Alameda County Health Care Agency
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502

Re: RO #479, Report dated 6/30/2011

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

If you have further questions I may be reached at 925-381-3608.

Sincerely,

Russell Lim

Aqua Science Engineers, Inc. 55 Oak Court, Suite 220, Danville, CA 94526
(925) 820-9391 - Fax (925) 837-4853 - www.aquascienceengineers.com

June 30, 2011

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

SUBJECT: OZONE-SPARGING AND VAPOR EXTRACTION REMEDIATION SYSTEMS INSTALLATION AND OPERATION REPORT
Lim Property, RO #0000479
250 8th Street
Oakland, California

Dear Mr. Wickham:

On behalf of our clients, Alice Ng and May Lee Lim, Aqua Science Engineers, Inc. (ASE) is pleased to submit this report detailing the installation and start-up of the ozone-sparging and vapor-extraction remediation equipment at the subject site. This report supplements ASE's Remedial Action Plan (RAP) dated March 15, 2010, ASE's Ozone Well Installation and Air-Sparging Test Results report dated September 10, 2010, and the Remediation Update letter dated March 28, 2011.

Should you require any additional information, please feel free to call me at (925) 820-9391.

Respectfully submitted,

AQUA SCIENCE ENGINEERS, INC.

David Allen
Vice President

Aqua Science Engineers, Inc. 55 Oak Court, Suite 220, Danville, CA 94526
(925) 820-9391 - Fax (925) 837-4853 - www.aquascienceengineers.com

June 30, 2011

REMEDIATION SYSTEMS INSTALLATION AND START-UP REPORT
LIM PROPERTY
250 8TH STREET
OAKLAND, CALIFORNIA
(ASE JOB NO. 2808)
(RO #0000479)
(USTCF Claim Number 7699)

for

Alice Ng Lim & May Lee Lim
c/o Mr. Russell Lim
3111 Diablo Road
Lafayette, CA 94549

Submitted by:

Aqua Science Engineers
208 West El Pintado Road
Danville, CA 94526
(925) 820-9391

Aqua Science Engineers, Inc. 55 Oak Court, Suite 220, Danville, CA 94526
(925) 820-9391 - Fax (925) 837-4853 - www.aquascienceengineers.com

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Aqua Science Engineers, Inc. 55 Oak Court, Suite 220, Danville, CA 94526
(925) 820-9391 - Fax (925) 837-4853 - www.aquascienceengineers.com

1.0 INTRODUCTION

This report presents Aqua Science Engineers, Inc. (ASE) installation, start-up, and operation of the ozone-sparging and vapor-extraction remediation systems at the Lim property located at 250 8th Street in Oakland, California, see Figure 1.

ASE submitted a Remedial Action Plan (RAP) dated March 15, 2010 that detailed the site conditions related to petroleum hydrocarbon pollution in soil and groundwater both on-site and off-site. The RAP detailed the proposed remedial strategy as in-situ chemical oxidation by using an ozone-sparging remediation system that would operate 24 hours per day, seven days per week to remediate petroleum hydrocarbons in the groundwater and capillary fringe both on-site and off-site. The RAP also allowed for the potential use of vapor-extraction technology if deemed necessary. This RAP was submitted to the Alameda County Health Care Services Agency (ACHCSA) for their approval.

As part of the RAP, ASE installed ozone-sparging well OS-1 in July 2010, and performed an air-sparging test in August 2010 to confirm the design parameters of the RAP. ASE prepared an Ozone-Sparging Test Results report, dated September 10, 2010 that concluded ozone-sparging using twelve wells would be capable of reaching all of the affected areas both on and off-site. This report also concluded that due to the presence of free-floating hydrocarbons on the groundwater within monitoring wells MW-3 and MW-4R, immediate use of vapor-extraction technology would be necessary to eliminate the product before and concurrently while the ozone-sparging is in operation.

ASE received RAP approval from the ACHCSA as detailed in their letter dated October 25, 2010. See Appendix A for a copy of the ACHCSA letter.

2.0 SCOPE OF WORK

The following tasks were completed as part of implementation of the RAP.

- Obtain well installation permits from the Alameda County Public Works Agency (ACPWA). Obtain City of Oakland permits for trenching and piping installations in the City right-of-ways. Obtain City of Oakland permits for the installation of new electrical services. Obtain a Bay Area Air Quality Management District (BAAQMD) permit for the operation of a vapor-extraction system.
- Install ozone-sparging wells.
- Trench for underground piping to connect remediation wells to the remediation equipment.
- Backfill and resurface the trenches.
- Installation of ozone-sparging and vapor-extraction remediation systems.
- Manifolding and hook-up of wells to the remediation equipment
- Start-up of the remediation systems.
- Operation, maintenance and monitoring of the remediation systems.

3.0 PERMITTING

Permits required for this phase of the project were obtained from the following agencies.

3.1 Alameda County Public Works Agency

Drilling permits for the installation of ozone-sparging wells OS-2 through OS-12 were provided to ASE by the ACPWA under their permit number W2010-0743. Ozone-sparging well OS-1 was previously installed by ASE for purposes of the sparging test, and had it's own drilling permit as detailed in the ASE report dated September 10, 2010. A copy of the ACPWA drilling permits are attached in Appendix B.

3.2 City of Oakland

The City of Oakland issued an encroachment permit, number ENMI10258, which allowed the ozone-sparging wells to be installed within the parking strip on 8th Street across from the subject site. The City of Oakland issued an excavation permit, number X10001362, which allowed for a trench to be installed within 8th Street to connect the remediation wells to the equipment compound located on the subject site. The City of Oakland issued an electrical permit, number E1003531, which allowed for a temporary power service for the vapor-extraction equipment. Copies of all of the City of Oakland permits are attached in Appendix B.

3.3 Bay Area Air Quality Management District

The Bay Area Air Quality Management District issued Permit to Operate number 18100 for the installation and operation of a 200 scfm vacuum blower and catalytic oxidizer soil vapor-extraction system. A copy of BAAQMD Permit to Operate is attached in Appendix B.

4.0 OZONE-SPARGING WELL INSTALLATION

4.1 Drilling Permit

Prior to drilling, ASE obtained drilling permit W2010-0743 from the ACPWA. A copy of the permit is attached in Appendix B. ASE also notified Underground Service Alert (USA) to have public underground utility lines marked in the site vicinity.

4.2 Drill Soil Borings and Construct Ozone-Sparging Wells

Between October 25 and 29, 2010, ASE installed ozone-sparge wells OS-2 through OS-7 on the subject site, and OS-8 through OS-12 off-site in the parking strip of 8th Street, opposite of the site (see Figure 2). The drilling and well installation process was performed under the direction of ASE senior geologist Robert Kitay, PG. The wells were drilled by RSI Drilling of Richmond, California. The wells were drilled with a drill rig equipped with 8-inch diameter hollow-stem augers.

Soil samples were collected in selected borings where previous borings and samples had not been completed. When collected, soil samples were collected at 5-foot intervals during the drilling in brass tubes using a split-barrel drive sampler advanced by repeated blows from a 140-lb. hammer dropped 18-inches. Samples to be retained for analysis were immediately removed from the sampler, trimmed, sealed with Teflon tape and plastic 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.

The remaining soil was described by the site geologist using the Unified Soil Classification System (USCS) and was screened for volatile compounds using a photo ionization detector (PID). The geologist screened the soil by emptying soil 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 shown on the boring logs presented in Appendix C.

Drilling equipment was cleaned with an Alconox solution between sampling intervals to prevent potential cross-contamination.

The wells were constructed with 1-inch diameter schedule 80 PVC well casing. A 1-inch diameter by 18-inch long sparge point with a 25 micron pore size was placed in a permeable water-bearing zone anywhere between 26.5 and 29.5-feet bgs depending on the boring lithology. Lonestar #2/12 sand was placed between the sparge point and the boring from the bottom of the boring to 1.5-feet above the top of the sparge point. A 2-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 to prevent surface water from infiltrating into the well. A traffic-rated well box was installed to allow for access into the well.

4.3 Soil Sample Analysis and Results

Soil samples collected from 19.5-feet below ground surface (bgs) in selected soil borings were analyzed by McCampbell Analytical of Pittsburg, California (ELAP 1644) for total petroleum hydrocarbons as diesel (TPH-D) by modified EPA Method 8015 with silica gel cleanup and total petroleum hydrocarbons as gasoline (TPH-G), benzene, toluene, ethylbenzene, and total xylenes (collectively known as BTEX), and methyl tertiary butyl ethane (MTBE) by EPA Method 8260B.

- TPH-G concentrations ranged from 29 to 4,400 ppm
- TPH-D concentrations ranged from 6.4 to 5,400 ppm
- Benzene concentrations ranged from < 0.01 to 70 ppm
- Toluene concentrations ranged from < 0.2 to 130 ppm

- Ethylbenzene concentrations ranged from < 0.01 to 70 ppm
- Xylenes concentrations ranged from < 0.2 to 460 ppm
- MTBE concentrations ranged from < 0.01 to < 10 ppm

The laboratory analytical report and chain of custody document are presented in Appendix D.

4.4 Waste Disposal

The drill cuttings and steam-clean rinseate water were drummed and left on-site. These drums were subsequently removed from the site by DECON Environmental of Hayward, California in late 2010 and transported to Evergreen Oil in Newark, California for disposal.

4.5 Vapor Monitoring Point Installation

Vapor monitoring points VMP-1 and VMP-2 were installed on January 10, 2011, see Figure 2.

The VMPs were drilled with a hand auger by ASE personnel. The VMPs were constructed with 1-inch diameter schedule 40 PVC solid well casing and slotted screen casing. The slotted screen material was placed from 3-feet to 4-feet below bgs. Lonestar #2/16 sand was placed between the screened casing and the boring from the bottom of the boring to 1/4-foot above the top of the well screen. A Portland cement sanitary seal was placed above the sand layer to prevent surface water from infiltrating into the well. The VMP's were installed within traffic-rated well boxes that allow for access into the VMP for periodic scanning of the VMP's interior air with a PID as well as an ozone meter. The VMP's were secured with a threaded cap.

5.0 REMEDIATION WELL AND SYSTEM PIPING INSTALLATION

This section details the installation of all of the underground piping installed to be used to delivery air to the sparging wells and vapors from the vapor-extraction wells.

5.1 Utility Potholing

As required by the City of Oakland permits, ASE was required to pothole all of the underground utilities that existed within or near the proposed trenches for the remediation equipment piping. On October 29, 2010, ASE subcontractor Subtronics of Concord, California located all of the marked underground utilities that existed within 8th Street surrounding the proposed trenches. Using air and vacuum equipment, the location and depth of each marked utility line was documented by Subtronic personnel. The utility lines were located, measured, and noted on a map. The potholes were later backfilled and resurfaced with concrete.

5.2 Sawcutting and Surface Material Removal

On November 12, 2010, the remediation piping installation began by sawcutting 8th Street and on-site for the trench that would house all of the piping that would connect the remediation wells

to the remediation equipment. The asphalt and concrete surface materials were removed from the site and delivered to the AMAN Concrete/Asphalt Recycling Facility in Oakland, California where it was ground up and turned into recycled base material. ASE estimates that 80 cubic yards of surface material were removed and recycled during this project.

5.3 8th Street Trenching, Piping Installation and Backfilling Activities

Trenching activities within 8th Street began on November 15, 2010. Trenching was completed using a backhoe operated by ASE subcontractor Orman and Associates of Danville, California. Trench depths within 8th Street were no less than 3-feet below ground surface (bgs) as required by the City of Oakland. The excavated soil, consisting of native silty sand, was screened with an organic vapor meter (OVM) by ASE personnel. At no time during trenching activities were any evidence of petroleum hydrocarbons present. A small portion of the excavated soil, approximately 10 cubic yards, was allowed to be used as backfill material only to cover the newly installed piping. The remainder of the excavated soil from within 8th Street was hauled immediately to the Landfill Management Facility in Hayward, California.

Once trenching was completed, 1-inch diameter Schedule 40 PVC piping was then laid within the trenches that would act as a secondary containment pipe for the ozone-sparging well tubing. Five 1-inch diameter PVC pipes were laid in the trench, one for each of the five ozone-sparging wells located in the parking strip in 8th Street opposite of the site (OS-8 through OS-12). One 2-inch diameter PVC pipe was laid within the trench that would be used for vapor-extraction from monitoring well MW-4R, a well that has historically contained measureable free-floating hydrocarbons. A second 2-inch diameter PVC pipe was laid within the trench that would be used for vapor-extraction from monitoring well MW-3, a well that has historically contained measureable free-floating hydrocarbons. The piping was glued and extended into each wellhead's traffic-rated security enclosure. All of the piping within 8th Street was installed into the subject site by the end of the day on November 18, 2010.

The piping was covered with native soil after inspection and approval from the City of Oakland. The trenches within 8th Street were then backfilled with controlled density fill (CDF) supplied to the site by Right Away Redy Mix. The CDF was placed into the trench to 12-inches below the street surface. On November 19, 2010, a 6-inch thick layer of concrete was then placed over the CDF by ASE, Orman & Associates, and Right Away Redy Mix. Due to inclement weather, asphalt paving was postponed until drier conditions existed. The trenches were covered with steel plates.

On November 29 and 30, 2010, the trenches within 8th Street were paved with 6-inches of asphalt by Orman & Associates.

5.4 Sidewalk and On-Site Trenching, Piping Installation, Backfilling and Resurfacing Activities

On December 1, 2010, the sidewalk in front of the subject site was removed to gain access to the

previously installed PVC piping. Trenching activities then began on-site with the removal of the asphalt surface material. The asphalt and sidewalk concrete were taken off-site to a local recycling facility where it was crushed for re-use as baserock. Excavated soil was stockpiled on-site for re-use as trench backfill material.

Trenches were then excavated between each on-site ozone-sparging well (OS-1 through OS-7) and the remediation equipment compound. Following the trenching, 1-inch diameter Schedule 40 PVC piping was then laid within the trenches that would act as a secondary containment pipe for the ozone-sparging well tubing. Seven 1-inch diameter PVC pipes were laid in the trench, one for each of the seven ozone-sparging wells located on-site (OS-1 through OS-7). The piping extended from inside the wellhead's traffic-rated security enclosure to the location of the remediation equipment compound.

Trenches were then excavated between the five on-site extraction wells that had previously been installed for use by CalClean during a dual-phase extraction event and the remediation equipment compound. Extraction wells EW-1 through EW-5 were connected to 2-inch diameter Schedule 40 PVC piping from their wellheads to the location of the remediation equipment compound. A PVC "tee" fitting was used on the wellhead that allowed for the connection of the underground vacuum piping while still allowing for access into the wellhead. These wells were subsequently labeled VE-1 through VE-5.

Trenches were then excavated and fitted with PVC piping to connect all of the off-site ozone-sparging and two monitoring wells to the location of the remediation equipment compound.

Once all of the trenching and pipe installation activities were completed, the on-site trenches and sidewalk in front of the site were backfilled and compacted with the native soil. The trenches were then resurfaced with asphalt on December 7, 2010. The sidewalk was resurfaced with concrete on December 13, 2010. All of the piping was terminated into the area of the remediation equipment in a traffic-rated security enclosure.

6.0 OZONE-SPARGING REMEDIATION SYSTEM & COMPONENTS INSTALLATION AND OPERATION

This section details the field activities related to the installation of the ozone-sparging remediation equipment.

6.1 Remediation Equipment Compound

On December 15, 2010, ASE and Orman & Associates poured a concrete pad that would support the remediation equipment and security enclosure. On February 7, 2011, a security fence was secured around the equipment pad.

6.2 Electrical Power

During the first weeks of 2011, Harvey Scat Electric of Castro Valley, California provided the necessary electrical power connection point for the ozone-sparging remediation equipment inside the equipment compound. Using the existing building's power, a 40-Amp disconnect was installed for use by the ozone-sparging remediation equipment.

6.3 Ozone-Sparging Well Manifold

During the week of January 10, 2011, ASE personnel installed the ½-inch Teflon tubing from the remediation equipment compound, through the secondary containment piping, and into each ozone-sparging wellbox. The tubing was then connected to each wellhead.

6.4 H2O Engineering Ozone-Sparging Remediation System Start-Up

In mid January 2011, the H20 Engineering ozone-sparging system was installed and hooked up to the underground piping and the electrical service as described in the RAP. Although ASE planned to operate both the ozone-sparging and vapor-extraction remediation systems simultaneously, the delayed BAAQMD permit forced ASE to only operate the ozone-sparging remediation equipment in a limited capacity. On January 18, 2011, the ozone-sparging remediation system was turned on. Due to the presence of free-floating hydrocarbons in monitoring wells MW-3 and MW-4R, the ozone-sparging wells in these areas were to be used only after the vapor-extraction system was operational. However, to ensure the ozone-sparging system and wells were operating as designed, all twelve ozone-sparging wells were allowed to operate for the first week to evaluate for leaks, and ozone/hydrocarbon detections within the VMPs.

6.5 First Weeks Operation of Ozone-Sparging Remediation System

Beginning on January 19, 2011, ASE visited the site daily to evaluate the remediation equipment and to test the air space within VMP-1 and VMP-2. During active ozone-sparging, the VMP's were scanned with an OVM and ozone meter daily, and a field log sheet was used to record hydrocarbon and/or ozone detections (Appendix E). After the third day of ozone-sparging, ASE began to notice detectable PID readings in both VMP-1 and VMP-2 as well as faint hydrocarbon odors within the well box that contained the VMP's. ASE immediately modified the well sequence program within the ozone-sparging remediation equipment to shut down all ozone-sparging wells located across 8th Street (OS-8 through OS-12), on January 22, 2011. ASE then reduced the remediation equipment's operating flow and pressure to the remaining on-site ozone-sparging wells. No odors, PID readings or ozone readings were detected within or near any of the ozone-sparging wells on-site. ASE believes the presence of free-floating hydrocarbons within monitoring well MW-4R were the cause for the build-up of hydrocarbon vapors within the subsurface soil across 8th Street. Operation of the vapor-extraction equipment in conjunction with ozone-sparging would likely eliminate future hydrocarbon vapor build-up in the vadose zone.

6.6 Remediation Status Letter to ACHCSA

ASE prepared a document dated March 28, 2011 to the ACHCSA detailing the initial remediation activities that occurred at the site since mid January 2011. The letter detailed the presence of hydrocarbon odors identified across 8th Street and provided a proposal to install four additional vapor-extraction wells adjacent to the ozone-sparging wells.

Portions of the March 28, 2011 letter are as follows:

"As a precautionary measure, ASE will install four (4) additional vapor-extraction wells on the opposite side of 8th Street, adjacent to and within the traffic-rated well boxes of ozone-sparging wells OS-8, OS-9, OS-10 and OS-12. These additional vapor-extraction wells will be installed and used in an effort to eliminate the possibility of built-up hydrocarbons in the vadose-zone resulting from the ozone-sparging. The use of these additional vapor-extraction wells will be based on readings from daily and weekly VMP monitoring by ASE.

ASE will secure a drilling permit from the Alameda County Public Works Agency. The borings for the four additional vapor-extraction wells will be drilled with a hand auger by ASE personnel. The vapor-extraction wells will be constructed with 1-inch diameter schedule 40 PVC solid well casing and slotted screen casing. The slotted screen material will be placed from 7-feet below bgs to 15-feet bgs. Lonestar #2/16 sand will be placed around the screened casing from the bottom of the boring to 1/2-foot above the top of the well screen. A 0.5-foot thick bentonite layer will be placed between the sandpack and the overlying cement sanitary seal. A Portland cement sanitary seal will be placed above the bentonite layer to prevent surface water from infiltrating into the well.

The top of each vapor-extraction well will be connected to the 1-inch diameter schedule 40 secondary containment piping within the traffic-rated well box used to house the existing ozone-sparging tubing. This piping will be fitted with a PVC "wye" fitting that will allow for the ozone tubing to exit one side of the wye, while the other side can be hooked up to the newly installed vapor-extraction well using vacuum semi-rigid hose. The exit point of the ozone tubing will be sealed to eliminate the potential for vacuum short circuiting. The secondary containment piping will then be acting as a "dual-purpose" pipe. The hydrocarbon vapors will be removed from the newly installed vapor-extraction wells and plumbed into the vapor-extraction well manifold within the remediation system compound. Each newly installed well will be valved individually so that certain wells can be turned on or off as desired. These vapor-extraction wells will be on-line whenever ozone-sparging activities occur; this will prevent any further release of hydrocarbons into the vadose zone where they could vent to the atmosphere."

6.7 ACHCSA Response Letter

The ACHCSA prepared a response letter to ASE, dated April 18, 2011, stating that further operation of the ozone-sparging remediation equipment was to be suspended until the vapor-extraction remediation equipment was fully operational. ASE complied immediately by turning

off the H2O Engineering ozone-sparging remediation equipment on April 19, 2011. The ACHCSA letter approved the proposal to install the four additional vapor-extraction wells. See Appendix A for a copy of the ACHCSA Letter.

7.0 VAPOR-EXTRACTION REMEDIATION SYSTEM & COMPONENTS INSTALLATION AND OPERATION

This section details the field activities related to the installation of the vapor-extraction remediation equipment.

