

ENVIRONMENTAL BIO-SYSTEMS, INC. Since 1989  
707 View Point Road, Mill Valley, CA 94941  
Tel: 415-381-5195 Fax: 415-381-5816 e-mail: augerpro@jps.net

Saturday, March 23, 2002

APR 09 2002

Ms. Eva Chu  
Alameda County  
Environmental Health Services  
1131 Harbor Bay Parkway, Suite 250  
Alameda, CA 94502-6577  
Fax: 510-337-9335

**Re: Workplan Transmittal**  
1125 Miller Avenue  
Oakland, California


Dear Eva:

Here is a copy of the workplan for the site on 1125 Miller Avenue in Oakland, California. If you request a mailed copy, I will be glad to send you one.

Please let me know when EBS can proceed with the work. Is a drilling permit (your agency, Zone 7 or Public Works) required and what is the cost for soil vapor sampling?

Please call me if you have any questions.

Sincerely,



James A. Jacobs, RG #4815; CHG# 88  
Chief Hydrogeologist and President

Mr. Al Pelton  
Dreisbach Enterprises  
2530 E. 11<sup>th</sup> St.  
Oakland, CA 94601  
Fax: 510-534-2316

**Environmental Bio-Systems, Inc.**  
**707 View Point Road**  
**Mill Valley, CA 94941**  
**TEL: 415-381-5195; FAX: 415-381-5816; e-mail: [augerpro@jps.net](mailto:augerpro@jps.net)**

March 21, 2002

Ms. Eva Chu  
Alameda County Environmental Health  
1131 Harbor Bay Parkway  
Alameda, CA 94502

**RE: SITE CLOSURE WORKPLAN**  
1125 Miller Ave.  
Oakland, California

Dear Ms. Chu:

Environmental Bio-Systems, Inc. (EBS) is pleased to present this Workplan and Safety Plan for 1125 Miller Avenue in Oakland, California. The Workplan is submitted in writing to you and the client in order to get complete agreement from all parties on the proposed activities that will lead to site closure for the Subject Property. The following is EBS' understanding of what you had requested and what was discussed with EBS regarding site closure activities. EBS will obtain the following information:

- Depth to storm drain, sanitary sewers, water line for fire hydrant, etc out in the streets.
- Depth and lateral distance to any underground creeks.
- A site plan is to be developed.
- Proof is needed to document that migration of contaminants will not travel by way of preferential pathways.
- A risk management plan will be developed by EBS to protect residents and construction workers in the event that excavation, is performed in area with residual soil contamination in vadose zone (mostly under former dispenser, and some by UST at 9 feet bgs)

EBS has prepared a brief letter workplan and safety plan for the regulator for field activities that will describe the work to be performed.

**TASK 1 – SENSITIVE RECEPTOR SURVEY**

EBS will map out the preferential pathways in the field. Additional information will be based on interviews, as well as historic maps and photos, as available from Dreisbach. If additional information is needed, EBS will make an appointment at the Public Works Department and review maps and records regarding preferential pathways.

EBS will estimate groundwater flow direction and restate the well survey as described in a previous EBS report. If needed, EBS may review Regional Water Quality Control Board (RWQCB) files for nearby sites having groundwater monitoring wells and flow

**Environmental Bio-Systems, Inc.**  
**707 View Point Road**  
**Mill Valley, CA 94941**  
**TEL: 415-381-5195; FAX: 415-381-5816; e-mail: [augerpro@ips.net](mailto:augerpro@ips.net)**

direction data. EBS will prepare sensitive receptor information based on the findings that will appear in the written report describing the activities.

#### **TASK 2 – SOIL VAPOR SURVEY**

EBS will collect soil vapor data within the one loft (near the former dispenser) and outside the other loft closest to the former tanks. Three vapor depths will be collected: Approximately 10 feet, 6 feet, and 2 feet below ground surface. All work will be performed by a geologist under the direction of a registered geologist. The 6 vapor samples will be analyzed for benzene, toluene, ethylbenzene and total xylenes (BTEX) as well as MTBE (methyl tertiary butyl ether).

Soil vapor samples will be collected using an in-situ Geoprobe® soil vapor sampling system. The soil vapor collection system consists of three-foot long threaded hollow steel rods, which can be connected to make lengths of up to 10 feet for this project. The lowermost length has a conical retractable vapor-sampling tip for driving which can be opened to allow soil gasses to be drawn from a selected depth and be sampled.

