ESSax Ave, Richmond, CA 94801	510-237-4575	4241/ UC2B71072339025	BL
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Drill 2	DESCRIPTION OF WOF - Soil borings in Washington Au REQUIRED CONDITION	-, Backfill with ca	ment	JAN 1 8 2006
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All work shall be in a No refund after 120 o begun. Permanent structures	<u>REQUIRED CONDITION</u> ccordance with the attached standard con days or work begins, 70% of fee refundates require City Council approval (City Code	NS nditions. Ne within 120 days prov	CITY OF	JAN 1 & ZUUG
All work shall be in a No refund after 120 o begun. Permanent structures CALL USA 1-800-22 Call for Final Inspect	<u>REQUIRED CONDITION</u> ccordance with the attached standard condays or work begins, 70% of fee refundates require City Council approval (City Code 7-2600 before excavating.	<u>VS</u> nditions. ble within 120 days prov 14-2). (510) 528-5760 ♀ (510	vided no work has	
All work shall be in a No refund after 120 o begun. Permanent structures CALL USA 1-800-22 Call for Final Inspecti Special Conditions m	EQUIRED CONDITION REQUIRED CONDITION CCORDANCE with the attached standard cond days or work begins, 70% of fee refundate s require City Council approval (City Code 7-2600 before excavating. ion and Sign-Off 48 hr. in advance at □ ay be imposed following City review and p	NS nditions. ble within 120 days prov 14-2). (510) 528-5760 (510 prior to issuance of this	vided no work has	JAN 1 & ZUUG
All work shall be in a No refund after 120 o begun. Permanent structures CALL USA 1-800-22 Call for Final Inspecti Special Conditions m	<u>REQUIRED CONDITION</u> ccordance with the attached standard condays or work begins, 70% of fee refundates require City Council approval (City Code 7-2600 before excavating.	<u>VS</u> nditions. ble within 120 days prov 14-2). (510) 528-5760 ♀ (510	vided no work has	JAN 1 & ZUUG
All work shall be in a No refund after 120 o begun. Permanent structures CALL USA 1-800-22 Call for Final Inspect Special Conditions m pplicant's Signature:	- Soil borings in Washington Ave <u>REQUIRED CONDITION</u> coordance with the attached standard con- days or work begins, 70% of fee refundables a require City Council approval (City Code 7-2600 before excavating. ion and Sign-Off 48 hr. in advance at □ hay be imposed following City review and p Mad M. May	NS nditions. ble within 120 days prov 14-2). (510) 528-5760 (510 prior to issuance of this	vided no work has	JAN 1 & CUUG
All work shall be in a No refund after 120 o begun. Permanent structures CALL USA 1-800-22 Call for Final Inspecti Special Conditions m pplicant's Signature:	EQUIRED CONDITION REQUIRED CONDITION CCORDANCE with the attached standard cond days or work begins, 70% of fee refundable is require City Council approval (City Code 7-2600 before excavating. ion and Sign-Off 48 hr. in advance at □ hay be imposed following City review and p hat May hat May Dn subject to fee:	NS nditions. ble within 120 days prov 14-2). (510) 528-5760 (510 prior to issuance of this	vided no work has	JAN 1 & ZUUG
All work shall be in a No refund after 120 o begun. Permanent structures CALL USA 1-800-22 Call for Final Inspecti Special Conditions m pplicant's Signature:	EQUIRED CONDITION REQUIRED CONDITION CCORDANCE with the attached standard cond days or work begins, 70% of fee refundable arequire City Council approval (City Code 7-2600 before excavating. ion and Sign-Off 48 hr. in advance at □ hay be imposed following City review and p Mathematical Subject to fee: of construction cost	NS nditions. ble within 120 days prov 14-2). (510) 528-5760 (510 prior to issuance of this	0 E Vided no work has 0) 524-9543. 5 permit. -17-06	
All work shall be in a No refund after 120 o begun. Permanent structures CALL USA 1-800-22 Call for Final Inspecti Special Conditions m pplicant's Signature:	EQUIRED CONDITION REQUIRED CONDITION coordance with the attached standard cond days or work begins, 70% of fee refundable arequire City Council approval (City Code 7-2600 before excavating. ion and Sign-Off 48 hr. in advance at □ hay be imposed following City review and p MALL May Dn subject to fee: of construction cost when street is out) ule (if greater than % fee)	NS nditions. ble within 120 days prov 14-2). (510) 528-5760 (510 prior to issuance of this Date:	0 E Vided no work has 0) 524-9543. 5 permit. -17-06	
All work shall be in a No refund after 120 of begun. Permanent structures CALL USA 1-800-22 Call for Final Inspecti Special Conditions m pplicant's Signature:	EQUIRED CONDITION REQUIRED CONDITION coordance with the attached standard cond days or work begins, 70% of fee refundable is require City Council approval (City Code 7-2600 before excavating. ion and Sign-Off 48 hr. in advance at □ hay be imposed following City review and p MALL May Dn subject to fee: of construction cost when street is out)	NS nditions. ble within 120 days prov 14-2). (510) 528-5760 (510 prior to issuance of this Date:	0 E Vided no work has 0) 524-9543. 5 permit. -17-06	
All work shall be in a No refund after 120 o begun. Permanent structures CALL USA 1-800-22 Call for Final Inspecti Special Conditions m pplicant's Signature:	EQUIRED CONDITION REQUIRED CONDITION coordance with the attached standard cond days or work begins, 70% of fee refundate a require City Council approval (City Code 7-2600 before excavating. ion and Sign-Off 48 hr. in advance at □ hay be imposed following City review and p M.M.M.M. Dn subject to fee: of construction cost when street is out) ule (if greater than % fee) to fee schedule from) (Utilities to be billed M.WOYK PER MONUS	A copy of permit to	vided no work has 524-9543. permit. -17-06 5129.00 17-06	
All work shall be in a No refund after 120 of begun. Permanent structures CALL USA 1-800-22 Call for Final Inspect Special Conditions m pplicant's Signature: Decial construction costs New construction costs New construction at 8% n-Lieu slurry seal fee (w Winimum fee per sched Total Fee due (transfer Finance)	- Soil borings in Washington Ave REQUIRED CONDITION coordance with the attached standard con- days or work begins, 70% of fee refundate a require City Council approval (City Code 7-2600 before excavating. ion and Sign-Off 48 hr. in advance at □ hay be imposed following City review and p hay be imposed following City rev	$\frac{VS}{14-2}$ A, copy of permit to $\frac{VS}{14-2}$	vided no work has vided no work has 0) 524-9543. permit. -17-08 \$129.00 All relevent Enditions	
All work shall be in a No refund after 120 of begun. Permanent structures CALL USA 1-800-22 Call for Final Inspecti Special Conditions m pplicant's Signature: <b>STAFF USE ONLY</b> Permit Fee Computation Total construction cost of New construction at 8% n-Lieu slurry seal fee (w Minimum fee per scheder Total Fee due (transfer Finance)	- Soil borings in Washington Ave REQUIRED CONDITION coordance with the attached standard con- days or work begins, 70% of fee refundate a require City Council approval (City Code 7-2600 before excavating. ion and Sign-Off 48 hr. in advance at □ hay be imposed following City review and p hay be imposed following City rev	A. copy of permit to A. copy of permit to	vided no work has 50) 524-9543. permit. -17-06 \$129.00 \$129.00 \$11 r = lowant \$00 it ions \$130   06	
<ul> <li>All work shall be in a</li> <li>No refund after 120 of begun.</li> <li>Permanent structures</li> <li>CALL USA 1-800-22</li> <li>Call for Final Inspection</li> <li>Special Conditions models</li> <li>Special Conditions models</li> <li>Staff USE ONLY</li> <li>Permit Fee Computation</li> <li>Total construction cost of New construction at 8%</li> <li>In-Lieu slurry seal fee (with the per scheder</li> <li>Total Fee due (transfer Finance)</li> </ul>	- Soil borings in Washington Ave REQUIRED CONDITION coordance with the attached standard con- days or work begins, 70% of fee refundate a require City Council approval (City Code 7-2600 before excavating. ion and Sign-Off 48 hr. in advance at have be imposed following City review and have Migg on subject to fee: of construction cost when street is out) ule (if greater than % fee) to fee schedule from) (Utilities to be billed M Work per Apples A (30 (06)	$\frac{VS}{14-2}$ A, copy of permit to $\frac{VS}{14-2}$	vided no work has 50) 524-9543. permit. -17-06 \$129.00 \$129.00 \$11 r = lowant \$00 it ions \$130   06	

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	Câ	ty of A	bany	•
SPE		S FOR ENCROACHM	IENT PERMIT FOR PER RIGHT-OF-WAY	RMANENT
	•	Permit # 06	-015	
Location: _	ashington Ave	at 800 San Pa.	blo Ave	atisfaction of the Dire
This APPLIC. Description APPROV An Engin A Soils R	ATION MUST BE AC on of Job ED Construction Plans eer's Estimate of the va	COMPANIED by the D/ and/or Documents	ATA and PLANS indicated	3 The cut al
ALL FEES SH	·		THE ISSUANCE OF THIS P	ERMIT: except Utility
The following of	SPECIFICATION: conditions and provision th City Standard Specif		Code apply to this permit. All	work shall be in
			in the permit, or an extensio	
the Director of the permit sha <u>INSPECTION</u> In general, ins Development shall take plac his/her authori (excluding we	Community Developm Il become void. pection producers and & Environmental Resou e without inspection by zed agent. Inspections ekends) IN ADVANCE	requirements shall be as e irces. Unless specifically e the Director of Community by the City must be reque of the work to be performe	t in the permit, or an extensio urces. If the work or use is n stablished by the Director of C exempted by the City Code, no Development & Environment sted at least TWENTY-FOUR t. No work shall be performe oment & Environmental Reso	Community o encroachment work tal Resources or R (24) HOURS d on weekends witho
the Director of the permit sha INSPECTION In general, ins Development shall take place his/her authori (excluding were PRIOR AUTH DISPLAY OF The permittee public street is	Community Developm Il become void. Pection producers and Environmental Resou e without inspection by zed agent. Inspections ekends) IN ADVANCE ORIZATION of the Dire <u>PERMIT</u> shall keep a copy of the involved. The permit s	requirements shall be as e inces. Unless specifically e the Director of Community s by the City must be reque of the work to be performe of the work to be performed to be performe	stablished by the Director of 0 exempted by the City Code, no Development & Environment sted at least TWENTY-FOUR 0. No work shall be performe oment & Environmental Reso work, or in the cab of a vehicle brized representative of the D	Community o encroachment work tal Resources or R (24) HOURS d on weekends witho urces.
the Director of the permit sha <u>INSPECTION</u> In general, ins Development shall take plac his/her authori (excluding wei PRIOR AUTH <u>DISPLAY OF</u> The permittee public street is Development <u>ACCEPTANC</u> Acceptance by	Community Developm Il become void. Environmental Resou e without inspection by zed agent. Inspections ekends) IN ADVANCE ORIZATION of the Dire <u>PERMIT</u> shall keep a copy of the involved. The permit s & Environmental Resou E OF PERMIT BY APP y the applicant of the per	requirements shall be as e inces. Unless specifically e the Director of Community by the City must be reque of the work to be performe ector of Community Develo is permit at the site of the v shall be shown to any auth unces or Law Enforcement <u>LICANT</u>	stablished by the Director of 0 exempted by the City Code, no Development & Environment sted at least TWENTY-FOUR 0. No work shall be performe oment & Environmental Reso work, or in the cab of a vehicle brized representative of the D Officer on demand.	Community o encroachment work tal Resources or R (24) HOURS d on weekends witho urces.
the Director of the permit sha INSPECTION In general, ins Development shall take place his/her authori (excluding were PRIOR AUTHON DISPLAY OF The permittee public street is Development ACCEPTANC Acceptance by and shall cons NON-ASSIGN Permits shall	Community Developm Il become void. Pection producers and & Environmental Resou e without inspection by zed agent. Inspections ekends) IN ADVANCE of ORIZATION of the Dire <u>PERMIT</u> shall keep a copy of the involved. The permit s & Environmental Resou <u>E OF PERMIT BY APP</u> of the applicant of the per- stitute a waiver of any ri <u>IMENT OF PERMIT</u> pe issued only to the per-	requirements shall be as e inces. Unless specifically e the Director of Community by the City must be reque of the work to be performe actor of Community Develo is permit at the site of the w shall be shown to any auth unces or Law Enforcement <u>LICANT</u> ermit shall be conclusive ev ght to legislative determina	stablished by the Director of C exempted by the City Code, no Development & Environment sted at least TWENTY-FOUR d. No work shall be performe oment & Environmental Resonvert work, or in the cab of a vehicle brized representative of the D Officer on demand.	Community o encroachment work tal Resources or & (24) HOURS d on weekends witho urces. when movement on irector of Community of the terms imposed
the Director of the permit sha INSPECTION In general, ins Development shall take place his/her authori (excluding were PRIOR AUTH DISPLAY OF The permittee public street is Development ACCEPTANC Acceptance by and shall cons NON-ASSIGN Permits shall permittee. If a CHANGES IN No changes m	Community Developm Il become void. Pection producers and Environmental Resou e without inspection by zed agent. Inspections akends) IN ADVANCE ORIZATION of the Dire <u>PERMIT</u> shall keep a copy of the involved. The permit s Environmental Resou E OF PERMIT BY APP y the applicant of the per- stitute a waiver of any ri <u>IMENT OF PERMIT</u> De issued only to the per- any permittee assigns h <u>PERMIT AND WORK</u> hay be made in the loca	requirements shall be as e urces. Unless specifically e the Director of Community s by the City must be reque of the work to be performe- actor of Community Develo is permit at the site of the w shall be shown to any auth urces or Law Enforcement <u>LICANT</u> ermit shall be conclusive even of the legislative determination arson making application are is permit to another, the per-	stablished by the Director of C exempted by the City Code, no Development & Environment sted at least TWENTY-FOUR d. No work shall be performe oment & Environmental Resonvert work, or in the cab of a vehicle brized representative of the D Officer on demand.	Community o encroachment work tal Resources or & (24) HOURS d on weekends witho urces. a when movement on irector of Community of the terms imposed other person by the ment or use as grant

City of Albany

Date: 1/26/06

### **Special Conditions**

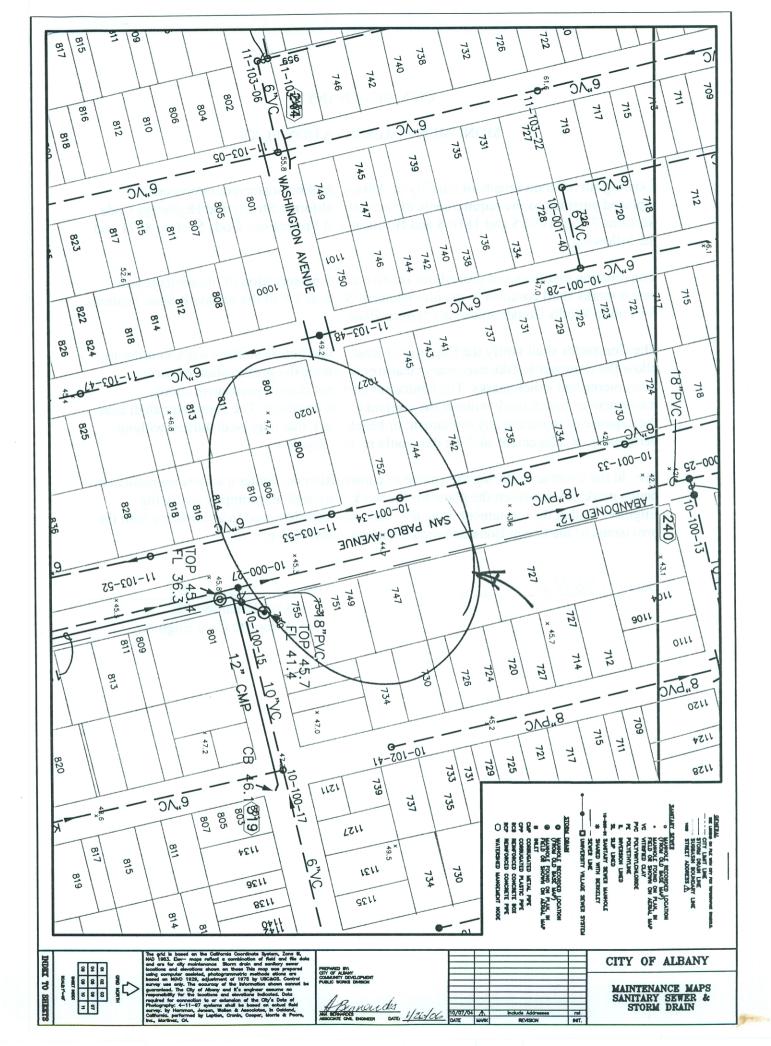
#### **Encroachment Permit for**

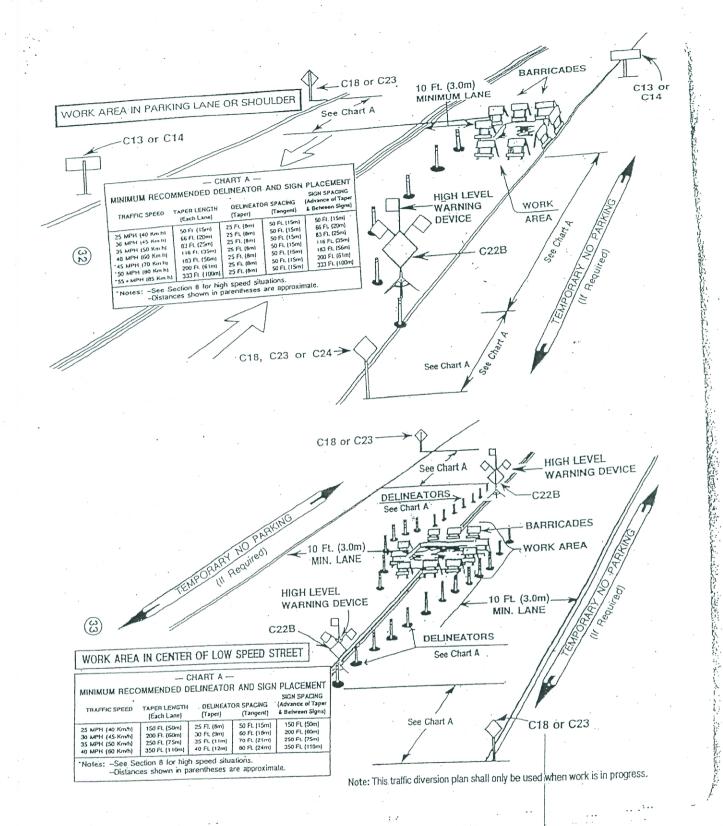
#### Drilling 2 soil borings in Washington Ave. in front of 800 San Pablo Ave.

- 1. All exploratory holes (wells and borings) construction and destruction under this permit are subject to the standards for the construction of Wells in the Alameda County Public Works Agency Guidelines, Policies & Procedures, the State Water Well Standards, and any instruction by the Health Department.
- 2. All drill cuttings and boring development water and soil shall be properly and legally handled and disposed of.
- 3. All soil boring must be completely filled with cement grout or cement grout/sand mixture. The top 6" of the borings shall be backfilled to match original surface material.
- 4. Provide for traffic control and pedestrian safety and lane closures per the General Provisions of the City and Caltrans Standard Specifications and the WATCH Manual. No open excavations shall be left unsupervised. All excavations shall be back filled or covered at the end the working day.
- 5. Post for no parking in advance per City requirements.
- 6. Prior to drilling, notify USA to identify any potential drilling obstructions.
- 7. Conform to the requirements of the City's monument preservation plan. Any survey monument encountered shall be referenced and preserved or restored per State law.
- 8. Conform to City Standard Details for Sidewalk and Gutter Repairs. Sidewalk and gutter shall be removed to the nearest joint.
- 9. Do not drill within 5 feet of existing sanitary sewers main or laterals.
- 10. Attention is directed to City Sanitary Sewer and Storm Drain Maintenance Maps at this location. (*Attached*)
- 11. Contact the City's Public Work Inspector, A.J. Silva at 510-559-4271 to schedule inspection a minimum of 48 hours in advance of excavating.
- 12. Any damage to the existing pavement or sidewalk shall be repaired to the satisfaction of the City Engineer.

lof 1 Office: 548 Cleveland Avenue, Albany, CA 94710 Mail: 1000 San Pablo Avenue, Albany, CA 94706

phone 510-524-3751 fax 510-558-3201





# **APPENDIX B**

Access Agreements

### **ACCESS AGREEMENT**

Dr. Joginder Sikand, owner of the property located at 800 San Pablo Avenue, is being required by the Alameda County Health Care Services Agency and the California Regional Water Quality Control Board, San Francisco Bay Region (RWQCB) to conduct a soil and groundwater assessment related to the underground storage tanks at the Albany Hill Mini Mart near your property. Aqua Science Engineers (ASE), an environmental consulting firm, is conducting this assessment for Dr. Joginder Sikand. To complete this assessment, ASE would like to place a two temporary soil borings on your property located at 810 San Pablo Avenue in Albany, California (your property). This document grants ASE access to your property for the purpose of conducting these activities.

As a condition for receiving access to your property, ASE agrees to at all times while conducting work on the property maintain liability, automotive and workers compensation insurance. ASE will also require any subcontractors to also maintain such insurance. ASE agrees to hold the property owner harmless for any liability that may arise related to ASE's activities at the site. All environmental activities will be at no cost to the property owner.

ASE also agrees to contact Underground Service Alert (USA) to mark underground utility lines in the site vicinity at least 48 hours prior to drilling. ASE will also obtain a drilling permit from the Alameda County Public Health Agency (ACPWA) prior to drilling. ASE will file all required paperwork with the ACPWA following the completion of the drilling.

ASE also agrees to provide a copy of the analytical results to the property owner at the completion of the assessment.

ASE also agrees to match the existing surface conditions (concrete or asphalt patch) upon completion of the drilling.

The property owner agrees to have the drilling location accessible to us at a mutually agreeable time. Unless difficult or unexpected drilling conditions occur, the drilling should be complete in less than a day.

P.01

p.3

#### AGREEMENT

I agree to be bound by the terms and conditions stated above.

Robert Kitay Aqua Science Engineers

I have read the access agreement and will grant access to my property to conduct the work stated above.