7.1 Installation of Additional Vapor Extraction Wells and Manifold Construction

In mid-April, ASE personnel installed four 1-inch diameter vapor-extraction wells adjacent to ozone-sparging wells OS-8, OS-9, OS-10 and OS-12. A permit was obtained from ACPWA, permit number W2011-0093, to install the wells as described in section 6.6 above. See Appendix B for a copy of the ACPWA permit. The wells were labeled as VE-6, VE-7, VE-8 and VE-9, see Figure 2.

In mid-April 2011, ASE completed a manifold system connecting all of the on-site and off-site vapor-extraction wells (including wells MW-3 and MW-4R) to a single vacuum line to be connected to the vapor-extraction remediation equipment. Each extraction well was plumbed with a ball valve, a sample port and a vacuum gauge. The valve allows for manipulation of the vacuum to each individual well, and the sample port can be used to hook up to a hand-held OVM to determine influent vapor concentrations for each well.

7.2 Installation of Vapor-Extraction Remediation Equipment

On April 20, 2011, Mako Industries delivered a vapor-extraction remediation system that ASE has leased for the site. The system is skid-mounted and includes (a) a 5-horsepower regenerative blower to achieve up to 150 cfm of flow and up to 60-inches of water vacuum to the manifold, (b) a moisture knock-out device, and (c) an abatement device to remove the hydrocarbons from the influent air stream. The abatement device is a catalytic oxidation unit that operates by heating the influent air stream to a temperature of approximately 700 degrees Fahrenheit using an electric heater and heat exchanger. The unit includes influent and effluent sample ports, a chart recorder to track flow, temperature, and vacuum components, a UL classified control panel, and is fully automated with five separate safety interlocks. The system has a destruction efficiency of 99%.

The Mako system was plumbed to the extraction well's manifold and wired to the newly installed power disconnect. On April 21, 2011, ASE received the Permit to Operate the vapor-extraction system from the BAAQMD.

Using a new power source supplied to the site by PG&E, Harvey Scat Electric installed a 200-Amp disconnect for use by the catalytic oxidizer vapor-extraction remediation equipment.

7.3 Vapor-Extraction Remediation System Start-up

On April 22, 2011, the vapor-extraction system was turned on by Mako personnel, who then trained ASE personnel in the system's operation. Initially, ASE had all on-site vapor-extraction wells and the two monitoring wells turned on for extraction. The four vapor-extraction wells across 8th Street remained off-line due to the fact that they had just recently been installed and ASE did not want to compromise the construction of the wells by applying a vacuum soon after construction. During the first week of operation, hydrocarbon concentrations ranged from a low of 25 parts per million by volume (ppmv) to a high of 570 ppmv in the individual vapor-extraction wells when measured using the OVM.

During the first few days of operation, the influent vapor stream consisted of 25% of vapors extracted from the well manifold, and 75% fresh air. The airflow through the system was near blower capacity at 130 cfm. This was done to reduce the potential of over-heating the catalyst that can typically occur during the first few days of extraction due to highly-concentrated hydrocarbon vapors in the subsurface soil. After approximately 10 days, ASE was able to allow the influent vapor stream to be made up of 100% of the well manifold vapors. The system typically operated at approximately 660 to 740 degrees Farenheight with an approximate flowrate of 50 cfm when the influent vapor stream was made up completely of soil-vapors.

The on-site ozone-sparging wells (OS-1 through OS-7) were turned back on in "air-only" mode on April 25, 2011. These wells were being delivered approximately 3.8 cfm of air at approximately 15 psi. Due to the destructive nature of ozone on non-stainless steel parts, ASE modified the ozone-sparging remediation equipment as to "not" inject ozone in the airstream being delivered to the wells. ASE and Mako are concerned that a potential exists for un-used ozone to be captured by the vapor-extraction wells and then forced through the vapor-extraction remediation equipment. Once vapor-extraction activities are no longer necessary, the ozone-sparging equipment can be modified again to begin delivering ozone to the sparging wells. ASE anticipates this occurring within 9 to 12 months.

7.4 Initial Influent and Effluent Vapor Sampling

As required by the BAAQMD Permit to Operate, ASE collected an influent vapor sample and an effluent vapor sample from the vapor-extraction system on April 28, 2011. The influent vapor sample (sample name VE-INF-04.28.11) was collected from a sample port on the positive side of the blower, and consisted of soil vapors being extracted from the vapor-extraction wells on-site (VE-1 through VE-5) and monitoring wells MW-3 and MW-4R.

The effluent vapor sample (sample name VE-EFF-04.28.11) was collected from a sample port on the exhaust stack of the vapor-extraction system. This sample was collected to determine the destruction efficiency of the catalytic oxidizer abatement device.

The samples were collected in new 1-liter Tedlar bags, labeled individually, and submitted to McCampbell Anlaytical of Pittsburg, California under chain of custody procedures. The samples were analyzed by McCampbell for TPH-G by EPA Method 8015, and MBTEX by EPA Method 8021.

- The influent vapor sample contained 4,600 ug/L TPH-G, 38 ug/L benzene, 70 ug/L toluene, 13 ug/L ethylbenzene, 61 ug/L xylenes, and < 50 ug/L MTBE.

- The effluent vapor sample was non-detect for all compounds.

7.5 Remediation Systems in Full Operation

Beginning the week of May 9, 2011, ASE began to bring all vapor-extraction and ozone-sparging wells on-line. First, the newly installed vapor-extraction wells on the opposite side of 8th Street (VE-6 through VE-9) were brought on-line. Initially, hydrocarbon concentrations ranged from a low of 15 parts per million by volume (ppmv) to a high of 140 ppmv in these individual vapor-extraction wells when measured using the OVM.

At the end of the week of May 9, 2011, ASE turned on the sparging wells on the opposite side of 8th Street (OS-8 through OS-12) allowing a low-flow air stream (minus ozone) into the wells. These wells delivered air only at 0.8 cfm at 9 psi. The duration of sparging was also limited to 10 minutes per well rather than the normal setting of 30 minutes per well. The sequence is repeated automatically nearly 5 times per 24 hour period. This was done in an effort to gradually introduce air into the formation without forcing any stripped hydrocarbons into the atmosphere that could not be captured by the vapor-extraction wells. By the the end of May 2011, the duration of sparging to the wells across 8th Street (OS-8 through OS-12) had been increased gradually to the duration of 20 minutes per well per sequence. By mid June 2011, the delivery air was changed to high-flow air (still minus ozone) for sparging wells OS-8 through OS-12 at the duration of 20 minutes. ASE expects that by mid July 2011, the duration can be increased to the maximum of 30 minutes per well per sequence.

7.6 Site and Remediation System Monitoring

Once all of the sparging and vapor-extraction wells were on-line, ASE began visiting the site daily during the first week, and then several times a week thereafter, to confirm proper operating parameters.

7.61 Hydrocarbon Vapor Readings from Utility and Well Boxes Using OVM

ASE measured for hydrocarbon vapors in the VMP's, remediation well boxes, and sidewalk utility boxes across 8th Street using a hand-held OVM multiple times per week in an effort to determine if stripped hydrocarbons were again being forced to the atmosphere by operation of the sparging wells. As shown on the attached field form, OVM reading have always been "0" since the date that all of the sparging wells were back on-line. ASE also measured for hydrocarbons in the utility boxes in the sidewalk in front of the subject site and within the well boxes and underground piping manifold box on site. Again, at no time were any readings above "0" observed in any sampling point. See Appendix E for a copy of the OVM Field Log.

7.62 Remediation Equipment Operating Parameters

ASE visited the site on a regular basis to confirm that the remediation equipment, both sparging and vapor-extraction, were working as designed. As the attached vapor-extraction equipment field log shows, ASE logged/measured the system's operating flow in cfm, the overall influent vapor concentration, and the individual well influent vapor concentrations. As the attached sparging field log shows, ASE logged the operating parameters of each sparging well, showing the duration and injection media (low or high-flow air). At this point in time, ASE is operating the sparging equipment in a non-ozone mode to eliminate the potential for ozone to be extracted by the vapor-extraction wells and thus injecting ozone into the Mako equipment. Ozone in the Mako equipment could be problematic to the blower and other components of their equipment. See Appendix E for copies of the Sparging Field Log and Vapor-Extraction Field Log.

8.0 RESPONSE TO ACHCSA LETTER DATED APRIL 18, 2011

The build-up and atmospheric release of hydrocarbon vapors due to sparging of the contaminated groundwater has been evident at this site. In their letter dated April 18, 2011, the ACHCSA required that the sparging system could not be operated unless the vapor-extraction system operated simultaneously as well. ASE agreed with this request and compliance has been met now that both systems are in full operation.

Given the apparent vapor-intrusion potential, ASE believes it is imperative to reduce the groundwater hydrocarbon concentrations as soon as possible to eliminate this threat. Active sparging along with consistent vapor-extraction has proven to be an effective tool in removing hydrocarbons from the groundwater and extracting them from the subsurface before they are released/forced to the atmosphere or below ground structure. ASE recommends continued use of the vapor-extraction system until such time that groundwater concentrations are reduced to an acceptable level. Periodic groundwater sampling and analysis will be conducted to determine such timing.

ASE has made modifications to the remediation equipment to eliminate the vapor-intrusion hazard. The two remediation systems, sparging and vapor-extraction, have been linked together electronically. If for any reason the vapor-extraction system goes off-line (power failure, power surge, high temperature alarm, high water alarm in knock-out drum, etc.), the sparging system is de-energized and shuts down automatically. The systems have been programmed to not allow an automatic re-start. Re-start of the systems can only be performed by physically going to the site, correcting the problem, and then manually re-starting the systems. The sparging system will not be able to come back on line until the vapor-extraction system is operating at greater than 650 degrees.

Aqua Science Engineers, Inc. 55 Oak Court, Suite 220, Danville, CA 94526
(925) 820-9391 - Fax (925) 837-4853 - www.aquascienceengineers.com

9.0 SIGNATURES

Should you require any additional information, please feel free to contact us at (925) 820-9391.

Respectfully submitted,

AQUA SCIENCE ENGINEERS, INC.

David Allen
Vice President

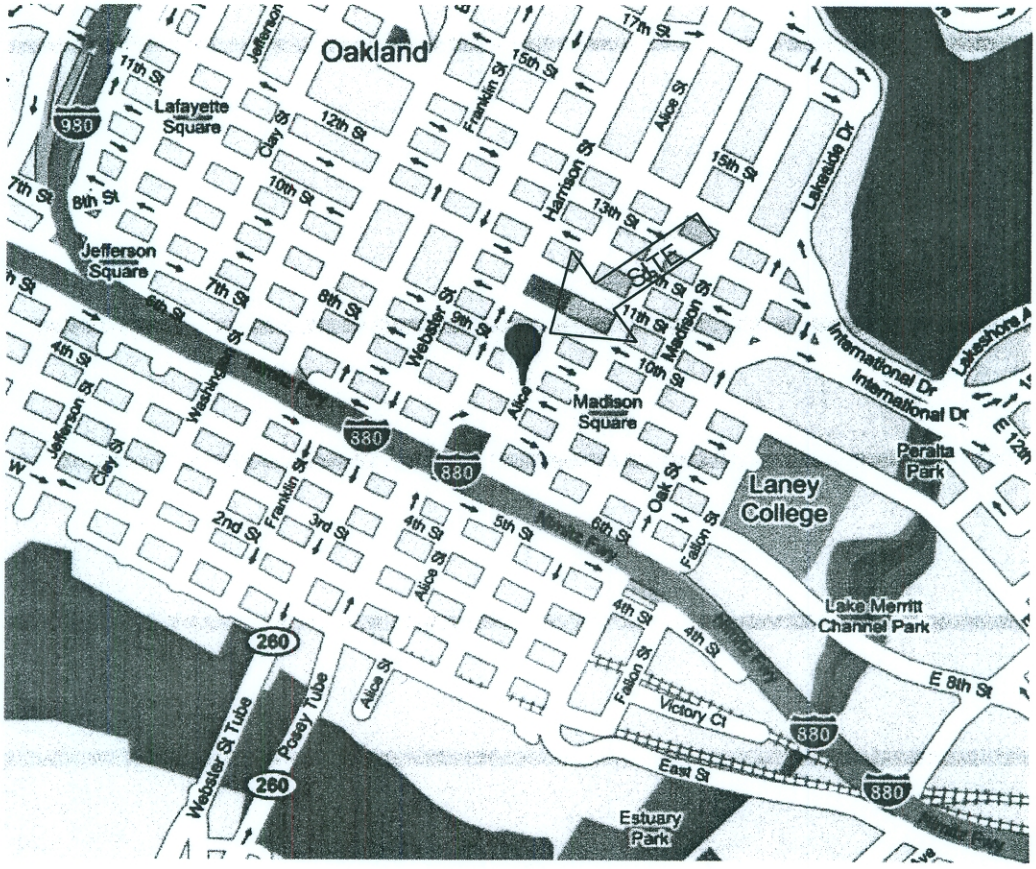
Robert Kitay, P.G., R.E.A
Senior Geologist

Cc: Mr. Jerry Wickhman, ACHCSA, electronically
Mr. Russ Lim, responsible party representative, electronically
RWQCB Geotracker Database, electronically

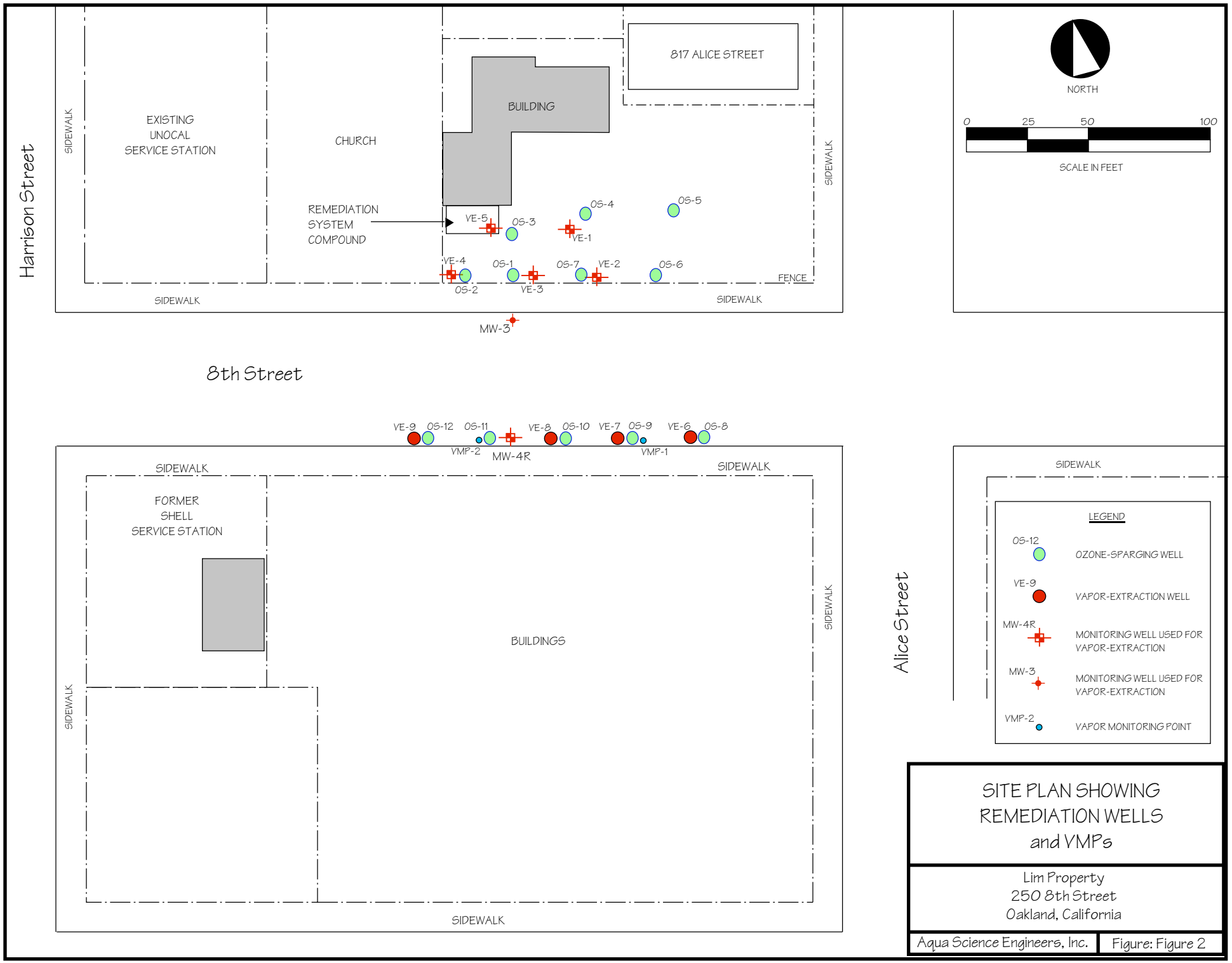
Aqua Science Engineers, Inc. 55 Oak Court, Suite 220, Danville, CA 94526
(925) 820-9391 - Fax (925) 837-4853 - www.aquascienceengineers.com

FIGURES

NORTH



LOCATION MAP	
LIM PROPERTY 250 8TH STREET OAKLAND, CALIFORNIA	
AQUA SCIENCE ENGINEERS	FIGURE 1



SITE PLAN SHOWING REMEDIATION WELLS and VMPs

Lim Property
250 8th Street
Oakland, California

Aqua Science Engineers, Inc. | Figure: Figure 2

Aqua Science Engineers, Inc. 55 Oak Court, Suite 220, Danville, CA 94526
(925) 820-9391 - Fax (925) 837-4853 - www.aquascienceengineers.com

APPENDIX A

ACHCSA LETTERS

ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY
ALEX BRISCOE, Director

ENVIRONMENTAL HEALTH SERVICES
ENVIRONMENTAL PROTECTION
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577
(510) 567-6700
FAX (510) 337-9335

October 25, 2010

Alice Ng Lim and May Lee Lim
C/o Russell Lim
3111 Diablo Road
Lafayette, CA 94549

Subject: Approval of Proposed Corrective Actions for Fuel Leak Case No. RO0000479 and Geotracker Global ID T0600100535, Lim Family Property, 250 8th Street, Oakland, CA 94607

Dear Mr. Lim:

Alameda County Environmental Health (ACEH) staff has reviewed the fuel leak case file for the above-referenced site including the recently submitted document entitled, "*Ozone-Sparge Well Installation and Air-Sparge Test Results Report*," dated September 10, 2010. The September 10, 2010 Report, also includes proposed modifications to the "*Remedial Action Plan*," dated March 15, 2010 (RAP). These modifications are based on air sparging pilot test results and ACEH technical comments provided in correspondence dated April 30, 2010.

The proposed corrective actions described in the RAP dated March 15, 2010 and modified in the "*Ozone-Sparge Well Installation and Air-Sparge Test Results Report*," dated September 10, 2010 are acceptable for implementation. ACEH notified potentially affected members of the public who live or own property in the surrounding area of the proposed remedial activities in a Fact Sheet dated September 20, 2010. No public comments on the proposed remediation were received during the public comment period which extended from September 22, 2010 to October 22, 2010.

TECHNICAL REPORT REQUEST

Please submit technical reports to Alameda County Environmental Health (Attention: Jerry Wickham), according to the following schedule:

- **January 20, 2011** – Semi-Annual Groundwater Monitoring Report (4Q 2010)
- **March 18, 2011** – Remediation System Start-Up Report
- **July 20, 2011** – Semi-Annual Groundwater Monitoring Report (2Q 2011)

If you have any questions, please call me at (510) 567-6791 or send me an electronic mail message at jerry.wickham@acgov.org.

Sincerely,

Jerry Wickham, California PG 3766, CEG 1177, and CHG 297
Senior Hazardous Materials Specialist

Attachment: Responsible Party(ies) Legal Requirements/Obligations

Enclosure: ACEH Electronic Report Upload (ftp) Instructions

cc: Leroy Griffin, Oakland Fire Department, 250 Frank H. Ogawa Plaza, Ste. 3341, Oakland, CA 94612-2032 2032 (*Sent via E-mail to: lgriffin@oaklandnet.com*)

David Allen, Aqua Science Engineers, Inc., 55 Oak Ct., Suite 220, Danville, CA 94526 (*Sent via E-mail to: dallen@aquascienceengineers.com*)

Robert Kitay, Aqua Science Engineers, Inc., 55 Oak Ct., Suite 220, Danville, CA 94526 (*Sent via E-mail to: rkitay@aquascienceengineers.com*)

Donna Drogos, ACEH (*Sent via E-mail to: donna.drogos@acgov.org*)
Jerry Wickham, ACEH (*Sent via E-mail to: jerry.wickham@acgov.org*)

GeoTracker, File

Attachment 1

Responsible Party(ies) Legal Requirements/Obligations

REPORT REQUESTS

These reports are being requested pursuant to California Health and Safety Code Section 25296.10. 23 CCR Sections 2652 through 2654, and 2721 through 2728 outline the responsibilities of a responsible party in response to an unauthorized release from a petroleum UST system, and require your compliance with this request.