Prior to the field work, EBS will mark the proposed soil vapor points and notify Underground Service Alert (USA). A one-inch diameter hole is first drilled through the asphalt or concrete with a carbide tipped rotary drill. The soil vapor sampling system with a retractable point holder system is then introduced into the hole and advanced with a direct drive system down to the specified sampling depth. The retractable vapor sampling tip is then opened manually from the surface. A length of 0.170 inch inside diameter polyethylene tubing is then attached directly to the tip by means of a post-run tubing adapter. The remaining polyethylene tubing end is then attached to a vacuum and 21 to 25 inches of mercury is applied to the system. The pressure gauge is noted prior to sample collection. A sampling area consists of self-sealing silicon tubing near the pump inflow.

The drilling contractor will use the Geoprobe® AT-1001 Geoprobe® vacuum volume system pump which is capable of a vacuum up to 21 in. Hg (70 centibars). The pump is connected to the polyethylene tubing. Pumping is continued until at least five polyethylene tubing volumes are purged. A vapor negative pressure sampling box will be used to obtain the vapor sample. Polyethylene tubing is run from the subsurface into the vapor sampling box which connects to the Tedlar sample bag. A vacuum is drawn on the vapor box by the pump. The Tedlar bags in the vapor sampling box inflate as the negative pressure outside the Tedlar sample bag (but within the box) inflates the Tedlar sample bags. The samples are labeled and the sampling time is noted. The samples are transported under chain-of-custody procedures to the laboratory.

After the vapor samples are collected, all vapor sampling equipment is removed from the borehole. The boreholes are then backfilled by tremie pipe with a neat cement grout. The used polyethylene vapor sample tubing is properly removed the sampler, pending disposal by FAST-TEK. The sampling tip, rods, and equipment are decontaminated

**Environmental Bio-Systems, Inc.**  
**707 View Point Road**  
**Mill Valley, CA 94941**  
**TEL: 415-381-5195; FAX: 415-381-5816; e-mail: [augerpro@jps.net](mailto:augerpro@jps.net)**

using a three bucket wash and rinse process approved by EPA. The wash includes Alconox, a laboratory grade soap and the rinse consists of deionized water. New polyethylene tubing is used for each sample.

The vapor samples will be collected in two locations. The samples will be shipped using chain-of-custody procedures analyzed for BTEX and MTBE at Kiff Analytical in Davis, California, a state-certified laboratory (DHS ELAP#2236).

### **TASK 3 – CLOSURE REPORT**

As part of the Closure Report, EBS will prepare a report with several sections, including, Sensitive Receptor Survey (Task 1), as well as a description of the Soil Vapor Survey (Task 2). The soil vapor data will be used in the Risk Assessment for the Subject Property as well as a Risk Management Plan.

### **BACKGROUND**

EBS, founded in 1989, specializes in environmental consulting and is licensed as a general engineering contracting firm with a hazardous waste removal certificate as well as a water well drillers license (# 687236). The firm has experienced registered geologists, engineers, environmental scientists, drillers, registered environmental assessors, and AHERA-accredited asbestos inspectors. EBS's clients include the Fortune 500 firms, investors and numerous others. EBS has completed numerous tank removals, Phase I and Phase II environmental assessments, and soil and groundwater remediation projects.

### **INSURANCE**

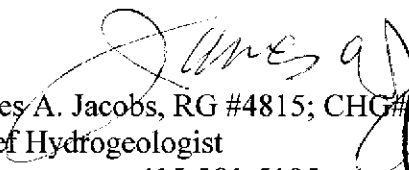
Workers Compensation Insurance: EBS's employees are protected by Worker's Compensation Insurance through the State Fund as required by applicable state law.  
Professional Liability Insurance: EBS is protected by a \$2,000,000 Professional and General Liability Insurance policy. An insurance certificate will be sent under separate cover, if requested.

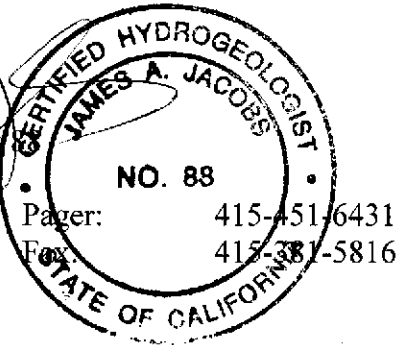
### **LICENSES**

All work will be performed under the direction of James A. Jacobs, C.H.G.#88, certified hydrogeologist. The soil vapor survey will be performed by a licensed drilling company, FAST-TEK Engineering Support Services of Point Richmond, California; License #624461: A, B, C-57, Haz., Asb).