UTS, Inc Property Owner

fllen

925- 837-4853

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# **APPENDIX C**

Boring Logs

Project Name: Alba	ny Hill		Dro	viect Locati	00: 20	O San Dahla A			
Driller: Precision Sar			+			0 San Pablo A			Page 1 of 2
				be of Rig: S	-		Size	of Drill: 2.0" Diameter	
Logged By: Robert	E. Kitay, P.	G.	Da	te Drilled: J	anuary 30, 2006 Checked By: Robert E. Kitay, P.G.				
WATER AND WELL DATA					Total Depth of Well Completed: NA				
Depth of Water First Encountered: 20'					Well	Well Screen Type and Diameter: NA			
Static Depth of Wate	er in Well: N	A			Well	Screen Slot Si	ze: NA		
Total Depth of Boring	g: 40'				Туре	and Size of So	oil Sam	pler: 2.0" I.D. Macro Sa	ampler
Feet			_	MPLE DATA	Feet		DESC	CRIPTION OF LITHOLO	
BORING H DETAIL	Description	Blow Counts	Water Level	Graphic Log	Depth in Fe	standard density,	classi	fication, texture, relatives, odor-staining, USCS	ve moisture,
0 5 10 15 20 25 30	MAMAMAMA MAMAMAMA MAMAMAMAMAMAMA MAMAMA MAMAMA	50 47 61 80 84 40 0	0 2 0		0 5 10 15 20 25 30	stiff; 70% c estimated K Sandy SILT stiff; 70% si <u>low estimate</u> Clayey SANI fine sand; 2: <u>estimated K</u> Silty CLAY ( 25% silt; 5% estimated K (No recover jammed slee Silty SAND ( fine to medi estimated K 5% gravel at moist at 18° loose; wet; 5 Clayey SILT 15% clay; 56 estimated K ; @ 22'; 70% Silty SAND ( sand; 40% f estimated K @ 24'; dense (No recover @ 28'; yellow	lay; 30 ; no oc (ML); y ilt; 25 ed K; n O (SC); 5% clay ; mode (CH); br 6 media ; mode (CH); br 6 media ; mode (CH); br 6 media ; mode (SM); y um sar ; mode t 16' ; decre 5% clay (MH); y % fine ; no od silt; 25 SM); lig ine san ; no od silt; 25 (SM); lig ine san ; no od silt; 25 (SM); lig ine san ; no od	vellow brown; damp; me % fine sand; 5% clay; r o odor light brown; damp; loc y; 5% silt; low plasticity erate hydrocarbon odor rown; damp; stiff; 70% um sand; high plasticity erate hydrocarbon odor een 10 and 15-feet du ellow brown; damp; den d; 20% silt; non-plastic erate hydrocarbon odor eased hydrocarbon odor (; 5% gravel to 1.5"; n yellow brown; moist; st sand; moderate plastic or 5% clay; 5% fine sand; ght brown; moist; loose id; 10% clay; non-plast	very low edium non-plastic; ose; 70% y; low clay; y; very low e to nse; 80% c; low or o odor at 20' ciff; 80% silt; ity; low high plasticity e; 50% fine c; low possible sand?)

SOIL BORING LOG AND MONITORING WELL COMPLETION DETAILS BORING: BH-R											
							Page 2 of 2				
SOIL/ROCK SAM						u u u		DESCRIPTION OF LITHOLOGY		)GY	
Depth in	BORING DETAIL	Interval	Blow Counts	(vmdd) MVO	Water Level	Graphic Log	Depth in		andard classification, texture, relative moisture, ensity, stiffness, odor-staining, USCS designation.		
Dep		Inter Ves	Blow	NVO	Wate			,			
F	F						-	80% fine to medium sa		-	
Ē	ment						- - -35 - -	Sandy SILT (MH); pale yellow brown; damp; medium stiff; 50% silt; 45% fine sand; 5% clay; low plasticity; low estimated K; no odor Silty SAND (SM); brown; moist; medium dense; 80% fine to medium sand; 20% silt; non-plastic; high estimated K; no odor Sandy SILT (MH); pale yellow brown; moist; soft; 50% silt; 45% fine sand; 5% clay; medium plasticity; low estimated K; no odor			
<b>-</b> 35	Portland Cement			0						dense; 80% tic; high	
	Portla			0							
-40	-40 🖾			Ū			<b>-</b> 40	( <u>no recovery 35 to 37</u> Clayey SILT (ML); pale	yellow brown; mo		
E							_	85% silt; 15% clay; tra low estimated K; no oc		sticity;	
45	- - 45						<b>-</b> <b>-</b> 45		End of boring Refusal		
E							_	Refusal			
F											
50							- - 50				
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E							_				
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<b>-</b> 60							= <sup>60</sup>				
_							_				
- -65							- -65				
_							_				
_							_				
AQUA SCIENCE ENGINEERS, INC.											

Driller: Precision Samplin Logged By: David Rains WATER AND WELL DATA Depth of Water First Enc Static Depth of Water in Total Depth of Boring: 38 UPU BORING DETAIL 0 0 5 5	s <u>A</u>	Type of Rig: S	tion: 800 San Pablo Ave, Albany, CAPage 1 of 2Sonic EPSize of Drill: 2.0" Diameter				
WATER AND WELL DATA Depth of Water First Enc Static Depth of Water in Total Depth of Boring: 38 U Hong DETAIL 0	Ā						
Depth of Water First Enc Static Depth of Water in Total Depth of Boring: 38 BORING DETAIL			January 30, 2006 Checked By: Robert E. Kitay, P.G.				
Static Depth of Water in Total Depth of Boring: 38 BORING DETAIL 0 5			Total Depth of Well Completed: NA				
Total Depth of Boring: 38 BORING DETAIL DETAIL	countered: 20'		Well Screen Type and Diameter: NA				
Depthin Detrail Decription	Well: NA		Well Screen Slot Size: NA				
E BORING DETAIL DETAIL	8'		Type and Size of Soil Sampler: 2.0" I.D. Macro Sampler				
E BORING DETAIL DETAIL		SAMPLE DAT					
5	Interval Blow Counts OVM (ppmv)	Water Level Graphic Log					
15 20 25 30			0       Concrete         Silty CLAY (CH); dark yellow brown; damp; medium stiff; 70% clay; 30% silt; high plasticity; very low estimated K; no odor         5       Clayey SILT (ML); dark yellow brown; damp; stiff; 80% silt; 15% clay; 5% medium sand; low plasticity; low estimated K; no odor         6       8'; dry; 75% silt; 20% clay; 5% sand         6       10'; green brown; damp; 85% silt; 10% clay; 5% medium sand; gasoline-like odor         10       @ 12'; 80% silt; 10% clay; 10% sand         @ 12'; 80% silt; 10% clay; 10% sand       @ 14'; brown mottled orange; no longer stained but still odorous (no recovery 15-18')         15       Clayey SILT (MH); brown; damp; medium stiff; 85% silt; 10% clay; 5% fine sand; high plasticity; low estimated K; gasoline-like odor         20       SiltT (ML); brown; wet; soft; 100% silt; non-plastic; medium estimated K; no odor         215       Silty SAND (SM); brown; wet; medium dense; 60% fine sand; 35% silt; 5% clay; low plasticity; medium estimated K; no odor				

SOIL BORING LOG AND MONITORING WELL COMPLETION DETAILS BORING: BH-S											
					Project Location: 800 San Pablo Avenue, Albar				y, CA	Page 2 of 2	
Feet		Ľ	SOI							DGY	
Depth in I	BORING DETAIL	Description	Interval	Blow Counts	(vmdd) MVO	Water Level	Graphic Log	Depth in Feet	standard classification, texture, relative moisture, density, stiffness, odor-staining, USCS designation.		
De				Blow	MVO						
Inded     DETAIL     135     Contract       35     Inded     Inded     Inded       40     Inded     Inded     Inded       40     Inded     Inded     Inded       50     Inded     Inded     Inded       50     Inded     Inded     Inded       60     Inded     Inded     Inded						Wat			Clayey SILT (MH); yello 90% silt; 10% clay; hig K; no odor SILT (ML); red brown; o non-plastic; low estima End of	dor-staining, USCS designation. -35' due to jammed sleeve) ow brown; moist; soft; gh plasticity; low estimated dry; soft; 95% silt; 5% sand;	
_								_			
									AQUA SCIENC	E ENGINEERS, INC	2.

SOIL BORING LOG AND MONITORING WELL COMPLETION DETAILS BORING: BH-T								
				BORING: BH-T				
Project Name: Albany Hill	Project Locatio	oject Location: 800 San Pablo Ave, Albany, (			Page 1 of 2			
Driller: Precision Sampling	Type of Rig: So	nic EP Size of Drill: 2.0" Diameter						
Logged By: David Rains	Date Drilled: Fe	ebruary 1, 2006 Checked By: Robert E. Kitay, P.G.						
WATER AND WELL DATA		Total Depth of Well Completed: NA						
Depth of Water First Encountered: 20'		Well Screen Type and Diameter: NA						
Static Depth of Water in Well: NA		Well Screen Slot Size: NA						
Total Depth of Boring: 38'		Type and Size of Soil Sampler: 2.0" I.D. Macro Sampler						
	SAMPLE DATA	DESCRIPTION OF LITHOLOGY						
Depth in Fe Description Interval OVM (ppmv)	Water Level Graphic Log	.⊑ standar	standard classification, texture, relative moisture, density, stiffness, odor-staining, USCS designation.					
		- 0 Concrete						
30 10 15 20 10 10 10 10 10 10 10 10 10 1	₹	<ul> <li>stiff; 70% of estimated H</li> <li>5</li> <li>Clayey SILT 20% clay; 5 estimated H</li> <li>10</li> <li>10</li> <li>10'; 85%</li> <li>11.5'; so</li> <li>15</li> <li>Sandy SILT 85% silt; 5% plasticity; lo estimated H</li> <li>20</li> <li>Clayey SILT 90% silt; 10 estimated H some cours</li> </ul>	clay; 30% sil (ML); grey; % sand; low sand; low silt; 10% cla il mottled gre (ML); yellow medium sa w estimated (MH); light b % clay; mod sin odor e red sand @	brown; damp; me nd; 5% clay; 5% g I K; no odor prown; moist; med lerate plasticity; lo	very low 75% silt; w odor dium stiff; gravel; low			
-25 		- 25 Sandy SILT - 15% sand; 5 - K; no odor	(ML); red bro	own; damp; stiff; & w plasticity; low e	30% silt; stimated			
		A	QUA SCIENC	E ENGINEERS, INC				

	SOIL BORING LOG AND MONITORING WELL COMPLETION DETAILS BORING: BH-T												
Proj	ect Name: Albar	ny Hill			F	Proje	ct Locatio	on: 800	) San Pablo Avenue, Alban	y, CA	Page 2 of 2		
Depth in Feet	BORING DETAIL	Description	Interval O	Blow Counts	OVM (ppmv)	Water Level	Graphic Log	Depth in Feet	DESCRIPT standard classificatio density, stiffness, od	ION OF LITHOLO n, texture, relativ lor-staining, USCS	/e moisture,		
- 35 - 40 - 45 - 50 - 55 - 60 - 65 - 65	Portland Cement		XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX		0				Sandy SILT (ML); red b 90% silt; 10% sand; no K; no odor (no recovery 34 to 37 Clayey SILT (MH); light 85% silt; 10% clay; 5% low estimated K; no oc SILT (ML); light brown; 5% clay; 5% sand; very K; no odor 90% silt; 5% fine sand; red brown; stiff; dry; 9 at 44' End of bc	on-plastic; low es .5') brown; moist; m 6 sand; moderate dor damp; medium s y low plasticity; lo ; 5% rounded gra	edium stiff; plasticity; tiff; 90% silt; ow estimated vel at 42'		
	AQUA SCIENCE ENGINEERS, INC.												

Project Name: Alba	ny Hill			Proje	ct Locatio	on: 80	0 San Pablo A	ve, Alba	any, CA	Page 1 of 2
Driller: Precision Sa	mpling				of Rig: So	1			f Drill: 2.0" Diameter	
Logged By: David I	Rains		-				y 2, 2006		Checked By: Robert	
WATER AND WELL D	ΑΤΑ						Depth of We	ll Compl		,
Depth of Water First		ed: 2	0'				Screen Type a			
Static Depth of Wate							Screen Slot Si		neter: NA	
Fotal Depth of Boring										
		IL/RC	OCK S	Type and Size of Soil Sampler: 2.0" I.D. Macro       SAMPLE DATA						
tə e ⊑ BORING					DESCRIPTION OF LITHOL					
	Description	Blow Counts	(vmqq) MVO	Water Level	Graphic Log	Depth in	standard classification, texture, relative moistu density, stiffness, odor-staining, USCS designa			
° 🕅	×		0	_>		- 0	Concrete		rk brown and grey; da	
5 10 15 5 5 5 5 5 5 5 5 5 5 5 5 5	AXXXXXX XXXXXXXXX XXXXXXXXX XXXXXXXXX XXXX	3	365 75 85 300			- 5 - 10 - 15 - 20 - 25	stiff; 70% c estimated K stiff; moist; hydrocarbor Clayey SILT 40% clay; 5% estimated K Silty CLAY (0 30% silt; 00 Sandy SILT (1 5% sand; 50 Sandy SILT (1 15% sand; 55 no odor moderate pla 60% silt; 35% SILT (ML); gr non-plastic; 1 Clayey SILT (1 70% silt; 30% K; no odor SILT (ML); ye non-plastic; 1 Sandy SILT (1 5% sandy SILT (1 70% silt; 30%	lay; 309 ; no odd 65% cla n odor at (MH); da % sand; ; hydroc CH); dar odor at ML); red % fine s rey; dan low estin (MH); gr oderate ML); yel % fine s	% silt; high plasticity; pr ay; 30% silt; 5% med t 5' ark brown; damp; stif medium plasticity; ve carbon odor k brown; damp; stiff; plasticity; very low es <u>: 13'</u> d brown; moist; soft; non-plastic; low estir	very low ium sand; f; 55% silt; ery low 70% clay; stimated K; 80% silt; mated K; ydrocarbon odor silt; ated K; no odor edium stiff; lium estimated d; 100% silt; r f; 60% silt;

	SOIL BORING LOG AND MONITORING WELL COMPLETION DETAILS BORING: BH-U												
Pro	oject Name: Albar	ny Hill			and the second				0 San Pablo Avenue, Alban	y, CA	Page 2 of 2		
Feet		u	SOI	-		1	LE DATA	Feet	DESCRIPT	ION OF LITHOLC	)GY		
Depth in	BORING DETAIL	Description	Interval	Blow Counts	(vmqq) MVO	Water Level	Graphic Log	Depth in	standard classificatio density, stiffness, od	n, texture, relativ lor-staining, USCS	e moisture, designation.		
ă		ă	ц Ц	Blov	OVN	Wat	Ū	ď					
Ē	<u> </u>				87				Clayey SILT (MH); yello 85% silt; 15% clay; hig K; slight hydrocarbon o	gh plasticity; low e odor	estimated		
-35 - -	Portland Cement							<b>-</b> 35  	Silty SAND (SM); yellov 65% fine to coarse sar plastic; low estimated	nd; 30% silt; 5% g K; no odor	gravel; non-		
-40 Clayey SILT (ML); brown; wet; soft; 95% silt 5% clay; low plasticity; low estimated K; no -40 Silty SAND (SM); vollow brown; demon media													
-40 - -			MAMAA MAMAAMA MAMAAMA					-40  	Silty SAND (SM); yellow brown; damp; medium dense; 60% fine sand; 40% silt; non-plastic; low estimated K; no odor grey at 42'; yellow brown at 43' SILT (ML); yellow brown; wet; soft; 100% silt;				
-45			XX		0			<b>-</b> 45	SILT (ML); yellow brow non-plastic; medium es	n; wet; soft; 1009 timated K; no odd	% silt; or		
F								-	Sandy SILT (ML); yellov 70-80% silt; 15-25% f plasticity; low estimate	ine sand; 5% clay	tiff; ; low		
- - 50 -			Ż		0			- - 50 -	Sandy CLAY (CH); red I 30% fine to coarse san very low estimated K; r	brown; damp; haro id; 10% gravel; lo no odor	d; 60% clay; w plasticity;		
Ē								-	End of bo	pring at 50.5'			
- 55								<b>-</b> 55					
F								_					
60								- - 60					
-								_					
- -65								- - 65					
-								-					
-								_					
					1								
									AQUA SCIENCE	E ENGINEERS, INC.			

5	ins TA Encountered: 18' in Well: NA	Type of Rig Date Drillec	: Februa Tota	ry 2, 2006 Checked By: Robert E. Kitay, P.G.				
WATER AND WELL DAT         Depth of Water First Er         Static Depth of Water i         Total Depth of Boring:         Umage: Static Depth of Boring: <td>TA Incountered: 18' in Well: NA</td> <td>Date Drillec</td> <td>Tota</td> <td></td>	TA Incountered: 18' in Well: NA	Date Drillec	Tota					
Depth of Water First Er Static Depth of Water i Total Depth of Boring: 1 BORING H DETAIL	in Well: NA							
Static Depth of Water i Total Depth of Boring: 1 Total Depth of Boring: 1 BORING DETAIL 0 5	in Well: NA			Total Depth of Well Completed: NA				
Total Depth of Boring:			Well Screen Type and Diameter: NA					
BORING DETAIL 0	50.5'		Well	Screen Slot Size: NA				
S BORING			Туре	and Size of Soil Sampler: 2.0" I.D. Macro Sampler				
5 BORING		K SAMPLE DA	Leet AT	DESCRIPTION OF LITHOLOGY				
5	Description Interval Blow Counts	Water Level		standard classification, texture, relative moisture, density, stiffness, odor-staining, USCS designation.				
10 15 20 25 30			0 5 10 10 10 10 10 10 10 10 10 10	Concrete Silty CLAY (CH); dark brown; damp; medium stiff; 70% clay; 30% silt; high plasticity; very low estimated K; no odor Clayey SILT (MH); dark yellow brown; moist; stiff; 60% silt; 35% clay; 5% sand; moderate plasticity; very low estimated K; no odor Silty CLAY (CH); grey mottled red brown; damp; very stiff; 75% clay; 25% silt; high plasticity; very low estimated K; no odor; gasoline-like odor at 9' Clayey SILT (ML); red brown; damp; medium stiff; 85% silt; 10% clay; 5% sand; non-plastic; low estimated K; gasoline-like odor Silty CLAY (CH); light brown; moist; soft; 75% clay; 25% silt; high plasticity; low estimated K; no odor stiff at 13' Clayey SILT (ML); red brown; damp; medium stiff; 55% silt; 40% clay; 5% sand; low plasticity; low estimated K; no odor Sandy SILT (ML); red brown; damp; medium stiff; 90% sil 10% sand; non-plastic; medium estimated K; no odor Clayey SILT (ML); red brown; moist to wet; soft; 65% silt; 30% clay; 5% fine sand; moderate plasticity; low estimated K; no odor medium stiff; damp at 19' small gravel at 22-23' very stiff; low plasticity at 23' wet; soft at 25' SILT (ML); light brown; damp; medium stiff; 90% silt; 5% sand; 5% clay; non-plastic; low estimated K; no odor very stiff; 5-15% clay; some gravel at 27'				

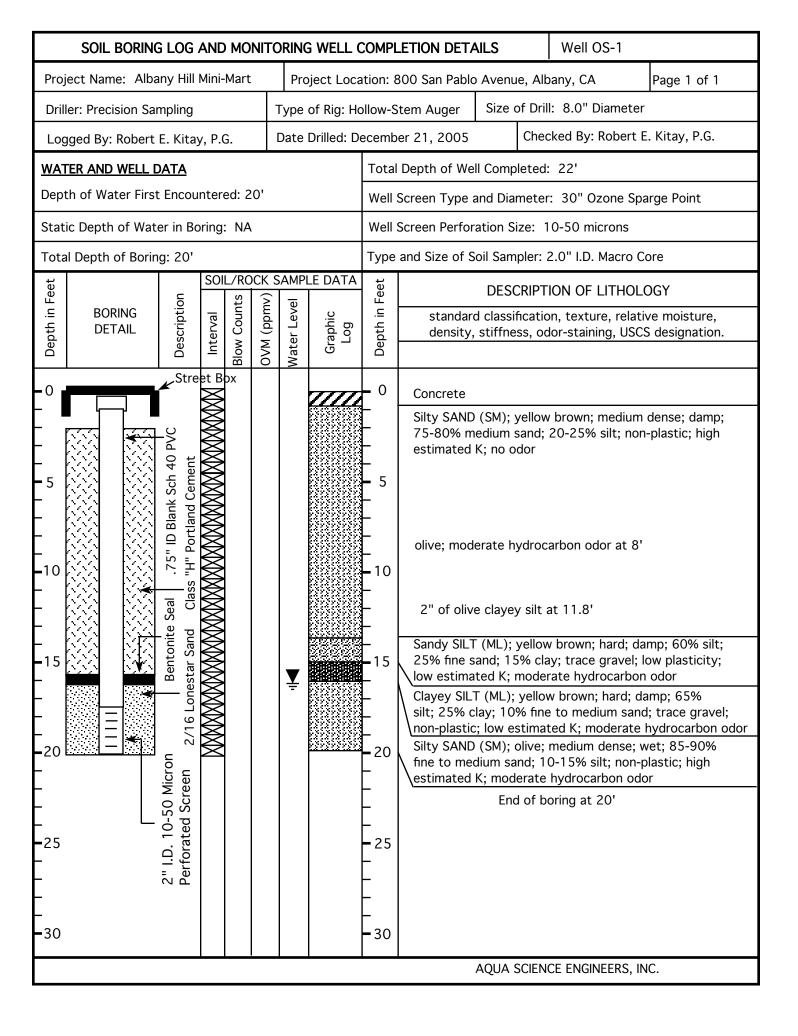
	SOIL BORING LOG AND MONITORING WELL COMPLETION DETAILS BORING: BH-V											
Pro	oject Name: Alba	ny Hill							0 San Pablo Avenue, Alban	iy, CA	Page 2 of 2	
Depth in Feet	BORING DETAIL	Description	Interval	Blow Counts	CK (vmqq) MVO	Water Level	Graphic Log	Depth in Feet	DESCRIPT standard classificatio density, stiffness, od	ION OF LITHOLO n, texture, relativ lor-staining, USCS	e moisture,	
	Portland		XX XXXXXX XXXXXXXX XXXXXXXX XXXXXXXX		5 0 0			- 35 - 40 - 45 - 45 - 45 - 55 - 55 - 55 - 60 - 65 - 65	Sandy SILT (ML); light 10% sand; 5% clay; lo estimated K: no odor Clayey SILT (MH); light 55% silt; 40% clay; 59 very low estimated K; some sand between 3: Sandy SILT (ML); light 80% silt; 10-15% coar plastic; low estimated SILT (ML); light brown; 100% silt; non-plastic; End of bo	w plasticity; medi t brown; damp; m 6 sand; moderate no odor 3 and 35' red brown; damp rse sand; 5-10% o K; no odor	edium stiff; plasticity; ; medium stiff; clay; non-	
									AQUA SCIENCE	E ENGINEERS, INC.		