ELECTRONIC SUBMITTAL OF REPORTS

ACEH's Environmental Cleanup Oversight Programs (LOP and SLIC) require submission of reports in electronic form. The electronic copy replaces paper copies and is expected to be used for all public information requests, regulatory review, and compliance/enforcement activities. Instructions for submission of electronic documents to the Alameda County Environmental Cleanup Oversight Program FTP site are provided on the attached "Electronic Report Upload Instructions." Submission of reports to the Alameda County FTP site is an addition to existing requirements for electronic submittal of information to the State Water Resources Control Board (SWRCB) GeoTracker website. In September 2004, the SWRCB adopted regulations that require electronic submittal of information for all groundwater cleanup programs. For several years, responsible parties for cleanup of leaks from underground storage tanks (USTs) have been required to submit groundwater analytical data, surveyed locations of monitoring wells, and other data to the GeoTracker database over the Internet. Beginning July 1, 2005, these same reporting requirements were added to Spills, Leaks, Investigations, and Cleanup (SLIC) sites. Beginning July 1, 2005, electronic submittal of a complete copy of all reports for all sites is required in GeoTracker (in PDF format). Please visit the SWRCB website for more information on these requirements (http://www.swrcb.ca.gov/ust/electronic_submittal/report_rqmts.shtml.

PERJURY STATEMENT

All work plans, technical reports, or technical documents submitted to ACEH must be accompanied by a cover letter from the responsible party that states, at a minimum, the following: "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." This letter must be signed by an officer or legally authorized representative of your company. Please include a cover letter satisfying these requirements with all future reports and technical documents submitted for this fuel leak case.

PROFESSIONAL CERTIFICATION & CONCLUSIONS/RECOMMENDATIONS

The California Business and Professions Code (Sections 6735, 6835, and 7835.1) requires that work plans and technical or implementation reports containing geologic or engineering evaluations and/or judgments be performed under the direction of an appropriately registered or certified professional. For your submittal to be considered a valid technical report, you are to present site specific data, data interpretations, and recommendations prepared by an appropriately licensed professional and include the professional registration stamp, signature, and statement of professional certification. Please ensure all that all technical reports submitted for this fuel leak case meet this requirement.

UNDERGROUND STORAGE TANK CLEANUP FUND

Please note that delays in investigation, later reports, or enforcement actions may result in your becoming ineligible to receive grant money from the state's Underground Storage Tank Cleanup Fund (Senate Bill 2004) to reimburse you for the cost of cleanup.

AGENCY OVERSIGHT

If it appears as though significant delays are occurring or reports are not submitted as requested, we will consider referring your case to the Regional Board or other appropriate agency, including the County District Attorney, for possible enforcement actions. California Health and Safety Code, Section 25299.76 authorizes enforcement including administrative action or monetary penalties of up to $10,000 per day for each day of violation.

Alameda County Environmental Cleanup Oversight Programs (LOP and SLIC)	**ISSUE DATE:** July 5, 2005
	REVISION DATE: March 27, 2009
	PREVIOUS REVISIONS: December 16, 2005, October 31, 2005
SECTION: Miscellaneous Administrative Topics & Procedures	**SUBJECT:** Electronic Report Upload (ftp) Instructions

The Alameda County Environmental Cleanup Oversight Programs (LOP and SLIC) require submission of all reports in electronic form to the county's ftp site. Paper copies of reports will no longer be accepted. The electronic copy replaces the paper copy and will be used for all public information requests, regulatory review, and compliance/enforcement activities.

REQUIREMENTS

- Entire report including cover letter must be submitted to the ftp site as **a single portable document format (PDF) with no password protection**. (Please do not submit reports as attachments to electronic mail.)
- It is **preferable** that reports be converted to PDF format from their original format, (e.g., Microsoft Word) rather than scanned.
- Signature pages and perjury statements **must** be included and have either original or electronic signature.
- **Do not password protect the document**. Once indexed and inserted into the correct electronic case file, the document will be secured in compliance with the County's current security standards and a password. **Documents with password protection will not be accepted**.
- Each page in the PDF document should be rotated in the direction that will make it easiest to read on a computer monitor.
- Reports must be named and saved using the following naming convention:
  RO#_Report Name_Year-Month-Date (e.g., RO#5555_WorkPlan_2005-06-14)

Additional Recommendations

- A separate copy of the tables in the document should be submitted by e-mail to your Caseworker in **Excel** format. These are for use by assigned Caseworker only.

Submission Instructions

1) Obtain User Name and Password:
   a) Contact the Alameda County Environmental Health Department to obtain a User Name and Password to upload files to the ftp site.
      i) Send an e-mail to dehloptoxic@acgov.org
         Or
      ii) Send a fax on company letterhead to (510) 337-9335, to the attention of My Le Huynh.
   b) In the subject line of your request, be sure to include **"ftp PASSWORD REQUEST"** and in the body of your request, include the **Contact Information, Site Addresses**, and the **Case Numbers (RO# available in Geotracker) you will be posting for**.

2) Upload Files to the ftp Site
   a) Using Internet Explorer (IE4+), go to ftp://alcoftp1.acgov.org
      (i) Note: Netscape and Firefox browsers will not open the FTP site.
   b) Click on File, then on Login As.
   c) Enter your User Name and Password. (Note: Both are Case Sensitive.)
   d) Open "My Computer" on your computer and navigate to the file(s) you wish to upload to the ftp site.
   e) With both "My Computer" and the ftp site open in separate windows, drag and drop the file(s) from "My Computer" to the ftp window.

3) Send E-mail Notifications to the Environmental Cleanup Oversight Programs
   a) Send email to dehloptoxic@acgov.org notify us that you have placed a report on our ftp site.
   b) Copy your Caseworker on the e-mail. Your Caseworker's e-mail address is the entire first name then a period and entire last name @acgov.org. (e.g., firstname.lastname@acgov.org)
   c) The subject line of the e-mail must start with the RO# followed by **Report Upload**. (e.g., Subject: RO1234 Report Upload) If site is a new case without an RO# use the street address instead.
   d) If your document meets the above requirements and you follow the submission instructions, you will receive a notification by email indicating that your document was successfully uploaded to the ftp site.

ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY
ALEX BRISCOE, Director

ENVIRONMENTAL HEALTH SERVICES
ENVIRONMENTAL PROTECTION
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577
(510) 567-6700
FAX (510) 337-9335

April 18, 2011

Alice Ng Lim and May Lee Lim
C/o Russell Lim
3111 Diablo Road
Lafayette, CA 94549

Subject: Review of Remediation Start-Up Report for Fuel Leak Case No. RO0000479 and Geotracker Global ID T0600100535, Lim Family Property, 250 8th Street, Oakland, CA 94607

Dear Mr. Lim:

Alameda County Environmental Health (ACEH) staff has reviewed the fuel leak case file for the above-referenced site including the recently submitted document entitled, "*Ozone-Sparging Remediation System Start-Up and First Week's Observations*," dated March 28, 2011 (Report). The March 28, 2011 Report presents results from the first week of operation of the ozone sparging system. The soil vapor extraction (SVE) system was not operating during the first week of ozone sparging, the and operation, PID readings were observed in both vapor monitoring points VMP-1 and VM-2 located on the south side of 8th Street during the first week of operation indicating that volatile organic compounds were migrating into the vadose zone.

The Report also includes plans to continue operation of the ozone sparging system on-site and to install an additional four SVE wells on the south side of 8th Street. We concur with the installation of four additional SVE wells on the south side of 8th Street. Due to the lack of monitoring points or active SVE, we do not concur with operation of the on-site ozone sparging system prior to operation of the SVE system. Therefore, we request that the ozone sparging system not be operated until the SVE system becomes fully operational. Please present results from start-up of the SVE and ozone sparging systems in the Remediation System Start-Up Report requested below.

TECHNICAL REPORT REQUEST

Please submit technical reports to Alameda County Environmental Health (Attention: Jerry Wickham), according to the following schedule:

- **July 12, 2011** – Remediation System Start-Up Report
- **July 20, 2011** – Semi-Annual Groundwater Monitoring Report (2Q 2011)

If you have any questions, please call me at (510) 567-6791 or send me an electronic mail message at jerry.wickham@acgov.org.

Sincerely,

Jerry Wickham, California PG 3766, CEG 1177, and CHG 297
Senior Hazardous Materials Specialist

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GeoTracker, eFile

Attachment 1

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Alameda County Environmental Cleanup Oversight Programs (LOP and SLIC)	**REVISION DATE:** July 20, 2010
	ISSUE DATE: July 5, 2005
	PREVIOUS REVISIONS: October 31, 2005; December 16, 2005; March 27, 2009; July 8, 2010
SECTION: Miscellaneous Administrative Topics & Procedures	**SUBJECT:** Electronic Report Upload (ftp) Instructions

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Submission Instructions

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   b) In the subject line of your request, be sure to include **"ftp PASSWORD REQUEST"** and in the body of your request, include the **Contact Information, Site Addresses**, and the **Case Numbers (RO# available in Geotracker) you will be posting for**.

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   a) Using Internet Explorer (IE4+), go to ftp://alcoftp1.acgov.org
      (i) Note: Netscape, Safari, and Firefox browsers will not open the FTP site as they are NOT being supported at this time.
   b) Click on Page located on the Command bar on upper right side of window, and then scroll down to Open FTP Site in Windows Explorer.
   c) Enter your User Name and Password. (Note: Both are Case Sensitive.)
   d) Open "My Computer" on your computer and navigate to the file(s) you wish to upload to the ftp site.
   e) With both "My Computer" and the ftp site open in separate windows, drag and drop the file(s) from "My Computer" to the ftp window.

3) Send E-mail Notifications to the Environmental Cleanup Oversight Programs
   a) Send email to deh.loptoxic@acgov.org notify us that you have placed a report on our ftp site.
   b) Copy your Caseworker on the e-mail. Your Caseworker's e-mail address is the entire first name then a period and entire last name @acgov.org. (e.g., firstname.lastname@acgov.org)
   c) The subject line of the e-mail must start with the RO# followed by **Report Upload**. (e.g., Subject: RO1234 Report Upload) If site is a new case without an RO#, use the street address instead.
   d) If your document meets the above requirements and you follow the submission instructions, you will receive a notification by email indicating that your document was successfully uploaded to the ftp site.

Aqua Science Engineers, Inc. 55 Oak Court, Suite 220, Danville, CA 94526
(925) 820-9391 - Fax (925) 837-4853 - www.aquascienceengineers.com

APPENDIX B

PERMITS

Alameda County Public Works Agency - Water Resources Well Permit

399 Elmhurst Street
Hayward, CA 94544-1395
Telephone: (510)670-6633 Fax:(510)782-1939

Application Approved on: 07/07/2010 By jamesy

Permit Numbers: W2010-0498
Permits Valid from 07/21/2010 to 08/31/2010

Application Id: 1278467112760 **City of Project Site:** Oakland
Site Location: 250 8th Street
Project Start Date: 07/21/2010 **Completion Date:** 08/31/2010
Assigned Inspector: Contact Vicky Hamlin at (510) 670-5443 or vickyh@acpwa.org

Applicant: Aqua Science Engineers - Robert Kitay
55 Oak Court, Suite 220, Danville, CA 94526 **Phone:** 925-820-9391
Property Owner: Russell Lim
3111 Diablo View Road, Lafayette, CA 94549 **Phone:** --
Client: ** same as Property Owner **

Total Due: $265.00
Receipt Number: WR2010-0240 **Total Amount Paid:** $265.00
Payer Name : Aqua Science Engineers Paid By: VISA **PAID IN FULL**

Works Requesting Permits:

Remediation Well Construction-Injection - 1 Wells
Driller: V&W Drilling - Lic #: 720904 - Method: hstem **Work Total: $265.00**

Specifications

Permit #	Issued Date	Expire Date	Owner Well Id	Hole Diam.	Casing Diam.	Seal Depth	Max. Depth
W2010-0498	07/07/2010	10/19/2010	OS-1	8.00 in.	2.00 in.	25.00 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. Permittee, 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 construction or 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 submit the copies of the approved encroachment permit to this office within 60 days.

5. Applicant shall contact Vicky Hamlin for an inspection time at 510-670-5443 or email to vickyh@acpwa.org 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.

6. Minimum seal depth (Neat Cement Seal) is 2 feet below ground surface (BGS).

7. Minimum surface seal thickness is two inches of cement grout placed by tremie

8. 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.

9. Prior to any drilling activities onto any public right-of-ways, it shall be the applicants responsibilities to contact and coordinate a Underground Service Alert (USA), obtain encroachment permit(s), excavation permit(s) or any other permits required for that City or to the County and follow all City or County Ordinances. It shall also be the applicants responsibilities to provide to the Cities or to Alameda County a Traffic Safety Plan for any lane closures or detours planned. No work shall begin until all the permits and requirements have been approved or obtained.

Alameda County Public Works Agency - Water Resources Well Permit

399 Elmhurst Street
Hayward, CA 94544-1395
Telephone: (510)670-6633 Fax:(510)782-1939

Application Approved on: 10/13/2010 By jamesy

Permit Numbers: W2010-0743
Permits Valid from 10/21/2010 to 10/21/2010

Application Id: 1286584471328
City of Project Site: Oakland
Site Location: 250 8th Street
Project Start Date: 10/21/2010
Completion Date: 10/21/2010

Assigned Inspector: Contact John Shouldice at (510) 670-5424 or johns@acpwa.org

Applicant: Aqua Science Engineers - Robert Kitay
55 Oak Court, Suite 220, Danville, CA 94526
Phone: 925-820-9391

Property Owner: Alice and May Lim
3100 La Playa Ct, Lafayette, CA 94549
Phone: --

Client: ** same as Property Owner **

Contact: Robert Kitay
Phone: --
Cell: 925-413-8604

Total Due: $265.00
Receipt Number: WR2010-0344 **Total Amount Paid:** $265.00
Payer Name : Aqua Science Engineers Paid By: VISA **PAID IN FULL**

Works Requesting Permits:

Remediation Well Construction-Injection - 11 Wells
Driller: RSI - Lic #: 802334 - Method: hstem **Work Total: $265.00**

Specifications

Permit #	Issued Date	Expire Date	Owner Well Id	Hole Diam.	Casing Diam.	Seal Depth	Max. Depth
W2010-0743	10/13/2010	01/19/2011	OS-10	8.00 in.	1.00 in.	25.00 ft	30.00 ft
W2010-0743	10/13/2010	01/19/2011	OS-11	8.00 in.	1.00 in.	25.00 ft	30.00 ft
W2010-0743	10/13/2010	01/19/2011	OS-12	8.00 in.	1.00 in.	25.00 ft	30.00 ft
W2010-0743	10/13/2010	01/19/2011	OS-2	8.00 in.	1.00 in.	25.00 ft	30.00 ft
W2010-0743	10/13/2010	01/19/2011	OS-3	8.00 in.	1.00 in.	25.00 ft	30.00 ft
W2010-0743	10/13/2010	01/19/2011	OS-4	8.00 in.	1.00 in.	25.00 ft	30.00 ft
W2010-0743	10/13/2010	01/19/2011	OS-5	8.00 in.	1.00 in.	25.00 ft	30.00 ft
W2010-0743	10/13/2010	01/19/2011	OS-6	8.00 in.	1.00 in.	25.00 ft	30.00 ft
W2010-0743	10/13/2010	01/19/2011	OS-7	8.00 in.	1.00 in.	25.00 ft	30.00 ft
W2010-0743	10/13/2010	01/19/2011	OS-8	8.00 in.	1.00 in.	25.00 ft	30.00 ft
W2010-0743	10/13/2010	01/19/2011	OS-9	8.00 in.	1.00 in.	25.00 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. Permittee, 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 construction or 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 submit the copies of the approved encroachment permit to this office within 60 days.

5. Applicant shall contact John Shouldice for an inspection time at 510-670-5424 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.

6. Minimum seal depth (Neat Cement Seal) is 2 feet below ground surface (BGS).

7. Minimum surface seal thickness is two inches of cement grout placed by tremie

8. 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.

9. Prior to any drilling activities onto any public right-of-ways, it shall be the applicants responsibilities to contact and coordinate a Underground Service Alert (USA), obtain encroachment permit(s), excavation permit(s) or any other permits required for that City or to the County and follow all City or County Ordinances. It shall also be the applicants responsibilities to provide to the Cities or to Alameda County a Traffic Safety Plan for any lane closures or detours planned. No work shall begin until all the permits and requirements have been approved or obtained.

Alameda County Public Works Agency - Water Resources Well Permit

399 Elmhurst Street
Hayward, CA 94544-1395
Telephone: (510)670-6633 Fax:(510)782-1939

Application Approved on: 02/23/2011 By jamesy

Permit Numbers: W2011-0093
Permits Valid from 03/08/2011 to 03/16/2011

Application Id: 1298158211547 **City of Project Site:** Oakland
Site Location: 250 8th Street
Project Start Date: 03/08/2011 **Completion Date:** 03/16/2011
Assigned Inspector: Contact Vicky Hamlin at (510) 670-5443 or vickyh@acpwa.org

Applicant: Aqua Science Engineers - Robert Kitay
55 Oak Court, Suite 220, Danville, CA 94526 **Phone:** 925-820-9391
Property Owner: Alice and May Lim
3100 La Playa Ct, Lafayette, CA 94549 **Phone:** --
Client: ** same as Property Owner **
Contact: David Allen **Phone:** --
Cell: 925-819-0963

Total Due: $265.00
Receipt Number: WR2011-0046 **Total Amount Paid:** $265.00
Payer Name : Aqua Science Engineers Paid By: VISA **PAID IN FULL**

Works Requesting Permits:

Remediation Well Construction-Vapor Remediation Well - 4 Wells
Driller: Aqua Science Engineers - Lic #: 487000 - Method: Hand **Work Total: $265.00**

Specifications

Permit #	Issued Date	Expire Date	Owner Well Id	Hole Diam.	Casing Diam.	Seal Depth	Max. Depth
W2011-0093	02/23/2011	06/06/2011	VE-1	2.50 in.	1.00 in.	4.00 ft	12.00 ft
W2011-0093	02/23/2011	06/06/2011	VE-2	2.50 in.	1.00 in.	4.00 ft	12.00 ft
W2011-0093	02/23/2011	06/06/2011	VE-3	2.50 in.	1.00 in.	4.00 ft	12.00 ft
W2011-0093	02/23/2011	06/06/2011	VE-4	2.50 in.	1.00 in.	4.00 ft	12.00 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. Permittee, 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 construction or 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 submit the copies of the approved encroachment permit to this office within 60 days.

5. Minimum seal depth (Neat Cement Seal) is 2 feet below ground surface (BGS).

6. Minimum surface seal thickness is two inches of cement grout placed by tremie

7. 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.

8. Prior to any drilling activities onto any public right-of-ways, it shall be the applicants responsibilities to contact and coordinate a Underground Service Alert (USA), obtain encroachment permit(s), excavation permit(s) or any other permits required for that City or to the County and follow all City or County Ordinances. It shall also be the applicants responsibilities to provide to the Cities or to Alameda County a Traffic Safety Plan for any lane closures or detours planned. No work shall begin until all the permits and requirements have been approved or obtained.

9. Applicant shall contact Vicky Hamlin for an inspection time at 510-670-5443 or email to vickyh@acpwa.org 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.

CITY OF OAKLAND • Community and Economic Development Agency

250 Frank H. Ogawa Plaza, 2nd Floor, Oakland, CA 94612 • Phone (510) 238-3443 • Fax (510) 238-2263

Applications for which no permit is issued within 180 days shall expire by limitation. No refund after 180 days when expired.

Appl# ENMI10258 Job Site 250 8TH ST Parcel# 001 -0185-011-00

Descr Allow five wells across from site in parking strip along 8th Street. Include horizontal bore from site to wells. Conduit to be removed at end of term. Filed 09/21/10

Insurance Required? YES Carrier Expires

		Applcnt	Phone#	Lic#	--License Classes--
Owner	LIM MAY L TR & ALICE TR				
Contractor	AQUA SCIENCE ENGINEERS, INC.	X	(925)820-9391	487000 A	C57
Arch/Engr					
Agent	AGENT TO PICK UP AGREEMENT				
Applic Addr	55 OAK CT. SUITE 220, DANVILLE, CA., 94526				

$1,133.73 TOTAL FEES PAID AT FILING $.00 TOTAL FEES PAID AT ISSUANCE

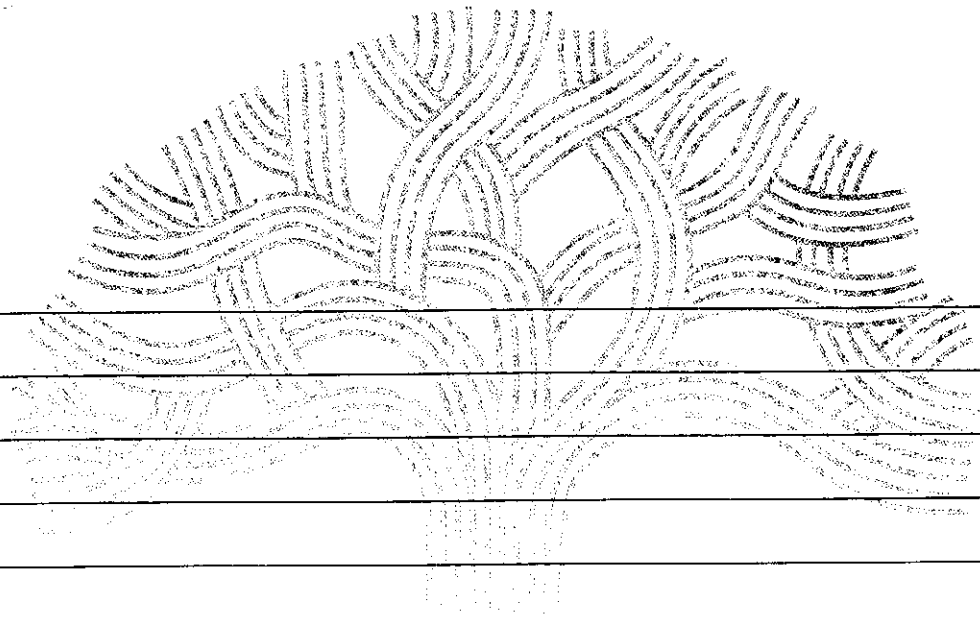
$71.00 Applic	$.00 Permit
$917.00 Process	$93.86 Rec Mgmt
$.00 Gen Plan	$.00 Invstg
$.00 Other	$51.87 Tech Enh

JOB SITE

need deed

Permit Issued By _____ Date: _____

Finaled By _____ Date: _____



ADDRESS:

DIST:

CITY OF OAKLAND • Community and Economic Development Agency

250 Frank H. Ogawa Plaza, 2nd Floor, Oakland, CA 94612 • Phone (510) 238-3443 • Fax (510) 238-2263

Applications for which no permit is issued within 180 days shall expire by limitation. No refund after 180 days when expired.

