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By Alameda County Environmental Health at 2:06 pm, Jul 29, 2013

Alameda County Health Care Services Agency

1131 Harbor Bay Pkwy, Suite 250

Alameda, CA 94502

Subject: RO#0000262

Albany Hill Mini Mart

800 San Pablo Avenuc

Albany, CA

Attached please find a copy of the most recent groundwater sampling report for the above referenced site. I declare, under penalty of perjury, that the information and/or recommendations contained in the attached document or report is true and correct to the best of my knowledge.

Sincerely,

Jasminder Sikand





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April 15, 2013

WORKPLAN
For a
SOIL AND SOIL VAPOR ASSESSMENT
at
Albany Hill Mini Mart
800 San Pablo Avenue
Albany, CA 94706

Submitted by:
AQUA SCIENCE ENGINEERS, INC.
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1.0 INTRODUCTION

This submittal presents Aqua Science Engineer's, Inc. (ASE) workplan for an additional soil and soil vapor assessment at 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) in their directive letter dated January 4, 2013.

2.0 BACKGROUND

Please see ASE's "Updated Site Conceptual Model" document dated August 4, 2011 and September 20, 2012 "Soil, Groundwater, and Soil Vapor Assessment Report" for detailed description of the site history and environmental condition of the site.

3.0 PROPOSED SCOPE OF WORK

The purpose of this assessment is to provide additional data to be used to determine whether the site may be closed as a low threat case under the new California Regional Water Quality Control Board, San Francisco Bay Region Low-Threat Closure Policy. The specific proposed scope of work is as follows:

- 1) Obtain a drilling permit from the Alameda County Public Works Agency, an encroachment permit from the City of Albany, and an access agreement from the owner of 1020 Washington Avenue to allow for drilling on their property.
- 2) Notify Underground Service Alert (USA) of the drilling and have drilling locations cleared of subsurface utility lines by a private subsurface utility line locating company.
- 3) Drill six soil borings in locations on and off-site using a Geoprobe and collect shallow soil samples for analysis.
- 4) Analyze two soil samples from each boring collected from 2 and 4-feet below ground surface (bgs) at a CAL-EPA certified analytical laboratory for total petroleum hydrocarbons as diesel (TPH-D) by modified Method 8015 and total petroleum hydrocarbons as gasoline (TPH-G), benzene, toluene, ethyl benzene, and total xylenes (collectively known as BTEX), and fuel oxygenates by EPA Method 8260B.
- 5) Collect soil vapor samples from three locations west and north of the site.
- 6) Analyze the soil vapor sample from each boring at a CAL-EPA certified analytical laboratory for TPH-G and BTEX by EPA Method TO-15, and carbon dioxide, oxygen, nitrogen, methane and helium by ASTM D1946.
- 7) Backfill each boring with neat cement.



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- 8) Review City of Albany Building Department records, if available, to determine construction details of the building foundations at 800 San Pablo Avenue (site), 752 San Pablo Avenue (Mallard Club) and 1020 Washington Avenue (apartment west of the site).
- 9) Prepare a report presenting the methods and findings of this assessment.

Details of the assessment are presented below.

TASK 1 OBTAIN NECESSARY PERMITS AND ACCESS AGREEMENTS

Prior to drilling, ASE will obtain a drilling permit from the Alameda County Public Works Agency. ASE will also obtain an encroachment permit from the City of Albany to allow for drilling within their right-of-way and an access agreement from the owner of 1020 Washington Avenue to allow for drilling on that property. In the past, there was been difficulty obtaining an access agreement from the 1020 Washington Avenue property owner. If we are unable to obtain this access agreement, an alternative location is presented in this workplan.

TASK 2 NOTIFY USA TO CLEAR DRILLING LOCATIONS OF UNDERGROUND UTILITY LINES

ASE will mark the proposed boring locations with white paint and will notify Underground Service Alert (USA) to have underground utility lines marked in the site vicinity at least 48-hours prior to drilling. ASE will also contract with a private underground utility locating company to clear each drilling locations of underground lines prior to drilling.

TASK 3 DRILL SIX SOIL BORINGS IN ON AND OFF-SITE LOCATIONS AND COLLECT SOIL SAMPLES FOR ANALYSIS

ASE will drill six soil borings at the locations shown on Figure 2 to evaluate hydrocarbon concentrations in shallow soil. The borings will be drilled using a Geoprobe direct-push drilling rig. A qualified ASE geologist will direct the drilling. If an area is inaccessible to a truck-mounted Geoprobe, the boring will be drilled using either a limited-access direct push drilling rig or with a hand-auger if necessary. If we are unable to obtain an access agreement from the owners of the 1020 Washington Avenue property, then the borings planned for this 1020 Washington Avenue will be moved into the restroom of the on-site mini mart and will be placed as close to the property line as possible.