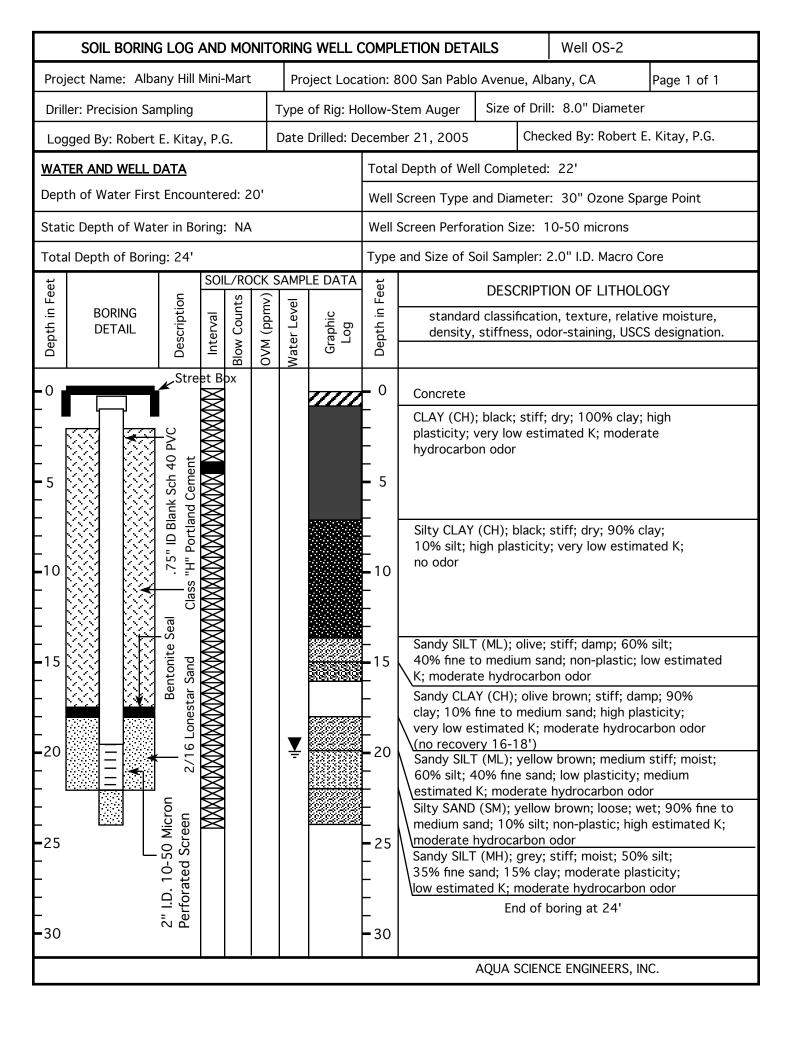
SOIL BORING LOG AND MONITORING WELL COMPLETION DETAILS BORING: BH-W													
Project Name: Alba	ny Hill		I	Projec	ct Locatio	on: 800	) San Pablo A	ve, Alban <u>y</u>	y, CA	Page 1 of 2			
Driller: Precision Sa	npling		-	Гуре	of Rig: Sc	onic EP		Size of I	Drill: 2.0" Diameter				
Logged By: David I	Rains		I	Date	Drilled: Fe	ebruary	6, 2006	С	hecked By: Robert E	E. Kitay, P.G.			
WATER AND WELL D	ATA					Total	Depth of Wel	l Complet	ed: NA				
Depth of Water First	Encount	ered: 2	20'			Well S	Screen Type a	ind Diame	ter: NA				
Static Depth of Wate	er in Well:	: NA				Well S	Screen Slot Si	ze: NA					
Total Depth of Borin	g: 50'					Type and Size of Soil Sampler: 2.0" I.D. Macro Sampler							
Feet					LE DATA	Feet		DESCRI	PTION OF LITHOL	OGY			
BORING E DETAIL	Description	Interval Blow Counts	(vmdd) MVO	Water Level	Graphic Log	Depth in F	standard classification, texture, relative moisture, density, stiffness, odor-staining, USCS designation.						
-0 		- MYMYMMM MYMMWW MYMMMW YMMMMW YMMMMWW YMYMMMWM	10 10 25 30			<ul> <li>0</li> <li>5</li> <li>10</li> <li>115</li> <li>20</li> <li>25</li> <li>30</li> </ul>	80% clay; 1 low estimat 80% clay; 1 stiff at 6.5' hydrocarbon moist to we slight hydro Sandy SILT 10% sand; no odor Clayey SILT 85% silt; 10 low estimat brown; soft Sandy SILT 85% silt; 10 low estimat brown; soft Sandy SILT 85% silt; 10 low estimat brown; soft Sandy SILT 85% silt; 10 estimated k SILT (ML); I 5% fine san moderate h Sandy SILT 15% fine san moderate h Sandy SILT 30% clay; 5 K; no odor medium stif 80% silt; 20	5% silt; 5 ed K; no o 0% silt; 1 n odor at t; 60% cl carbon od (ML); red 5% clay; n (ML); red 5% clay; s ed K; no od ; wet; 55% (ML); red 0% sand; t; no odor ight brow d; 5% cl ydrocarbo (ML); red ight brow d; 7% cl ydrocarbo (ML); red (ML);	0% sand at 5' 10.5' ay; 35% silt; 5% sa dor at 12' brown; dry; medium non-plastic; low esti brown; damp; medi 5% sand; moderate odor <u>% silt; 40% clay; 5%</u> brown; damp; medi 5% clay; non-plastic 5% clay; non-plastic 5% clay; non-plastic is prown; damp; stiff; ay; non-plastic; low nt brown; wet; soft; noderate plasticity; high plasticity at 26	nd; n stiff; 85% silt; mated K; lium stiff; plasticity; 6 gravel at 18' ium stiff; c; low :iff; 90% silt; v estimated K; 80% silt; estimated K; 65% silt; low estimated ;			

	SOIL BORING LOG AND MONITORING WELL COMPLETION DETAILS BORING: BH-W												
Proj	ect Name: Albany I	Hill			F	Projec	ct Locatio	on: 800	) San Pablo Avenue, Alban	y, CA	Page 2 of 2		
eet	2		Soil		-	1	_E DATA	Feet	DESCRIPT	Ion of Lithold	)GY		
Depth in Feet	BORING DETAIL	הפארווארוס	Interval	Blow Counts	(vmdd) MVO	Water Level	Graphic Log	Depth in F	standard classificatio density, stiffness, od				
<b>–</b> – – – – – – – – – – – – –	Portland Cement		11 XX XXXXXX XXXXXXXX XXXXXXXX XXXXXXXX	Blo	20 30 40	Wa			moist to wet; some graved brown; medium sti 5% coarse sand; 5% g estimated K; no odor a 90% silt; 10% clay; mo Sandy SILT (ML); red k 10% coarse sand; 5% estimated K; no odor light brown; some grav Silty GRAVEL (GM); lig 65% gravel; 30% silt; high estimated K; no odor 5% gravel at 44' 90% silt; 10% clay at End of b	ff; damp; 75% sil ravel; low plasticit at 32' oderate plasticity prown; damp; stiff clay; non-plastic; vel at 37' ht brown; wet; low 5% gravel; non-pl odor t red brown; damp d; medium plastic	ty; low at 34' f; 85% silt; low ose; lastic; p; 75% silt;		
								_					
									Aqua scient	CE ENGINEERS, IN	C.		

Project Name: Albany Driller: Precision Sampl Logged By: David Rain WATER AND WELL DAT Depth of Water First En Static Depth of Water in Total Depth of Boring: 1 Total Depth of Boring: 1 BORING DETAIL 0 0 10	pling ains ATA Encountered: r in Well: NA : 50'	11.5'	Type Date	of Rig: Sc	onic EP ebruary Total Well S	O San Pablo Ave, Albany, CA       Page 1 of 2         Size of Drill: 2.0" Diameter         v 6, 2006       Checked By: Robert E. Kitay, P.G.         Depth of Well Completed: NA         Screen Type and Diameter: NA					
Logged By: David Rair WATER AND WELL DAT Depth of Water First En Static Depth of Water in Total Depth of Boring: S U BORING DETAIL 0 10 10	ains ATA Encountered: in Well: NA : 50' SOIL/R	11.5' ЮСК	Date		ebruary Total Well S	7 6, 2006 Checked By: Robert E. Kitay, P.G. Depth of Well Completed: NA					
WATER AND WELL DAT         Depth of Water First En         Static Depth of Water in         Total Depth of Boring: 1         U         U         U         U         U         U         U         U         U         U         U         U         U         U         U         U         U         U         U         U         U         U         U         U         U         U         U         U         U         U         U         U         U         U         U         U         U         U         U         U         U         U         U         U         U         U         U         U         U         U      <	ATA Encountered: r in Well: NA : 50' SOIL/R	11.5'		Drilled: Fe	Total Well S	Depth of Well Completed: NA					
Depth of Water First En Static Depth of Water in Total Depth of Boring: 1 BORING DETAIL 0 10	Encountered: r in Well: NA : 50' SOIL/R	ОСК			Well S	· · · · · · · · · · · · · · · · · · ·					
Static Depth of Water in Total Depth of Boring: 1 Total Depth of Boring: 1 BORING DETAIL 0 10	r in Well: NA : 50'	ОСК				Screen Type and Diameter: NA					
Total Depth of Boring: 1 BORING DETAIL 0 5 10	: 50' SOIL/R				Wall C	Well Screen Type and Diameter: NA					
Depth in Feet DELAIT Portland Cement	SOIL/R				Well Screen Slot Size: NA						
DETAIL DETAIL					Type and Size of Soil Sampler: 2.0" I.D. Macro Sampler						
DETAIL DETAIL	Description Interval Blow Counts		-	'LE DATA I	Feet	DESCRIPTION OF LITHOLOGY					
Portland Cement		(vmdd) MVO	Water Level	Graphic Log	standard classification, texture, relative moisture, density, stiffness, odor-staining, USCS designation.						
20 25 30	WWWWWW WWWWWW WWWWWWW WWWWWWW WWWWWWW	65 60 40 40 20	₹.		- 0 - 5 - 10 - 15 - 20 - 25 - 25 - 30	ConcreteSilty CLAY (CH); dark yellow brown; moist; medium stiff; 60% clay; 35% silt; 5% sand; medium plasticity; low estimated K; no odorvery stiff; 5% gravel at 5'80% clay; 20% silt; trace sand at 8'hydrocarbon odor at 11'Clayey SILT (ML); dark grey; wet; soft; 50% silt; 40% clay; 10% fine sand; non-plastic; medium estimated K; no odor@ 13'; moist; medium stiff; 70% silt; 20% clay; 10% fine to medium sand; medium plasticity; low est. K @ 14'; grey; soft; to medium stiff; 90% silt; 10% clay; high plasticity (no recovery 18-20')Silty CLAY (CH); red brown; damp; medium stiff; 70% silt; 20% clay; 10% gravel; low plasticity; low estimated K; no odorClayey SILT (ML); red brown; damp; medium stiff; 70% silt; 20% clay; 10% gravel; low plasticity; low estimated K; no odorClayey SILT (ML); red brown; damp; medium stiff; 70% silt; 20% clay; 10% gravel; low plasticity; low estimated K; no odorSilty CLAY (CH); red brown; damp; medium stiff; 70% silt; 30% clay at 27'					

	SOIL BORING LOG AND MONITORING WELL COMPLETION DETAILS BORING: BH-X												
Proj	ect Name: Albany H	lill		I	Proje	ct Locatio	on: 80	0 San Pablo Avenue, Alban	y, CA	Page 2 of 2			
Feet	ç		-	i	I	E DATA	Feet	DESCRIPTI	ion of lithold	)GY			
Depth in F	BORING DETAIL		Blow Counts	(vmdd) MVO	Water Level	Graphic Log	Depth in I	standard classificatio density, stiffness, od					
- - - - - - - - - - - - - - - - - - -	Portland Cement			6			- - - - - - - - - - - - - - - - - - -	Silty CLAY (CH); red gr stiff; damp; 60% clay; low plasticity; very low Clayey SILT; (ML); light silt; 10-20% clay; 10% medium estimated K; r @ 34'; 65% silt; 20% c @ 36'; medium stiff; d Sandy SILT (ML); red k 10-20% sand; up to 1 estimated K; no odor SILT (ML); grey brown up tp 10% clay; non-p (no recovery 38-40') Sandy SILT (ML); red 80% silt; 15% coarse low estimated K: no odor Clayey SILT (ML); light brown 90-100% silt; up to 1 estimated K: no odor Clayey SILT (MH); red 80% silt; 10% clay; 1 estimated K; no odor @ 47'; dry; non-plasti (no recovery 48-50') End of b	40% silt; high pla y estimated K; no t brown; soft; we 5 fine sand; non-p no odor clay; 10% fine sa <u>amp; low plasticit</u> prown; dry; stiff; 0% clay; non-plastic; o% clay; non-plastic; brown; damp; medium brown; damp; medium 0% clay; non-pla brown; medium 0% clay; non-pla	asticity; odor odor olastic; nd; 5% gravel ty 80% silt; stic; low 00% silt; ated K; no odor edium stiff; ; non-plastic; stiff; stic; low stiff; damp;			
	AQUA SCIENCE ENGINEERS, INC.												
									JE LINGIINEERO, IN	0.			





SOIL BORING LOG AND MON	TORING WELL	COMPLETION DE	TAILS	Well OS-3			
Project Name: Albany Hill Mini-Mart	Project Loca	ation: 800 San Pa	blo Avenue, Alb	bany, CA	Page 1 of 1		
Driller: Precision Sampling	Type of Rig: He	ollow-Stem Auge	Size of Dril	I: 8.0" Diameter			
Logged By: Robert E. Kitay, P.G.	Date Drilled: D	ecember 22, 200	5 Chec	cked By: Robert E	. Kitay, P.G.		
WATER AND WELL DATA		Total Depth of	Vell Completed:	: 22'			
Depth of Water First Encountered: 20	,	Well Screen Type and Diameter: 30" Ozone Sparge P					
Static Depth of Water in Boring: NA		Well Screen Per	oration Size: 1	0-50 microns			
Total Depth of Boring: 24'		Type and Size c	Type and Size of Soil Sampler: 2.0" I.D. Macro Core				
	K SAMPLE DATA	DESCRIPTION OF LITHOLOGY					
Depth in Fe Description Interval	UVM (ppmv) Mater Level Graphic Log	.⊑ stand		on, texture, relati dor-staining, USC			
0 Street Box Dortland Cement		_ plasticit	/el H); black; stiff;	dry; 100% clay; mated K; modera			
10 11 Bentonite Seal 2/16 Lonestar Sand Class "H" 75'	Ţ.	- 15 35% fin K; stror Silty SA 85% fin	e sand; 5% grav g hydrocarbon ND (SM); dark y	vellow brown; loos nd; 15% silt; non	ow estimated se; damp;		
		20 Sandy S fine to r low esti SILT (M	LT (ML); olive; nedium sand; 59 nated K; strong ); grey; mediur	medium stiff; 50 % gravel; trace cl 9 hydrocarbon od n stiff; damp; 10	ay; non-plastic; or		
2. I.D. 10-50 Micron		- 25 		f boring at 24' CE ENGINEERS, IN	IC.		

SOIL BORING LOG AND MON	TORING WELL (	COMPL	ETION DETAILS		Well VE-1	
Project Name: Albany Hill Mini-Mart	Project Loca	ation: 8	300 San Pablo Ave	enue, Alba	any, CA	Page 1 of 1
Driller: Precision Sampling	Type of Rig: Ho	ollow-S	tem Auger Size	ze of Drill	: 8.0" Diameter	
Logged By: Robert E. Kitay, P.G.	Date Drilled: D	ecemb	er 21, 2005	Chec	ked By: Robert E	Kitay, P.G.
WATER AND WELL DATA		Total	Depth of Well Con	mpleted:	16'	
Depth of Water First Encountered: NA		Well	) PVC			
Static Depth of Water in Boring: NA		Well	Screen Perforation	n Size: 0	.020" factory slo	otted
Total Depth of Boring: 16'		Туре	and Size of Soil Sa	ampler: 2	.0" I.D. Macro Co	ore
	K SAMPLE DATA	DESCRIPTION OF LITHOLOGY				
Depth in Fe Description Interval Slow Counts	UVM (ppmv) Water Level Graphic Log	Depth in F			n, texture, relativ or-staining, USCS	
20 Street Box Street Box St		- 0 - 5 - 5 - 10 - 15 - 20 - 25 - 25 - 30	75-80% medium estimated K; no olive; moderate yellow brown; le 2" of odorous o 4" of odorous o yellow brown; le Sandy SILT (ML) sand; 20% clay; estimated K; mo Silty SAND (SM) 85% medium sa medium estimat	m sand; 2 o odor e hydroca less odoro olive clay olive silty less odoro _); olive; s c, 5% grav oderate I l); yellow and; 15% ated K; sli	ous at 10.5' ey silt at 11.8'	-plastic; high 12.4' 5 silt; 25% fine sticity; low or dense; damp; non-plastic;
-30		- 30				
		<u>.</u>	AQUA	IA SCIENC	E ENGINEERS, IN	IC.

	SOIL BORING	G LOG .	AND	MON	IITO	ORING WELL COMPLETION DETAILS					Well VE-2	
Proj	ect Name: Alba	iny Hill	Mini-	Mart		Pro	ject Loca	ition: 8	300 San Pablo	Avenue, A	lbany, CA	Page 1 of 1
Drill	er: Precision Sar	mpling			Т	Гуре	of Rig: Ho	ollow-S	tem Auger	Size of Dr	ill: 8.0" Diameter	,
Log	ged By: Robert	E. Kita <u>y</u>	y, P.G	<b>.</b>	[	Date	Drilled: D	ecemb	er 22, 2005	Che	ecked By: Robert E	. Kitay, P.G.
<u>WA</u> T	ER AND WELL D	<u>ATA</u>						Total	Depth of Wel	I Completed	d: 16'	
Dept	th of Water First	: Encou	ntere	ed: NA	4			Well	Screen Type a	and Diamete	er: 2" Schedule 4	0 PVC
Stat	ic Depth of Wate	er in Bo	oring:	NA				Well Screen Perforation Size: 0.020" factory slotted				
Tota	ll Depth of Borin	g: 16'						Туре	and Size of S	oil Sampler:	2.0" I.D. Macro C	ore
Feet		ç	Soii				E DATA	feet	DESCRIPTION OF LITHOLOGY			
	Depth in Fe Depth in Fe Description Interval Mater Level Caphic Caphic										ion, texture, relati	
Dept	Depth in F Depth in F Description Interval Mater Level Caphic Lod								density,	surmess, o	dor-staining, USC	s designation.
-0-		🖌 Stre	et Bo	_	<u> </u>	>		0	Conorata			
-		nent	Ž					Ē	Concrete CLAY (CH):	; black; stiff	; dry; 100% clay;	high
	11 <del>83</del>	nk Sch 40 PVC   "H" Portland Cement	×							very low est	imated K; modera	
- - 5		1 40 ה ortlan	X X					- - 5	ny al ocal se			
	—	ID Blank Sch 40 PV Class "H" Portland	$\mathbb{R}$					Ē				
		ID Blar Class "	$\otimes$								; stiff; dry; 90% c	
-10		2" IC C	$\bigotimes$					- 10	10% silt; h no odor	igh plasticit	y; very low estima	ated K;
F		seal od	Ž									
		nite Seal ar Sand	Š									
-		Benton Lonesta	$\bigotimes$					<ul> <li>Sandy SILT (ML); olive; stiff; damp; 60% silt;</li> <li>40% fine to medium sand; non-plastic; low estimated</li> </ul>				
<b>-</b> 15			$\bigotimes$					-	K; moderat	e hydrocarl	oon odor	
È		2" I.D. 0.020" Slotted PVC Screen #							clay; 10% t	fine to med	e brown; stiff; dar ium sand; high pla	sticity;
		VC S						-	very low es		moderate hydroca	arbon odor
-20 -	L	ted F						<b>-</b> 20			boning at 10	
E		" Slot										
-		.020										
<b>-</b> 25		0.D.						<b>-</b> 25				
E		5"										
F								Ē				
-30								<b>-</b> 30				
										AQUA SCIEN	NCE ENGINEERS, IN	IC.

SOIL BORING LOG AND MONITORING WELL COMPLETION DETAILS					
Project Name: Albany Hill Mini-Mart	Project Loc	ation: 800 San Pa	olo Avenue, Alk	bany, CA	Page 1 of 1
Driller: Precision Sampling	Type of Rig: H	lollow-Stem Auger	Size of Dril	l: 8.0" Diameter	
Logged By: Robert E. Kitay, P.G.	Date Drilled: D	December 22, 200	5 Cheo	cked By: Robert E	E. Kitay, P.G.
WATER AND WELL DATA		Total Depth of \	ell Completed	: 10'	
Depth of Water First Encountered: NA	L.	Well Screen Typ	e and Diameter	r: 2" Schedule 4	0 PVC
Static Depth of Water in Boring: NA		Well Screen Per	oration Size: (	).020" factory sl	otted
Total Depth of Boring: 10'		Type and Size o	Soil Sampler:	2.0" I.D. Macro C	ore
	K SAMPLE DATA	Feet	DESCRIPT	ION OF LITHOL	OGY
Depth in Fe Description Interval Slow Counts	OVM (ppmv) Water Level Graphic Log	.⊑ stand		on, texture, relati dor-staining, USC	
2" I.D. 0.020" Slotted PVC Screen 2" I.D. 0.020" Slotted PVC Screen #3 Lonestar Sand 30		– plastic	avel CH); black; stif ty; very low es arbon odor End	if; dry; 100% clay stimated K; mode	erate
-30		- 30			
			AQUA SCIEN	CE ENGINEERS, IN	IC.

## **APPENDIX D**

Analytical Report and Chain of Custody Forms For Soil and Groundwater Samples



Report Number : 48247 Date : 2/15/2006

David Rains Aqua Science Engineers, Inc. 208 West El Pintado Rd. Danville, CA 94526

Subject : 30 Soil Samples and 6 Water Samples Project Name : Albany Hill Project Number :

Dear Mr. Rains,

Chemical analysis of the samples referenced above has been completed. Summaries of the data are contained on the following pages. Sample(s) were received under documented chain-of-custody. US EPA protocols for sample storage and preservation were followed.

Kiff Analytical is certified by the State of California (# 2236). If you have any questions regarding procedures or results, please call me at 530-297-4800.

Sincerely,

ni l bel Kiff



Report Number : 48247 Date : 2/15/2006

Subject :30 Soil Samples and 6 Water SamplesProject Name :Albany HillProject Number :

## **Case Narrative**

Hydrocarbons reported as TPH as Diesel do not exhibit a typical Diesel chromatographic pattern for samples BH-R-39.0. These hydrocarbons are higher boiling than typical diesel fuel.

Hydrocarbons reported as TPH as Diesel do not exhibit a typical Diesel chromatographic pattern for samples BH-S-14.5, BH-S-19.5, BH-T-15.0 and BH-U-15.0. These hydrocarbons are lower boiling than typical diesel fuel.

Matrix Spike/Matrix Spike Duplicate Results associated with sample BH-R-24.5 for the analyte Toluene were outside of control limits. This may indicate a bias for the sample that was spiked. Since the LCS recoveries were within control limits, no data are flagged.

Matrix Spike/Matrix Spike Duplicate Results associated with samples BH-R-39.0, BH-S-14.5 for the analyte Methyl-t-butyl ether were affected by the analyte concentrations already present in the un-spiked sample.

The Method Reporting Limit for TPH as Diesel is increased due to interference from Gasoline-Range Hydrocarbons for samples BH-S-25, BH-V-20-24 and BH-V-30-32.

Hydrocarbons reported as TPH as Gasoline do not exhibit a typical Gasoline chromatographic pattern for sample BH-T-34-37.

Tert-Butanol results for samples BH-S-25 and BH-T-25-27 may be biased slightly high and are flagged with a 'J'. A fraction of MtBE (typically less than 1%) converts to Tert-Butanol during the analysis of water samples. We consider this conversion effect to be mathematically significant in samples that contain MtBE/Tert-Butanol in ratios of over 20:1.

Tert-Butanol results for samples BH-R-20.0 and BH-R-24.5 may be biased slightly high and are flagged with a 'J'. A fraction of MtBE (up to 5%) converts to Tert-Butanol during the analysis of soil samples. We consider this conversion effect to be mathematically significant in samples that contain MtBE/Tert-Butanol in ratios of over 3:1.