Appl# X1001362 Job Site 250 8TH ST Parcel# 001 -0185-011-00

Descr Allow five wells across from site in parking strip along 8th Street. Trench required per PWA from site to wells. Call PWA INSPECTION prior to start: 510-238-3651. Permit Issued 10/20/10

Work Type EXCAVATION-PRIVATE P

USA # Util Co. Job # Acctg#:

Util Fund #:

		Applcnt	Phone#	Lic#	--License Classes--
Owner	LIM MAY L TR & ALICE TR				
Contractor	AQUA SCIENCE ENGINEERS, INC.	X	(925)820-9391	487000 A	C57
Arch/Engr					
Agent					

Applic Addr 55 OAK CT. SUITE 220, DANVILLE, CA., 94526

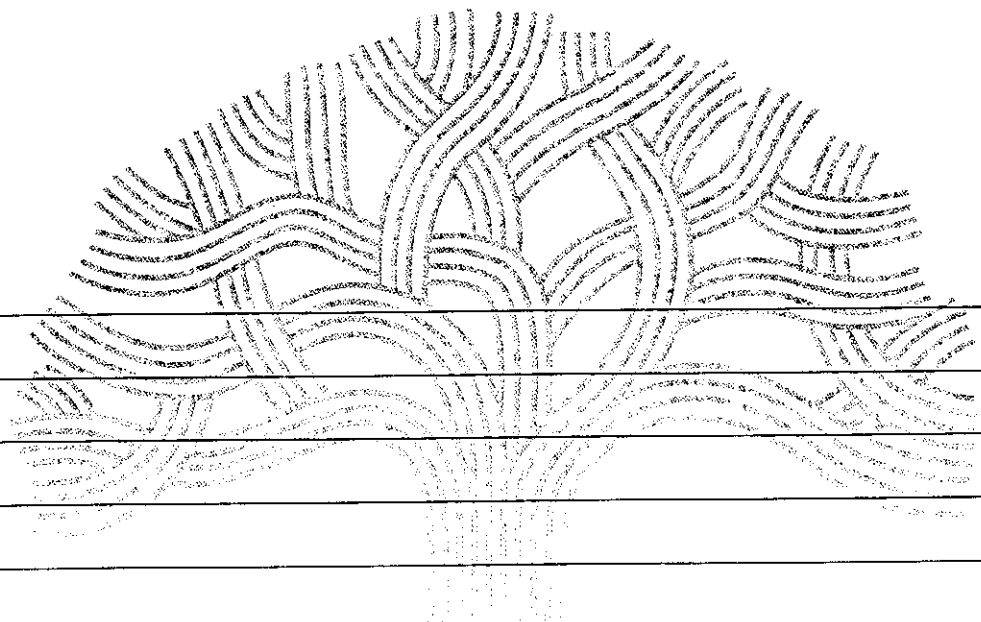
$436.05 TOTAL FEES PAID AT ISSUANCE

$71.00 Applic	$309.00 Permit
$.00 Process	$36.10 Rec Mgmt
$.00 Gen Plan	$.00 Invstg
$.00 Other	$19.95 Tech Enh

JOB SITE

Permit Issued By _____ Date: _____

Finaled By _____ Date: _____



ADDRESS:

DIST:

10/20/10

CITY OF OAKLAND • Community and Economic Development Agency
250 Frank H. Ogawa Plaza, 2nd Floor, Oakland, CA 94612 • Phone (510) 238-3443 • Fax (510) 238-2263

Applications for which no permit is issued within 180 days shall expire by limitation. No refund after 180 days when expired.

Appl# E1003531 Job Site 250 8TH ST

Parcel# 001 -0185-011-00
District: ED-INSP 01
Permit Issued 11/30/10
To schedule inspection call (510) 238-3444

Descr Temp power for ground water treatment system

Related ENMI99004 ENMI10258 OB100616 X1001420 X1001362

Work Type ALTERATION #Units Plans Energy Calcs
Bldg Sq Ft #Stories Survey Struct Calcs
Est Value Const Type 5B Soil Report Occup Codes U-2
Bldg Use MISC. STRUCTURE Sprinkler Zoning

	Name	Applcnt	Phone#	Lic#	--License Classes--
Owner	LIM MAY L TR & ALICE TR				
Contractor	AQUA SCIENCE ENGINEERS, INC.	X	(925)820-9391	487000	A C57
Arch/Engr					
Agent					

Applic Addr 55 OAK CT. SUITE 220, DANVILLE, CA., 94526

JOB SITE

$172.13 TOTAL FEES PAID AT ISSUANCE

$71.00	Applic	$.00	State Regs
$.00	Process	$.00	School
$.00	Bedroom	$.00	Plot Plan
$.00	Address	$.00	
$.00	SMIP	$7.88	Tech Enhc
$.00	Fire	$.00	Zoning Cnd
$79.00	Inspects	$14.25	Recd Mgmt
$.00	Wrk Cmnc	$.00	Gen Plan
$.00	Other	$.00	Fld Chk
$.00	Zone Insp	$.00	Proc Coord
$.00	CBSC		

Plans Checked By ____________ Date ________ Permit Issued By CB Date 11-30-10

Special Inspections

Finaled By ____________ Date ________

1-5-11 - METER RELEASED OK - EQUIPMENT CONNECTION TO COME
TJ

ADDRESS:

DIST:

BAY AREA
AIR QUALITY
MANAGEMENT
DISTRICT
SINCE 1955

May 2, 2011

Aqua Science Engineers, Inc (ASE)
55 Oak Ct, Suite 220
Danville, CA 94526

Attention: David Allen

Application Number: 22890
Plant Number: 18100
Equipment Location:
250 8th Street
Oakland, CA 94607

Dear Applicant:

Enclosed is your Permit to Operate the following:

S-2 Soil Vapor Extraction System, 200 scfm vacuum blower

The equipment described above is subject to condition no. 24909.

In accordance with Regulation 2-1-411.2, you must sign your Permit to Operate. All Permits should be posted in a clearly visible and accessible place on or near the equipment to be operated, or kept available for inspection at any time. Operation of this equipment in violation of District Regulations or any permit conditions is subject to penalty action.

In the absence of specific permit conditions to the contrary, the throughputs, fuel and material consumption, capacities, and hours of operation described in your permit application will be considered maximum allowable limits. A new permit will be required before any increase in these parameters, or change in raw material handled may be made.

Please include your permit number with any correspondence with the District. If you have any questions on this matter please call Flora W Chan, Air Quality Engineer I at (415) 749-4630.

Very truly yours,

Jack P. Broadbent
Executive Officer/APCO

by
Engineering Division

FWC
Enclosure

BAY AREA AIR QUALITY MANAGEMENT DISTRICT SINCE 1955

PERMIT TO OPERATE

PLANT No. **18100**

SOURCE No. **2**

Aqua Science Engineers, Inc (ASE)

250 8th Street, Oakland, CA 94607

IS HEREBY GRANTED A PERMIT TO OPERATE THE FOLLOWING EQUIPMENT

Soil Vapor Extraction System, 200 scfm vacuum blower

Subject to attached condition no. 24909.[1]

JACK P. BROADBENT
EXECUTIVE OFFICER/APCO

Permit Issue Date May 2, 2011
Reported Start Up Date April 22, 2011
Permit Expiration Date **April 21, 2012**

By Scott Lutz

Right of Entry

The Air Pollution Control Officer of the Bay Area Air Quality Management District, the Chairman of the California Air Resources Board, the Regional Administrator of the Environmental Protection Agency, and/or their designees, upon presentation of credentials, shall be granted the right of entry to any premises on which an air pollution source is located for the purposes of : i) the inspection of the source ii) the sampling of materials used at the source iii) the conduction of an emissions source test iv) the inspection of any records required by District rule or permit condition.

Permit Expiration

In accordance with Regulation 3-408, a Permit to Operate is valid for 12 months from the date of issuance or other time period as approved by the APCO. Use of this Permit to Operate is authorized by the District until the later of: the Permit Expiration Date or the Permit Renewal Date. Permit to operate fees will be prorated as described in Regulation 3-402 when the permit is renewed.

This permit does not authorize violation of the rules and regulations of the BAAQMD or the Health and Safety Code of the State of California. District regulations may be viewed on line at www.baaqmd.gov. This permit is not transferable to another person without approval from the District. It is the responsibiliy of the permit holder to have knowledge of and be in compliance with all District Rules and Regulations.

1. Compliance with conditions contained in this permit does not mean that the permit holder is currently in compliance with District Rules and Regulations.

Permit Holder Must Sign Here _____

Plant Name: Aqua Science Engineers, Inc (ASE)

Source No. 2 Soil Vapor Extraction System, 200 scfm vacuum blower

Condition No. 24909 Plant No. 18100 Application No. 22890

1. Precursor Organic Compound (POC) emissions from S-2 shall be abated by Abatement device A-2 SVE Abatement System, consisting of either a Electric Catalytic Oxidizer, or at least two (200 lbs minimum capacity) Activated Carbon Vessels during all periods of operation. Start-up and subsequent operation of each abatement device shall take place only after written notification of same has been received by the District's Engineering Division. Influent vapor flow shall not exceed 200 scfm. [Basis. Reg 8-47-301,302].
2. The POC abatement efficiency of abatement device A-2 shall be maintained at a minimum of 98.5% by weight for inlet POC concentrations greater than or equal to 2000 ppmv (measured as hexane). For inlet concentrations below 2000 ppmv and greater than or equal to 200 ppmv, a minimum abatement efficiency of 97% shall be maintained. For inlet concentrations below 200 ppmv, a minimum abatement efficiency of 90% shall be maintained. The minimum abatement efficiency shall be waived if outlet POC concentrations are shown to be less than 10 ppmv (measured as hexane). In no event shall Benzene emissions to the atmosphere exceed 0.01 pounds per day for sources S-2.
3. While operating as a Catalytic Oxidizer, the minimum operating temperature of A-2 shall not be less than 600 degrees Fahrenheit.
4. To determine compliance with Condition Number 3, the Catalytic Oxidizer shall be equipped with continuous measuring and temperature recording instrumentation. The temperature data collected from the temperature recorder shall be maintained in a file which shall be available for District inspection for a period of at least 2 years following the date on which such data are recorded.
5. To determine compliance with Condition 2, within ten days after start-up of the Catalytic Oxidizer, the operator of these sources shall:
   a. Analyze inlet gas stream to determine the flow rate and concentration of POC present.
   b. Analyze exhaust gas to determine the flow rate, and the concentration of Benzene and POC present.
   c. Calculate the Benzene emission rate in pounds per day based on the exhaust gas analysis and the operating exhaust flow rate. The soil vapor flow rate shall be decreased, if necessary, to demonstrate compliance with Condition 2.
   d. Calculate the POC abatement efficiency based on the inlet and exhaust gas analysis. For the purpose of determining compliance with condition 2, the POC concentration shall be reported as hexane.

e. Submit to the District's Engineering Division the test results and emission calculations within one month from the testing date. Samples shall be analyzed according to modified EPA test methods 8015 and 8020 or their equivalent to determine the concentrations of POC and Benzene.

6. The operator of this source shall maintain the following records for each month of operation of the Catalytic Oxidizer:
   a. Days and hours of operation.
   b. Each emission test, analysis or monitoring results logged-in for the day of operation they were taken.
   c. Analysis results for any catalyst plugs removed from the bed to determine remaining life of the catalyst.

   Such records shall be retained and made available for inspection by the District for two years following the date the data is recorded. [basis: Reg. 1-523]
7. During operation of the Activated Carbon Vessels, the operator of this source shall monitor with a photo-ionization detector (PID), flame-ionization detector (FID), or other method approved in writing by the District's Source Test Manager at the following locations:
   a. At the inlet to the second to last Carbon vessel in series.
   b. At the inlet to the last Carbon vessel in series.
   c. At the outlet of the Carbon vessel that is last in series prior to venting to the atmosphere. When using an FID to monitor breakthrough, readings may be taken with and without a Carbon filter tip fitted on the FID probe. Concentrations measured with the Carbon filter tip in place shall be considered methane for the purpose of these permit conditions.
8. These monitor readings shall be recorded in a monitoring log at the time they are taken. The monitoring results shall be used to estimate the frequency of Carbon change out necessary to maintain compliance with conditions number 9 and 10, and shall be conducted on a daily basis. The operator of this source may propose for District review, based on actual measurements taken at the site during operation of the source, that the monitoring schedule be changed based on the decline in organic emissions and/or the demonstrated breakthrough rates of the carbon vessels. Written approval by the District's Engineering Division must be received by the operator prior to a change to the monitoring schedule.
9. The second to last Carbon vessel shall be immediately changed out with unspent carbon upon breakthrough, defined as the detection at its outlet in excess of the higher of the following limits:

a. 10 % of the inlet stream concentration to the carbon bed.
b. 10 ppmv (measured as hexane).

10. The last Carbon vessel shall be immediately changed out with unspent Carbon upon detection at its outlet of 10 ppmv or greater (measured as hexane).
11. The operator of this source shall maintain the following information for each month of operation of the Activated Carbon Vessels:
    a. Hours and time of operation.
    b. Each emission test, analysis or monitoring results logged in for the day of operation they were taken.
    c. The number of Carbon vessels removed from service.

    Such records shall be retained and made available for inspection by the District for two years following the date the data is recorded. [basis: Reg.523]
12. Any non-compliance with these conditions shall be reported to the Compliance and Enforcement Division at the time that it is first discovered. The submittal shall detail the corrective action taken and shall include the data showing the exceedance as well as the time of occurrence.
13. The operator shall maintain a file containing all measurements, records and other data that are required to be collected pursuant to the various provisions of this conditional Authority to Construct/Permit to Operate. All measurements, records and data required to be maintained by the operator shall be retained for at least two years following the date the data is recorded [basis: Reg 1-523].
14. Upon final completion of the remediation project, the operator of Source S-2 shall notify the Engineering Division within two weeks of decommissioning the operation.

End of Conditions

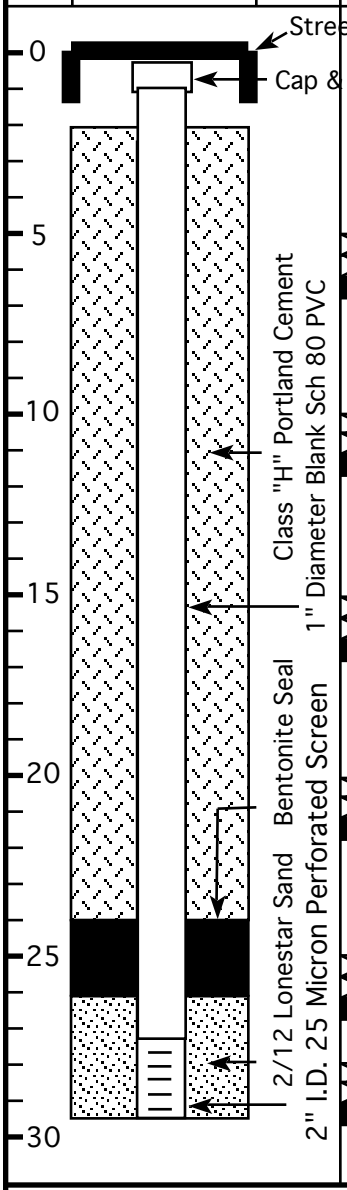
Aqua Science Engineers, Inc. 55 Oak Court, Suite 220, Danville, CA 94526
(925) 820-9391 - Fax (925) 837-4853 - www.aquascienceengineers.com

APPENDIX C

SPARGING WELL LOGS

SOIL BORING LOG AND MONITORING WELL COMPLETION DETAILS		Well 0S-1
Project Name: Lim Property	Project Location: 250 8th Street, Oakland, CA	Page 1 of 1
Driller: V&W Drilling	Type of Rig: Hollow-Stem Auger	Size of Drill: 8.0" Diameter
Logged By: Robert E. Kitay, P.G.	Date Drilled: July 29, 2010	Checked By: Robert E. Kitay, P.G.

WATER AND WELL DATA	
Depth of Water First Encountered: 22'	Total Depth of Well Completed: 29.5'
	Well Screen Type and Diameter: 18" Ozone Sparge Point
Static Depth of Water in Boring: NA	Well Screen Perforation Size: 25 microns
Total Depth of Boring: 29.5'	Type and Size of Soil Sampler: 2.0" I.D. Macro Core

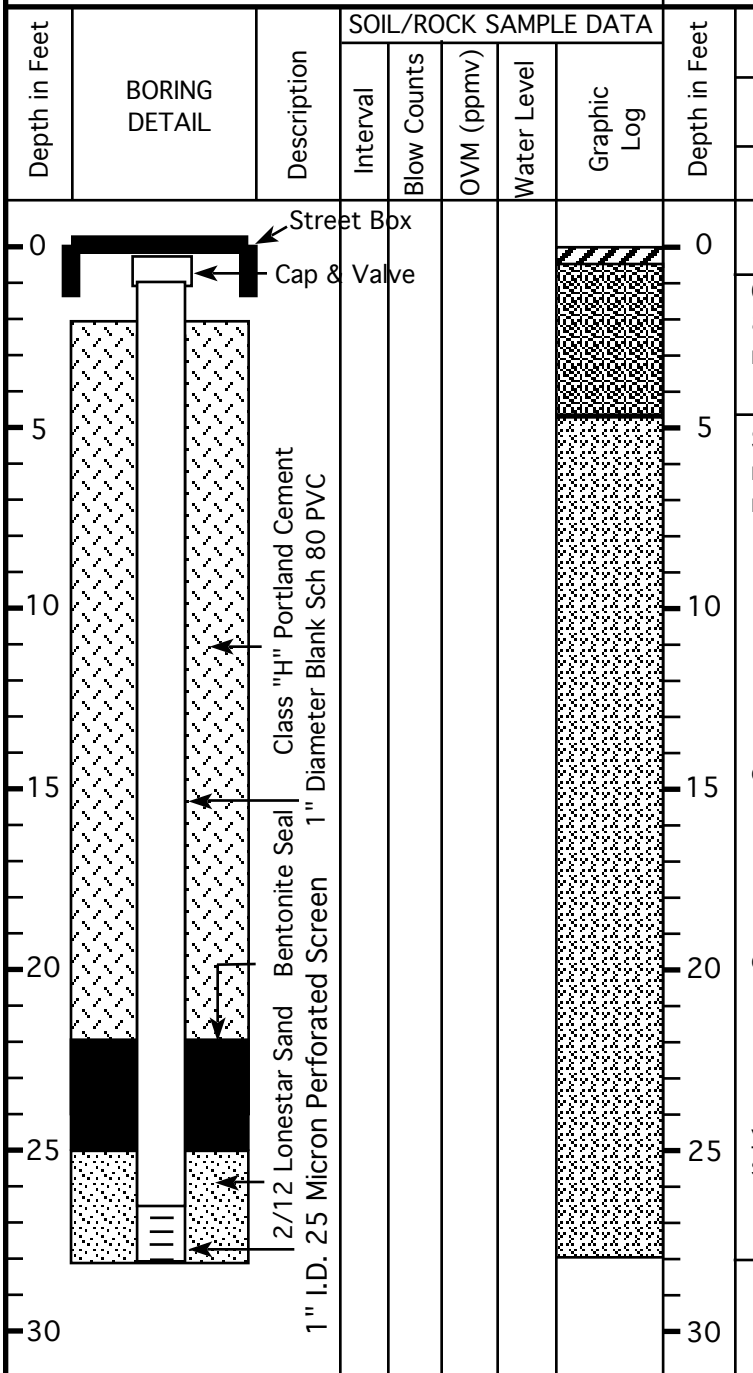


Depth in Feet	DESCRIPTION OF LITHOLOGY standard classification, texture, relative moisture, density, stiffness, odor-staining, USCS designation.
0	Asphalt
	Silty SAND (SM); yellow brown; loose; dry; 90% fine sand; 10% silt; non-plastic; high estimated K; no odor
15	strong hydrocarbon odor
20	very strong hydrocarbon odor
25	wet; strong hydrocarbon odor
	yelow brown; moderate hydrocarbon odor
30	End of boring at 29.5'

AQUA SCIENCE ENGINEERS, INC.