**Environmental Bio-Systems, Inc.**  
**707 View Point Road**  
**Mill Valley, CA 94941**  
**TEL: 415-381-5195; FAX: 415-381-5816; e-mail: [augerpro@jps.net](mailto:augerpro@jps.net)**

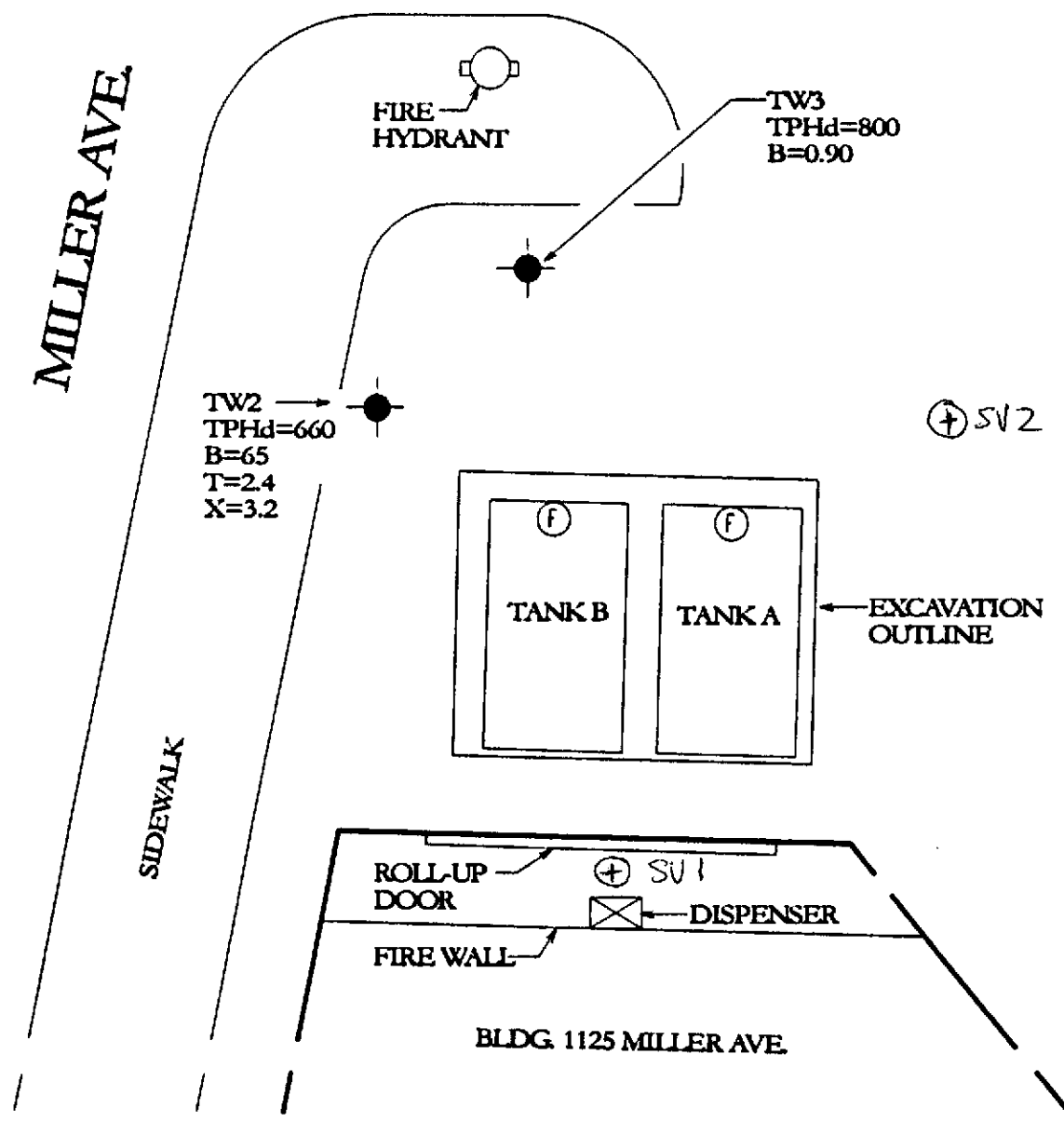
Please call me at (415) 381-5195 if you have any questions.

  
James A. Jacobs, RG #4815; CHG#  
Chief Hydrogeologist  
Phone: 415-381-5195  
Cell: 510-590-1098  
E-mail: [augerpro@jps.net](mailto:augerpro@jps.net)



Pager: 415-451-6431  
Fax: 415-381-5816

Cc: Mr. Al Pelton  
Dreisbach Enterprises  
P.O. Box 7509  
Oakland, CA 94601



SV1 ⊕ Soil Vapor NOTES:  
 ● Soil Core/Temporary Well Location and Designation  
 Sample results expressed in micrograms per liter (ug/l).

**FIGURE 4: WATER SAMPLE RESULTS**



Client: 23rd Avenue Partners  
 Site: 1125 Miller Ave., Oakland, CA  
 Project: UST Removal  
 Prepared by Environmental Bio-Systems, Inc.  
 EBS Project #: 079-507A  
 Scale: 1 inch = 10 feet  
 Date of Work: 12/2/98

3/22/02 Soil Vapor Locations