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2795 2nd St, Suite 300	Davis, CA 95616		Jde Kiff	-



Project Number :

Sample : BH-R-25		Matrix : Water		Lab Number : 48247-01	
Sample Date :1/31/2006		NA - 411			
Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	< 5.0	5.0	ug/L	EPA 8260B	2/8/2006
Toluene	< 5.0	5.0	ug/L	EPA 8260B	2/8/2006
Ethylbenzene	< 5.0	5.0	ug/L	EPA 8260B	2/8/2006
Total Xylenes	< 5.0	5.0	ug/L	EPA 8260B	2/8/2006
Methyl-t-butyl ether (MTBE)	2800	5.0	ug/L	EPA 8260B	2/8/2006
Diisopropyl ether (DIPE)	< 5.0	5.0	ug/L	EPA 8260B	2/8/2006
Ethyl-t-butyl ether (ETBE)	< 5.0	5.0	ug/L	EPA 8260B	2/8/2006
Tert-amyl methyl ether (TAME)	11	5.0	ug/L	EPA 8260B	2/8/2006
Tert-Butanol	< 25	25	ug/L	EPA 8260B	2/8/2006
TPH as Gasoline	< 500	500	ug/L	EPA 8260B	2/8/2006
Toluene - d8 (Surr)	94.4		% Recovery	EPA 8260B	2/8/2006
4-Bromofluorobenzene (Surr)	101		% Recovery	EPA 8260B	2/8/2006
TPH as Diesel	400	50	ug/L	M EPA 8015	2/9/2006
Octacosane (Diesel Surrogate)	106		% Recovery	M EPA 8015	2/9/2006

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Project Number :

Sample : BH-S-25	Matrix : Water		Water	Lab Number : 48247-02	
Sample Date :1/31/2006		Mathad			
Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	16	1.0	ug/L	EPA 8260B	2/8/2006
Toluene	1.4	1.0	ug/L	EPA 8260B	2/8/2006
Ethylbenzene	17	1.0	ug/L	EPA 8260B	2/8/2006
Total Xylenes	99	1.0	ug/L	EPA 8260B	2/8/2006
Methyl-t-butyl ether (MTBE)	720	1.0	ug/L	EPA 8260B	2/8/2006
Diisopropyl ether (DIPE)	< 1.0	1.0	ug/L	EPA 8260B	2/8/2006
Ethyl-t-butyl ether (ETBE)	< 1.0	1.0	ug/L	EPA 8260B	2/8/2006
Tert-amyl methyl ether (TAME)	3.1	1.0	ug/L	EPA 8260B	2/8/2006
Tert-Butanol	34 J	5.0	ug/L	EPA 8260B	2/8/2006
TPH as Gasoline	670	100	ug/L	EPA 8260B	2/8/2006
Toluene - d8 (Surr)	95.2		% Recovery	EPA 8260B	2/8/2006
4-Bromofluorobenzene (Surr)	102		% Recovery	EPA 8260B	2/8/2006
TPH as Diesel	< 200	200	ug/L	M EPA 8015	2/9/2006
Octacosane (Diesel Surrogate)	92.8		% Recovery	M EPA 8015	2/9/2006

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Project Number :

Sample : <b>BH-T-25-27</b>		Matrix : Water		Lab Number : 48247-03	
Sample Date :2/1/2006		Method			
Parameter	Measured Value	Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	5.6	5.0	ug/L	EPA 8260B	2/8/2006
Toluene	< 5.0	5.0	ug/L	EPA 8260B	2/8/2006
Ethylbenzene	< 5.0	5.0	ug/L	EPA 8260B	2/8/2006
Total Xylenes	5.4	5.0	ug/L	EPA 8260B	2/8/2006
Methyl-t-butyl ether (MTBE)	2900	5.0	ug/L	EPA 8260B	2/8/2006
Diisopropyl ether (DIPE)	< 5.0	5.0	ug/L	EPA 8260B	2/8/2006
Ethyl-t-butyl ether (ETBE)	< 5.0	5.0	ug/L	EPA 8260B	2/8/2006
Tert-amyl methyl ether (TAME)	6.3	5.0	ug/L	EPA 8260B	2/8/2006
Tert-Butanol	30 J	25	ug/L	EPA 8260B	2/8/2006
TPH as Gasoline	< 500	500	ug/L	EPA 8260B	2/8/2006
Toluene - d8 (Surr)	95.3		% Recovery	EPA 8260B	2/8/2006
4-Bromofluorobenzene (Surr)	100		% Recovery	EPA 8260B	2/8/2006
TPH as Diesel	640	50	ug/L	M EPA 8015	2/7/2006
Octacosane (Diesel Surrogate)	93.8		% Recovery	M EPA 8015	2/7/2006

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Project Number :

Sample : BH-T-34-37 Matrix : Water		Water	Lab Number : 48247-04		
Sample Date :2/1/2006		Method			
Parameter	Measured Value	Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	0.65	0.50	ug/L	EPA 8260B	2/8/2006
Toluene	0.64	0.50	ug/L	EPA 8260B	2/8/2006
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	2/8/2006
Total Xylenes	0.85	0.50	ug/L	EPA 8260B	2/8/2006
Methyl-t-butyl ether (MTBE)	180	0.50	ug/L	EPA 8260B	2/8/2006
Diisopropyl ether (DIPE)	< 0.50	0.50	ug/L	EPA 8260B	2/8/2006
Ethyl-t-butyl ether (ETBE)	< 0.50	0.50	ug/L	EPA 8260B	2/8/2006
Tert-amyl methyl ether (TAME)	< 0.50	0.50	ug/L	EPA 8260B	2/8/2006
Tert-Butanol	< 5.0	5.0	ug/L	EPA 8260B	2/8/2006
TPH as Gasoline	75	50	ug/L	EPA 8260B	2/8/2006
Toluene - d8 (Surr)	94.2		% Recovery	EPA 8260B	2/8/2006
4-Bromofluorobenzene (Surr)	99.8		% Recovery	EPA 8260B	2/8/2006
TPH as Diesel	450	50	ug/L	M EPA 8015	2/11/2006
Octacosane (Diesel Surrogate)	98.2		% Recovery	M EPA 8015	2/11/2006

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Project Number :

Sample : BH-V-20-24 Matrix : Water		Water	r Lab Number : 48247-05		
Sample Date :2/3/2006					
Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	560	7.0	ug/L	EPA 8260B	2/8/2006
Toluene	150	7.0	ug/L	EPA 8260B	2/8/2006
Ethylbenzene	1100	7.0	ug/L	EPA 8260B	2/8/2006
Total Xylenes	5400	7.0	ug/L	EPA 8260B	2/8/2006
Methyl-t-butyl ether (MTBE)	92	7.0	ug/L	EPA 8260B	2/8/2006
Diisopropyl ether (DIPE)	< 7.0	7.0	ug/L	EPA 8260B	2/8/2006
Ethyl-t-butyl ether (ETBE)	< 7.0	7.0	ug/L	EPA 8260B	2/8/2006
Tert-amyl methyl ether (TAME)	< 7.0	7.0	ug/L	EPA 8260B	2/8/2006
Tert-Butanol	< 40	40	ug/L	EPA 8260B	2/8/2006
TPH as Gasoline	32000	700	ug/L	EPA 8260B	2/8/2006
Toluene - d8 (Surr)	92.8		% Recovery	EPA 8260B	2/8/2006
4-Bromofluorobenzene (Surr)	100		% Recovery	EPA 8260B	2/8/2006
TPH as Diesel	< 10000	10000	ug/L	M EPA 8015	2/11/2006
Octacosane (Diesel Surrogate)	90.2		% Recovery	M EPA 8015	2/11/2006

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Project Number :

Sample : <b>BH-V-30-32</b>	Matrix : Water		Water	Lab Number : 48247-06	
Sample Date :2/3/2006		Method			
Parameter	Measured Value	Reporting	Units	Analysis Method	Date Analyzed
Benzene	330	5.0	ug/L	EPA 8260B	2/8/2006
Toluene	93	5.0	ug/L	EPA 8260B	2/8/2006
Ethylbenzene	730	5.0	ug/L	EPA 8260B	2/8/2006
Total Xylenes	3600	5.0	ug/L	EPA 8260B	2/8/2006
Methyl-t-butyl ether (MTBE)	91	5.0	ug/L	EPA 8260B	2/8/2006
Diisopropyl ether (DIPE)	< 5.0	5.0	ug/L	EPA 8260B	2/8/2006
Ethyl-t-butyl ether (ETBE)	< 5.0	5.0	ug/L	EPA 8260B	2/8/2006
Tert-amyl methyl ether (TAME)	< 5.0	5.0	ug/L	EPA 8260B	2/8/2006
Tert-Butanol	< 25	25	ug/L	EPA 8260B	2/8/2006
TPH as Gasoline	23000	500	ug/L	EPA 8260B	2/8/2006
Toluene - d8 (Surr)	92.8		% Recovery	EPA 8260B	2/8/2006
4-Bromofluorobenzene (Surr)	102		% Recovery	EPA 8260B	2/8/2006
TPH as Diesel	< 4000	4000	ug/L	M EPA 8015	2/11/2006
Octacosane (Diesel Surrogate)	96.2		% Recovery	M EPA 8015	2/11/2006

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Project Number :

Sample : BH-R-15.0	Matrix : Soil		Soil	Lab Number : 48247-0	
Sample Date :1/30/2006		Method			
Parameter	Measured Value	Reporting	Units	Analysis Method	Date Analyzed
Benzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/9/2006
Toluene	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/9/2006
Ethylbenzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/9/2006
Total Xylenes	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/9/2006
Methyl-t-butyl ether (MTBE)	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/9/2006
Diisopropyl ether (DIPE)	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/9/2006
Ethyl-t-butyl ether (ETBE)	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/9/2006
Tert-amyl methyl ether (TAME)	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/9/2006
Tert-Butanol	0.0097	0.0050	mg/Kg	EPA 8260B	2/9/2006
TPH as Gasoline	< 1.0	1.0	mg/Kg	EPA 8260B	2/9/2006
Toluene - d8 (Surr)	100		% Recovery	EPA 8260B	2/9/2006
4-Bromofluorobenzene (Surr)	92.9		% Recovery	EPA 8260B	2/9/2006
TPH as Diesel	51	1.0	mg/Kg	M EPA 8015	2/8/2006
1-Chlorooctadecane (Diesel Surrogate)	115		% Recovery	M EPA 8015	2/8/2006

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Project Number :

Sample : BH-R-20.0	Matrix : Soil		Soil	Lab Number : 48247-11	
Sample Date :1/30/2006		Method			
Parameter	Measured Value	Reporting	Units	Analysis Method	Date Analyzed
Benzene	0.023	0.0050	mg/Kg	EPA 8260B	2/9/2006
Toluene	0.034	0.0050	mg/Kg	EPA 8260B	2/9/2006
Ethylbenzene	0.029	0.0050	mg/Kg	EPA 8260B	2/9/2006
Total Xylenes	0.16	0.0050	mg/Kg	EPA 8260B	2/9/2006
Methyl-t-butyl ether (MTBE)	0.11	0.0050	mg/Kg	EPA 8260B	2/9/2006
Diisopropyl ether (DIPE)	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/9/2006
Ethyl-t-butyl ether (ETBE)	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/9/2006
Tert-amyl methyl ether (TAME)	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/9/2006
Tert-Butanol	0.011 J	0.0050	mg/Kg	EPA 8260B	2/9/2006
TPH as Gasoline	1.7	1.0	mg/Kg	EPA 8260B	2/9/2006
Toluene - d8 (Surr)	99.3		% Recovery	EPA 8260B	2/9/2006
4-Bromofluorobenzene (Surr)	93.3		% Recovery	EPA 8260B	2/9/2006
TPH as Diesel	55	2.0	mg/Kg	M EPA 8015	2/10/2006
1-Chlorooctadecane (Diesel Surrogate)	89.3		% Recovery	M EPA 8015	2/10/2006

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Project Number :

Sample : <b>BH-R-24.5</b>		Matrix : Soil		Lab Number : 48247-	
Sample Date :1/30/2006					
Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/9/2006
Toluene	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/9/2006
Ethylbenzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/9/2006
Total Xylenes	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/9/2006
Methyl-t-butyl ether (MTBE)	0.26	0.0050	mg/Kg	EPA 8260B	2/9/2006
Diisopropyl ether (DIPE)	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/9/2006
Ethyl-t-butyl ether (ETBE)	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/9/2006
Tert-amyl methyl ether (TAME)	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/9/2006
Tert-Butanol	0.011 J	0.0050	mg/Kg	EPA 8260B	2/9/2006
TPH as Gasoline	< 1.0	1.0	mg/Kg	EPA 8260B	2/9/2006
Toluene - d8 (Surr)	95.9		% Recovery	EPA 8260B	2/9/2006
4-Bromofluorobenzene (Surr)	93.0		% Recovery	EPA 8260B	2/9/2006
TPH as Diesel	< 1.0	1.0	mg/Kg	M EPA 8015	2/8/2006
1-Chlorooctadecane (Diesel Surrogate)	104		% Recovery	M EPA 8015	2/8/2006

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Project Number :

Sample : BH-R-29.5		Matrix : Soil		Lab Number : 48247-13	
Sample Date :1/30/2006		Mathad			
Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/8/2006
Toluene	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/8/2006
Ethylbenzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/8/2006
Total Xylenes	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/8/2006
Methyl-t-butyl ether (MTBE)	0.056	0.0050	mg/Kg	EPA 8260B	2/8/2006
Diisopropyl ether (DIPE)	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/8/2006
Ethyl-t-butyl ether (ETBE)	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/8/2006
Tert-amyl methyl ether (TAME)	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/8/2006
Tert-Butanol	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/8/2006
TPH as Gasoline	< 1.0	1.0	mg/Kg	EPA 8260B	2/8/2006
Toluene - d8 (Surr)	100		% Recovery	EPA 8260B	2/8/2006
4-Bromofluorobenzene (Surr)	93.1		% Recovery	EPA 8260B	2/8/2006
TPH as Diesel	< 1.0	1.0	mg/Kg	M EPA 8015	2/10/2006
1-Chlorooctadecane (Diesel Surrogate)	106		% Recovery	M EPA 8015	2/10/2006

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Project Number :

Sample : BH-R-34.5	Matrix : Soil		Soil	Lab Number : 48247-14	
Sample Date :1/30/2006		Method			
Parameter	Measured Value	Reporting	Units	Analysis Method	Date Analyzed
Benzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/8/2006
Toluene	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/8/2006
Ethylbenzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/8/2006
Total Xylenes	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/8/2006
Methyl-t-butyl ether (MTBE)	0.0081	0.0050	mg/Kg	EPA 8260B	2/8/2006
Diisopropyl ether (DIPE)	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/8/2006
Ethyl-t-butyl ether (ETBE)	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/8/2006
Tert-amyl methyl ether (TAME)	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/8/2006
Tert-Butanol	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/8/2006
TPH as Gasoline	< 1.0	1.0	mg/Kg	EPA 8260B	2/8/2006
Toluene - d8 (Surr)	99.9		% Recovery	EPA 8260B	2/8/2006
4-Bromofluorobenzene (Surr)	91.8		% Recovery	EPA 8260B	2/8/2006
TPH as Diesel	< 1.0	1.0	mg/Kg	M EPA 8015	2/10/2006
1-Chlorooctadecane (Diesel Surrogate)	122		% Recovery	M EPA 8015	2/10/2006

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Project Number :

Sample : BH-R-39.0		Matrix :	Soil	Lab Number : 48	3247-15
Sample Date :1/30/2006		Mathad			
Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/9/2006
Toluene	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/9/2006
Ethylbenzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/9/2006
Total Xylenes	0.014	0.0050	mg/Kg	EPA 8260B	2/9/2006
Methyl-t-butyl ether (MTBE)	0.018	0.0050	mg/Kg	EPA 8260B	2/9/2006
Diisopropyl ether (DIPE)	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/9/2006
Ethyl-t-butyl ether (ETBE)	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/9/2006
Tert-amyl methyl ether (TAME)	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/9/2006
Tert-Butanol	0.0078	0.0050	mg/Kg	EPA 8260B	2/9/2006
TPH as Gasoline	< 1.0	1.0	mg/Kg	EPA 8260B	2/9/2006
Toluene - d8 (Surr)	101		% Recovery	EPA 8260B	2/9/2006
4-Bromofluorobenzene (Surr)	97.4		% Recovery	EPA 8260B	2/9/2006
TPH as Diesel	3.0	1.0	mg/Kg	M EPA 8015	2/10/2006
1-Chlorooctadecane (Diesel Surrogate)	91.3		% Recovery	M EPA 8015	2/10/2006

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Project Number :

Sample : BH-S-14.5		Matrix : S	Soil	Lab Number : 48	8247-18
Sample Date :1/30/2006		Mathaad			
Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	0.15	0.0050	mg/Kg	EPA 8260B	2/9/2006
Toluene	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/9/2006
Ethylbenzene	0.13	0.0050	mg/Kg	EPA 8260B	2/9/2006
Total Xylenes	0.29	0.0050	mg/Kg	EPA 8260B	2/9/2006
Methyl-t-butyl ether (MTBE) Diisopropyl ether (DIPE) Ethyl-t-butyl ether (ETBE) Tert-amyl methyl ether (TAME) Tert-Butanol	0.018 < 0.0050 < 0.0050 < 0.0050 0.019	0.0050 0.0050 0.0050 0.0050 0.015	mg/Kg mg/Kg mg/Kg mg/Kg mg/Kg	EPA 8260B EPA 8260B EPA 8260B EPA 8260B EPA 8260B	2/9/2006 2/9/2006 2/9/2006 2/9/2006 2/9/2006
TPH as Gasoline	8.1	1.0	mg/Kg	EPA 8260B	2/9/2006
Toluene - d8 (Surr) 4-Bromofluorobenzene (Surr)	102 92.2		% Recovery % Recovery	EPA 8260B EPA 8260B	2/9/2006 2/9/2006
TPH as Diesel	21	1.0	mg/Kg	M EPA 8015	2/8/2006
1-Chlorooctadecane (Diesel Surrogate)	111		% Recovery	M EPA 8015	2/8/2006

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Project Number :

Sample : BH-S-19.5		Matrix :	Soil	Lab Number : 48	3247-19
Sample Date :1/30/2006		Method			
Parameter	Measured Value	Reporting	Units	Analysis Method	Date Analyzed
Benzene	0.018	0.0050	mg/Kg	EPA 8260B	2/8/2006
Toluene	0.0097	0.0050	mg/Kg	EPA 8260B	2/8/2006
Ethylbenzene	0.15	0.0050	mg/Kg	EPA 8260B	2/8/2006
Total Xylenes	0.86	0.0050	mg/Kg	EPA 8260B	2/8/2006
Methyl-t-butyl ether (MTBE)	0.078	0.0050	mg/Kg	EPA 8260B	2/8/2006
Diisopropyl ether (DIPE)	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/8/2006
Ethyl-t-butyl ether (ETBE)	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/8/2006
Tert-amyl methyl ether (TAME)	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/8/2006
Tert-Butanol	0.045	0.0050	mg/Kg	EPA 8260B	2/8/2006
TPH as Gasoline	4.0	1.0	mg/Kg	EPA 8260B	2/9/2006
Toluene - d8 (Surr)	94.6		% Recovery	EPA 8260B	2/8/2006
4-Bromofluorobenzene (Surr)	100		% Recovery	EPA 8260B	2/8/2006
TPH as Diesel	24	1.0	mg/Kg	M EPA 8015	2/8/2006
1-Chlorooctadecane (Diesel Surrogate)	109		% Recovery	M EPA 8015	2/8/2006

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Project Number :

Sample : BH-S-29.5		Matrix : 3	Soil	Lab Number : 48	3247-21
Sample Date :1/30/2006					
Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/8/2006
Toluene	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/8/2006
Ethylbenzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/8/2006
Total Xylenes	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/8/2006
Methyl-t-butyl ether (MTBE)	0.037	0.0050	mg/Kg	EPA 8260B	2/8/2006
Diisopropyl ether (DIPE)	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/8/2006
Ethyl-t-butyl ether (ETBE)	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/8/2006
Tert-amyl methyl ether (TAME)	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/8/2006
Tert-Butanol	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/8/2006
TPH as Gasoline	< 1.0	1.0	mg/Kg	EPA 8260B	2/8/2006
Toluene - d8 (Surr)	99.5		% Recovery	EPA 8260B	2/8/2006
4-Bromofluorobenzene (Surr)	94.6		% Recovery	EPA 8260B	2/8/2006
TPH as Diesel	< 1.0	1.0	mg/Kg	M EPA 8015	2/8/2006
1-Chlorooctadecane (Diesel Surrogate)	107		% Recovery	M EPA 8015	2/8/2006

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Project Number :

Sample : <b>BH-S-35.0</b>		Matrix : 3	Soil	Lab Number : 48	3247-22
Sample Date :1/30/2006		Method			
Parameter	Measured Value	Reporting	Units	Analysis Method	Date Analyzed
Benzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/8/2006
Toluene	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/8/2006
Ethylbenzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/8/2006
Total Xylenes	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/8/2006
Methyl-t-butyl ether (MTBE)	0.0067	0.0050	mg/Kg	EPA 8260B	2/8/2006
Diisopropyl ether (DIPE)	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/8/2006
Ethyl-t-butyl ether (ETBE)	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/8/2006
Tert-amyl methyl ether (TAME)	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/8/2006
Tert-Butanol	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/8/2006
TPH as Gasoline	< 1.0	1.0	mg/Kg	EPA 8260B	2/8/2006
Toluene - d8 (Surr)	99.5		% Recovery	EPA 8260B	2/8/2006
4-Bromofluorobenzene (Surr)	94.8		% Recovery	EPA 8260B	2/8/2006
TPH as Diesel	< 1.0	1.0	mg/Kg	M EPA 8015	2/8/2006
1-Chlorooctadecane (Diesel Surrogate)	104		% Recovery	M EPA 8015	2/8/2006

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Project Number :

Sample : <b>BH-S-37.5</b>		Matrix : S	Soil	Lab Number : 48	3247-23
Sample Date :1/30/2006					
Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/8/2006
Toluene	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/8/2006
Ethylbenzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/8/2006
Total Xylenes	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/8/2006
Methyl-t-butyl ether (MTBE)	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/8/2006
Diisopropyl ether (DIPE)	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/8/2006
Ethyl-t-butyl ether (ETBE)	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/8/2006
Tert-amyl methyl ether (TAME)	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/8/2006
Tert-Butanol	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/8/2006
TPH as Gasoline	< 1.0	1.0	mg/Kg	EPA 8260B	2/8/2006
Toluene - d8 (Surr)	99.9		% Recovery	EPA 8260B	2/8/2006
4-Bromofluorobenzene (Surr)	94.0		% Recovery	EPA 8260B	2/8/2006
TPH as Diesel	< 1.0	1.0	mg/Kg	M EPA 8015	2/8/2006
1-Chlorooctadecane (Diesel Surrogate)	106		% Recovery	M EPA 8015	2/8/2006

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Project Number :

Sample : BH-T-15.0	Matrix : Soil		Lab Number : 48247-26		
Sample Date :2/1/2006		Method			
Parameter	Measured Value	Reporting	Units	Analysis Method	Date Analyzed
Benzene	0.030	0.0050	mg/Kg	EPA 8260B	2/8/2006
Toluene	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/8/2006
Ethylbenzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/8/2006
Total Xylenes	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/8/2006
Methyl-t-butyl ether (MTBE)	0.058	0.0050	mg/Kg	EPA 8260B	2/8/2006
Diisopropyl ether (DIPE)	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/8/2006
Ethyl-t-butyl ether (ETBE)	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/8/2006
Tert-amyl methyl ether (TAME)	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/8/2006
Tert-Butanol	0.040	0.015	mg/Kg	EPA 8260B	2/8/2006
TPH as Gasoline	2.5	1.0	mg/Kg	EPA 8260B	2/8/2006
Toluene - d8 (Surr)	99.0		% Recovery	EPA 8260B	2/8/2006
4-Bromofluorobenzene (Surr)	92.4		% Recovery	EPA 8260B	2/8/2006
TPH as Diesel	15	1.0	mg/Kg	M EPA 8015	2/14/2006
1-Chlorooctadecane (Diesel Surrogate)	93.9		% Recovery	M EPA 8015	2/14/2006

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Project Number :

Sample : <b>BH-T-20.0</b>		Matrix : Soil		Lab Number : 48247-27	
Sample Date :2/1/2006		Method			
Parameter	Measured Value	Reporting	Units	Analysis Method	Date Analyzed
Benzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/9/2006
Toluene	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/9/2006
Ethylbenzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/9/2006
Total Xylenes	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/9/2006
Methyl-t-butyl ether (MTBE)	0.28	0.0050	mg/Kg	EPA 8260B	2/9/2006
Diisopropyl ether (DIPE)	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/9/2006
Ethyl-t-butyl ether (ETBE)	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/9/2006
Tert-amyl methyl ether (TAME)	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/9/2006
Tert-Butanol	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/9/2006
TPH as Gasoline	< 1.0	1.0	mg/Kg	EPA 8260B	2/9/2006
Toluene - d8 (Surr)	100		% Recovery	EPA 8260B	2/9/2006
4-Bromofluorobenzene (Surr)	93.9		% Recovery	EPA 8260B	2/9/2006
TPH as Diesel	< 1.0	1.0	mg/Kg	M EPA 8015	2/8/2006
1-Chlorooctadecane (Diesel Surrogate)	104		% Recovery	M EPA 8015	2/8/2006