SOIL BORING LOG AND MONITORING WELL COMPLETION DETAILS		Well 0S-2
Project Name: Lim Property	Project Location: 250 8th Street, Oakland, CA	Page 1 of 1
Driller: RSI	Type of Rig: Hollow-Stem Auger	Size of Drill: 8.0" Diameter
Logged By: Robert E. Kitay, P.G.	Date Drilled: October 27, 2010	Checked By: Robert E. Kitay, P.G.

WATER AND WELL DATA	
Depth of Water First Encountered: NA'	Total Depth of Well Completed: 28'
	Well Screen Type and Diameter: 18" Ozone Sparge Point
Static Depth of Water in Boring: NA	Well Screen Perforation Size: 25 microns
Total Depth of Boring: 28'	Type and Size of Soil Sampler: 2.0" I.D. Macro Core

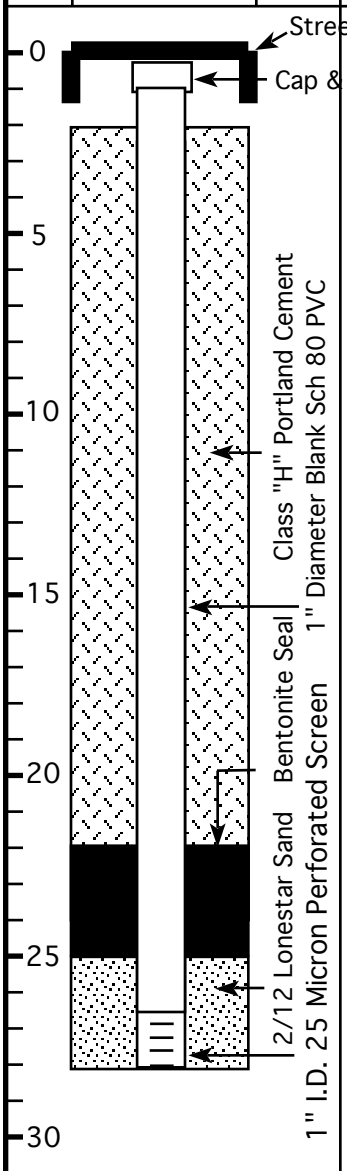


DESCRIPTION OF LITHOLOGY	
standard classification, texture, relative moisture, density, stiffness, odor-staining, USCS designation.	
< Not Sampled - Lithology from Adjacent EW-4 >	
0	Asphalt
	Clayey SAND (SC); yellow brown; medium dense; dry; 85% fine to medium sand; 15% clay; non-plastic; medium estimated K; no odor
5	Silty SAND (SM); yellow brown; loose; dry; 90% fine to medium sand; 10% silt; non-plastic; high estimated K; no odor
10	
15	olive; slight hydrocarbon odor at 14'
20	olive; strong hydrocarbon odor at 19'
25	yellow brown; wet; 80% fine to medium sand; 5% coarse sand; 15% silt; slight hydrocarbon odor
	End of boring at 28'
30	

AQUA SCIENCE ENGINEERS, INC.

SOIL BORING LOG AND MONITORING WELL COMPLETION DETAILS		Well 0S-3
Project Name: Lim Property	Project Location: 250 8th Street, Oakland, CA	Page 1 of 1
Driller: RSI	Type of Rig: Hollow-Stem Auger	Size of Drill: 8.0" Diameter
Logged By: Robert E. Kitay, P.G.	Date Drilled: October 27, 2010	Checked By: Robert E. Kitay, P.G.

WATER AND WELL DATA	
Depth of Water First Encountered: NA'	Total Depth of Well Completed: 28'
	Well Screen Type and Diameter: 18" Ozone Sparge Point
Static Depth of Water in Boring: NA	Well Screen Perforation Size: 25 microns
Total Depth of Boring: 28'	Type and Size of Soil Sampler: 2.0" I.D. Macro Core



SOIL/ROCK SAMPLE DATA

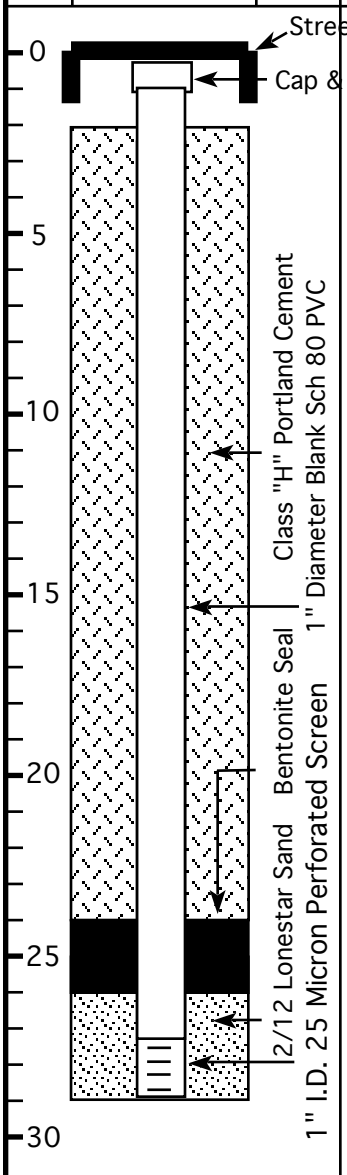
Interval	Blow Counts	OVM (ppmv)	Water Level	Graphic Log

Depth in Feet	DESCRIPTION OF LITHOLOGY
	standard classification, texture, relative moisture, density, stiffness, odor-staining, USCS designation.
	< Not Sampled - Lithology from EW-5 >
0	Asphalt
	Clayey SAND (SC); yellow brown; medium dense; dry; 90% fine sand; 10% clay; low plasticity; low estimated K; no odor
5	Silty SAND (SM); yellow brown; loose; dry; 90% fine to medium sand; 10% silt; non-plastic; high estimated K; no odor
10	olive; damp; 95% fine sand; 5% clay; slight hydrocarbon odor at 9'
15	Silty SAND (SM); olive; damp; dense; 90% fine to medium sand; 10% silt; non-plastic; high estimated K; moderate hydrocarbon odor
20	
25	SAND (SP); olive; moist; dense; 100% fine to medium sand; non-plastic; high estimated K; strong hydrocarbon odor
30	End of boring at 28'

AQUA SCIENCE ENGINEERS, INC.

SOIL BORING LOG AND MONITORING WELL COMPLETION DETAILS		Well 0S-4
Project Name: Lim Property	Project Location: 250 8th Street, Oakland, CA	Page 1 of 1
Driller: RSI	Type of Rig: Hollow-Stem Auger	Size of Drill: 8.0" Diameter
Logged By: Robert E. Kitay, P.G.	Date Drilled: October 28, 2010	Checked By: Robert E. Kitay, P.G.

WATER AND WELL DATA	
Depth of Water First Encountered: NA'	Total Depth of Well Completed: 29'
	Well Screen Type and Diameter: 18" Ozone Sparge Point
Static Depth of Water in Boring: NA	Well Screen Perforation Size: 25 microns
Total Depth of Boring: 29'	Type and Size of Soil Sampler: 2.0" I.D. Macro Core

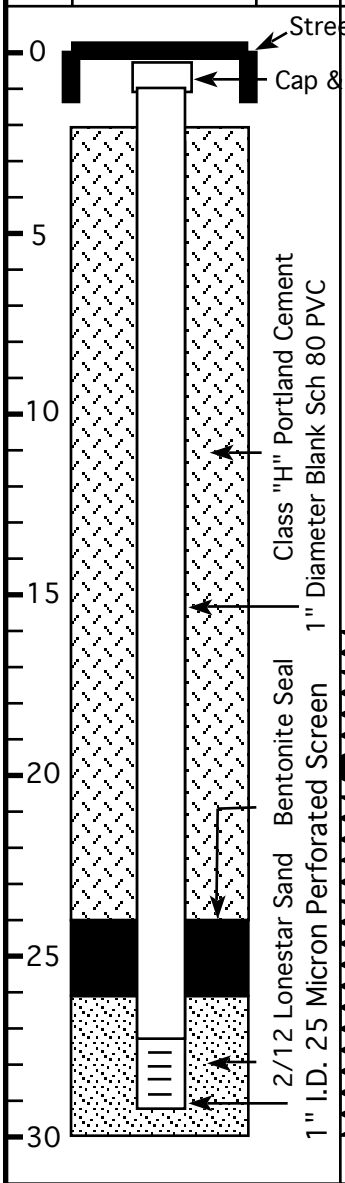


SOIL/ROCK SAMPLE DATA						DESCRIPTION OF LITHOLOGY
Depth in Feet	Interval	Blow Counts	OVM (ppmv)	Water Level	Graphic Log	standard classification, texture, relative moisture, density, stiffness, odor-staining, USCS designation.
0						Asphalt
						< Not Sampled since it is adjacent to well MW-8; However, pea gravel stopped at 6' and sand was encountered. Very strong hydrocarbon odors from 6' >
5						Pea Gravel
						Silty SAND (SM); grey; medium dense; wet; 70% sand; 30% silt; non-plastic; high estimated K; very strong hydrocarbon odor < Description from MW-8 boring log >
10						
15						
20						SAND (SP); grey; loose; wet; 100% fine sand; non-plastic; high estimated K; strong hydrocarbon odor
25						
30						End of boring at 29'

AQUA SCIENCE ENGINEERS, INC.

SOIL BORING LOG AND MONITORING WELL COMPLETION DETAILS		Well 0S-5
Project Name: Lim Property	Project Location: 250 8th Street, Oakland, CA	Page 1 of 1
Driller: RSI	Type of Rig: Hollow-Stem Auger	Size of Drill: 8.0" Diameter
Logged By: Robert E. Kitay, P.G.	Date Drilled: October 28, 2010	Checked By: Robert E. Kitay, P.G.

WATER AND WELL DATA	
Depth of Water First Encountered: 22'	Total Depth of Well Completed: 29.5'
	Well Screen Type and Diameter: 18" Ozone Sparge Point
Static Depth of Water in Boring: NA	Well Screen Perforation Size: 25 microns
Total Depth of Boring: 30'	Type and Size of Soil Sampler: 2.0" I.D. Macro Core

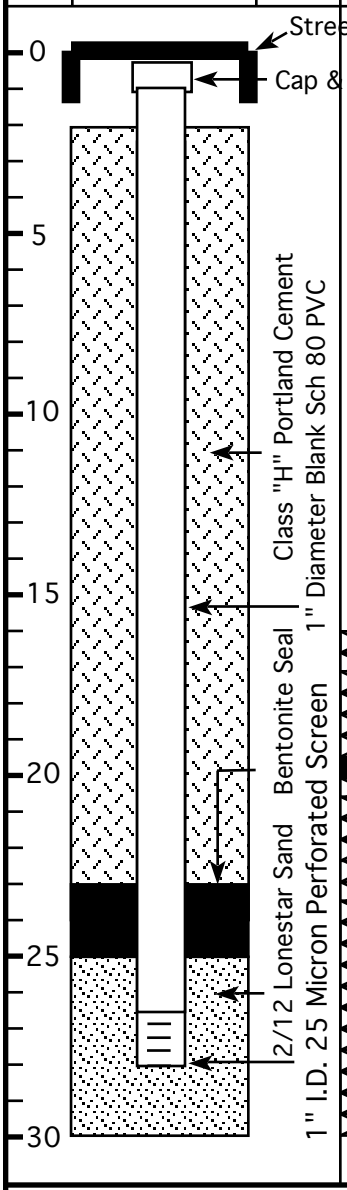


Depth in Feet	BORING DETAIL	Description	SOIL/ROCK SAMPLE DATA: Interval	Blow Counts	OVM (ppmv)	Water Level	Graphic Log	Depth in Feet	DESCRIPTION OF LITHOLOGY (standard classification, texture, relative moisture, density, stiffness, odor-staining, USCS designation.)
0								0	Asphalt
									Pea Gravel
5								5	
10								10	
15								15	
20					1675			20	SAND (SP); olive; medium dense; moist; 100% fine to medium sand; non-plastic; high estimated K; very strong hydrocarbon odor
									Silty SAND (SM); olive; dense; moist; 70% fine sand; 30% silt; trace clay; non-plastic; medium estimated K; very strong hydrocarbon odor
25					3610			25	SAND (SP); olive; medium dense; wet; 100% fine to medium sand; non-plastic; very high estimated K; very strong hydrocarbon odor yellow brown at 26.5'
					19				slight hydrocarbon odor at 28'
30					6.3			30	End of boring at 29.5'

AQUA SCIENCE ENGINEERS, INC.

SOIL BORING LOG AND MONITORING WELL COMPLETION DETAILS		Well 0S-6
Project Name: Lim Property	Project Location: 250 8th Street, Oakland, CA	Page 1 of 1
Driller: RSI	Type of Rig: Hollow-Stem Auger	Size of Drill: 8.0" Diameter
Logged By: Robert E. Kitay, P.G.	Date Drilled: October 29, 2010	Checked By: Robert E. Kitay, P.G.

WATER AND WELL DATA	
Depth of Water First Encountered: 16'	Total Depth of Well Completed: 29.5'
	Well Screen Type and Diameter: 18" Ozone Sparge Point
Static Depth of Water in Boring: NA	Well Screen Perforation Size: 25 microns
Total Depth of Boring: 30'	Type and Size of Soil Sampler: 2.0" I.D. Macro Core



DESCRIPTION OF LITHOLOGY

standard classification, texture, relative moisture, density, stiffness, odor-staining, USCS designation.

Concrete

< No Sampling until 16' >

SAND (SP); olive; medium dense; wet; 100% fine to medium sand; trace silt; non-plastic; high estimated K; very strong hydrocarbon odor

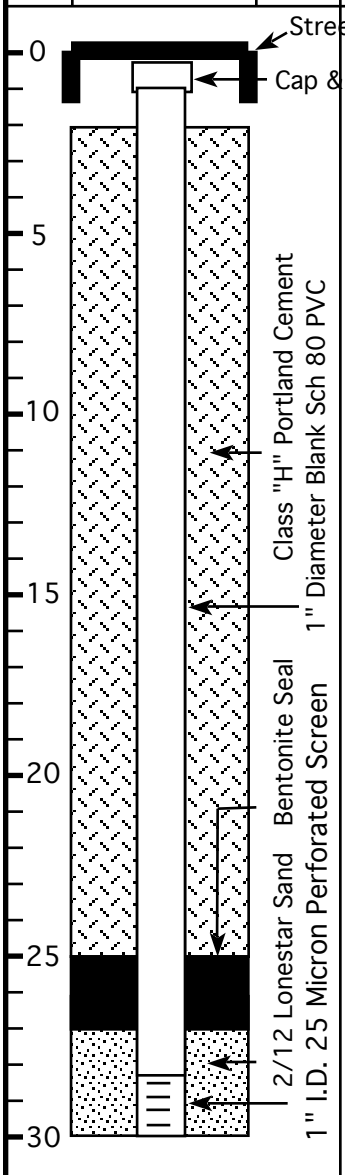
yellow brown; slight hydrocarbon odor at 26.5'

End of boring at 30'

AQUA SCIENCE ENGINEERS, INC.

SOIL BORING LOG AND MONITORING WELL COMPLETION DETAILS		Well 0S-7
Project Name: Lim Property	Project Location: 250 8th Street, Oakland, CA	Page 1 of 1
Driller: RSI	Type of Rig: Hollow-Stem Auger	Size of Drill: 8.0" Diameter
Logged By: Robert E. Kitay, P.G.	Date Drilled: October 28, 2010	Checked By: Robert E. Kitay, P.G.

WATER AND WELL DATA	
Depth of Water First Encountered: NA	Total Depth of Well Completed: 30'
	Well Screen Type and Diameter: 18" Ozone Sparge Point
Static Depth of Water in Boring: NA	Well Screen Perforation Size: 25 microns
Total Depth of Boring: 30'	Type and Size of Soil Sampler: 2.0" I.D. Macro Core



SOIL/ROCK SAMPLE DATA

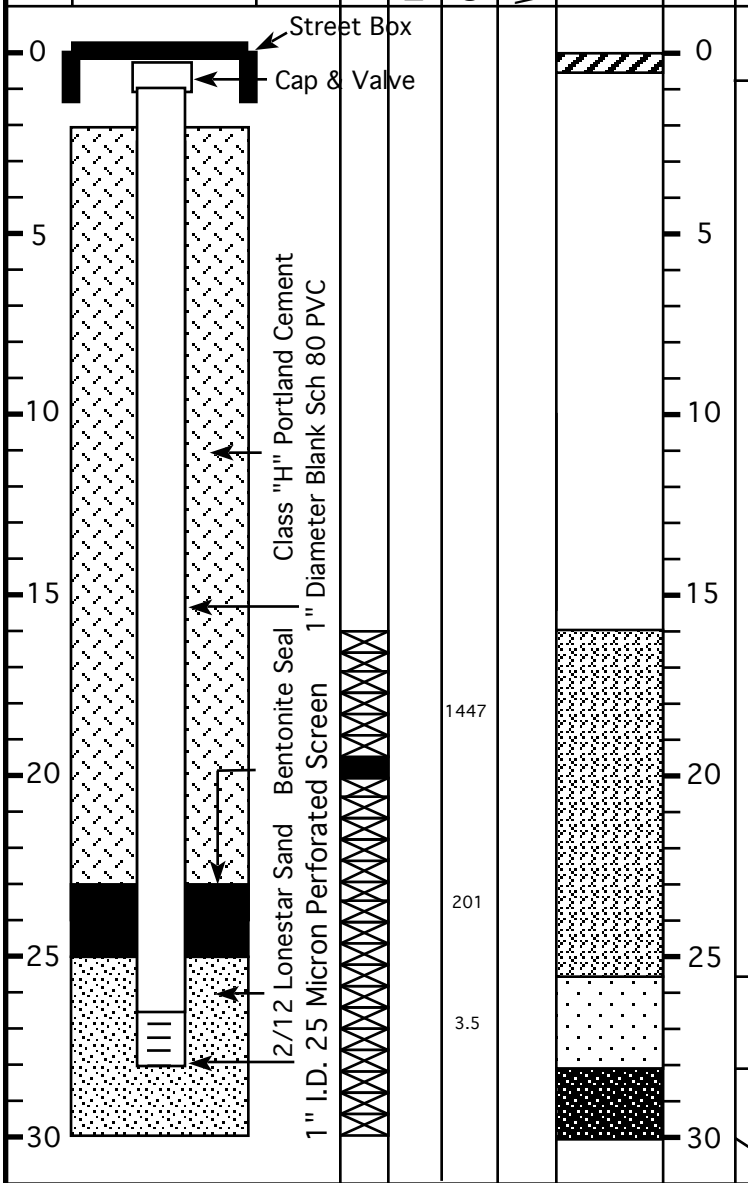
Interval	Blow Counts	OVM (ppmv)	Water Level	Graphic Log

Depth in Feet	DESCRIPTION OF LITHOLOGY standard classification, texture, relative moisture, density, stiffness, odor-staining, USCS designation.
	< Not Sampled - Adjacent to EW-2 >
0	Asphalt
	Sandy GRAVEL (GW); yellow brown; loose; dry; 70% rounded gravel to 0.7" diameter; 30% fine sand; non-plastic; high estimated K; no odor
5	PEA GRAVEL (FILL); grey; no odor
10	no recovery; appears to still be pea gravel
15	pea gravel; slight hydrocarbon odor
20	no recovery; pea gravel suspected; wet with strong hydrocarbon odor on water
	pea gravel
25	Silty SAND (SM); olive; medium dense; wet; 60-70% fine sand; 30-40% silt; non-plastic; high estimated K; strong hydrocarbon odor
	90% medium to coarse sand; 10% silt; moderate hydrocarbon odor at 29'
30	End of boring at 30'

AQUA SCIENCE ENGINEERS, INC.

SOIL BORING LOG AND MONITORING WELL COMPLETION DETAILS		Well 0S-8
Project Name: Lim Property	Project Location: 250 8th Street, Oakland, CA	Page 1 of 1
Driller: RSI	Type of Rig: Hollow-Stem Auger	Size of Drill: 8.0" Diameter
Logged By: Robert E. Kitay, P.G.	Date Drilled: October 26, 2010	Checked By: Robert E. Kitay, P.G.