Undisturbed soil samples will be collected continuously for subsurface hydrogeologic description and possible chemical analysis. The soil will be described by the ASE geologist according to the Unified Soil Classification System (USCS). The samples will be collected in acetate tubes using a drive sampler advanced as the boring progresses. Soil samples from 2 and 4-feet bgs in each boring will be prepared for analysis. Samples prepared for analysis will be immediately removed from the sampler, cut at the appropriate sample interval, trimmed, and sealed with Teflon tape and plastic caps. The samples will then be labeled with the site location, sample designation, date and time the sample was collected, and the initials of the person



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collecting the sample. The samples will be placed into an ice chest containing wet ice for delivery under chain of custody to a CAL-EPA certified analytical laboratory.

Soil from the remaining tubes not sealed for analysis will be removed for hydrogeologic description and will be screened for volatile compounds with a photoionization detector (PID). The soil will be screened by emptying soil into a plastic bag. The bag will be sealed and placed in the sun for approximately 10 minutes. After the hydrocarbons have been allowed to volatilize, the PID will measure the vapor through a small hole, punched in the bag. These PID readings will be used as a screening tool only since these procedures are not as rigorous as those used in an analytical laboratory.

All sampling equipment will be cleaned in buckets with brushes and an Alconox solution, and then rinsed twice with tap water. Rinsates will be contained on-site in 55-gallon steel drums for future disposal.

TASK 4 ANALYZE SOIL SAMPLES

Two soil samples from each boring collected from 2 and 4-foot bgs will be analyzed at a CAL-EPA certified analytical laboratory for TPH-D by modified Method 8015 and TPH-G, BTEX, and fuel oxygenates by EPA Method 8260B.

TASK 5 COLLECT SOIL VAPOR SAMPLES FROM THREE LOCATIONS

Prior to conducting the project, ASE will verify that there has been no significant rainfall (no more than 1/2-inch) for 5 days prior to the soil vapor sampling. Nearby on-site irrigation systems will also be shut off for 5 days prior to the sampling. ASE will also turn off the existing ozone sparging remediation system two weeks prior to the drilling.

ASE will push three vapor points to 5-foot bgs using drilling rods driven with a Geoprobe (Figure 2). If we are unable to obtain an access agreement from the owners of 1020 Washington Avenue, then an alternative location will be used inside of the mini-mart's restroom as close to the western property line as possible. In areas inaccessible to a Geoprobe, the vapor points will be driven to depth with either a limited-access drilling rig or with hand tools in necessary. The bottom of each rod will contain an expendable point. Once at depth, 1/4" Teflon tubing with a 1-inch screen will be inserted inside the drive rod. The drive rod will be retracted approximately 6-inches separating the expendable point and the rods and creating the desired void for the sample collection Membrane. Sand will be added to fill the void to 6-inches above the sample point. Above the sand, 6-inches of dry granulated bentonite will be added followed by hydrated bentonite to the surface to prevent ambient air intrusion into the borehole.

The borehole will then be allowed to equilibrate 20 minutes prior to purging and sampling. A "vacuum shut in test" will then be conducted to verify there are no leaks in the sample train system. A minimum vacuum of 100-inches of water column will be applied to the sampling manifold and valves system between the Summa canister and the probe for at least 5 minutes with all valves closed. If a vacuum of 100-inches of water is not maintained, then the tubing and valves will be adjusted or changed until the vacuum holds for the length of the test.



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For the sampling, the sampling probe and Summa canister will be placed in a shroud consisting of a plastic shroud with glove entry. Helium will then be added to the shroud as a tracer gas at a minimum concentration of 10% by volume. The tubing will then be purged of at least three volumes to insure that all ambient air is removed from the tubing using a Summa canister that is to be used specifically for purging. Once the required volume is purged, the sample will be collected in a 1-liter Summa canister with a rate between 100 to 200-ml per minute and at a vacuum of less than 100-inches of water. The samples will be labeled with the site location, sample designation, date and time the samples are collected, and the initials of the person collecting the sample, as well as the initial and final vacuum of the Summa canister. The samples will then be delivered under chain of custody to a CAL-EPA certified analytical laboratory for analysis.

All disposable equipment and supplies will be discarded and non-disposable equipment will be cleaned with an Alconox solution and triple rinsed between sampling locations.

TASK 6 ANALYZE THE SOIL VAPOR SAMPLES

Each vapor sample will be analyzed at a CAL-EPA certified analytical laboratory for TPH-G and BTEX by EPA Method TO-15, and carbon dioxide, oxygen, nitrogen, methane and helium by ASTM D1946.

TASK 7 BACKFILL THE BORINGS WITH NEAT CEMENT

Following collection of the samples, all boreholes will be backfilled with neat cement placed by tremie pipe.

TASK 8 REVIEW BUILDING DEPARTMENT RECORDS FOR BUILDING FOUNDATION DETAILS

ASE will review available records at the City of Albany Building Department for information regarding building foundation details for 800 San Pablo Avenue (the site), 752 San Pablo Avenue (Mallard Club), and 1020 Washington Avenue (apartments west of the site). This information will be used to assist in determining whether there may be issues related to soil vapor in these buildings.

TASK 9 PREPARE A REPORT

ASE will prepare a report presenting the methods and findings of this assessment. The report will be submitted under the seal of state registered civil engineer or geologist. This report will include a summary of all work completed during this assessment including tabulated analytical results, conclusions and recommendations. Copies of the analytical report and chain of custody will be included as appendices. The report, analytical data, and boring logs will also be uploaded to the state Geotracker database.