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Project Number :

Sample : <b>BH-T-25.0</b>		Matrix : Soil		Lab Number : 48247-28	
Sample Date :2/1/2006		Method			
Parameter	Measured Value	Reporting	Units	Analysis Method	Date Analyzed
Benzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/7/2006
Toluene	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/7/2006
Ethylbenzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/7/2006
Total Xylenes	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/7/2006
Methyl-t-butyl ether (MTBE)	0.12	0.0050	mg/Kg	EPA 8260B	2/7/2006
Diisopropyl ether (DIPE)	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/7/2006
Ethyl-t-butyl ether (ETBE)	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/7/2006
Tert-amyl methyl ether (TAME)	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/7/2006
Tert-Butanol	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/7/2006
TPH as Gasoline	< 1.0	1.0	mg/Kg	EPA 8260B	2/7/2006
Toluene - d8 (Surr)	99.5		% Recovery	EPA 8260B	2/7/2006
4-Bromofluorobenzene (Surr)	91.7		% Recovery	EPA 8260B	2/7/2006
TPH as Diesel	< 1.0	1.0	mg/Kg	M EPA 8015	2/8/2006
1-Chlorooctadecane (Diesel Surrogate)	101		% Recovery	M EPA 8015	2/8/2006

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Project Number :

Sample : BH-T-31.0		Matrix : Soil		Lab Number : 48247-29	
Sample Date :2/1/2006		Mathad			
Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/8/2006
Toluene	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/8/2006
Ethylbenzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/8/2006
Total Xylenes	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/8/2006
Methyl-t-butyl ether (MTBE)	0.060	0.0050	mg/Kg	EPA 8260B	2/8/2006
Diisopropyl ether (DIPE)	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/8/2006
Ethyl-t-butyl ether (ETBE)	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/8/2006
Tert-amyl methyl ether (TAME)	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/8/2006
Tert-Butanol	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/8/2006
TPH as Gasoline	< 1.0	1.0	mg/Kg	EPA 8260B	2/8/2006
Toluene - d8 (Surr)	99.5		% Recovery	EPA 8260B	2/8/2006
4-Bromofluorobenzene (Surr)	92.3		% Recovery	EPA 8260B	2/8/2006
TPH as Diesel	< 1.0	1.0	mg/Kg	M EPA 8015	2/8/2006
1-Chlorooctadecane (Diesel Surrogate)	100		% Recovery	M EPA 8015	2/8/2006

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Project Number :

Sample : BH-T-37.5		Matrix : Soil		Lab Number : 48247-30	
Sample Date :2/1/2006		Method			
Parameter	Measured Value	Reporting	Units	Analysis Method	Date Analyzed
Benzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/9/2006
Toluene	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/9/2006
Ethylbenzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/9/2006
Total Xylenes	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/9/2006
Methyl-t-butyl ether (MTBE)	0.0085	0.0050	mg/Kg	EPA 8260B	2/9/2006
Diisopropyl ether (DIPE)	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/9/2006
Ethyl-t-butyl ether (ETBE)	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/9/2006
Tert-amyl methyl ether (TAME)	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/9/2006
Tert-Butanol	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/9/2006
TPH as Gasoline	< 1.0	1.0	mg/Kg	EPA 8260B	2/9/2006
Toluene - d8 (Surr)	99.9		% Recovery	EPA 8260B	2/9/2006
4-Bromofluorobenzene (Surr)	93.1		% Recovery	EPA 8260B	2/9/2006
TPH as Diesel	< 1.0	1.0	mg/Kg	M EPA 8015	2/10/2006
1-Chlorooctadecane (Diesel Surrogate)	105		% Recovery	M EPA 8015	2/10/2006

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Project Number :

Sample : <b>BH-T-40.0</b>		Matrix : Soil		Lab Number : 48247-31	
Sample Date :2/1/2006		Method			
Parameter	Measured Value	Reporting	Units	Analysis Method	Date Analyzed
Benzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/7/2006
Toluene	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/7/2006
Ethylbenzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/7/2006
Total Xylenes	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/7/2006
Methyl-t-butyl ether (MTBE)	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/7/2006
Diisopropyl ether (DIPE)	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/7/2006
Ethyl-t-butyl ether (ETBE)	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/7/2006
Tert-amyl methyl ether (TAME)	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/7/2006
Tert-Butanol	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/7/2006
TPH as Gasoline	< 1.0	1.0	mg/Kg	EPA 8260B	2/7/2006
Toluene - d8 (Surr)	99.2		% Recovery	EPA 8260B	2/7/2006
4-Bromofluorobenzene (Surr)	101		% Recovery	EPA 8260B	2/7/2006
TPH as Diesel	< 1.0	1.0	mg/Kg	M EPA 8015	2/9/2006
1-Chlorooctadecane (Diesel Surrogate)	101		% Recovery	M EPA 8015	2/9/2006

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Project Number :

Sample : BH-T-43.5		Matrix : Soil		Lab Number : 48247-33	
Sample Date :2/1/2006		Method			
Parameter	Measured Value	Reporting	Units	Analysis Method	Date Analyzed
Benzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/7/2006
Toluene	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/7/2006
Ethylbenzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/7/2006
Total Xylenes	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/7/2006
Methyl-t-butyl ether (MTBE)	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/7/2006
Diisopropyl ether (DIPE)	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/7/2006
Ethyl-t-butyl ether (ETBE)	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/7/2006
Tert-amyl methyl ether (TAME)	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/7/2006
Tert-Butanol	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/7/2006
TPH as Gasoline	< 1.0	1.0	mg/Kg	EPA 8260B	2/7/2006
Toluene - d8 (Surr)	99.3		% Recovery	EPA 8260B	2/7/2006
4-Bromofluorobenzene (Surr)	102		% Recovery	EPA 8260B	2/7/2006
TPH as Diesel	< 1.0	1.0	mg/Kg	M EPA 8015	2/9/2006
1-Chlorooctadecane (Diesel Surrogate)	102		% Recovery	M EPA 8015	2/9/2006

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Project Number :

Sample : BH-T-50.5		Matrix : Soil		Lab Number : 48247-33	
Sample Date :2/1/2006		Mathad			
Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/8/2006
Toluene	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/8/2006
Ethylbenzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/8/2006
Total Xylenes	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/8/2006
Methyl-t-butyl ether (MTBE)	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/8/2006
Diisopropyl ether (DIPE)	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/8/2006
Ethyl-t-butyl ether (ETBE)	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/8/2006
Tert-amyl methyl ether (TAME)	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/8/2006
Tert-Butanol	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/8/2006
TPH as Gasoline	< 1.0	1.0	mg/Kg	EPA 8260B	2/8/2006
Toluene - d8 (Surr)	99.8		% Recovery	EPA 8260B	2/8/2006
4-Bromofluorobenzene (Surr)	92.4		% Recovery	EPA 8260B	2/8/2006
TPH as Diesel	< 1.0	1.0	mg/Kg	M EPA 8015	2/9/2006
1-Chlorooctadecane (Diesel Surrogate)	100		% Recovery	M EPA 8015	2/9/2006

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Project Number :

Sample : BH-U-10.0		Matrix : Soil		Lab Number : 48247-35	
Sample Date :2/2/2006		Method			
Parameter	Measured Value	Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	0.59	0.0050	mg/Kg	EPA 8260B	2/8/2006
Toluene	0.059	0.0050	mg/Kg	EPA 8260B	2/8/2006
Ethylbenzene	1.8	0.0050	mg/Kg	EPA 8260B	2/8/2006
Total Xylenes	4.8	0.25	mg/Kg	EPA 8260B	2/9/2006
Methyl-t-butyl ether (MTBE)	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/8/2006
Diisopropyl ether (DIPE)	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/8/2006
Ethyl-t-butyl ether (ETBE)	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/8/2006
Tert-amyl methyl ether (TAME)	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/8/2006
Tert-Butanol	0.024	0.015	mg/Kg	EPA 8260B	2/8/2006
TPH as Gasoline	87	25	mg/Kg	EPA 8260B	2/9/2006
Toluene - d8 (Surr)	88.7		% Recovery	EPA 8260B	2/8/2006
4-Bromofluorobenzene (Surr)	105		% Recovery	EPA 8260B	2/8/2006
TPH as Diesel	64	1.0	mg/Kg	M EPA 8015	2/10/2006
1-Chlorooctadecane (Diesel Surrogate)	103		% Recovery	M EPA 8015	2/10/2006

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Project Number :

Sample : BH-U-15.0		Matrix : Soil		Lab Number : 48247-36	
Sample Date :2/2/2006		Method			
Parameter	Measured Value	Reporting	Units	Analysis Method	Date Analyzed
Benzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/7/2006
Toluene	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/7/2006
Ethylbenzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/7/2006
Total Xylenes	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/7/2006
Methyl-t-butyl ether (MTBE)	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/7/2006
Diisopropyl ether (DIPE)	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/7/2006
Ethyl-t-butyl ether (ETBE)	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/7/2006
Tert-amyl methyl ether (TAME)	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/7/2006
Tert-Butanol	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/7/2006
TPH as Gasoline	< 1.0	1.0	mg/Kg	EPA 8260B	2/7/2006
Toluene - d8 (Surr)	101		% Recovery	EPA 8260B	2/7/2006
4-Bromofluorobenzene (Surr)	92.4		% Recovery	EPA 8260B	2/7/2006
TPH as Diesel	< 1.0	1.0	mg/Kg	M EPA 8015	2/15/2006
1-Chlorooctadecane (Diesel Surrogate)	98.9		% Recovery	M EPA 8015	2/15/2006

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Project Number :

Sample : BH-U-20.0		Matrix : Soil		Lab Number : 48247-37	
Sample Date :2/2/2006		Method			
Parameter	Measured Value	Reporting	Units	Analysis Method	Date Analyzed
Benzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/8/2006
Toluene	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/8/2006
Ethylbenzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/8/2006
Total Xylenes	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/8/2006
Methyl-t-butyl ether (MTBE)	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/8/2006
Diisopropyl ether (DIPE)	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/8/2006
Ethyl-t-butyl ether (ETBE)	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/8/2006
Tert-amyl methyl ether (TAME)	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/8/2006
Tert-Butanol	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/8/2006
TPH as Gasoline	< 1.0	1.0	mg/Kg	EPA 8260B	2/8/2006
Toluene - d8 (Surr)	101		% Recovery	EPA 8260B	2/8/2006
4-Bromofluorobenzene (Surr)	109		% Recovery	EPA 8260B	2/8/2006
TPH as Diesel	< 1.0	1.0	mg/Kg	M EPA 8015	2/9/2006
1-Chlorooctadecane (Diesel Surrogate)	105		% Recovery	M EPA 8015	2/9/2006

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Project Number :

Sample : <b>BH-U-25.0</b>		Matrix : Soil		Lab Number : 48247-38	
Sample Date :2/2/2006		Method			
Parameter	Measured Value	Reporting	Units	Analysis Method	Date Analyzed
Benzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/8/2006
Toluene	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/8/2006
Ethylbenzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/8/2006
Total Xylenes	0.0076	0.0050	mg/Kg	EPA 8260B	2/8/2006
Methyl-t-butyl ether (MTBE)	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/8/2006
Diisopropyl ether (DIPE)	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/8/2006
Ethyl-t-butyl ether (ETBE)	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/8/2006
Tert-amyl methyl ether (TAME)	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/8/2006
Tert-Butanol	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/8/2006
TPH as Gasoline	< 1.0	1.0	mg/Kg	EPA 8260B	2/8/2006
Toluene - d8 (Surr)	100		% Recovery	EPA 8260B	2/8/2006
4-Bromofluorobenzene (Surr)	93.7		% Recovery	EPA 8260B	2/8/2006
TPH as Diesel	< 1.0	1.0	mg/Kg	M EPA 8015	2/9/2006
1-Chlorooctadecane (Diesel Surrogate)	102		% Recovery	M EPA 8015	2/9/2006

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Project Number :

Sample : BH-U-31.0		Matrix : Soil		Lab Number : 48247-39	
Sample Date :2/2/2006		Method			
Parameter	Measured Value	Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	0.21	0.0050	mg/Kg	EPA 8260B	2/8/2006
Toluene	0.64	0.0050	mg/Kg	EPA 8260B	2/8/2006
Ethylbenzene	0.44	0.0050	mg/Kg	EPA 8260B	2/8/2006
Total Xylenes	2.5	0.0050	mg/Kg	EPA 8260B	2/8/2006
Methyl-t-butyl ether (MTBE)	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/8/2006
Diisopropyl ether (DIPE)	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/8/2006
Ethyl-t-butyl ether (ETBE)	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/8/2006
Tert-amyl methyl ether (TAME)	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/8/2006
Tert-Butanol	< 0.015	0.015	mg/Kg	EPA 8260B	2/8/2006
TPH as Gasoline	22	1.0	mg/Kg	EPA 8260B	2/8/2006
Toluene - d8 (Surr)	96.2		% Recovery	EPA 8260B	2/8/2006
4-Bromofluorobenzene (Surr)	102		% Recovery	EPA 8260B	2/8/2006
TPH as Diesel	14	1.0	mg/Kg	M EPA 8015	2/10/2006
1-Chlorooctadecane (Diesel Surrogate)	103		% Recovery	M EPA 8015	2/10/2006

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Project Number :

Sample : BH-U-36.0		Matrix :	Soil	Lab Number : 48	3247-40
Sample Date :2/2/2006		NA - 411			
Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/8/2006
Toluene	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/8/2006
Ethylbenzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/8/2006
Total Xylenes	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/8/2006
Methyl-t-butyl ether (MTBE)	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/8/2006
Diisopropyl ether (DIPE)	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/8/2006
Ethyl-t-butyl ether (ETBE)	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/8/2006
Tert-amyl methyl ether (TAME)	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/8/2006
Tert-Butanol	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/8/2006
TPH as Gasoline	< 1.0	1.0	mg/Kg	EPA 8260B	2/8/2006
Toluene - d8 (Surr)	99.9		% Recovery	EPA 8260B	2/8/2006
4-Bromofluorobenzene (Surr)	93.4		% Recovery	EPA 8260B	2/8/2006
TPH as Diesel	< 1.0	1.0	mg/Kg	M EPA 8015	2/9/2006
1-Chlorooctadecane (Diesel Surrogate)	95.6		% Recovery	M EPA 8015	2/9/2006

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Project Number :

Sample : BH-U-40.0		Matrix :	Soil	Lab Number : 48	3247-41
Sample Date :2/2/2006		Method			
Parameter	Measured Value	Reporting	Units	Analysis Method	Date Analyzed
Benzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/7/2006
Toluene	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/7/2006
Ethylbenzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/7/2006
Total Xylenes	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/7/2006
Methyl-t-butyl ether (MTBE) Diisopropyl ether (DIPE)	< 0.0050 < 0.0050	0.0050 0.0050	mg/Kg mg/Kg	EPA 8260B EPA 8260B	2/7/2006 2/7/2006
Ethyl-t-butyl ether (ETBE)	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/7/2006
Tert-amyl methyl ether (TAME)	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/7/2006
Tert-Butanol	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/7/2006
TPH as Gasoline	< 1.0	1.0	mg/Kg	EPA 8260B	2/7/2006
Toluene - d8 (Surr)	101		% Recovery	EPA 8260B	2/7/2006
4-Bromofluorobenzene (Surr)	101		% Recovery	EPA 8260B	2/7/2006
TPH as Diesel	< 1.0	1.0	mg/Kg	M EPA 8015	2/9/2006
1-Chlorooctadecane (Diesel Surrogate)	101		% Recovery	M EPA 8015	2/9/2006

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Project Number :

Sample : <b>BH-U-45.0</b>		Matrix :	Soil	Lab Number : 48	3247-42
Sample Date :2/2/2006		Method			
Parameter	Measured Value	Reporting	Units	Analysis Method	Date Analyzed
Benzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/8/2006
Toluene	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/8/2006
Ethylbenzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/8/2006
Total Xylenes	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/8/2006
Methyl-t-butyl ether (MTBE)	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/8/2006
Diisopropyl ether (DIPE)	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/8/2006
Ethyl-t-butyl ether (ETBE)	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/8/2006
Tert-amyl methyl ether (TAME)	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/8/2006
Tert-Butanol	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/8/2006
TPH as Gasoline	< 1.0	1.0	mg/Kg	EPA 8260B	2/8/2006
Toluene - d8 (Surr)	100		% Recovery	EPA 8260B	2/8/2006
4-Bromofluorobenzene (Surr)	91.8		% Recovery	EPA 8260B	2/8/2006
TPH as Diesel	< 1.0	1.0	mg/Kg	M EPA 8015	2/10/2006
1-Chlorooctadecane (Diesel Surrogate)	107		% Recovery	M EPA 8015	2/10/2006

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Project Number :

Sample : BH-U-50.0		Matrix :	Soil	Lab Number : 48	3247-43
Sample Date :2/2/2006		Method			
Parameter	Measured Value	Reporting	Units	Analysis Method	Date Analyzed
Benzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/8/2006
Toluene	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/8/2006
Ethylbenzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/8/2006
Total Xylenes	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/8/2006
Methyl-t-butyl ether (MTBE)	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/8/2006
Diisopropyl ether (DIPE)	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/8/2006
Ethyl-t-butyl ether (ETBE)	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/8/2006
Tert-amyl methyl ether (TAME)	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/8/2006
Tert-Butanol	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/8/2006
TPH as Gasoline	< 1.0	1.0	mg/Kg	EPA 8260B	2/8/2006
Toluene - d8 (Surr)	99.7		% Recovery	EPA 8260B	2/8/2006
4-Bromofluorobenzene (Surr)	92.2		% Recovery	EPA 8260B	2/8/2006
TPH as Diesel	< 1.0	1.0	mg/Kg	M EPA 8015	2/10/2006
1-Chlorooctadecane (Diesel Surrogate)	106		% Recovery	M EPA 8015	2/10/2006

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Project Number :

Sample : BH-V-10.0		Matrix :	Soil	Lab Number : 48	247-45
Sample Date :2/3/2006		Method			
Parameter	Measured Value	Reporting	Units	Analysis Method	Date Analyzed
Benzene	0.16	0.0050	mg/Kg	EPA 8260B	2/8/2006
Toluene	0.0076	0.0050	mg/Kg	EPA 8260B	2/8/2006
Ethylbenzene	0.22	0.0050	mg/Kg	EPA 8260B	2/8/2006
Total Xylenes	0.29	0.0050	mg/Kg	EPA 8260B	2/8/2006
Methyl-t-butyl ether (MTBE)	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/8/2006
Diisopropyl ether (DIPE)	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/8/2006
Ethyl-t-butyl ether (ETBE)	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/8/2006
Tert-amyl methyl ether (TAME)	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/8/2006
Tert-Butanol	< 0.015	0.015	mg/Kg	EPA 8260B	2/8/2006
TPH as Gasoline	13	1.0	mg/Kg	EPA 8260B	2/8/2006
Toluene - d8 (Surr)	108		% Recovery	EPA 8260B	2/8/2006
4-Bromofluorobenzene (Surr)	98.6		% Recovery	EPA 8260B	2/8/2006
TPH as Diesel	22	1.0	mg/Kg	M EPA 8015	2/10/2006
1-Chlorooctadecane (Diesel Surrogate)	95.5		% Recovery	M EPA 8015	2/10/2006

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Project Number :

Sample : BH-V-15.0		Matrix :	Soil	Lab Number : 48	3247-46
Sample Date :2/3/2006		Method			
Parameter	Measured Value	Reporting	Units	Analysis Method	Date Analyzed
Benzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/9/2006
Toluene	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/9/2006
Ethylbenzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/9/2006
Total Xylenes	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/9/2006
Methyl-t-butyl ether (MTBE)	0.0063	0.0050	mg/Kg	EPA 8260B	2/9/2006
Diisopropyl ether (DIPE)	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/9/2006
Ethyl-t-butyl ether (ETBE)	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/9/2006
Tert-amyl methyl ether (TAME)	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/9/2006
Tert-Butanol	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/9/2006
TPH as Gasoline	< 1.0	1.0	mg/Kg	EPA 8260B	2/9/2006
Toluene - d8 (Surr)	99.8		% Recovery	EPA 8260B	2/9/2006
4-Bromofluorobenzene (Surr)	91.0		% Recovery	EPA 8260B	2/9/2006
TPH as Diesel	< 1.0	1.0	mg/Kg	M EPA 8015	2/10/2006
1-Chlorooctadecane (Diesel Surrogate)	92.9		% Recovery	M EPA 8015	2/10/2006

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#### **QC Report : Method Blank Data**

#### Project Name : Albany Hill

Project Number :

Parameter	Measured Value	Method Reportin Limit	g Units	Analysis Method	Date Analyzed
TPH as Diesel	< 1.0	1.0	mg/Kg	M EPA 8015	2/9/2006
1-Chlorooctadecane (Diesel Surrogate)	108		%	M EPA 8015	2/9/2006
TPH as Diesel	< 1.0	1.0	mg/Kg	M EPA 8015	2/9/2006
1-Chlorooctadecane (Diesel Surrogate)	93.0		%	M EPA 8015	2/9/2006
TPH as Diesel	< 1.0	1.0	mg/Kg	M EPA 8015	2/8/2006
1-Chlorooctadecane (Diesel Surrogate)	101		%	M EPA 8015	2/8/2006
TPH as Diesel	< 50	50	ug/L	M EPA 8015	2/7/2006
Octacosane (Diesel Surrogate)	90.2		%	M EPA 8015	2/7/2006
TPH as Diesel	< 50	50	ug/L	M EPA 8015	2/8/2006
Octacosane (Diesel Surrogate)	85.6		%	M EPA 8015	2/8/2006
TPH as Diesel	< 50	50	ug/L	M EPA 8015	2/11/2006
Octacosane (Diesel Surrogate)	86.0		%	M EPA 8015	2/11/2006
TPH as Diesel	< 1.0	1.0	mg/Kg	M EPA 8015	
1-Chlorooctadecane (Diesel Surrogate)	89.5		%	M EPA 8015	2/14/2006

Report Number : 48247 Date : 2/15/2006

Parameter	Measured Value	Method Reportin Limit	g Units	Analysis Method	Date Analyzed		
TPH as Diesel	< 1.0	1.0	mg/Kg	M EPA 8015	2/15/2006		
1-Chlorooctadecane (Diesel Surrogate)	96.3		%	M EPA 8015	2/15/2006		
Benzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/7/2006		
Toluene	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/7/2006		
Ethylbenzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/7/2006		
Total Xylenes	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/7/2006		
Methyl-t-butyl ether (MTBE)	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/7/2006		
Diisopropyl ether (DIPE)	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/7/2006		
Ethyl-t-butyl ether (ETBE)	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/7/2006		
Tert-amyl methyl ether (TAME)	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/7/2006		
Tert-Butanol	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/7/2006		
TPH as Gasoline	< 1.0	1.0	mg/Kg	EPA 8260B	2/7/2006		
Toluene - d8 (Surr)	100		%	EPA 8260B	2/7/2006		
4-Bromofluorobenzene (Surr)	94.8		%	EPA 8260B	2/7/2006		
Benzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/7/2006		
Toluene	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/7/2006		
Ethylbenzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/7/2006		
Total Xylenes	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/7/2006		
Methyl-t-butyl ether (MTBE)	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/7/2006		
Diisopropyl ether (DIPE)	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/7/2006		
Ethyl-t-butyl ether (ETBE)	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/7/2006		
Tert-amyl methyl ether (TAME)			mg/Kg	EPA 8260B	2/7/2006		
Tert-Butanol	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/7/2006		
TPH as Gasoline	< 1.0	1.0	mg/Kg	EPA 8260B	2/7/2006		
Toluene - d8 (Surr)	98.8		%	EPA 8260B	2/7/2006		
4-Bromofluorobenzene (Surr)	94.8		%	EPA 8260B	2/7/2006		