WATER AND WELL DATA	
Depth of Water First Encountered: NA	Total Depth of Well Completed: 30'
	Well Screen Type and Diameter: 18" Ozone Sparge Point
Static Depth of Water in Boring: NA	Well Screen Perforation Size: 25 microns
Total Depth of Boring: 30'	Type and Size of Soil Sampler: 2.0" I.D. Macro Core

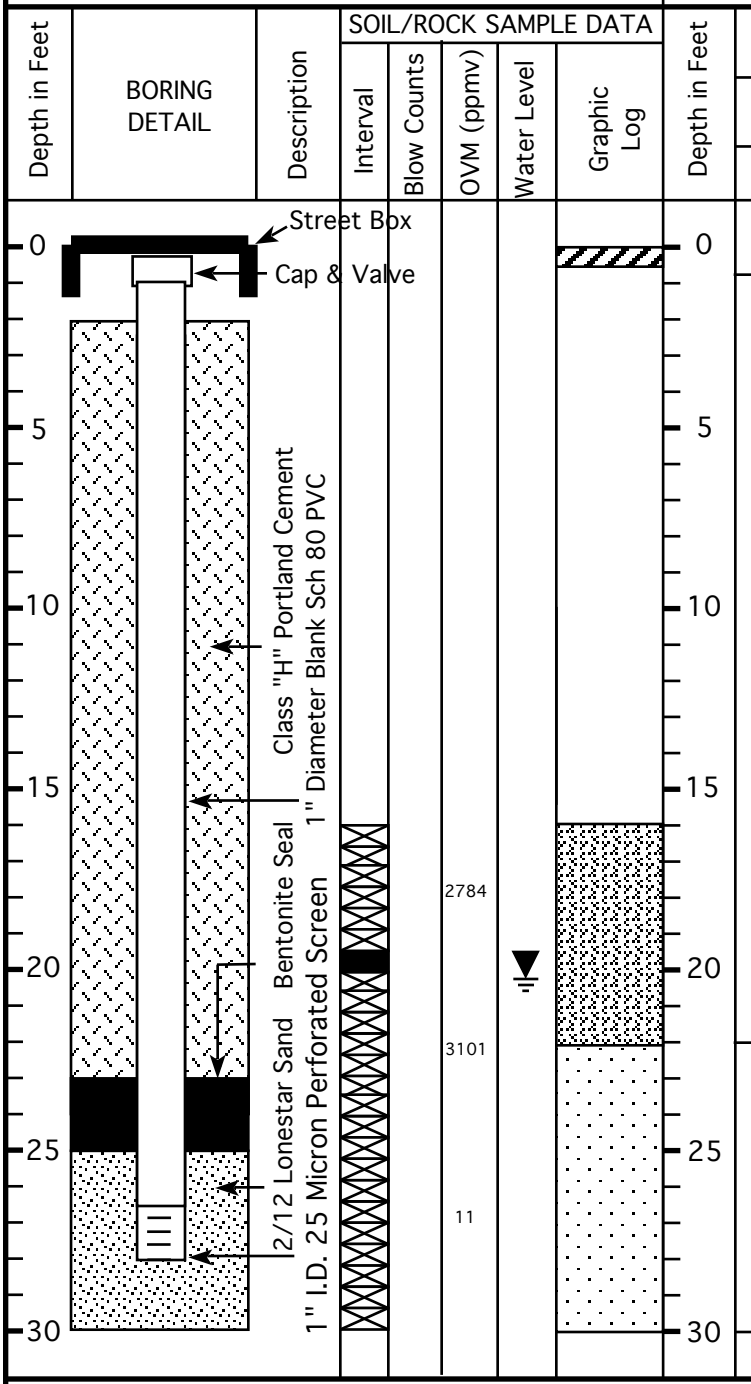


Depth in Feet	DESCRIPTION OF LITHOLOGY standard classification, texture, relative moisture, density, stiffness, odor-staining, USCS designation.
0	Concrete
	< No Sampling until 16' >
15	Silty SAND (SM); olive; medium dense; moist; 70% fine to medium sand; 30% silt; non-plastic; high estimated K; strong hydrocarbon odor
20	very strong hydrocarbon odor
25	SAND (SP); yellow brown; loose; wet; 100% fine to medium sand; non-plastic; very high estimated K; slight hydrocarbon odor
30	Sandy CLAY (CH); yellow brown; very stiff; moist; 80% clay; 20% fine sand; high plasticity; very low estimated K; slight hydrocarbon odor

AQUA SCIENCE ENGINEERS, INC.

SOIL BORING LOG AND MONITORING WELL COMPLETION DETAILS		Well 0S-9
Project Name: Lim Property	Project Location: 250 8th Street, Oakland, CA	Page 1 of 1
Driller: RSI	Type of Rig: Hollow-Stem Auger	Size of Drill: 8.0" Diameter
Logged By: Robert E. Kitay, P.G.	Date Drilled: October 26, 2010	Checked By: Robert E. Kitay, P.G.

WATER AND WELL DATA	
Depth of Water First Encountered: NA	Total Depth of Well Completed: 30'
	Well Screen Type and Diameter: 18" Ozone Sparge Point
Static Depth of Water in Boring: NA	Well Screen Perforation Size: 25 microns
Total Depth of Boring: 30'	Type and Size of Soil Sampler: 2.0" I.D. Macro Core



DESCRIPTION OF LITHOLOGY

standard classification, texture, relative moisture, density, stiffness, odor-staining, USCS designation.

Concrete

< No Sampling until 16' >

Silty SAND (SM); yellow brown; medium dense; moist; 85% fine to medium sand; 15% silt; non-plastic; very high estimated K; strong hydrocarbon odor

wet at 20'

SAND (SP); olive; medium dense; wet; 100% fine sand; non-plastic; very high estimated K; strong hydrocarbon odor

yellow brown; slight hydrocarbon odor below 25'

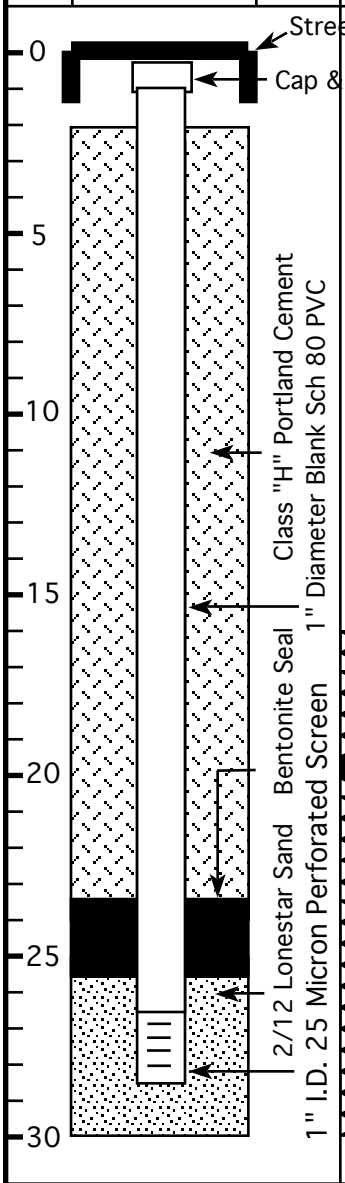
< 28-30' Sampler jammed - Could not retreave sample >

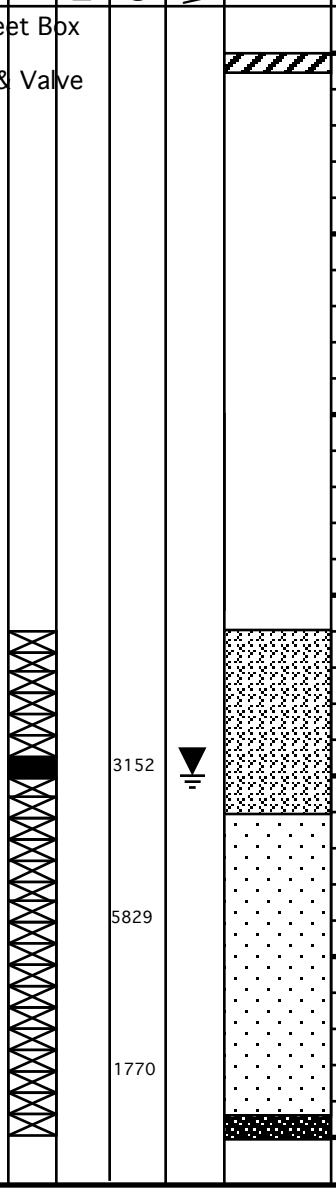
End of boring at 30'

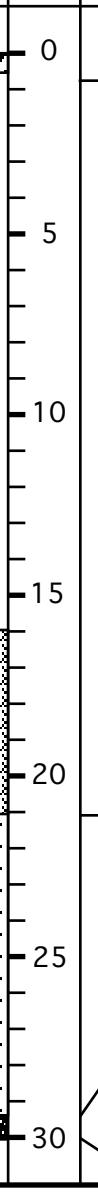
AQUA SCIENCE ENGINEERS, INC.

SOIL BORING LOG AND MONITORING WELL COMPLETION DETAILS		Well 0S-10
Project Name: Lim Property	Project Location: 250 8th Street, Oakland, CA	Page 1 of 1
Driller: RSI	Type of Rig: Hollow-Stem Auger	Size of Drill: 8.0" Diameter
Logged By: Robert E. Kitay, P.G.	Date Drilled: October 25, 2010	Checked By: Robert E. Kitay, P.G.

WATER AND WELL DATA	
Depth of Water First Encountered: NA	Total Depth of Well Completed: 30'
	Well Screen Type and Diameter: 18" Ozone Sparge Point
Static Depth of Water in Boring: NA	Well Screen Perforation Size: 25 microns
Total Depth of Boring: 30'	Type and Size of Soil Sampler: 2.0" I.D. Macro Core







DESCRIPTION OF LITHOLOGY

standard classification, texture, relative moisture, density, stiffness, odor-staining, USCS designation.

Concrete

< No Sampling until 16' >

Silty SAND (SM); yellow brown; dense; damp; 85% fine to medium sand; 15% silt; non-plastic; high estimated K; moderate hydrocarbon odor

wet at 20'

SAND (SP); dark grey; medium dense; wet; 100% fine to medium sand; non-plastic; high estimated K; strong hydrocarbon odor

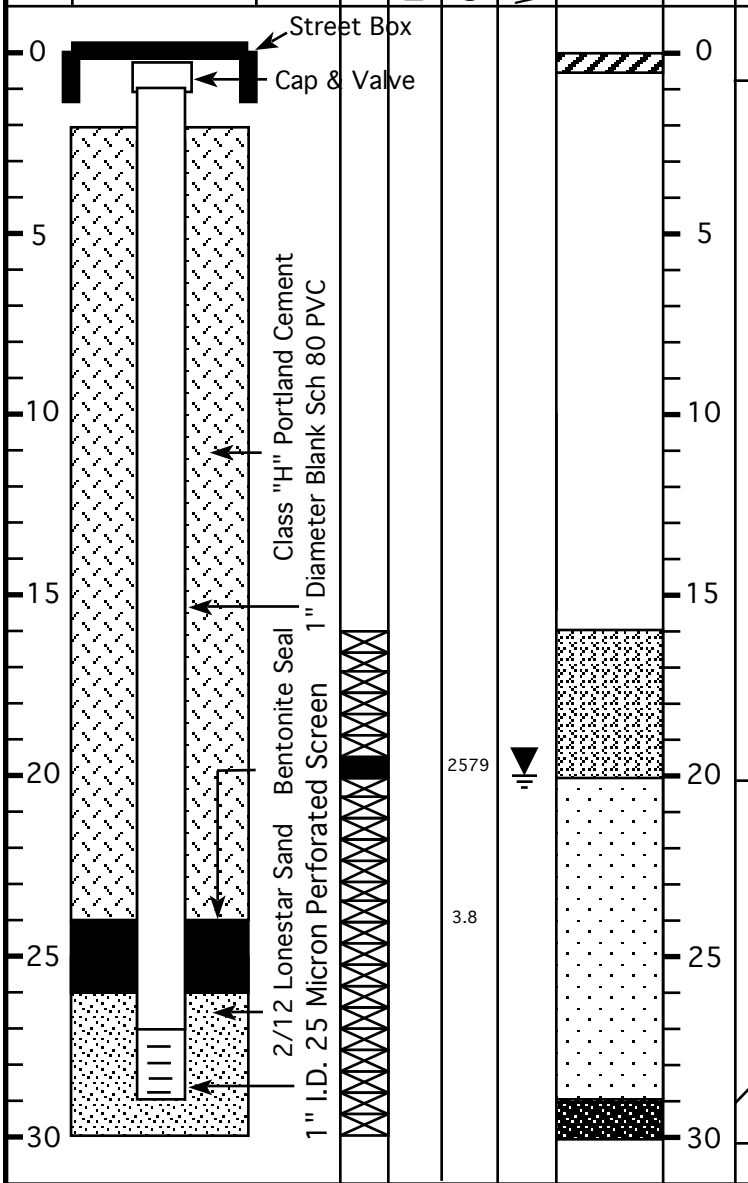
strong hydrocarbon odor at 28'

Sandy CLAY (CH); dark brown; very stiff; moist; 85% clay; 15% fine sand; high plasticity; very low estimated K; no odor

AQUA SCIENCE ENGINEERS, INC.

SOIL BORING LOG AND MONITORING WELL COMPLETION DETAILS		Well 0S-11
Project Name: Lim Property	Project Location: 250 8th Street, Oakland, CA	Page 1 of 1
Driller: RSI	Type of Rig: Hollow-Stem Auger	Size of Drill: 8.0" Diameter
Logged By: Robert E. Kitay, P.G.	Date Drilled: October 25, 2010	Checked By: Robert E. Kitay, P.G.

WATER AND WELL DATA	
Depth of Water First Encountered: NA	Total Depth of Well Completed: 30'
	Well Screen Type and Diameter: 18" Ozone Sparge Point
Static Depth of Water in Boring: NA	Well Screen Perforation Size: 25 microns
Total Depth of Boring: 30'	Type and Size of Soil Sampler: 2.0" I.D. Macro Core



DESCRIPTION OF LITHOLOGY

standard classification, texture, relative moisture, density, stiffness, odor-staining, USCS designation.

Concrete

< No Sampling until 16' >

Silty SAND (SM); yellow brown; dense; damp; 85% fine to medium sand; 15% silt; non-plastic; high estimated K; moderate hydrocarbon odor

SAND (SP); dark grey; medium dense; wet; 100% fine to medium sand; non-plastic; high estimated K; strong hydrocarbon odor

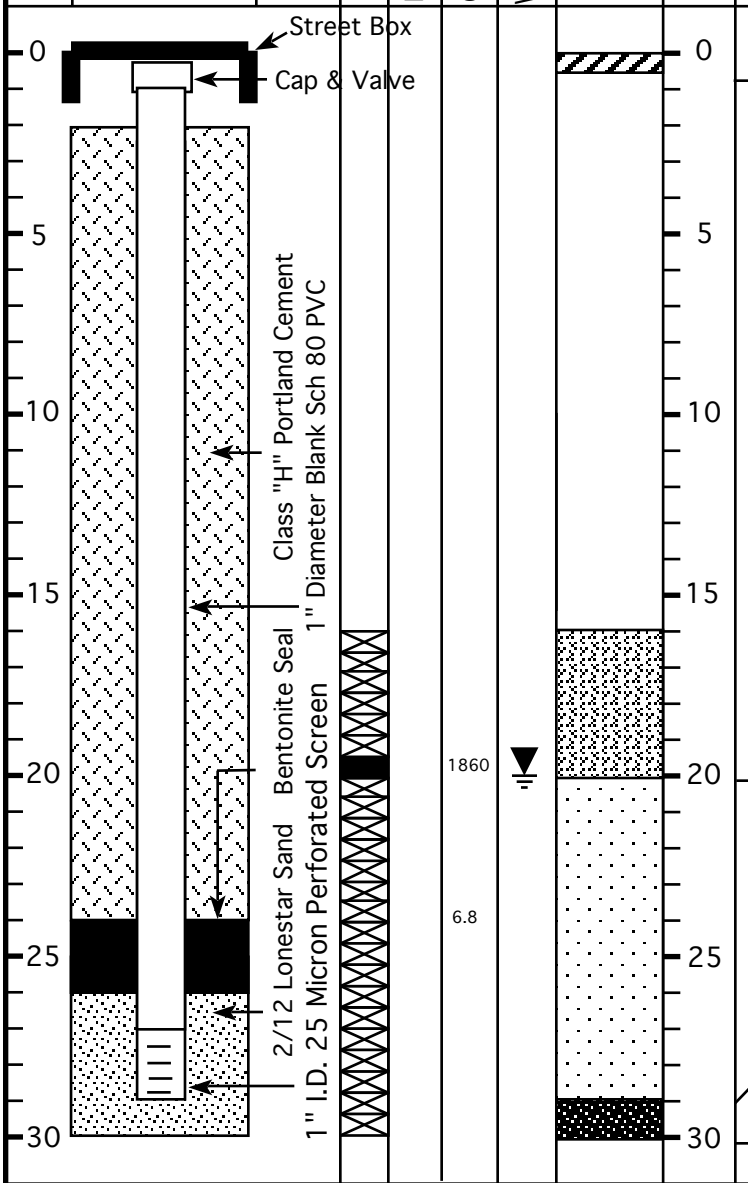
Sandy CLAY (CH); dark brown; stiff; dry; 85% clay; 15% fine sand; high plasticity; very low estimated K; no odor

End of boring at 30'

AQUA SCIENCE ENGINEERS, INC.

SOIL BORING LOG AND MONITORING WELL COMPLETION DETAILS		Well 0S-12
Project Name: Lim Property	Project Location: 250 8th Street, Oakland, CA	Page 1 of 1
Driller: RSI	Type of Rig: Hollow-Stem Auger	Size of Drill: 8.0" Diameter
Logged By: Robert E. Kitay, P.G.	Date Drilled: October 26, 2010	Checked By: Robert E. Kitay, P.G.

WATER AND WELL DATA	
Depth of Water First Encountered: NA	Total Depth of Well Completed: 30'
	Well Screen Type and Diameter: 18" Ozone Sparge Point
Static Depth of Water in Boring: NA	Well Screen Perforation Size: 25 microns
Total Depth of Boring: 30'	Type and Size of Soil Sampler: 2.0" I.D. Macro Core



DESCRIPTION OF LITHOLOGY

standard classification, texture, relative moisture, density, stiffness, odor-staining, USCS designation.

Concrete

< No Sampling until 16' >

Silty SAND (SM); yellow brown; dense; damp; 75% fine to medium sand; 25% silt; non-plastic; high estimated K; moderate hydrocarbon odor

SAND (SP); dark grey; medium dense; wet; 100% fine to medium sand; non-plastic; high estimated K; strong hydrocarbon odor

Sandy CLAY (CH); dark brown; stiff; dry; 85% clay; 15% fine sand; high plasticity; very low estimated K; no odor

End of boring at 30'

AQUA SCIENCE ENGINEERS, INC.

Aqua Science Engineers, Inc. 55 Oak Court, Suite 220, Danville, CA 94526
(925) 820-9391 - Fax (925) 837-4853 - www.aquascienceengineers.com

APPENDIX D

ANALYTICAL REPORT

McCampbell Analytical, Inc.
"When Quality Counts"

1534 Willow Pass Road, Pittsburg, CA 94565-1701
Web: www.mccampbell.com E-mail: main@mccampbell.com
Telephone: 877-252-9262 Fax: 925-252-9269

Aqua Science Engineers, Inc.	Client Project ID: #2808; 250 8th Street, Oakland, CA	Date Sampled: 10/25/10-10/29/10
		Date Received: 11/03/10
55 Oak Court Suite 220	Client Contact: Robert Kitay	Date Reported: 11/10/10
Danville, CA 94526	Client P.O.:	Date Completed: 11/09/10

WorkOrder: 1011110

November 10, 2010

Dear Robert:

Enclosed within are:

1) The results of the **11** analyzed samples from your project: **#2808; 250 8th Street, Oakland, CA,**
2) A QC report for the above samples,
3) A copy of the chain of custody, and
4) An invoice 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 or concerns, please feel free to give me a call. Thank you for choosing

McCampbell Analytical Laboratories for your analytical needs.

Best regards,

Angela Rydelius
Laboratory Manager
McCampbell Analytical, Inc.