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4.0 SCHEDULE

ASE will schedule field activities upon approval of this workplan by the Alameda County Health Care Services Agency. Depending on how quickly the access agreement can be obtained, ASE could complete this project in approximately 90-days of the workplan approval.

Should you have any questions or comments, please call us at (925) 820-9391.

Respectfully submitted,

AQUA SCIENCE ENGINEERS, INC.

A handwritten signature in black ink that reads "Robert E. Kitay".



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



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FIGURES



NORTH

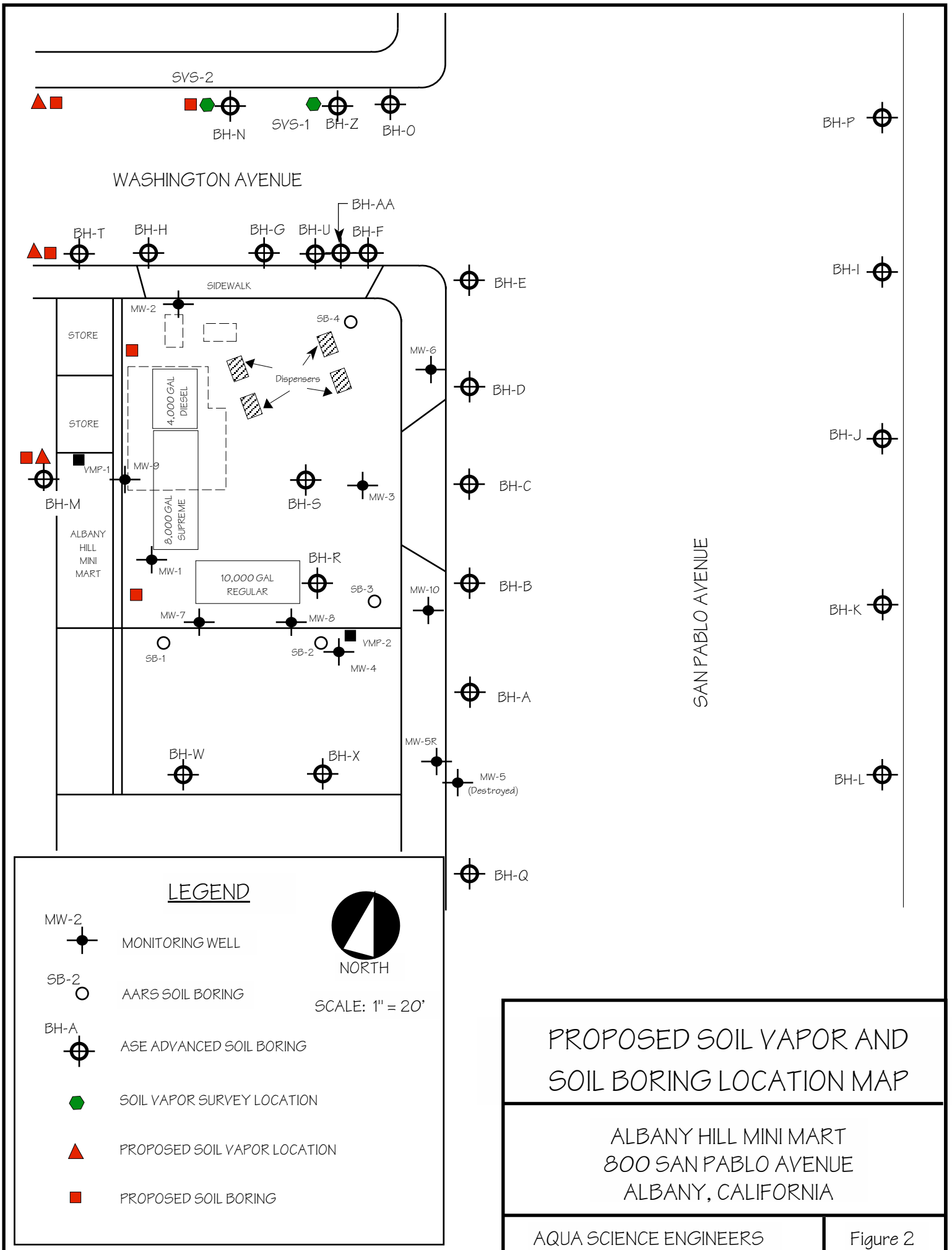


LOCATION MAP







ALBANY HILL MINI MART
800 SAN PABLO AVENUE
ALBANY, CALIFORNIA

AQUA SCIENCE ENGINEERS, INC.

Figure 1



LEGEND

- MW-2  MONITORING WELL
- SB-2  AARS SOIL BORING
- BH-A  ASE ADVANCED SOIL BORING
-  SOIL VAPOR SURVEY LOCATION
-  PROPOSED SOIL VAPOR LOCATION
-  PROPOSED SOIL BORING



SCALE: 1" = 20'

PROPOSED SOIL VAPOR AND SOIL BORING LOCATION MAP

ALBANY HILL MINI MART
800 SAN PABLO AVENUE
ALBANY, CALIFORNIA