Approved By: Joel Kiff

KIFF ANALYTICAL, LLC

#### **QC Report : Method Blank Data**

#### Project Name : Albany Hill

Project Number :

Parameter	Measured Value	Method Reportin Limit	ig Units	Analysis Method	Date Analyzed	Parameter	Measured Value	Method Reportir Limit	ng Units	Analysis Method	Date Analyzed
Benzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/8/2006	Benzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/9/2006
Toluene	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/8/2006	Toluene	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/9/2006
Ethylbenzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/8/2006	Ethylbenzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/9/2006
Total Xylenes	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/8/2006	Total Xylenes	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/9/2006
Methyl-t-butyl ether (MTBE)	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/8/2006	Methyl-t-butyl ether (MTBE)	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/9/2006
Diisopropyl ether (DIPE)	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/8/2006	Diisopropyl ether (DIPE)	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/9/2006
Ethyl-t-butyl ether (ETBE)	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/8/2006	Ethyl-t-butyl ether (ETBE)	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/9/2006
Tert-amyl methyl ether (TAME)	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/8/2006	Tert-amyl methyl ether (TAME)	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/9/2006
Tert-Butanol	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/8/2006	Tert-Butanol	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/9/2006
TPH as Gasoline	< 1.0	1.0	mg/Kg	EPA 8260B	2/8/2006	TPH as Gasoline	< 1.0	1.0	mg/Kg	EPA 8260B	2/9/2006
Toluene - d8 (Surr)	101		%	EPA 8260B	2/8/2006	Toluene - d8 (Surr)	96.3		%	EPA 8260B	2/9/2006
4-Bromofluorobenzene (Surr)	107		%	EPA 8260B	2/8/2006	4-Bromofluorobenzene (Surr)	94.2		%	EPA 8260B	2/9/2006
Benzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/8/2006	Benzene	< 0.50	0.50	ug/L	EPA 8260B	2/7/2006
Toluene	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/8/2006	Toluene	< 0.50	0.50	ug/L	EPA 8260B	2/7/2006
Ethylbenzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/8/2006	Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	2/7/2006
Total Xylenes	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/8/2006	Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	2/7/2006
Methyl-t-butyl ether (MTBE)	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/8/2006	Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	2/7/2006
Diisopropyl ether (DIPE)	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/8/2006	Diisopropyl ether (DIPE)	< 0.50	0.50	ug/L	EPA 8260B	2/7/2006
Ethyl-t-butyl ether (ETBE)	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/8/2006	Ethyl-t-butyl ether (ETBE)	< 0.50	0.50	ug/L	EPA 8260B	2/7/2006
Tert-amyl methyl ether (TAME)	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/8/2006	Tert-amyl methyl ether (TAME)	< 0.50	0.50	ug/L	EPA 8260B	2/7/2006
Tert-Butanol	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/8/2006	Tert-Butanol	< 5.0	5.0	ug/L	EPA 8260B	2/7/2006
TPH as Gasoline	< 1.0	1.0	mg/Kg	EPA 8260B	2/8/2006	TPH as Gasoline	< 50	50	ug/L	EPA 8260B	2/7/2006
Toluene - d8 (Surr)	96.7		%	EPA 8260B	2/8/2006	Toluene - d8 (Surr)	95.4		%	EPA 8260B	2/7/2006
4-Bromofluorobenzene (Surr)	97.2		%	EPA 8260B	2/8/2006	4-Bromofluorobenzene (Surr)	101		%	EPA 8260B	2/7/2006

Report Number: 48247 Date : 2/15/2006

Approved By: Joel Kiff

KIFF ANALYTICAL, LLC

#### **QC Report : Method Blank Data**

#### Project Name : Albany Hill

Project Number :

		Method			
_	Measured	Reporti	0	Analysis	Date
Parameter	Value	Limit	Units	Method	Analyzed
Benzene	< 0.50	0.50	ug/L	EPA 8260B	2/8/2006
Toluene	< 0.50	0.50	ug/L	EPA 8260B	2/8/2006
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	2/8/2006
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	2/8/2006
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	2/8/2006
Diisopropyl ether (DIPE)	< 0.50	0.50	ug/L	EPA 8260B	2/8/2006
Ethyl-t-butyl ether (ETBE)	< 0.50	0.50	ug/L	EPA 8260B	2/8/2006
Tert-amyl methyl ether (TAME)	< 0.50	0.50	ug/L	EPA 8260B	2/8/2006
Tert-Butanol	< 5.0	5.0	ug/L	EPA 8260B	2/8/2006
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	2/8/2006
Toluene - d8 (Surr)	94.5		%	EPA 8260B	2/8/2006
4-Bromofluorobenzene (Surr)	100		%	EPA 8260B	2/8/2006

N 4 - 41- - -1

		Method	l		
	Measured	Reporti	ng	Analysis	Date
Parameter	Value	Limit	Units	Method	Analyzed

Approved By: Joel Kiff

KIFF ANALYTICAL, LLC

Project Number :

Parameter	Spiked Sample	Sample Value	Spike Level	Spike Dup. Level	Spiked Sample Value	Duplicate Spiked Sample Value	e Units	Analysis Method	Date Analyzed	Spiked Sample Percent I Recov.	Duplicat Spiked Sample Percent Recov.	Relative	Spiked Sample Percent Recov. Limit	Relative Percent Diff. Limit
TPH as Diesel	48240-01	1.0	20.0	20.0	22.8	22.4	mg/Kg	M EPA 8015	2/9/06	109	106	2.06	60-140	25
TPH as Diesel	48247-36	1.8	20.0	20.0	17.1	17.7	mg/Kg	M EPA 8015	2/9/06	78.8	81.3	3.18	60-140	25
TPH as Diesel	48247-27	<1.0	20.0	20.0	20.0	19.4	mg/Kg	M EPA 8015	2/8/06	99.8	97.3	2.56	60-140	25
TPH as Diesel	Blank	<50	1000	1000	793	887	ug/L	M EPA 8015	2/7/06	79.3	88.7	11.2	70-130	25
TPH as Diesel	Blank	<50	1000	1000	872	851	ug/L	M EPA 8015	2/8/06	87.2	85.1	2.40	70-130	25
TPH as Diesel	Blank	<50	1000	1000	867	865	ug/L	M EPA 8015	2/11/06	86.7	86.5	0.300	70-130	25
TPH as Diesel	48344-05	<1.0	20.0	20.0	17.4	20.8	mg/Kg	M EPA 8015	2/14/06	87.0	104	17.7	60-140	25
TPH as Diesel	48358-04	1.4	20.0	20.0	20.1	20.5	mg/Kg	M EPA 8015	2/15/06	94.1	95.9	1.90	60-140	25
Benzene Toluene Tert-Butanol Methyl-t-Butyl Ethe	48157-05 48157-05 48157-05 er 48157-05	<0.0050 <0.0050 <0.0050 <0.0050	0.0372 0.186	0.0366 0.0366 0.183 0.0366	0.0370 0.0357 0.178 0.0450	0.0343 0.0333 0.173 0.0423	mg/Kg mg/Kg	EPA 8260B EPA 8260B EPA 8260B EPA 8260B	2/7/06 2/7/06 2/7/06 2/7/06	99.5 96.1 95.6 121	93.7 91.0 94.4 115	5.95 5.50 1.19 4.71	70-130 70-130 70-130 70-130	25 25 25 25
Benzene	48247-36	<0.0050	0.0384	0.0398	0.0375	0.0386	mg/Kg	EPA 8260B	2/7/06	97.7	97.0	0.739	70-130	25

Approved By: Joe kiff

KIFF ANALYTICAL, LLC

#### Albany Hill Project Name :

Project Number :

Parameter	Spiked Sample	Sample Value	Spike Level	Spike Dup. Level	Spiked Sample Value	Duplicate Spiked Sample Value	e Units	Analysis Method	Date Analyzed	Spiked Sample Percent Recov.	Duplicat Spiked Sample Percent Recov.		Spiked Sample Percent Recov. Limit	Relative Percent Diff. Limit
Toluene	48247-36	<0.0050	0.0384	0.0398	0.0372	0.0382	mg/Kg	EPA 8260B	2/7/06	96.8	96.0	0.832	70-130	25
Tert-Butanol	48247-36	<0.0050	0.192	0.199	0.183	0.187	mg/Kg	EPA 8260B	2/7/06	95.4	94.1	1.42	70-130	25
Methyl-t-Butyl Ethe	er 48247-36	<0.0050	0.0384	0.0398	0.0373	0.0388	mg/Kg	EPA 8260B	2/7/06	97.1	97.6	0.604	70-130	25
Benzene	48247-37	<0.0050	0.0389	0.0380	0.0385	0.0336	mg/Kg	EPA 8260B	2/8/06	98.9	88.3	11.3	70-130	25
Toluene	48247-37	<0.0050	0.0389	0.0380	0.0389	0.0336	mg/Kg	EPA 8260B	2/8/06	100	88.4	12.3	70-130	25
Tert-Butanol	48247-37	<0.0050	0.194	0.190	0.166	0.168	mg/Kg	EPA 8260B	2/8/06	85.6	88.4	3.17	70-130	25
Methyl-t-Butyl Ethe	er 48247-37	<0.0050	0.0389	0.0380	0.0434	0.0390	mg/Kg	EPA 8260B	2/8/06	111	103	8.14	70-130	25
Benzene	48276-03	<0.0050	0.0398	0.0368	0.0290	0.0300	mg/Kg	EPA 8260B	2/9/06	73.1	81.5	10.9	70-130	25
Toluene	48276-03	<0.0050	0.0398	0.0368	0.0270	0.0278	mg/Kg	EPA 8260B	2/9/06	67.8	75.8	11.1	70-130	25
Tert-Butanol	48276-03	<0.0050	0.199	0.184	0.181	0.167	mg/Kg	EPA 8260B	2/9/06	91.0	90.8	0.287	70-130	25
Methyl-t-Butyl Ethe	er 48276-03	<0.0050	0.0398	0.0368	0.0359	0.0351	mg/Kg	EPA 8260B	2/9/06	90.3	95.4	5.52	70-130	25
Benzene	48259-03	<0.0050	0.0995	0.0990	0.0926	0.0953	mg/Kg	EPA 8260B	2/9/06	93.0	96.3	3.42	70-130	25
Toluene	48259-03	0.021	0.0995	0.0990	0.0996	0.120	mg/Kg	EPA 8260B	2/9/06	78.7	99.2	23.0	70-130	25
Tert-Butanol	48259-03	0.048	0.498	0.495	0.505	0.516	mg/Kg	EPA 8260B	2/9/06	91.9	94.6	2.93	70-130	25
Methyl-t-Butyl Ethe	er 48259-03	0.060	0.0995	0.0990	0.144	0.189	mg/Kg	EPA 8260B	2/9/06	84.5	130	42.7	70-130	25
Benzene	48252-01	<0.50	40.0	40.0	40.6	39.7	ug/L	EPA 8260B	2/7/06	101	99.3	2.08	70-130	25
Toluene	48252-01	<0.50	40.0	40.0	37.8	37.1	ug/L	EPA 8260B	2/7/06	94.6	92.7	1.98	70-130	25
Tert-Butanol	48252-01	<5.0	200	200	190	196	ug/L	EPA 8260B	2/7/06	95.3	98.3	3.12	70-130	25
Methyl-t-Butyl Ethe	er 48252-01	<0.50	40.0	40.0	43.5	42.3	ug/L	EPA 8260B	2/7/06	109	106	2.86	70-130	25
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KIFF ANALYTICAL, LLC

Approved By: Joel Kiff 2795 2nd St, Suite 300 Davis, CA 95616 530-297-4800

Project Number :

Parameter	Spiked Sample	Sample Value	Spike Level	Spike Dup. Level	Spiked Sample Value	Duplicate Spiked Sample Value	e Units	Analysis Method	Date Analyzed	Percent	Duplicat Spiked Sample Percent Recov.	Relative	Spiked Sample Percent Recov. Limit	Relative Percent Diff. Limit
Benzene	48253-01	<0.50	40.0	40.0	39.4	38.3	ug/L	EPA 8260B	2/8/06	98.5	95.7	2.92	70-130	25
Toluene	48253-01	<0.50	40.0	40.0	36.8	35.7	ug/L	EPA 8260B	2/8/06	91.9	89.3	2.90	70-130	25
Tert-Butanol	48253-01	<5.0	200	200	197	191	ug/L	EPA 8260B	2/8/06	98.4	95.3	3.17	70-130	25
Methyl-t-Butyl Eth	er 48253-01	8.8	40.0	40.0	51.4	50.8	ug/L	EPA 8260B	2/8/06	106	105	1.39	70-130	25

Approved By: Joel Kiff

KIFF ANALYTICAL, LLC

Project Number :

Parameter	Spike Level	Units	Analysis Method	Date Analyzed	LCS Percent Recov.	LCS Percent Recov. Limit
TPH as Diesel	20.0	mg/Kg	M EPA 8015	2/9/06	92.2	70-130
TPH as Diesel	20.0	mg/Kg	M EPA 8015	2/9/06	89.6	70-130
TPH as Diesel	20.0	mg/Kg	M EPA 8015	2/8/06	99.2	70-130
TPH as Diesel	20.0	mg/Kg	M EPA 8015	2/14/06	102	70-130
TPH as Diesel	20.0	mg/Kg	M EPA 8015	2/15/06	87.2	70-130
Benzene	0.0387	mg/Kg	EPA 8260B	2/7/06	101	70-130
Toluene	0.0387	mg/Kg	EPA 8260B	2/7/06	95.4	70-130
Tert-Butanol	0.193	mg/Kg	EPA 8260B	2/7/06	96.8	70-130
Methyl-t-Butyl Ether	0.0387	mg/Kg	EPA 8260B	2/7/06	108	70-130
Benzene	0.0385	mg/Kg	EPA 8260B	2/7/06	99.8	70-130
Toluene	0.0385	mg/Kg	EPA 8260B	2/7/06	98.6	70-130
Tert-Butanol	0.193	mg/Kg	EPA 8260B	2/7/06	92.3	70-130
Methyl-t-Butyl Ether	0.0385	mg/Kg	EPA 8260B	2/7/06	97.4	70-130



KIFF ANALYTICAL, LLC

Joel Kiff

Approved By:

#### Project Name : Albany Hill

Project Number :

Parameter	Spike Level	Units	Analysis Method	Date Analyzed	LCS Percent Recov.	LCS Percent Recov. Limit
Benzene	0.0380	mg/Kg	EPA 8260B	2/8/06	99.4	70-130
Toluene	0.0380	mg/Kg	EPA 8260B	2/8/06	99.2	70-130
Tert-Butanol	0.190	mg/Kg	EPA 8260B	2/8/06	89.9	70-130
Methyl-t-Butyl Ether	0.0380	mg/Kg	EPA 8260B	2/8/06	103	70-130
Benzene	0.0393	mg/Kg	EPA 8260B	2/8/06	86.6	70-130
Toluene	0.0393	mg/Kg	EPA 8260B	2/8/06	82.6	70-130
Tert-Butanol	0.196	mg/Kg	EPA 8260B	2/8/06	93.6	70-130
Methyl-t-Butyl Ether	0.0393	mg/Kg	EPA 8260B	2/8/06	90.4	70-130
Benzene	0.0398	mg/Kg	EPA 8260B	2/9/06	97.4	70-130
Toluene	0.0398	mg/Kg	EPA 8260B	2/9/06	91.7	70-130
Tert-Butanol	0.199	mg/Kg	EPA 8260B	2/9/06	96.5	70-130
Methyl-t-Butyl Ether	0.0398	mg/Kg	EPA 8260B	2/9/06	108	70-130
Benzene	40.0	ug/L	EPA 8260B	2/7/06	94.3	70-130
Toluene	40.0	ug/L	EPA 8260B	2/7/06	92.3	70-130
Tert-Butanol	200	ug/L	EPA 8260B	2/7/06	88.9	70-130
Methyl-t-Butyl Ether	40.0	ug/L	EPA 8260B	2/7/06	104	70-130
Benzene	40.0	ug/L	EPA 8260B	2/8/06	93.7	70-130
Toluene	40.0	ug/L	EPA 8260B	2/8/06	91.7	70-130
		0				

KIFF ANALYTICAL, LLC

#### **QC Report : Laboratory Control Sample (LCS)**

Project Name : Albany Hill

Project Number :

Parameter	Spike Level	Units	Analysis Method	Date Analyzed	LCS Percent Recov.	LCS Percent Recov. Limit
Tert-Butanol	200	ug/L	EPA 8260B	2/8/06	95.2	70-130
Methyl-t-Butyl Ether	40.0	ug/L	EPA 8260B	2/8/06	105	70-130





208 W. El Pintado Road Danville, CA 94526 (925) 820-9391 FAX (925) 837-4853



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## 48247 Chain of Custody

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208 W. El Pintado Road Danville, CA 94526 (925) 820-9391 FAX (925) 837-4853



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# Chain of Custody

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48247 Chain of Custody

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Report Number : 48331 Date : 2/16/2006

Robert Kitay Aqua Science Engineers, Inc. 208 West El Pintado Rd. Danville, CA 94526

Subject : 11 Soil Samples and 2 Water Samples Project Name : Albany Hill Project Number :

Dear Mr. Kitay,

Chemical analysis of the samples referenced above has been completed. Summaries of the data are contained on the following pages. Sample(s) were received under documented chain-of-custody. US EPA protocols for sample storage and preservation were followed.

Kiff Analytical is certified by the State of California (# 2236). If you have any questions regarding procedures or results, please call me at 530-297-4800.

Sincerely,

n l bel Kiff



Report Number : 48331 Date : 2/16/2006

Subject :11 Soil Samples and 2 Water SamplesProject Name :Albany HillProject Number :

### **Case Narrative**

The Method Reporting Limit for TPH as Diesel is increased due to interference from Gasoline-Range Hydrocarbons for sample BH-X-32-34.

Hydrocarbons reported as TPH as Diesel do not exhibit a typical diesel chromatographic pattern for samples BH-W-10.0 and BH-X-20.5. These hydrocarbons are lower boiling than typical diesel fuel.

Matrix Spike/Matrix Spike Duplicate Results associated with sample BH-X-20.5 for the analyte Methyl-t-butyl ether were affected by the analyte concentrations already present in the un-spiked sample.

Matrix Spike/Matrix Spike Duplicate Results associated with sample for the analyte Toluene were outside of control limits. This may indicate a bias for the sample that was spiked. Since the LCS recoveries were within control limits, no data are flagged.

		Approved By:	Jour Will
2795 2nd St, Suite 300	Davis, CA 95616	530-297-4800	Jde Kiff



Project Number :

Report Number : 48331 Date : 2/16/2006

Sample : BH-W-10.0		Matrix : S	Soil	Lab Number : 48	331-02
Sample Date :2/6/2006					
Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	0.088	0.0050	mg/Kg	EPA 8260B	2/11/2006
Toluene	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/11/2006
Ethylbenzene	0.34	0.0050	mg/Kg	EPA 8260B	2/11/2006
Total Xylenes	0.12	0.0050	mg/Kg	EPA 8260B	2/11/2006
Methyl-t-butyl ether (MTBE)	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/11/2006
Diisopropyl ether (DIPE)	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/11/2006
Ethyl-t-butyl ether (ETBE)	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/11/2006
Tert-amyl methyl ether (TAME)	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/11/2006
Tert-Butanol	0.017	0.015	mg/Kg	EPA 8260B	2/11/2006
TPH as Gasoline	17	1.0	mg/Kg	EPA 8260B	2/11/2006
Toluene - d8 (Surr)	99.9		% Recovery	EPA 8260B	2/11/2006
4-Bromofluorobenzene (Surr)	103		% Recovery	EPA 8260B	2/11/2006
TPH as Diesel (Silica Gel)	7.5	1.0	mg/Kg	M EPA 8015	2/13/2006
1-Chlorooctadecane (Silica Gel Surr)	87.3		% Recovery	M EPA 8015	2/13/2006

	$\rangle$	pul W	4
Approved By:	Joel	Kiff	
2795 2nd St., Suite 300 Davis, CA 95616 530-29	97-4800	J	



Project Number :

Sample : BH-W-15.0		Matrix : S	Soil	Lab Number : 48331-03	
Sample Date :2/6/2006					
Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/10/2006
Toluene	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/10/2006
Ethylbenzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/10/2006
Total Xylenes	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/10/2006
Methyl-t-butyl ether (MTBE)	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/10/2006
Diisopropyl ether (DIPE)	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/10/2006
Ethyl-t-butyl ether (ETBE)	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/10/2006
Tert-amyl methyl ether (TAME)	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/10/2006
Tert-Butanol	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/10/2006
TPH as Gasoline	< 1.0	1.0	mg/Kg	EPA 8260B	2/10/2006
Toluene - d8 (Surr)	99.2		% Recovery	EPA 8260B	2/10/2006
4-Bromofluorobenzene (Surr)	95.5		% Recovery	EPA 8260B	2/10/2006
TPH as Diesel (Silica Gel)	< 1.0	1.0	mg/Kg	M EPA 8015	2/13/2006
1-Chlorooctadecane (Silica Gel Surr)	92.8		% Recovery	M EPA 8015	2/13/2006

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Approved By:	Joe	I Kiff	
2795 2nd St., Suite 300 Davis, CA 95616 530-29	97-4800	J	



Project Number :

Sample : BH-W-20.0		Matrix : Soil		Lab Number : 48331-04	
Sample Date :2/6/2006		Mathaad			
Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/11/2006
Toluene	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/11/2006
Ethylbenzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/11/2006
Total Xylenes	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/11/2006
Methyl-t-butyl ether (MTBE)	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/11/2006
Diisopropyl ether (DIPE)	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/11/2006
Ethyl-t-butyl ether (ETBE)	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/11/2006
Tert-amyl methyl ether (TAME)	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/11/2006
Tert-Butanol	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/11/2006
TPH as Gasoline	< 1.0	1.0	mg/Kg	EPA 8260B	2/11/2006
Toluene - d8 (Surr)	99.0		% Recovery	EPA 8260B	2/11/2006
4-Bromofluorobenzene (Surr)	94.0		% Recovery	EPA 8260B	2/11/2006
TPH as Diesel (Silica Gel)	< 1.0	1.0	mg/Kg	M EPA 8015	2/13/2006
1-Chlorooctadecane (Silica Gel Surr)	93.7		% Recovery	M EPA 8015	2/13/2006

	Jul vill	
Approved By:	Joel Kiff	
2795 2nd St., Suite 300 Davis, CA 95616 530-29	07-4800	



Project Number :

Sample : BH-W-30.0		Matrix : Soil		Lab Number : 48331-06	
Sample Date :2/6/2006					
Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/10/2006
Toluene	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/10/2006
Ethylbenzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/10/2006
Total Xylenes	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/10/2006
Methyl-t-butyl ether (MTBE)	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/10/2006
Diisopropyl ether (DIPE)	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/10/2006
Ethyl-t-butyl ether (ETBE)	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/10/2006
Tert-amyl methyl ether (TAME)	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/10/2006
Tert-Butanol	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/10/2006
TPH as Gasoline	< 1.0	1.0	mg/Kg	EPA 8260B	2/10/2006
Toluene - d8 (Surr)	99.2		% Recovery	EPA 8260B	2/10/2006
4-Bromofluorobenzene (Surr)	102		% Recovery	EPA 8260B	2/10/2006
TPH as Diesel (Silica Gel)	< 1.0	1.0	mg/Kg	M EPA 8015	2/13/2006
1-Chlorooctadecane (Silica Gel Surr)	103		% Recovery	M EPA 8015	2/13/2006