10/11/10

Aqua Science Engineers, Inc.
55 Oak Court, Suite 220
Danville, CA 94526
(925) 820-9391
FAX (925) 837-4853

Chain of Custody

PAGE 1 of 1

SAMPLER (SIGNATURE) R. C. Kitay

PROJECT NAME Lim JOB NO. 2808

ADDRESS 250 8th Street, Oakland, CA

ANALYSIS REQUEST

SPECIAL INSTRUCTIONS:

SAMPLE ID.	DATE	TIME	MATRIX	QUANTITY	TPH-GAS / MTBE & BTEX (EPA 5030/8015-8020) $2,600	TPH-DIESEL (EPA 3510/8015)	TPH-DIESEL & MOTOR OIL (EPA 3510/8015)	CAM 17 METALS (EPA 6010+7000)	SEMI-VOLATILE ORGANICS (EPA 625/8270)	Pb (TOTAL or DISSOLVED) (EPA 6010)	PESTICIDES (EPA 8081)	FUEL OXYGENATES (EPA 8260)	PURGEABLE HALOCARBONS (EPA 601/8010)	TPH-G/BTEX/5 OXYS (EPA METHOD 8260)	MULTI-RANGE HYDROCARBONS WITH SILICA GEL CLEANUP (EPA 8015)	VOLATILE ORGANICS (EPA 624/8240/8260)	LUFT METALS (5) (EPA 6010+7000)	COMPOSITE 4:1	EDF
OS-2 Drum	10-27-10	1012	S	1	X	X													
OS-3 Drum	10-27-10	1133			X	X													
OS-4 Drum	10-28-10	1200			X	X													
OS-5 19.5'	10-28-10	1425			X	X													
OS-6 19.5'	10-29-10	749			X	X													
OS-7 Drum	10-28-10	952			X	X													
OS-8 19.5'	10-26-10	1115			X	X													
OS-9 19.5'	10-26-10	1430			X	X													
OS-10 19.5'	10-25-10	1025			X	X													
OS-11 19.5	10-25-10	1400			X	X													
OS-12 19.5'	10-26-10	755	↓	↓	X	X													

ICE / t 13.6
GOOD CONDITION ___ APPROPRIATE
HEAD SPACE ABSENT ___ CONTAINERS ___
DECHLORINATED IN LAB ___ PRESERVED IN LAB ___
PRESERVATION VOAS | O & G | METALS | OTHER

RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY LABORATORY:
(signature) R. C. Kitay (time) 1410	(signature) (time) 1410	(signature) (time) 1605	(signature) (time)
(printed name) Robert E. Kitay (date) 11-3-10	(printed name) B. Ysla (date) 11/3/10	(printed name) Julia Arenegos (date) 11/3	(printed name) (date)
Company-ASE, INC.	Company- mCampbell	Company-	Company-

COMMENTS:

TURN AROUND TIME
STANDARD 24Hr 48Hr 72Hr
OTHER:

McCampbell Analytical, Inc.
1534 Willow Pass Rd
Pittsburg, CA 94565-1701
(925) 252-9262

CHAIN-OF-CUSTODY RECORD

WorkOrder: 1011110 **ClientCode: ASED**

☐ WaterTrax ☐ WriteOn ☐ EDF ☐ Excel ☐ Fax ☑ Email ☐ HardCopy ☐ ThirdParty ☐ J-flag

Report to:
Robert Kitay
Aqua Science Engineers, Inc.
55 Oak Court Suite 220
Danville, CA 94526
(925) 820-9391 FAX (925) 837-4853

Email: rkitay@aquascienceengineers.com
cc:
PO:
ProjectNo: #2808; 250 8th Street, Oakland, CA

Bill to:
Diane Schiell
Aqua Science Engineers, Inc.
217 Wild Flower Drive
Roseville, CA 95678
deezthng22@yahoo.com

Requested TAT: 5 days

Date Received: **11/03/2010**
Date Printed: **11/04/2010**

Lab ID	Client ID	Matrix	Collection Date	Hold	Requested Tests (See legend below)											
					1	2	3	4	5	6	7	8	9	10	11	12
1011110-001	OS-2 Drum	Soil	10/27/2010 10:12	☐	A	A										
1011110-002	OS-3 Drum	Soil	10/27/2010 11:33	☐	A	A										
1011110-003	OS-4 Drum	Soil	10/28/2010 12:00	☐	A	A										
1011110-004	OS-5 19.5'	Soil	10/28/2010 14:25	☐	A	A										
1011110-005	OS-6 19.5'	Soil	10/29/2010 7:49	☐	A	A										
1011110-006	OS-7 Drum	Soil	10/28/2010 9:52	☐	A	A										
1011110-007	OS-8 19.5'	Soil	10/26/2010 11:15	☐	A	A										
1011110-008	OS-9 19.5'	Soil	10/26/2010 14:30	☐	A	A										
1011110-009	OS-10 19.5'	Soil	10/25/2010 10:25	☐	A	A										
1011110-010	OS-11 19.5'	Soil	10/25/2010 14:00	☐	A	A										
1011110-011	OS-12 19.5'	Soil	10/26/2010 7:55	☐	A	A										

Test Legend:

1	GAS8260_S	2	TPH(D)_S	3		4		5	
6		7		8		9		10	
11		12							

The following SampIDs: 001A, 002A, 003A, 004A, 005A, 006A, 007A, 008A, 009A, 010A, 011A contain testgroup.

Prepared by: Ana Venegas

Comments:

NOTE: Soil samples are discarded 60 days after results are reported unless other arrangements are made (Water samples are 30 days).
Hazardous samples will be returned to client or disposed of at client expense.

McCampbell Analytical, Inc.
"When Quality Counts"

1534 Willow Pass Road, Pittsburg, CA 94565-1701
Web: www.mccampbell.com E-mail: main@mccampbell.com
Telephone: 877-252-9262 Fax: 925-252-9269

Sample Receipt Checklist

Client Name: **Aqua Science Engineers, Inc.**
Date and Time Received: **11/3/2010 5:36:51 PM**

Project Name: **#2808; 250 8th Street, Oakland, CA**
Checklist completed and reviewed by: Julia Venegas

WorkOrder N°: **1011110** Matrix Soil
Carrier: Benjamin Yslas (MAI Courier)

Chain of Custody (COC) Information

Chain of custody present?	Yes ☑	No ☐
Chain of custody signed when relinquished and received?	Yes ☑	No ☐
Chain of custody agrees with sample labels?	Yes ☑	No ☐
Sample IDs noted by Client on COC?	Yes ☑	No ☐
Date and Time of collection noted by Client on COC?	Yes ☑	No ☐
Sampler's name noted on COC?	Yes ☑	No ☐

Sample Receipt Information

Custody seals intact on shipping container/cooler?	Yes ☐	No ☑	NA ☐
Shipping container/cooler in good condition?	Yes ☑	No ☐	
Samples in proper containers/bottles?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	

Sample Preservation and Hold Time (HT) Information

All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature	Cooler Temp: 13.6°C		NA ☐
Water - VOA vials have zero headspace / no bubbles?	Yes ☐	No ☐	No VOA vials submitted ☑
Sample labels checked for correct preservation?	Yes ☑	No ☐	
Metal - pH acceptable upon receipt (pH<2)?	Yes ☐	No ☐	NA ☑
Samples Received on Ice?	Yes ☑	No ☐	

(Ice Type: WET ICE)

** NOTE: If the "No" box is checked, see comments below.*

Client contacted: Date contacted: Contacted by:

Comments:

McCampbell Analytical, Inc.
"When Quality Counts"

1534 Willow Pass Road, Pittsburg, CA 94565-1701
Web: www.mccampbell.com E-mail: main@mccampbell.com
Telephone: 877-252-9262 Fax: 925-252-9269

Aqua Science Engineers, Inc.	Client Project ID: #2808; 250 8th Street, Oakland, CA	Date Sampled: 10/25/10-10/29/10
		Date Received: 11/03/10
55 Oak Court Suite 220	Client Contact: Robert Kitay	Date Extracted: 11/03/10
Danville, CA 94526	Client P.O.:	Date Analyzed 11/04/10-11/08/10

TPH(g) by Purge & Trap and GC/MS*

Extraction method SW5030B Analytical methods SW8260B Work Order: 1011110

Lab ID	Client ID	Matrix	TPH(g)	DF	% SS	Comments
001A	OS-2 Drum	S	40	20	95	
002A	OS-3 Drum	S	2100	670	108	
003A	OS-4 Drum	S	3400	400	88	
004A	OS-5 19.5'	S	340	40	98	
005A	OS-6 19.5'	S	4400	2000	120	
006A	OS-7 Drum	S	72	10	107	
007A	OS-8 19.5'	S	29	20	118	
008A	OS-9 19.5'	S	3700	2000	110	
009A	OS-10 19.5'	S	1300	400	119	
010A	OS-11 19.5'	S	470	200	112	
011A	OS-12 19.5'	S	1000	200	80	

Reporting Limit for DF =1; ND means not detected at or above the reporting limit	W	NA	NA
	S	0.25	mg/kg

* water and vapor samples are reported in µg/L, soil/sludge/solid samples in mg/kg, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts are reported in mg/L, wipe samples in µg/wipe.

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

surrogate diluted out of range or coelutes with another peak; &) low surrogate due to matrix interference.

%SS = Percent Recovery of Surrogate Standard
DF = Dilution Factor

DHS ELAP Certification 1644

CC for Angela Rydelius, Lab Manager

McCampbell Analytical, Inc.
"When Quality Counts"

1534 Willow Pass Road, Pittsburg, CA 94565-1701
Web: www.mccampbell.com E-mail: main@mccampbell.com
Telephone: 877-252-9262 Fax: 925-252-9269

Aqua Science Engineers, Inc.	Client Project ID: #2808; 250 8th Street, Oakland, CA	Date Sampled: 10/25/10-10/29/10
		Date Received: 11/03/10
55 Oak Court Suite 220	Client Contact: Robert Kitay	Date Extracted: 11/03/10
Danville, CA 94526	Client P.O.:	Date Analyzed: 11/04/10-11/05/10

MTBE and BTEX by GC/MS*

Extraction Method: SW5030B Analytical Method: SW8260B Work Order: 1011110

Lab ID	1011110-001A	1011110-002A	1011110-003A	1011110-004A	Reporting Limit for DF =1	
Client ID	OS-2 Drum	OS-3 Drum	OS-4 Drum	OS-5 19.5'		
Matrix	S	S	S	S		
DF	5	670	2000	40	S	W
Compound	**Concentration**				mg/kg	ug/L
Benzene	ND<0.025	5.6	ND<10	ND<0.20	0.005	NA
Ethylbenzene	ND<0.025	32	63	ND<0.20	0.005	NA
Methyl-t-butyl ether (MTBE)	ND<0.025	ND<3.3	ND<10	ND<0.20	0.005	NA
Toluene	ND<0.025	58	120	ND<0.20	0.005	NA
Xylenes	ND<0.025	160	320	ND<0.20	0.005	NA
Surrogate Recoveries (%)						
%SS1:	107	106	108	107		
%SS2:	98	98	99	98		
Comments				a3		

* water and vapor samples are reported in µg/L, soil/sludge/solid samples in mg/kg, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts are reported in mg/L, wipe samples in µg/wipe.

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

surrogate diluted out of range or coelutes with another peak; &) low surrogate due to matrix interference.

%SS = Percent Recovery of Surrogate Standard
DF = Dilution Factor

a3) sample diluted due to high organic content.

DHS ELAP Certification 1644

CC for Angela Rydelius, Lab Manager

McCampbell Analytical, Inc.
"When Quality Counts"

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Telephone: 877-252-9262 Fax: 925-252-9269

Aqua Science Engineers, Inc.	Client Project ID: #2808; 250 8th Street, Oakland, CA	Date Sampled: 10/25/10-10/29/10
		Date Received: 11/03/10
55 Oak Court Suite 220	Client Contact: Robert Kitay	Date Extracted: 11/03/10
Danville, CA 94526	Client P.O.:	Date Analyzed: 11/04/10-11/05/10

MTBE and BTEX by GC/MS*

Extraction Method: SW5030B Analytical Method: SW8260B Work Order: 1011110

Lab ID	1011110-005A	1011110-006A	1011110-007A	1011110-008A	Reporting Limit for DF =1	
Client ID	OS-6 19.5'	OS-7 Drum	OS-8 19.5'	OS-9 19.5'		
Matrix	S	S	S	S		
DF	2000	10	2	2000	S	W
Compound	**Concentration**				mg/kg	ug/L
Benzene	70	ND<0.050	0.15	21	0.005	NA
Ethylbenzene	130	ND<0.050	0.065	76	0.005	NA
Methyl-t-butyl ether (MTBE)	ND<10	ND<0.050	ND<0.010	ND<10	0.005	NA
Toluene	22	ND<0.050	ND<0.010	200	0.005	NA
Xylenes	460	0.25	0.011	370	0.005	NA
Surrogate Recoveries (%)						
%SS1:	107	101	100	109		
%SS2:	99	96	102	99		
Comments						

* water and vapor samples are reported in µg/L, soil/sludge/solid samples in mg/kg, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts are reported in mg/L, wipe samples in µg/wipe.

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

surrogate diluted out of range or coelutes with another peak; &) low surrogate due to matrix interference.

%SS = Percent Recovery of Surrogate Standard
DF = Dilution Factor

a3) sample diluted due to high organic content.

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Aqua Science Engineers, Inc.	Client Project ID: #2808; 250 8th Street, Oakland, CA	Date Sampled: 10/25/10-10/29/10
		Date Received: 11/03/10
55 Oak Court Suite 220	Client Contact: Robert Kitay	Date Extracted: 11/03/10
Danville, CA 94526	Client P.O.:	Date Analyzed: 11/04/10-11/05/10

MTBE and BTEX by GC/MS*

Extraction Method: SW5030B Analytical Method: SW8260B Work Order: 1011110

Lab ID	1011110-009A	1011110-010A	1011110-011A		Reporting Limit for DF =1	
Client ID	OS-10 19.5'	OS-11 19.5'	OS-12 19.5'			
Matrix	S	S	S			
DF	400	200	200		S	W
Compound	**Concentration**				mg/kg	ug/L
Benzene	3.1	3.1	ND<1.0		0.005	NA
Ethylbenzene	20	7.2	16		0.005	NA
Methyl-t-butyl ether (MTBE)	ND<2.0	ND<1.0	ND<1.0		0.005	NA
Toluene	37	20	21		0.005	NA
Xylenes	100	35	80		0.005	NA
Surrogate Recoveries (%)						
%SS1:	103	105	102			
%SS2:	95	95	96			
Comments						

* water and vapor samples are reported in µg/L, soil/sludge/solid samples in mg/kg, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts are reported in mg/L, wipe samples in µg/wipe.

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

surrogate diluted out of range or coelutes with another peak; &) low surrogate due to matrix interference.

%SS = Percent Recovery of Surrogate Standard
DF = Dilution Factor

a3) sample diluted due to high organic content.

DHS ELAP Certification 1644

AC for Angela Rydelius, Lab Manager

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Aqua Science Engineers, Inc.	Client Project ID: #2808; 250 8th Street, Oakland, CA	Date Sampled: 10/25/10-10/29/10
		Date Received: 11/03/10
55 Oak Court Suite 220	Client Contact: Robert Kitay	Date Extracted: 11/03/10
Danville, CA 94526	Client P.O.:	Date Analyzed 11/06/10-11/09/10

Total Extractable Petroleum Hydrocarbons*

Extraction method SW3550B Analytical methods: SW8015B Work Order: 1011110

Lab ID	Client ID	Matrix	TPH-Diesel (C10-C23)	DF	% SS	Comments
1011110-001A	OS-2 Drum	S	13	1	112	e8
1011110-002A	OS-3 Drum	S	1100	10	91	e8,e4
1011110-003A	OS-4 Drum	S	1400	10	92	e8,e4
1011110-004A	OS-5 19.5'	S	2800	20	114	e8
1011110-005A	OS-6 19.5'	S	5400	10	99	e8,e4
1011110-006A	OS-7 Drum	S	47	1	100	e8
1011110-007A	OS-8 19.5'	S	6.4	1	107	e1,e4
1011110-008A	OS-9 19.5'	S	1100	10	81	e4,e2
1011110-009A	OS-10 19.5'	S	210	10	105	e4,e2
1011110-010A	OS-11 19.5'	S	90	1	110	e4,e2
1011110-011A	OS-12 19.5'	S	390	1	113	e4,e8

Reporting Limit for DF =1; ND means not detected at or above the reporting limit	W	NA	NA
	S	1.0	mg/Kg

* water samples are reported in µg/L, wipe samples in µg/wipe, soil/solid/sludge samples in mg/kg, product/oil/non-aqueous liquid samples in mg/L, and all DISTLC / STLC / SPLP / TCLP extracts are reported in µg/L.

cluttered chromatogram resulting in coeluted surrogate and sample peaks, or; surrogate peak is on elevated baseline, or; surrogate has been diminished by dilution of original extract.

%SS = Percent Recovery of Surrogate Standard. DF = Dilution Factor

+The following descriptions of the TPH chromatogram are cursory in nature and McCampbell Analytical is not responsible for their interpretation:

e1) unmodified or weakly modified diesel is significant
e2) diesel range compounds are significant; no recognizable pattern
e4) gasoline range compounds are significant.
e8) kerosene/kerosene range/jet fuel range

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Angela Rydelius, Lab Manager

McCampbell Analytical, Inc.
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1534 Willow Pass Road, Pittsburg, CA 94565-1701
Web: www.mccampbell.com E-mail: main@mccampbell.com
Telephone: 877-252-9262 Fax: 925-252-9269

QC SUMMARY REPORT FOR SW8260B

W.O. Sample Matrix: Soil QC Matrix: Soil BatchID: 54142 WorkOrder 1011110

EPA Method SW8260B **Extraction SW5030B** **Spiked Sample ID: 1011015-001A**

Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)			
	mg/Kg	mg/Kg	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	RPD	LCS/LCSD	RPD
Benzene	ND	0.050	98.1	100	2.35	101	101	0	70 - 130	30	70 - 130	30
Methyl-t-butyl ether (MTBE)	ND	0.050	91.2	90.7	0.580	98	98	0	70 - 130	30	70 - 130	30
Toluene	ND	0.050	96.4	101	4.94	110	107	2.31	70 - 130	30	70 - 130	30
%SS1:	95	0.13	85	84	1.84	82	84	1.30	70 - 130	30	70 - 130	30
%SS2:	110	0.13	112	112	0	114	113	1.13	70 - 130	30	70 - 130	30

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:
NONE

BATCH 54142 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1011110-001A	10/27/10 10:12 AM	11/03/10	11/04/10 11:39 PM	1011110-002A	10/27/10 11:33 AM	11/03/10	11/04/10 5:57 PM
1011110-003A	10/28/10 12:00 PM	11/03/10	11/05/10 12:23 AM	1011110-004A	10/28/10 2:25 PM	11/03/10	11/04/10 2:26 PM
1011110-005A	10/29/10 7:49 AM	11/03/10	11/05/10 1:07 AM	1011110-006A	10/28/10 9:52 AM	11/03/10	11/05/10 2:43 PM
1011110-007A	10/26/10 11:15 AM	11/03/10	11/05/10 3:25 PM	1011110-008A	10/26/10 2:30 PM	11/03/10	11/05/10 2:33 AM
1011110-009A	10/25/10 10:25 AM	11/03/10	11/05/10 4:07 PM	1011110-010A	10/25/10 2:00 PM	11/03/10	11/05/10 4:48 PM
1011110-011A	10/26/10 7:55 AM	11/03/10	11/05/10 5:31 PM				

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 and / or MSD spike recoveries may not be near 100% or the RPDs near 0% if: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) if that specific sample matrix interferes with spike recovery. The LCS and LCSD are spikes into a clean, known, similar matrix and they and the surrogate standards reflect the overall validity of their extraction batch. Our control limits are 70-130% recovery and a 30% RPD for the LCS-LCSD and for the Surrogate Standards.

DHS ELAP Certification 1644

CC for _____ QA/QC Officer

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Web: www.mccampbell.com E-mail: main@mccampbell.com
Telephone: 877-252-9262 Fax: 925-252-9269

QC SUMMARY REPORT FOR SW8015B

W.O. Sample Matrix: Soil QC Matrix: Soil BatchID: 54135 WorkOrder 1011110

EPA Method SW8015B **Extraction SW3550B** **Spiked Sample ID: 1010854-005A**

Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)			
	mg/Kg	mg/Kg	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	RPD	LCS/LCSD	RPD
TPH-Diesel (C10-C23)	6.2	40	118	121	2.11	113	110	2.55	70 - 130	30	70 - 130	30
%SS:	106	25	102	102	0	97	95	1.69	70 - 130	30	70 - 130	30

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:
NONE

BATCH 54135 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1011110-001A	10/27/10 10:12 AM	11/03/10	11/06/10 3:21 PM	1011110-002A	10/27/10 11:33 AM	11/03/10	11/09/10 12:57 AM
1011110-003A	10/28/10 12:00 PM	11/03/10	11/09/10 5:26 AM	1011110-004A	10/28/10 2:25 PM	11/03/10	11/09/10 2:04 AM
1011110-005A	10/29/10 7:49 AM	11/03/10	11/08/10 6:07 PM	1011110-006A	10/28/10 9:52 AM	11/03/10	11/09/10 3:11 AM
1011110-007A	10/26/10 11:15 AM	11/03/10	11/08/10 2:33 PM	1011110-008A	10/26/10 2:30 PM	11/03/10	11/08/10 9:34 PM
1011110-009A	10/25/10 10:25 AM	11/03/10	11/08/10 8:26 PM	1011110-010A	10/25/10 2:00 PM	11/03/10	11/09/10 5:07 PM
1011110-011A	10/26/10 7:55 AM	11/03/10	11/06/10 11:29 PM				

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.

DHS ELAP Certification 1644

QA/QC Officer

McCampbell Analytical, Inc.
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Telephone: 877-252-9262 Fax: 925-252-9269

Aqua Science Engineers, Inc.	Client Project ID: #2808; LIM, 250 8th St	Date Sampled: 04/28/11
		Date Received: 04/28/11
55 Oak Court Suite 220	Client Contact: Dave Allen	Date Reported: 05/03/11
Danville, CA 94526	Client P.O.:	Date Completed: 05/02/11

WorkOrder: 1104821

May 03, 2011

Dear Dave:

Enclosed within are:

1) The results of the **2** analyzed samples from your project: **#2808; LIM, 250 8th St,**
2) A QC report for the above samples,
3) A copy of the chain of custody, and
4) An invoice 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 or concerns, please feel free to give me a call. Thank you for choosing

McCampbell Analytical Laboratories for your analytical needs.

Best regards,

Angela Rydelius
Laboratory Manager
McCampbell Analytical, Inc.