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Approved By:	Joel	Kiff	
2795 2nd St., Suite 300 Davis, CA 95616 530-297-48	воо (	)	



Project Number :

Sample : BH-W-40.0		Matrix : S	Soil	Lab Number : 48331-08	
Sample Date :2/6/2006					
Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/11/2006
Toluene	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/11/2006
Ethylbenzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/11/2006
Total Xylenes	0.0084	0.0050	mg/Kg	EPA 8260B	2/11/2006
Methyl-t-butyl ether (MTBE)	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/11/2006
Diisopropyl ether (DIPE)	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/11/2006
Ethyl-t-butyl ether (ETBE)	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/11/2006
Tert-amyl methyl ether (TAME)	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/11/2006
Tert-Butanol	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/11/2006
TPH as Gasoline	< 1.0	1.0	mg/Kg	EPA 8260B	2/11/2006
Toluene - d8 (Surr)	111		% Recovery	EPA 8260B	2/11/2006
4-Bromofluorobenzene (Surr)	98.0		% Recovery	EPA 8260B	2/11/2006
TPH as Diesel (Silica Gel)	< 1.0	1.0	mg/Kg	M EPA 8015	2/13/2006
1-Chlorooctadecane (Silica Gel Surr)	91.3		% Recovery	M EPA 8015	2/13/2006

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Approved By:	Joel	Kiff	
2795 2nd St., Suite 300 Davis, CA 95616 530-29	97-4800	)	



Project Number :

Sample : <b>BH-W-50.0</b>		Matrix : Soil		Lab Number : 48331-10	
Sample Date :2/6/2006					
Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/11/2006
Toluene	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/11/2006
Ethylbenzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/11/2006
Total Xylenes	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/11/2006
Methyl-t-butyl ether (MTBE)	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/11/2006
Diisopropyl ether (DIPE)	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/11/2006
Ethyl-t-butyl ether (ETBE)	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/11/2006
Tert-amyl methyl ether (TAME)	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/11/2006
Tert-Butanol	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/11/2006
TPH as Gasoline	< 1.0	1.0	mg/Kg	EPA 8260B	2/11/2006
Toluene - d8 (Surr)	100		% Recovery	EPA 8260B	2/11/2006
4-Bromofluorobenzene (Surr)	101		% Recovery	EPA 8260B	2/11/2006
TPH as Diesel (Silica Gel)	< 1.0	1.0	mg/Kg	M EPA 8015	2/13/2006
1-Chlorooctadecane (Silica Gel Surr)	92.9		% Recovery	M EPA 8015	2/13/2006

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Approved By:	Joel Kiff	ll.
2795 2nd St., Suite 300 Davis, CA 95616 530-29	7-4800	



Project Number :

Sample : BH-W-30-32		Matrix : V	Nater	Lab Number : 48331-11	
Sample Date :2/6/2006		Method			
Parameter	Measured Value	Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	1.2	0.50	ug/L	EPA 8260B	2/13/2006
Toluene	1.2	0.50	ug/L	EPA 8260B	2/13/2006
Ethylbenzene	6.2	0.50	ug/L	EPA 8260B	2/13/2006
Total Xylenes	20	0.50	ug/L	EPA 8260B	2/13/2006
Methyl-t-butyl ether (MTBE)	0.77	0.50	ug/L	EPA 8260B	2/13/2006
Diisopropyl ether (DIPE)	< 0.50	0.50	ug/L	EPA 8260B	2/13/2006
Ethyl-t-butyl ether (ETBE)	< 0.50	0.50	ug/L	EPA 8260B	2/13/2006
Tert-amyl methyl ether (TAME)	< 0.50	0.50	ug/L	EPA 8260B	2/13/2006
Tert-Butanol	< 5.0	5.0	ug/L	EPA 8260B	2/13/2006
TPH as Gasoline	310	50	ug/L	EPA 8260B	2/13/2006
Toluene - d8 (Surr)	91.4		% Recovery	EPA 8260B	2/13/2006
4-Bromofluorobenzene (Surr)	101		% Recovery	EPA 8260B	2/13/2006
TPH as Diesel (Silica Gel)	< 50	50	ug/L	M EPA 8015	2/15/2006
Octacosane (Diesel Surrogate)	87.8		% Recovery	M EPA 8015	2/15/2006

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Project Number :

Sample : BH-X-10.5		Matrix : S	Soil	Lab Number : 48	3331-13
Sample Date :2/7/2006					
Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	0.018	0.0050	mg/Kg	EPA 8260B	2/11/2006
Toluene	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/11/2006
Ethylbenzene	0.030	0.0050	mg/Kg	EPA 8260B	2/11/2006
Total Xylenes	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/11/2006
Methyl-t-butyl ether (MTBE)	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/11/2006
Diisopropyl ether (DIPE)	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/11/2006
Ethyl-t-butyl ether (ETBE)	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/11/2006
Tert-amyl methyl ether (TAME)	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/11/2006
Tert-Butanol	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/11/2006
TPH as Gasoline	< 1.0	1.0	mg/Kg	EPA 8260B	2/11/2006
Toluene - d8 (Surr)	100		% Recovery	EPA 8260B	2/11/2006
4-Bromofluorobenzene (Surr)	103		% Recovery	EPA 8260B	2/11/2006
TPH as Diesel (Silica Gel)	< 1.0	1.0	mg/Kg	M EPA 8015	2/13/2006
1-Chlorooctadecane (Silica Gel Surr)	91.6		% Recovery	M EPA 8015	2/13/2006

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Project Number :

Sample : BH-X-15.0		Matrix :	Soil	Lab Number : 48	3331-14
Sample Date :2/7/2006		Mathad			
Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/11/2006
Toluene	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/11/2006
Ethylbenzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/11/2006
Total Xylenes	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/11/2006
Methyl-t-butyl ether (MTBE)	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/11/2006
Diisopropyl ether (DIPE)	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/11/2006
Ethyl-t-butyl ether (ETBE)	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/11/2006
Tert-amyl methyl ether (TAME)	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/11/2006
Tert-Butanol	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/11/2006
TPH as Gasoline	< 1.0	1.0	mg/Kg	EPA 8260B	2/11/2006
Toluene - d8 (Surr)	110		% Recovery	EPA 8260B	2/11/2006
4-Bromofluorobenzene (Surr)	97.9		% Recovery	EPA 8260B	2/11/2006
TPH as Diesel (Silica Gel)	< 1.0	1.0	mg/Kg	M EPA 8015	2/13/2006
1-Chlorooctadecane (Silica Gel Surr)	92.6		% Recovery	M EPA 8015	2/13/2006

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Project Number :

Sample : BH-X-20.5		Matrix :	Soil	Lab Number : 48	331-15
Sample Date :2/7/2006					
Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	0.018	0.0050	mg/Kg	EPA 8260B	2/14/2006
Toluene	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/14/2006
Ethylbenzene	0.11	0.0050	mg/Kg	EPA 8260B	2/14/2006
Total Xylenes	0.26	0.0050	mg/Kg	EPA 8260B	2/14/2006
Methyl-t-butyl ether (MTBE)	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/14/2006
Diisopropyl ether (DIPE)	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/14/2006
Ethyl-t-butyl ether (ETBE)	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/14/2006
Tert-amyl methyl ether (TAME)	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/14/2006
Tert-Butanol	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/15/2006
TPH as Gasoline	5.8	1.0	mg/Kg	EPA 8260B	2/14/2006
Toluene - d8 (Surr)	101		% Recovery	EPA 8260B	2/14/2006
4-Bromofluorobenzene (Surr)	94.2		% Recovery	EPA 8260B	2/14/2006
TPH as Diesel (Silica Gel)	3.1	1.0	mg/Kg	M EPA 8015	2/14/2006
1-Chlorooctadecane (Silica Gel Surr)	98.4		% Recovery	M EPA 8015	2/14/2006

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Project Number :

Sample : BH-X-30.5		Matrix : S	Soil	Lab Number : 4	8331-17
Sample Date :2/7/2006					
Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/11/2006
Toluene	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/11/2006
Ethylbenzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/11/2006
Total Xylenes	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/11/2006
Methyl-t-butyl ether (MTBE)	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/11/2006
Diisopropyl ether (DIPE)	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/11/2006
Ethyl-t-butyl ether (ETBE)	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/11/2006
Tert-amyl methyl ether (TAME)	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/11/2006
Tert-Butanol	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/11/2006
TPH as Gasoline	< 1.0	1.0	mg/Kg	EPA 8260B	2/11/2006
Toluene - d8 (Surr)	99.5		% Recovery	EPA 8260B	2/11/2006
4-Bromofluorobenzene (Surr)	99.0		% Recovery	EPA 8260B	2/11/2006
TPH as Diesel (Silica Gel)	< 1.0	1.0	mg/Kg	M EPA 8015	2/13/2006
1-Chlorooctadecane (Silica Gel Surr)	92.5		% Recovery	M EPA 8015	2/13/2006

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Project Number :

Sample : BH-X-40.0		Matrix :	Soil	Lab Number : 48	3331-19
Sample Date :2/7/2006		Mathaad			
Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/11/2006
Toluene	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/11/2006
Ethylbenzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/11/2006
Total Xylenes	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/11/2006
Methyl-t-butyl ether (MTBE)	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/11/2006
Diisopropyl ether (DIPE)	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/11/2006
Ethyl-t-butyl ether (ETBE)	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/11/2006
Tert-amyl methyl ether (TAME)	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/11/2006
Tert-Butanol	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/11/2006
TPH as Gasoline	< 1.0	1.0	mg/Kg	EPA 8260B	2/11/2006
Toluene - d8 (Surr)	100		% Recovery	EPA 8260B	2/11/2006
4-Bromofluorobenzene (Surr)	101		% Recovery	EPA 8260B	2/11/2006
TPH as Diesel (Silica Gel)	< 1.0	1.0	mg/Kg	M EPA 8015	2/13/2006
1-Chlorooctadecane (Silica Gel Surr)	93.8		% Recovery	M EPA 8015	2/13/2006

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Project Number :

Sample : BH-X-32-34		Matrix : V	Water	Lab Number : 48	331-21
Sample Date :2/7/2006 Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	36	1.5	ug/L	EPA 8260B	2/13/2006
Toluene	4.9	1.5	ug/L	EPA 8260B	2/13/2006
Ethylbenzene	200	1.5	ug/L	EPA 8260B	2/13/2006
Total Xylenes	560	1.5	ug/L	EPA 8260B	2/13/2006
Methyl-t-butyl ether (MTBE)	< 1.5	1.5	ug/L	EPA 8260B	2/13/2006
Diisopropyl ether (DIPE)	< 1.5	1.5	ug/L	EPA 8260B	2/13/2006
Ethyl-t-butyl ether (ETBE)	< 1.5	1.5	ug/L	EPA 8260B	2/13/2006
Tert-amyl methyl ether (TAME)	< 1.5	1.5	ug/L	EPA 8260B	2/13/2006
Tert-Butanol	< 7.0	7.0	ug/L	EPA 8260B	2/13/2006
TPH as Gasoline	6300	150	ug/L	EPA 8260B	2/13/2006
Toluene - d8 (Surr)	98.2		% Recovery	EPA 8260B	2/13/2006
4-Bromofluorobenzene (Surr)	103		% Recovery	EPA 8260B	2/13/2006
TPH as Diesel (Silica Gel)	< 500	500	ug/L	M EPA 8015	2/15/2006
Octacosane (Diesel Surrogate)	89.0		% Recovery	M EPA 8015	2/15/2006

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### **QC Report : Method Blank Data**

## Project Name : Albany Hill

Project Number :

Parameter	Measured Value	Method Reportin Limit	g Units	Analysis Method	Date Analyzed
TPH as Diesel (Silica Gel)	< 1.0	1.0	mg/Kg	M EPA 8015	2/13/2006
1-Chlorooctadecane (Silica Gel Surr)	80.7		%	M EPA 8015	2/13/2006
TPH as Diesel (Silica Gel)	< 50	50	ug/L	M EPA 8015	2/15/2006
Octacosane (Diesel Surrogate)	83.0		%	M EPA 8015	2/15/2006
Benzene Toluene Ethylbenzene Total Xylenes Methyl-t-butyl ether (MTBE) Diisopropyl ether (DIPE) Ethyl-t-butyl ether (ETBE) Tert-amyl methyl ether (TAME) Tert-Butanol TPH as Gasoline Toluene - d8 (Surr) 4-Bromofluorobenzene (Surr)	< 0.0050 < 0.0050 < 0.0050 < 0.0050 < 0.0050 < 0.0050 < 0.0050 < 0.0050 < 0.0050 < 1.0 112 96.7	0.0050 0.0050 0.0050 0.0050 0.0050 0.0050 0.0050 0.0050 0.0050 1.0	mg/Kg mg/Kg mg/Kg mg/Kg mg/Kg mg/Kg mg/Kg mg/Kg % %	EPA 8260B EPA 8260B	2/10/2006 2/10/2006 2/10/2006 2/10/2006 2/10/2006 2/10/2006 2/10/2006 2/10/2006 2/10/2006 2/10/2006 2/10/2006
Benzene Toluene Ethylbenzene Total Xylenes Methyl-t-butyl ether (MTBE) Diisopropyl ether (DIPE) Ethyl-t-butyl ether (ETBE) Tert-amyl methyl ether (TAME) Tert-Butanol TPH as Gasoline Toluene - d8 (Surr) 4-Bromofluorobenzene (Surr)	< 0.0050 < 0.0050 < 0.0050 < 0.0050 < 0.0050 < 0.0050 < 0.0050 < 0.0050 < 1.0 99.1 92.2	0.0050 0.0050 0.0050 0.0050 0.0050 0.0050 0.0050 0.0050 1.0	mg/Kg mg/Kg mg/Kg mg/Kg mg/Kg mg/Kg mg/Kg mg/Kg mg/Kg %	EPA 8260B EPA 8260B	2/11/2006 2/11/2006 2/11/2006 2/11/2006 2/11/2006 2/11/2006 2/11/2006 2/11/2006 2/11/2006 2/11/2006 2/11/2006

Parameter	Measured Value	Method Reportin Limit	ig Units	Analysis Method	Date Analyzed
Benzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/13/2006
Toluene	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/13/2006
Ethylbenzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/13/2006
Total Xylenes	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/13/2006
Methyl-t-butyl ether (MTBE)	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/13/2006
Diisopropyl ether (DIPE)	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/13/2006
Ethyl-t-butyl ether (ETBE)	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/13/2006
Tert-amyl methyl ether (TAME)	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/13/2006
			0 0		
TPH as Gasoline	< 1.0	1.0	mg/Kg	EPA 8260B	2/13/2006
Toluene - d8 (Surr)	99.0		%	EPA 8260B	2/13/2006
4-Bromofluorobenzene (Surr)	92.7		%	EPA 8260B	2/13/2006
Benzene	< 0.50	0.50	ug/L	EPA 8260B	2/13/2006
Toluene	< 0.50	0.50	ug/L	EPA 8260B	2/13/2006
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	2/13/2006
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	2/13/2006
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	2/13/2006
Diisopropyl ether (DIPE)	< 0.50	0.50	ug/L	EPA 8260B	2/13/2006
Ethyl-t-butyl ether (ETBE)	< 0.50	0.50	ug/L	EPA 8260B	2/13/2006
Tert-amyl methyl ether (TAME)	< 0.50	0.50	ug/L	EPA 8260B	2/13/2006
Tert-Butanol	< 5.0	5.0	ug/L	EPA 8260B	2/13/2006
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	2/13/2006
Toluene - d8 (Surr)	109		%	EPA 8260B	2/13/2006
4-Bromofluorobenzene (Surr)	102		%	EPA 8260B	2/13/2006

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### **QC Report : Method Blank Data**

## Project Name : Albany Hill

Project Number :

Parameter	Measured Value	Method Reporting Limit	g Units	Analysis Method	Date Analyzed
Tert-Butanol	< 0.0050	0.0050	mg/Kg	EPA 8260B	2/14/2006
Benzene	< 0.50	0.50	ug/L	EPA 8260B	2/13/2006
Toluene	< 0.50	0.50	ug/L	EPA 8260B	2/13/2006
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	2/13/2006
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	2/13/2006
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	2/13/2006
Diisopropyl ether (DIPE)	< 0.50	0.50	ug/L	EPA 8260B	2/13/2006
Ethyl-t-butyl ether (ETBE)	< 0.50	0.50	ug/L	EPA 8260B	2/13/2006
Tert-amyl methyl ether (TAME)	< 0.50	0.50	ug/L	EPA 8260B	2/13/2006
Tert-Butanol	< 5.0	5.0	ug/L	EPA 8260B	2/13/2006
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	2/13/2006
Toluene - d8 (Surr)	91.1		%	EPA 8260B	2/13/2006
4-Bromofluorobenzene (Surr)	102		%	EPA 8260B	2/13/2006

Report Number : 48331 Date : 2/16/2006

		Method			
	Measured	Reporti	ng	Analysis	Date
Parameter	Value	Limit	Units	Method	Analyzed

Approved By: Joel Kiff

KIFF ANALYTICAL, LLC

Project Number :

Parameter	Spiked Sample	Sample Value	Spike Level	Spike Dup. Level	Spiked Sample Value	Duplicate Spiked Sample Value	e Units	Analysis Method	Date Analyzec	Spiked Sample Percent I Recov.	Duplicat Spiked Sample Percent Recov.	Relative	Spiked Sample Percent Recov. Limit	Relative Percent Diff. Limit
TPH as Diesel	48330-06	1.3	20.0	20.0	18.8	19.5	mg/Kg	M EPA 8015	2/13/06	88.3	91.5	3.62	60-140	25
TPH as Diesel	Blank	<50	1000	1000	774	738	ug/L	M EPA 8015	2/15/06	77.4	73.8	4.71	70-130	25
Benzene Toluene Tert-Butanol	48331-06 48331-06 48331-06	<0.0050 <0.0050 <0.0050	0.0400 0.200	0.0397 0.0397 0.198	0.0358 0.0402 0.181	0.0355 0.0396 0.169	mg/Kg mg/Kg mg/Kg	EPA 8260B EPA 8260B	2/10/06 2/10/06 2/10/06	89.5 100 90.6	89.5 99.8 85.1	0.0139 0.769 6.30	70-130 70-130 70-130	25 25 25
Methyl-t-Butyl Ethe		<0.0050		0.0397	0.0312	0.0312		EPA 8260B	2/10/06	77.9	78.6	0.886	70-130	25
Benzene	48344-14	<0.0050		0.0366	0.0354	0.0344	mg/Kg		2/11/06	95.1	94.0	1.15	70-130	25
Toluene	48344-14	< 0.0050		0.0366	0.0356	0.0344	mg/Kg		2/11/06	95.7	94.1	1.68	70-130	25
Tert-Butanol Methyl-t-Butyl Ethe	48344-14 er 48344-14	<0.0050 <0.0050		0.183 0.0366	0.171 0.0361	0.166 0.0345	mg/Kg mg/Kg	EPA 8260B EPA 8260B	2/11/06 2/11/06	92.2 97.1	90.7 94.3	1.69 2.87	70-130 70-130	25 25
Benzene	47977-11	<0.0050		0.0398	0.0369	0.0361	mg/Kg		2/13/06	92.8	90.6	2.38	70-130	25
Toluene	47977-11	< 0.0050	0.0398	0.0398	0.0358	0.0362	mg/Kg		2/13/06	90.0	90.8	0.779	70-130	25
Tert-Butanol Methyl-t-Butyl Ethe	47977-11 er 47977-11	0.16 0.060	0.199 0.0398	0.199 0.0398	0.349 0.0878	0.334 0.0741	mg/Kg mg/Kg		2/13/06 2/13/06	92.1 69.0	84.2 34.4	8.91 66.9	70-130 70-130	25 25
Benzene Toluene	48371-06 48371-06	<0.50 <0.50	39.8 39.8	39.9 39.9	39.4 39.2	38.6 38.6	ug/L ug/L	EPA 8260B EPA 8260B	2/13/06 2/13/06	98.8 98.3	96.8 96.8	2.10 1.60	70-130 70-130	25 25
Tert-Butanol	48371-06	<5.0	199	200	187	180	ug/L	EPA 8260B	2/13/06	93.7	90.2	3.78	70-130	25

Approved By: Joe kiff

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Project Number :

Parameter	Spiked Sample	Sample Value	Spike Level	Spike Dup. Level	Spiked Sample Value	Duplicate Spiked Sample Value	e Units	Analysis Method	Date Analyzed	Spiked Sample Percent Recov.	Duplicat Spiked Sample Percent Recov.	Relative	Spiked Sample Percent Recov. Limit	Relative Percent Diff. Limit
Methyl-t-Butyl Ethe	er 48371-06	<0.50	39.8	39.9	40.3	41.5	ug/L	EPA 8260B	2/13/06	101	104	2.67	70-130	25
Benzene Toluene Tert-Butanol Methyl-t-Butyl Ethe	48105-22 48105-22 48105-22 er 48105-22	<0.0050 0.019 0.072 0.065	0.0399 0.0399 0.200 0.0399	0.0396 0.0396 0.198 0.0396	0.0351 0.0449 0.235 0.0914	0.0343 0.0446 0.236 0.0806	mg/Kg mg/Kg mg/Kg mg/Kg		2/14/06 2/14/06 2/14/06 2/14/06	88.0 64.4 81.6 67.1	86.6 64.1 83.1 40.3	1.59 0.431 1.86 49.9		25 25 25 25
Benzene Toluene Tert-Butanol Methyl-t-Butyl Ethe	48359-08 48359-08 48359-08 er 48359-08	<0.50 <0.50 <5.0 <0.50	40.0 40.0 200 40.0	40.0 40.0 200 40.0	35.0 32.0 178 37.1	34.6 31.8 173 37.5	ug/L ug/L ug/L ug/L	EPA 8260B EPA 8260B EPA 8260B EPA 8260B	2/13/06 2/13/06 2/13/06 2/13/06	87.5 79.9 89.1 92.8	86.5 79.4 86.6 93.9	1.12 0.653 2.83 1.13	70-130 70-130 70-130 70-130	25 25 25 25

Approved By: Joe kiff

KIFF ANALYTICAL, LLC

Project Number :

Parameter	Spike Level	Units	Analysis Method	Date Analyzed	LCS Percent Recov.	LCS Percent Recov. Limit
TPH as Diesel	20.0	mg/Kg	M EPA 8015	2/13/06	87.9	70-130
Benzene	0.0388	mg/Kg	EPA 8260B	2/10/06	92.7	70-130
Toluene	0.0388	mg/Kg	EPA 8260B	2/10/06	104	70-130
Tert-Butanol	0.194	mg/Kg	EPA 8260B	2/10/06	90.8	70-130
Methyl-t-Butyl Ether	0.0388	mg/Kg	EPA 8260B	2/10/06	78.8	70-130
		-				
Benzene	0.0394	mg/Kg	EPA 8260B	2/11/06	95.9	70-130
Toluene	0.0394	mg/Kg	EPA 8260B	2/11/06	95.7	70-130
Tert-Butanol	0.197	mg/Kg	EPA 8260B	2/11/06	89.9	70-130
Methyl-t-Butyl Ether	0.0394	mg/Kg	EPA 8260B	2/11/06	95.3	70-130
Benzene	0.0400	mg/Kg	EPA 8260B	2/13/06	88.6	70-130
Toluene	0.0400	mg/Kg	EPA 8260B	2/13/06	94.9	70-130
Tert-Butanol	0.200	mg/Kg	EPA 8260B	2/13/06	84.6	70-130
Methyl-t-Butyl Ether	0.0400	mg/Kg	EPA 8260B	2/13/06	71.9	70-130
Benzene	40.0	ug/L	EPA 8260B	2/13/06	93.6	70-130
Toluene	40.0	ug/L	EPA 8260B	2/13/06	101	70-130
Tert-Butanol	200	ug/L	EPA 8260B	2/13/06	88.0	70-130
Methyl-t-Butyl Ether	40.0	ug/L	EPA 8260B	2/13/06	80.5	70-130

KIFF ANALYTICAL, LLC Approved By: Joel Kiff 2795 2nd St, Suite 300 Davis, CA 95616 530-297-4800

Project Number :

Parameter	Spike Level	Units	Analysis Method	Date Analyzed	LCS Percent Recov.	LCS Percent Recov. Limit
Benzene	0.0400	mg/Kg	EPA 8260B	2/14/06	93.0	70-130
Toluene	0.0400	mg/Kg	EPA 8260B	2/14/06	87.7	70-130
Tert-Butanol	0.200	mg/Kg	EPA 8260B	2/14/06	93.6	70-130
Methyl-t-Butyl Ether	0.0400	mg/Kg	EPA 8260B	2/14/06	104	70-130
Benzene	40.0	ug/L	EPA 8260B	2/13/06	95.9	70-130
Toluene	40.0	ug/L	EPA 8260B	2/13/06	89.4	70-130
Tert-Butanol	200	ug/L	EPA 8260B	2/13/06	90.7	70-130
Methyl-t-Butyl Ether	40.0	ug/L	EPA 8260B	2/13/06	110	70-130



KIFF ANALYTICAL, LLC

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SAMPLER (SIGN	ATURE)							JECT N RESS		Al	bang	#14						JOB NO			
ANAL*	CTIONS			NO. OF	PH-GAS / MTBE & BTEX	TPH-DIESEL W Silica Gel Cleanup	TPH-MINERAL SPIRITS W/ Silica Gel Cleanup	PURGEABLE HALOCARBONS	VOLATILE ORGANICS (EPA 8260)	BEMI-VOLATILE ORGANICS	OIL & GREASE	LUFT METALS (5)	CAM 17 METALS	PCBo & PESTICIDES	ORGANOPHOSPHORUS PESTICIDES	FUEL OXYGENATES	(TOTAL or DISSOLVED)	TPH-G/BTEX/5 0XY'S (EPA 8260)	D		
SAMPLE ID.	DATE <b>27-4</b>		MATRIX 5	SAMPLES	-H9T	TPH V Sil	H M M M M M M M	PUR	VOL (EPA	SEM	OIL	LUF1	CAN	PCB	OR( PEC	FUE	qd	TPH (EP/	апон 🗙		┢
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(printed name)	(da	ite)	(print	ed name)	(date	;)	(prin	ted nar	ne)	(date	e)		LIAN A		NSC-	m e) 620	100		AROUN		7011
Company- AS L			Comp	any-			Com	pany-					ipany- (PA	naly	tical			TANDARD	> 24 <b>Hr</b>	40 <b>h</b>	/ 2Hr

# **APPENDIX E**

Vapor Extraction Test Data

# ALBANY HILL VAPOR-EXTRACTION TEST DATA PERFORMED ON VE-2

DATE 03-27.06

TIME TEST BEGAN 0800

TIME TEST ENDED 1600

			1			(	00011	/		5			
OBSERV.	INITIAL	TIME	TIME	TIME	TIME	TIME	TIME	TIME	TIME	TIME	TIME	TIME	TIME
POINT	READING	0805	0900	1000	1100	1200	1300	1400	1500	1600			
VE-1	0	0	0	0	0	Ø	Ð	0	0	0			
VE-3	0	0	0	0	0	0	0	0	0	0			
MW-2	0	0	0	0	0	0	0	0	0	0			
MW-3	0	D	6	0	0	0	0	0	0	0			
MW-6	0	0	6	0	0	0	0	0	0	0			

## NEGATIVE PRESSURE (VACUUM) READINGS

# TREATMENT SYSTEM OPERATING PARAMETERS

		VACUUM ON VE-2 IN	AIRFLOW FROM	SOIL GAS	OVM
	TIME	INCHES OF WATER	VE-2 IN CFM	TEMPERATURE	READING
	0805	50	570	NM	0
	0900	40	0	66	140
	1000	40	0	NM	275
	1100	40	0	62	65
	1200	40	0	NM	78
	1300	40	0	62	75
	1400	40	0	NM	40
	1500	40	D	62	31
	1600	40	D	NM	12
L					-

WATER ELEVATION IN \	/E-2 AT START/END
6.75	16.50

GALLONS REMOVED FROM VE-2 DURING TEST

TIME AIRBAG SAMPLES WERE COLLECTED

# **APPENDIX F**

Analytical Report and Chain of Custody Forms For Vapor Extraction Test Sample



Aqua Science Engineers, Inc.	Client Project ID: Albany Hill	Date Sampled: 03/27/06
208 West El Pintado Road		Date Received: 03/28/06
Danville, CA 94526		Date Reported: 04/03/06
	Client P.O.:	Date Completed: 04/03/06

#### WorkOrder: 0603596

April 03, 2006

Dear David:

Enclosed are:

- 1). the results of 1 analyzed sample from your Albany Hill project,
- 2). a QC report for the above sample
- 3). a copy of the chain of custody, and
- 4). a bill for analytical services.

All analyses were completed satisfactorily and all QC samples were found to be within our control limits. If you have any questions please contact me. McCampbell Analytical Laboratories strives for excellence

in quality, service and cost. Thank you for your business and I look forward to working with you again.

Best regards,

Angela Rydelius, Lab Manager

	McCampbell	Analyti	ical, Inc.	al, Inc. 110 2nd Avenue South, #D7, Pacheco, CA 94553-55 Telephone : 925-798-1620 Fax : 925-798-1622 Website: www.mccampbell.com E-mail: main@mccampb										
Aqua Sci	ience Engineers, Inc.		Client Pro	ject ID: A			Date Sample		)6					
208 Wes	t El Pintado Road					Date Received: 03/28/06								
Danville,	, CA 94526		Client Cor	ntact: David	1 Rains		Date Extracted: 03/29/06							
			Client P.C	).:			Date Analyze	ed: 03/29/0	)6					
Extraction m	Gasoline ethod: SW5030B	Range (Cé	5-C12) Vola Analy	tile Hydroc	earbons as Gas SW8021B/8015Cm	soline with B	TEX and MTI							
Lab ID	Client ID	Matrix	TPH(g)	MTBE	Benzene	Toluene	Ethylbenzene	Work C Xylenes	Work Order: 0603596 Xylenes DF % SS					
001A	VE-INF-3/27/06	А	ND	ND	0.92	0.84	0.33	1.2	1	111				
						-								
Reporti	ing Limit for $DF = 1$ ;	А	25	2.5	0.25	0.25								
ND mea above	ans not detected at or the reporting limit	S	NA	NA	0.25 NA	0.25 NA	0.25	0.25	1	μg/L				

mg/Kg \* water and vapor samples are reported in µg/L, soil/sludge/solid samples in mg/kg, wipe samples in µg/wipe, product/oil/non-aqueous liquid samples in mg/L.

NA

NA

# cluttered chromatogram; sample peak coelutes with surrogate peak.

+The following descriptions of the TPH chromatogram are cursory in nature and McCampbell Analytical is not responsible for their interpretation: a) unmodified or weakly modified gasoline is significant; b) heavier gasoline range compounds are significant(aged gasoline?); c) lighter gasoline range compounds (the most mobile fraction) are significant; d) gasoline range compounds having broad chromatographic peaks are significant; biologically altered gasoline?; e) TPH pattern that does not appear to be derived from gasoline (stoddard solvent / mineral spirit?); f) one to a few isolated non-target peaks present; g) strongly aged gasoline or diesel range compounds are significant; h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~1 vol. % sediment; j) reporting limit raised due to high MTBE content; k) TPH pattern that does not appear to be derived from gasoline (aviation gas). m) no recognizable pattern.

DHS Certification No. 1644

Angela Rydelius, Lab Manager

NA

NA

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McCampbell An	alytical,	Inc.	<ul> <li>110 2nd Avenue South, #D7, Pacheco, CA 94553-5560</li> <li>Telephone : 925-798-1620 Fax : 925-798-1622</li> <li>Website: www.mccampbell.com E-mail: main@mccampbell.com</li> </ul>						
Aqua Science Engineers, Inc.	Clie	ent Project ID:		Date Sampled:					
208 West El Pintado Road				Date Received:	ceived: 03/28/06				
Danville, CA 94526	Clie	nt Contact: Da	03/29/06						
	Clie	nt P.O.:	03/29/06						
Extraction Method: SW5030B	Oxygenated	Volatile Organ Analytical Method	nics by P&T and ( SW8260B	GC/MS*	Work Orc	ler: 0603596			
Lab ID	0603596-00	1A							
Client ID Matrix	VE-INF-3/27 A	7/06			Reporting				
DF	1					1			
Compound	1		Concentration		S	А			
Compound		······	ug/kg	μg/L					
tert-Amyl methyl ether (TAME)					1				
	ND				NA	0.25			
t-Butyl alcohol (TBA)	ND				NA NA	0.25			
t-Butyl alcohol (TBA) Diisopropyl ether (DIPE)									
Diisopropyl ether (DIPE)	ND				NA	2.5			
Diisopropyl ether (DIPE) Ethyl tert-butyl ether (ETBE)	ND				NA	2.5 0.25			
	ND ND ND ND	urrogate Recov	/eries (%)		NA NA NA	2.5 0.25 0.25			
Diisopropyl ether (DIPE) Ethyl tert-butyl ether (ETBE)	ND ND ND ND	urrogate Recov	/eries (%)		NA NA NA	2.5 0.25 0.25			
Diisopropyl ether (DIPE) Ethyl tert-butyl ether (ETBE) Methyl-t-butyl ether (MTBE)	ND ND ND ND Su	Irrogate Recov	/eries (%)		NA NA NA	2.5 0.25 0.25			

ND means not detected above the reporting limit; N/A means analyte not applicable to this analysis.

# surrogate diluted out of range or surrogate coelutes with another peak.

h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than  $\sim 1$  vol. % sediment; j) sample diluted due to high organic content/matrix interference; k) reporting limit near, but not identical to our standard reporting limit due to variable Encore sample weight; m) reporting limit raised due to insufficient sample amount; n) results are reported on a dry weight basis; p) see attached narrative.

\_Angela Rydelius, Lab Manager



## QC SUMMARY REPORT FOR SW8021B/8015Cm

EPA Method: SW8021B/	8015Cm E	xtraction	SW5030	В	Batc	hID: 20979	)	Spiked Sample ID: 0603594-005A				
Analyte	Sample	e Spiked MS MSD		MSD	MS-MSD	LCS	LCSD	LCS-LCSD		e Criteria (%)		
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	LCS / LCSD		
TPH(btex) <sup>£</sup>	ND	60	100	109	8.64	98.9	98.7	0.170	70 - 130	70 - 130		
MTBE	ND	10	95.8	94.2	1.68	96.3	96.8	0.552	70 - 130	70 - 130		
Benzene	ND	10	95.3	94	1.32	94	95.3	1.45	70 - 130	70 - 130		
Toluene	ND	10	97.7	95.7	2.11	95.2	95.7	0.441	70 - 130	70 - 130		
Ethylbenzene	ND	10	96.9	95.5	1.55	95.1	95.9	0.849	70 - 130	70 - 130		
Xylenes	ND	30	89.7	90.7	1.11	89.3	89.3	0	70 - 130	70 - 130		
%SS:	115	10	107	106	0.965	108	109	0.880	70 - 130	70 - 130		
All target compounds in the M NONE	lethod Blank of thi	s extraction	batch were	e ND less th	an the method	RL with the	e following	exceptions:				

#### BATCH 20979 SUMMARY

Sample ID	Date Sampled	Date Extracted	Date Analyzed	Sample ID	Date Sampled	Date Extracted	Date Analyzed
0603596-001A	3/27/06 3:00 PM	3/29/06	3/29/06 12:55 AM				2 dio / mary200

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 \* (MS-Sample) / (Amount Spiked); RPD = 100 \* (MS - MSD) / ((MS + MSD) / 2).

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

 $\pounds$  TPH(btex) = sum of BTEX areas from the FID.

# cluttered chromatogram; sample peak coelutes with surrogate peak.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

DHS Certification No. 1644

QA/QC Officer



## QC SUMMARY REPORT FOR SW8260B

W.O. Sample Matrix: Air				QC Ma	WorkOrder: 0603596							
EPA Method: SW8260B	E	Extraction	: SW5030	В	Batc	hID: 20986	6	Spiked Sample ID: 0603594-005C				
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)			
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	LCS / LCSD		
tert-Amyl methyl ether (TAME)	ND	10	82.1	81.4	0.922	80.2	80.1	0.0847	70 - 130	70 - 130		
t-Butyl alcohol (TBA)	ND	50	111	114	2.57	106	102	3.90	70 - 130	70 - 130		
Diisopropyl ether (DIPE)	ND	10	103	104	0.970	102	100	1.50	70 - 130	70 - 130		
Ethyl tert-butyl ether (ETBE)	ND	10	90.6	90.7	0.132	87.5	87.3	0.151	70 - 130	70 - 130		
Methyl-t-butyl ether (MTBE)	ND	10	95.3	94.7	0.647	91.1	92.2	1.20	70 - 130	70 - 130		
%SS1:	101	10	103	104	0.644	102	102	0	70 - 130	70 - 130		
All target compounds in the Metho	od Blank of thi	s extractior	batch were	e ND less th	an the method	RL with the	e following	exceptions:		10 150		
NONE												

#### BATCH 20986 SUMMARY

Sample ID	Date Sampled	Date Extracted	Date Analyzed	Sample ID	Date Sampled	Date Extracted	Date Analyzed
0603596-001A	3/27/06 3:00 PM	3/29/06	3/29/06 2:08 PM				2 010 / 110/200

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 \* (MS-Sample) / (Amount Spiked); RPD = 100 \* (MS - MSD) / ((MS + MSD) / 2).

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

Laboratory extraction solvents such as methylene chloride and acetone may occasionally appear in the method blank at low levels.

DHS Certification No. 1644

<u>\_\_\_</u>QA/QC Officer

## McCampbell Analytical, Inc.



110 Second Avenue South, #D7 Pacheco, CA 94553-5560 (925) 798-1620

# **CHAIN-OF-CUSTODY RECORD**

Page 1 of 1

L¥ (925) 798-16	20			W	orkOre	der: 06	03596		Clie	entIl	D: A	SED		E	DF: N	0			
Report to: David Rains Aqua Science El 208 West El Pin Danville, CA 94	tado Road	TEL: FAX: ProjectNo: PO:	(925) 820-9391 (925) 837-4853 Albany Hill				Αqι 208	ia Scie West	Payab ence Er El Pint CA 945	ngine ado				D	equeste ate Red ate Pri	ceive	ed:	03/28	5 days 3/2006 3/2006
Sample ID	ClientSampID		Matrix	Collection Date	Hold	1	2	3	Re 4		sted	Tests 6	(See le	egend b 8	elow) 9		10	11	12
0603596-001	VE-INF-3/27/06		Air	03/27/2006		A	A					_							12

#### Test Legend:

1	5-OXYS_A
6	
11	

3
8

2 7 12

3	
5	

4	
9	

5	
10	

#### Prepared by: Kathleen Owen

#### **Comments:**

NOTE: Samples are discarded 60 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense.



208 W. El Pintado Road Danville, CA 94526 (925) 820-9391 FAX (925) 837-4853



Analytical Laboratory N	ame:		,										n	Ту	pe of	Anal	ysis	to b	e Pe	rfor	med	k	(	Othe	r	Tu	rnar	our	nd T	ime
Analytical Laboratory N Project Name: Alba Sampled by: David Sample ID VE - INF - 3/21 ] oc	Rains Sam Typ	Ssite ad ald a			Other	Sa	Meth	r Sig	nature	E) Samp Date	oling	Time { <b>5</b> 00	X X X X Y Y Y Y Y Y Y Y Y Y Y Y Y Y Y Y	0962 1 5/10												A Standard	1 day	day		Other
Relinquished by:		ate	T 28-a	Т	# c ïme 35	F	ontair Receir	ved		243		ate  28/106	Tim 444			Com	ic G H D	ts: E/* EAD	SPAC ORI	E AB	SENT DIN	LAB,	Outo	PRI	ESE					

# **APPENDIX G**

Ozone Sparging Test Data

# ALBANY HILL AIR SPARGE TEST DATA PERFORMED ON OS-2 POSITIVE PRESSURE (PSI)

## DATE 04-26-06

TIME TEST BEGIN 0940

OBSERV.	0940	TIME	TIME	TIME	TIME						
POINT	INITIAL	0945	1000	1100	1200	1300	1400	1500	1600	1630	
OS-1	0	0	0	0	Ø	6	6	6	0	0	
OS-3	0	0	0	0	0	Ø	Ø	0	0	0	
MW-2	0	0.15	0,15	0	0	0	0	0	0	0	
MW-3	0							terrative construction of north low construction			
MW-6	0	0	0	0	0	0	0	0	0	0	
VE-2	0	0	2.3	0.4	1.5	3.5	3.3	3.1	3.05	2,95	

# OTS AIR SPARGE TEST DATA PERFORMED ON OS-2

HELIUM (%)

OBSERV.	0940	TIME	TIME	TIME	TIME	TIME	TIME	TIME	TIME	TIME	TIME
POINT	INITIAL	0945	1000	1100	1200	1300	1400	1500	1600	(630	
OS-1	0	0	6	0	0	0	0	O	0	0	
OS-3	0	0	0.20	6.17	0.08	0.09	0.12	0.12	0.14	0.13	
MW-2	0	0	٥	0	0	NM	0	0	0	0	
MW-3	0	0	0.03?	0	0	0	D	0	υ	0	
MW-6	0	Ô	0	0	0.03?	0	٥	0	0	0	
VE-2	0	0	1.0	7,3	NM	NM	NM	NM	NM	NM	
VE-3	0	0	NM	0.047	0	0	0	0	0	0	

## **OPERATING PARAMETERS**

	0940	TIME									
ITEM	START	0945	1000	1100	1200	1300	1400	1500	1600	1630	
AIR COMPRESSOR PRESSURE (PSI)	52	50	40	35	32	20	20	19	19	18	
AIR COMPRESSOR FLOW (CFM)	3.5	3.5	3.5	3.5	3.0	BRO	FEN	CFM	GAU	OFE	
PRESSRE AT INJECTION WELL (PSI)	35	30	23	16	11	12	12	12	12	12	
HELIUM FLOW (CFH)	15	15	15	20	20	25	25	25	25	25	

NOTE 1 NOTE2 NOTE3

# DEPTH TO WATER (IN FEET)

		TIME									
WELL NAME	START	0945							1600		
MW-2		6.15							1		
MW-3		6.52							6.14		
MW-6		6.30							6.28		

## NM means not measured

NOTES :

 $\rightarrow$ 

- 1. AC IS RUNNING AF FULL BORE. CANNOT BET ANY ADDITIONAL PRESSURE FROM UNIT.
- 2. AT 1145 VAPORS COMING FROM VE-2 WERE MEASURED AT 683 W/ OVM.
- 3. AT 1150, ADJUSTED AC FLOW INTO WELL TO 3.0 CFM
- \* HELIUM METER WAS HOVERING @ 0.2-0.3 IN WELL, WITEN PROBE WAS REMOVED, METER WENT BACK TO 0.0

AT 1235, INCREASED HELIUM TO 25 CFH

- AT 1300, DID NOT V FOR HELIUMID MW-2 TO ALLOW FOR PRESSURE TO BUILD.
- AT 1220, THE FOTTING ON THE CEM FLOWMETER BROKE. RE-PLUMBED SYSTEM W/O FLOWMETER.

# **APPENDIX H**

Survey Data



CSS ENVIRONMENTAL SERVICES, INC. Managing Cost, Scope and Schedule 100 Galli Drive, Suite 1 Novato, CA 94949 Telephone: (415) 883-6203 Facsimile: (415) 883-6204

#### Site Positions

6364B Aqua Science - Albany Site Albany Hill Mini Mart 800 San Pablo Ave, Albany, CA

Horizontal Coordinate System:	North American 1983-CONUS Date:	04/26/06
Height System:	North American Vertical Datum 1988 Ortho. H	It. (GEOID99)
Project file:	6364 Aqua Science Fremont.spr	
Desired Horizontal Accuracy:	0.200Ft + 1ppm	
Desired Vertical Accuracy:	0.300Ft + 2ppm	
Confidence Level:	95% Err.	
Linear Units of Measure:	Int. Feet	

All	Site ID wells s	Site Descriptor surveyed 04/21/06.	 	Position	95% <u>Error</u>	Fix Status	Position Status
1	MW-1 N	NORTH RIM (NR) WELL LOC NR Elevation W TOC Elevation		31.31547" 1 59.67862" 1 49.25 48.82			Adjusted
2	MW-2	TBM2 ON NR TBM-2/NR Elevation N TOC Elevation		31.88714" 1 59.77284" 1 48.01 47.71			Adjusted
3	MW-3	NR WELL LOC NR Elevation W TOC Elevation		31.60833" 1 59.14295" 1 47.83 47.49			Adjusted
4	MW-4	NR WELL LOC NR Elevation N TOC Elevation		31.14780" 1 59.04553" 1 47.81 47.61			Adjusted
5	MW-5R	NR WELL LOC NR Elevation N TOC Elevation		30.80584" 58.55888" 47.66 47.36			Adjusted
6	MW-6	THIS IS TBM-1 TBM-1/NR Elevation SE TOC Elevation		31.89466" 58.90744" 46.849 46.27			Adjusted



# CSS ENVIRONMENTAL SERVICES, INC. Managing Cost, Scope and Schedule 100 Galli Drive, Suite 1 Novato, CA 94949 Telephone: (415) 883-6203 Facsimile: (415) 883-6204

7	MW-7	NR WELL LOC NR Elevation NNE TOC Elevation	Lat. Lon. 1 Elv. Elv.		31.25132" 59.39534" 48.69 48.36	0.055 0.053		Adjusted
8	MW-8	NR WELL LOC NR Elevation W TOC Elevation	Lat. Lon. 1 Elv. Elv.		31.29687" 59.16924" 48.21 47.99	0.048 0.052		Adjusted
9	MW-9	NR WELL LOC NR Elevation NNW TOC Elevation	Lat. Lon. Elv. Elv.		31.55817" 59.81677" 49.45 49.24	0.055 0.058		Adjusted
10	MW-10	NR WELL LOC NR Elevation W TOC Elevation	Lat. Lon. Elv. Elv.		31.47654" 58.77054" 47.12 46.90	0.047 0.052		Adjusted
11	AS-1	NR WELL LOC	Lat. Lon.		31.90896" 59.57700"	0.047 0.052		Adjusted
12	AS-2	NR WELL LOC	Lat. Lon.		31.94819" 59.36340"	0.048		Adjusted
13	AS-3	NR WELL LOC	Lat. Lon.		31.79452" 59.07581"	0.048 0.052		Adjusted
14	0882	MONUMENT HT0882	Lat. Lon. Elv.		48.04137" 53.51060" 9.130	0.000 0.000 0.000	Fixed Fixed Fixed	Adjusted
15	9563	MONUMENT JT9563	Lat. Lon. Elv.	38° 122°	48.78742" 16.40456" 183.000	0.000 0.000 0.000	Fixed Fixed Fixed	Adjusted

No. n 12 31-0 Fxn STATE OF CALIF