110482)

Aqua Science Engineers, Inc.
55 Oak Court, Suite 220
Danville, CA 94526
(925) 820-9391
FAX (925) 837-4853

Chain of Custody

PAGE 1 of 1

SAMPLER (SIGNATURE) David Allen

PROJECT NAME LIM JOB NO. 2808

ADDRESS 250 8th St. Oakland, CA

ANALYSIS REQUEST

SPECIAL INSTRUCTIONS:

SAMPLE ID.	DATE	TIME	MATRIX	QUANTITY	TPH-GAS / MTBE & BTEX (EPA 5030/8015-8020)	TPH-DIESEL (EPA 3510/8015)	TPH-DIESEL & MOTOR OIL (EPA 3510/8015)	CAM 17 METALS (EPA 6010+7000)	SEMI-VOLATILE ORGANICS (EPA 625/8270)	Pb (TOTAL or DISSOLVED) (EPA 6010)	PESTICIDES (EPA 8081)	FUEL OXYGENATES (EPA 8260)	PURGEABLE HALOCARBONS (EPA 601/8010)	TPH-G/BTEX/5 OXYS (EPA METHOD 8260)	MULTI-RANGE HYDROCARBONS WITH SILICA GEL CLEANUP (EPA 8015)	VOLATILE ORGANICS (EPA 624/8240/8260)	LUFT METALS (5) (EPA 6010+7000)	COMPOSITE 4:1	EDF	
VE-INF-04.28.11	4/28	1235	Air	1	X														Y	
VE-EFF-04.28.11	"	1240	Air	1	X														Y	

RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY LABORATORY:	COMMENTS:
(signature) (time)	(signature) (time)	(signature) (time)	(signature) (time)	
DAVID ALLEN 4/28/11	Ben Klas 1445 4/28/11	1715 4/28/11	[illegible]	
(printed name) (date)	(printed name) (date)	(printed name) (date)	(printed name) (date)	TURN AROUND TIME
Company-ASE, INC.	Company-MCCampbell	Company-	Company-MAI 4/28/11	STANDARD 24Hr 48Hr 72Hr
				OTHER:

McCampbell Analytical, Inc.
1534 Willow Pass Rd
Pittsburg, CA 94565-1701
(925) 252-9262

CHAIN-OF-CUSTODY RECORD

WorkOrder: 1104821 **ClientCode: ASED**

☐ WaterTrax ☐ WriteOn ☑ EDF ☐ Excel ☐ Fax ☑ Email ☐ HardCopy ☐ ThirdParty ☐ J-flag

Report to:
Dave Allen
Aqua Science Engineers, Inc.
55 Oak Court Suite 220
Danville, CA 94526
(925) 820-9391 FAX (925) 837-4853

Email: dallen@aquascienceengineers.com
cc:
PO:
ProjectNo: #2808; LIM, 250 8th St

Bill to:
Diane Schiell
Aqua Science Engineers, Inc.
217 Wild Flower Drive
Roseville, CA 95678
deezthng22@yahoo.com

Requested TAT: 5 days

Date Received: **04/28/2011**
Date Printed: **04/28/2011**

Lab ID	Client ID	Matrix	Collection Date	Hold	Requested Tests (See legend below)											
					1	2	3	4	5	6	7	8	9	10	11	12
1104821-001	VE-INF-04-28-11	Air	4/28/2011 12:35	☐	A	A										
1104821-002	VE-EFF-04-28-11	Air	4/28/2011 12:40	☐	A											

Test Legend:

1	G-MBTEX_AIR	2	PREDF REPORT	3		4		5	
6		7		8		9		10	
11		12							

The following SampIDs: 001A, 002A contain testgroup.

Prepared by: Ana Venegas

Comments:

NOTE: Soil samples are discarded 60 days after results are reported unless other arrangements are made (Water samples are 30 days).
Hazardous samples will be returned to client or disposed of at client expense.

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Sample Receipt Checklist

Client Name: **Aqua Science Engineers, Inc.**
Date and Time Received: **4/28/2011 5:42:08 PM**

Project Name: **#2808; LIM, 250 8th St**
Checklist completed and reviewed by: Ana Venegas

WorkOrder N°: **1104821** Matrix Air
Carrier: Benjamin Yslas (MAI Courier)

Chain of Custody (COC) Information

Chain of custody present?	Yes ☑	No ☐
Chain of custody signed when relinquished and received?	Yes ☑	No ☐
Chain of custody agrees with sample labels?	Yes ☑	No ☐
Sample IDs noted by Client on COC?	Yes ☑	No ☐
Date and Time of collection noted by Client on COC?	Yes ☑	No ☐
Sampler's name noted on COC?	Yes ☑	No ☐

Sample Receipt Information

Custody seals intact on shipping container/cooler?	Yes ☐	No ☐	NA ☑
Shipping container/cooler in good condition?	Yes ☑	No ☐	
Samples in proper containers/bottles?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	

Sample Preservation and Hold Time (HT) Information

All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature	Cooler Temp:		NA ☑
Water - VOA vials have zero headspace / no bubbles?	Yes ☐	No ☐	No VOA vials submitted ☑
Sample labels checked for correct preservation?	Yes ☑	No ☐	
Metal - pH acceptable upon receipt (pH<2)?	Yes ☐	No ☐	NA ☑
Samples Received on Ice?	Yes ☐	No ☑	

** NOTE: If the "No" box is checked, see comments below.*

Client contacted: Date contacted: Contacted by:

Comments:

McCampbell Analytical, Inc.
"When Quality Counts"

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Telephone: 877-252-9262 Fax: 925-252-9269

Aqua Science Engineers, Inc.	Client Project ID: #2808; LIM, 250 8th St	Date Sampled: 04/28/11
		Date Received: 04/28/11
55 Oak Court Suite 220	Client Contact: Dave Allen	Date Extracted: 04/29/11
Danville, CA 94526	Client P.O.:	Date Analyzed: 04/29/11

Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline with BTEX and MTBE*

Extraction method: SW5030B Analytical methods: SW8021B/8015Bm Work Order: 1104821

Lab ID	Client ID	Matrix	TPH(g)	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	DF	% SS	Comments
001A	VE-INF-04-28-11	A	4600	ND<50	38	70	13	61	20	94	d1
002A	VE-EFF-04-28-11	A	ND	ND	ND	ND	ND	ND	1	100	

Reporting Limit for DF =1; ND means not detected at or above the reporting limit	A	25	2.5	0.25	0.25	0.25	0.25	µg/L
	S	1.0	0.05	0.005	0.005	0.005	0.005	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.

cluttered chromatogram; sample peak coelutes with surrogate peak; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

+The following descriptions of the TPH chromatogram are cursory in nature and McCampbell Analytical is not responsible for their interpretation:

d1) weakly modified or unmodified gasoline is significant

DHS ELAP Certification 1644

Angela Rydelius, Lab Manager

McCampbell Analytical, Inc.
"When Quality Counts"

1534 Willow Pass Road, Pittsburg, CA 94565-1701
Web: www.mccampbell.com E-mail: main@mccampbell.com
Telephone: 877-252-9262 Fax: 925-252-9269

Aqua Science Engineers, Inc.	Client Project ID: #2808; LIM, 250 8th St	Date Sampled: 04/28/11
		Date Received: 04/28/11
55 Oak Court Suite 220	Client Contact: Dave Allen	Date Extracted: 04/29/11
Danville, CA 94526	Client P.O.:	Date Analyzed: 04/29/11

Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline with MTBE and BTEX in ppmv*

Extraction method: SW5030B Analytical methods: SW8021B/8015Bm Work Order: 1104821

Lab ID	Client ID	Matrix	TPH(g)	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	DF	% SS	Comments
001A	VE-INF-04-28-11	A	1300	ND<14	12	18	2.9	14	20	94	d1
002A	VE-EFF-04-28-11	A	ND	ND	ND	ND	ND	ND	1	100	

ppm (mg/L) to ppmv (ul/L) conversion for TPH(g) assumes the molecular weight of gasoline to be equal to that of hexane.

Reporting Limit for DF =1; ND means not detected at or above the reporting limit	A	7.0	0.68	0.077	0.065	0.057	0.057	1	uL/L
	S	NA	NA	NA	NA	NA	NA	1	mg/Kg

* vapor samples are reported in µL/L, soil/sludge/solid samples in mg/kg, wipe samples in µg/wipe, product/oil/non-aqueous liquid samples in mg/L, water samples and all TCLP & SPLP extracts are reported in µg/L.

cluttered chromatogram; sample peak coelutes with surrogate peak; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

+The following descriptions of the TPH chromatogram are cursory in nature and McCampbell Analytical is not responsible for their interpretation:

d1) weakly modified or unmodified gasoline is significant

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QC SUMMARY REPORT FOR SW8021B/8015Bm

W.O. Sample Matrix: Air | QC Matrix: Water | BatchID: 57991 | WorkOrder 1104821

EPA Method SW8021B/8015Bm **Extraction SW5030B** **Spiked Sample ID: 1104823-002A**

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	RPD	LCS/LCSD	RPD
TPH(btex)£	ND	60	99.4	109	9.39	105	98.6	6.48	70 - 130	20	70 - 130	20
MTBE	ND	10	123	118	4.76	119	123	3.13	70 - 130	20	70 - 130	20
Benzene	ND	10	105	109	3.86	106	107	0.633	70 - 130	20	70 - 130	20
Toluene	ND	10	102	108	6.27	108	105	2.28	70 - 130	20	70 - 130	20
Ethylbenzene	ND	10	102	107	4.70	102	103	0.680	70 - 130	20	70 - 130	20
Xylenes	ND	30	104	107	3.39	105	105	0	70 - 130	20	70 - 130	20
%SS:	104	10	99	99	0	102	101	1.78	70 - 130	20	70 - 130	20

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:
NONE

BATCH 57991 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1104821-001A	04/28/11 12:35 PM	04/29/11	04/29/11 11:24 AM	1104821-001A	04/28/11 12:35 PM	04/29/11	04/29/11 11:24 AM
1104821-002A	04/28/11 12:40 PM	04/29/11	04/29/11 12:54 PM	1104821-002A	04/28/11 12:40 PM	04/29/11	04/29/11 12:54 PM

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.

£ 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 ELAP Certification 1644

QA/QC Officer

Aqua Science Engineers, Inc. 55 Oak Court, Suite 220, Danville, CA 94526
(925) 820-9391 - Fax (925) 837-4853 - www.aquascienceengineers.com

APPENDIX E

FIELD LOGS

LIM PROPERTY - 250 8TH STREET, OAKLAND, CALIFORNIA
HYDROCARBON VAPOR MEASUREMENT LOG

HYDROCARBON CONCENTRATIONS IN PPMV* MEASURED WITH ORGANIC VAPOR METER															
	VAPOR MONITORING POINTS		METER BOXES (SITE SIDE OF 8TH STREET)			METER BOXES (OPPOSITE SIDE OF 8TH STREET)									
DATE	VMP-1	VMP-1	PIPING MANIFOLD	PG&E BOX	EBMUD BOX	GAS METER 1	GAS METER 2	GAS METER 3	EBMUD BOX 1	EBMUD BOX 2	OS-8/VE-6 WELL BOX	OS-9/VE-7 WELL BOX	OS-10/VE-8 WELL BOX	OS-11 WELL BOX	OS-12/VE-9 WELL BOX
1/18/11	0	0	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
1/19/11	0	0	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
1/20/11	0	0	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
1/21/11	11	21	NM	NM	NM	10	8	11	5	7	NM	NM	NM	NM	NM
1/22/11	3	7	NM	NM	NM	12	11	8	4	6	NM	NM	NM	NM	NM
1/23/11	0	0	NM	NM	NM	0	0	0	0	0	NM	NM	NM	NM	NM
1/28/11	0	0	NM	NM	NM	0	0	0	0	0	NM	NM	NM	NM	NM
2/15/11	0	0	NM	NM	NM	0	0	0	0	0	NM	NM	NM	NM	NM
2/28/11	0	0	NM	NM	NM	0	0	0	0	0	NM	NM	NM	NM	NM
3/8/11	0	0	NM	NM	NM	0	0	0	0	0	NM	NM	NM	NM	NM
3/29/11	0	0	NM	NM	NM	0	0	0	0	0	NM	NM	NM	NM	NM
4/12/11	0	0	NM	NM	NM	0	0	0	0	0	NM	NM	NM	NM	NM
4/25/11	0	0	NM	NM	NM	0	0	0	0	0	NM	NM	NM	NM	NM
5/13/11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5/16/11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5/20/11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5/23/11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5/25/11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5/27/11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5/30/11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6/3/11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6/6/11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6/8/11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6/10/11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6/13/11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6/16/11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6/20/11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6/22/11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6/24/11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6/27/11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

NM = Not Measured

LIM PROPERTY - 250 8TH STREET, OAKLAND, CALIFORNIA
VAPOR-EXTRACTION SYSTEM LOG

	CAT-OX SYSTEM		VAPOR-EXTRACTION WELLS OVM CONCENTRATION IN PPMV*										
DATE	FLOW IN CFM	INFLUENT IN PPMV*	VE-1	VE-2	VE-3	VE-4	VE-5	VE-6	VE-7	VE-8	VE-9	MW-3	MW-4
4/22/11	130	1096	240	34	119	125	440					465	570
4/25/11	130	986	185	28	95	130	400					390	565
4/25/11	100	923	210	26	100	100	350					450	442
4/26/11	90	912	230	25	98	86	410					422	388
4/27/11	78	747	210	32	112	56	360					364	224
4/29/11	65	790	320	30	90	45	320					320	312
5/2/11	58	879	350	28	88	66	400					420	246
5/4/11	52	916	520	25	98	48	365					310	300
5/6/11	52	892	590	26	119	30	328					263	265
5/9/11	52	1079	610	22	234	45	290	85	80	140	15	200	240
5/12/11	50	1016	556	40	185	40	265	80	84	135	11	216	235
5/16/11	48	1155	764	32	156	36	213	75	70	124	10	310	310
5/20/11	52	1158	810	26	164	38	312	92	88	156	14	186	220
5/23/11	50	1013	564	26	242	28	286	94	102	140	9	165	186
5/25/11	46	1169	686	28	310	42	310	90	95	125	15	220	205
5/27/11	52	1031	712	35	126	58	268	110	115	120	22	165	143
5/30/11	50	923	572	34	164	29	345	102	99	133	13	120	68
6/3/11	48	948	660	30	135	20	320	86	95	144	11	110	112
6/6/11	43	981	742	25	133	14	285	95	90	126	8	123	142
6/8/11	48	983	762	26	142	25	246	84	84	139	7	120	152
6/10/11	48	944	688	22	139	28	288	116	96	120	8	105	106
6/13/11	52	1152	884	24	115	32	296	125	102	144	9	134	229
6/16/11	50	1183	920	24	135	18	305	102	114	152	5	130	245
6/20/11	46	1277	1122	28	128	22	308	96	84	132	11	125	266
6/22/11	42	1180	952	18	130	24	264	85	98	130	6	128	310
6/24/11	55	1105	878	20	134	26	277	118	102	148	5	106	195
6/27/11	52	1141	765	26	127	26	263	102	100	122	6	144	393

* = Based on measurement obtained from organic vapor meter calibrated to hexane

LIM PROPERTY - 250 8TH STREET, OAKLAND, CALIFORNIA
SPARGING WELL LOG

DATE	SPARGING WELLS											
	OS-1	OS-2	OS-3	OS-4	OS-5	OS-6	OS-7	OS-8	OS-9	OS-10	OS-11	OS-12
	DURATION/ AIRSTREAM	DURATION/ AIRSTREAM	DURATION/ AIRSTREAM	DURATION/ AIRSTREAM	DURATION/ AIRSTREAM	DURATION/ AIRSTREAM	DURATION/ AIRSTREAM	DURATION/ AIRSTREAM	DURATION/ AIRSTREAM	DURATION/ AIRSTREAM	DURATION/ AIRSTREAM	DURATION/ AIRSTREAM
1/18/11	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR
1/19/11	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR
1/20/11	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR
1/21/11	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR
1/22/11	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	OFF	OFF	OFF	OFF	OFF
1/26/11	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	OFF	OFF	OFF	OFF	OFF
1/28/11	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	OFF	OFF	OFF	OFF	OFF
2/2/11	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	OFF	OFF	OFF	OFF	OFF
2/4/11	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	OFF	OFF	OFF	OFF	OFF
2/8/11	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	OFF	OFF	OFF	OFF	OFF
2/11/11	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	OFF	OFF	OFF	OFF	OFF
2/15/11	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	OFF	OFF	OFF	OFF	OFF
2/18/11	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	OFF	OFF	OFF	OFF	OFF
2/22/11	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	OFF	OFF	OFF	OFF	OFF
2/25/11	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	OFF	OFF	OFF	OFF	OFF
2/28/11	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	OFF	OFF	OFF	OFF	OFF

LIM PROPERTY - 250 8TH STREET, OAKLAND, CALIFORNIA
SPARGING WELL LOG

	SPARGING WELLS											
	OS-1	OS-2	OS-3	OS-4	OS-5	OS-6	OS-7	OS-8	OS-9	OS-10	OS-11	OS-12
DATE	DURATION/ AIRSTREAM	DURATION/ AIRSTREAM	DURATION/ AIRSTREAM	DURATION/ AIRSTREAM	DURATION/ AIRSTREAM	DURATION/ AIRSTREAM	DURATION/ AIRSTREAM	DURATION/ AIRSTREAM	DURATION/ AIRSTREAM	DURATION/ AIRSTREAM	DURATION/ AIRSTREAM	DURATION/ AIRSTREAM
3/1/11	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	OFF	OFF	OFF	OFF	OFF
3/4/11	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	OFF	OFF	OFF	OFF	OFF
3/8/11	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	OFF	OFF	OFF	OFF	OFF
3/11/11	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	OFF	OFF	OFF	OFF	OFF
3/914/11	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	OFF	OFF	OFF	OFF	OFF
3/17/11	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	OFF	OFF	OFF	OFF	OFF
3/22/11	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	OFF	OFF	OFF	OFF	OFF
3/25/11	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	OFF	OFF	OFF	OFF	OFF
3/29/11	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	OFF	OFF	OFF	OFF	OFF
4/1/11	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	OFF	OFF	OFF	OFF	OFF
4/5/11	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	OFF	OFF	OFF	OFF	OFF
4/8/11	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	OFF	OFF	OFF	OFF	OFF
4/12/11	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	OFF	OFF	OFF	OFF	OFF
4/15/11	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	OFF	OFF	OFF	OFF	OFF
4/19/11	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
4/25/11	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	OFF	OFF	OFF	OFF	OFF
5/2/11	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	OFF	OFF	OFF	OFF	OFF

LIM PROPERTY - 250 8TH STREET, OAKLAND, CALIFORNIA
SPARGING WELL LOG

	SPARGING WELLS											
	OS-1	OS-2	OS-3	OS-4	OS-5	OS-6	OS-7	OS-8	OS-9	OS-10	OS-11	OS-12
DATE	DURATION/ AIRSTREAM	DURATION/ AIRSTREAM	DURATION/ AIRSTREAM	DURATION/ AIRSTREAM	DURATION/ AIRSTREAM	DURATION/ AIRSTREAM	DURATION/ AIRSTREAM	DURATION/ AIRSTREAM	DURATION/ AIRSTREAM	DURATION/ AIRSTREAM	DURATION/ AIRSTREAM	DURATION/ AIRSTREAM
5/9/11	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	OFF	OFF	OFF	OFF	OFF
5/13/11	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	10 MIN./LOW FLOW AIR	10 MIN./LOW FLOW AIR	10 MIN./LOW FLOW AIR	10 MIN./LOW FLOW AIR	10 MIN./LOW FLOW AIR
5/16/11	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	10 MIN./LOW FLOW AIR	10 MIN./LOW FLOW AIR	10 MIN./LOW FLOW AIR	10 MIN./LOW FLOW AIR	10 MIN./LOW FLOW AIR
5/23/11	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	10 MIN./LOW FLOW AIR	10 MIN./LOW FLOW AIR	10 MIN./LOW FLOW AIR	10 MIN./LOW FLOW AIR	10 MIN./LOW FLOW AIR
5/30/11	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	20 MIN./LOW FLOW AIR	20 MIN./LOW FLOW AIR	20 MIN./LOW FLOW AIR	20 MIN./LOW FLOW AIR	20 MIN./LOW FLOW AIR
6/6/11	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	20 MIN./LOW FLOW AIR	20 MIN./LOW FLOW AIR	20 MIN./LOW FLOW AIR	20 MIN./LOW FLOW AIR	20 MIN./LOW FLOW AIR
6/13/11	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	10 MIN./HIGH FLOW AIR	10 MIN./HIGH FLOW AIR	10 MIN./HIGH FLOW AIR	10 MIN./HIGH FLOW AIR	10 MIN./HIGH FLOW AIR
6/20/11	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	10 MIN./HIGH FLOW AIR	10 MIN./HIGH FLOW AIR	10 MIN./HIGH FLOW AIR	10 MIN./HIGH FLOW AIR	10 MIN./HIGH FLOW AIR
6/27/11	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	30 MIN./HIGH FLOW AIR	20 MIN./HIGH FLOW AIR	20 MIN./HIGH FLOW AIR	20 MIN./HIGH FLOW AIR	20 MIN./HIGH FLOW AIR	20 MIN./HIGH FLOW AIR