

NOzaki & Associates  
3390 Dwight Way  
Berkeley, California 94704

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1:24 pm, Nov 13, 2009

Alameda County  
Environmental Health

October 26, 2009

Mr. Mark Detterman  
Alameda County Health Care Services Agency  
Department of Environmental Health  
1131 Harbor Bay Parkway, Suite 250  
Alameda, California 94502-6577

Subject: Work Plan  
Soil and Groundwater Investigation  
1240 Powell Street  
Emeryville, California  
Global Identification Number: T06019727624  
County Project Number: RO0002869

Dear Mr. Detterman:

Pursuant to your request presented in your letter of September 11, 2009 to Mr. Ron Silberman ("the Client"), NOzaki and Associates has prepared this Work Plan to conduct a soil and groundwater investigation at 1240 Powell Street located in Emeryville, California ("the Site"; Figure 1).

### **OBJECTIVE**

The purpose of the investigation are to assess:

1. The potential presence of total petroleum hydrocarbons (TPH) as oil and grease (TOG) and polycyclic aromatic hydrocarbons (PAHs) within the subsurface soil and groundwater adjacent to a former waste oil underground storage tank (UST) at the northern portion of the Site; and
2. The potential presence of TPH as gasoline (TPHg); TPH as diesel (TPHd); benzene, toluene, ethylbenzene, xylenes (BTEX); methyl tertiary butyl ether (MTBE); and volatile organic compounds (VOCs) within the groundwater downgradient of the former USTs at the southern portion of the Site.

### **SAMPLING ACTIVITIES**

Prior to sampling activities, the boring locations will be screened using a magnetometer to assess the potential presence of underground utilities. Underground Services Alert and Cruz Brothers of Milpitas, California will be contacted to assist in utility clearance activities.

Soil samples will be collected at boring location (B-1) within the approximate vicinity of the former waste oil UST (Figure 2). Since a previous consultant's site map must be relied upon for the identification of the UST, the exact location of the former waste oil UST could not be confirmed. Based on the results of the magnetometer survey, it was determined that the UST was removed and no longer exists as indicated in Figure 2. No magnetic anomalies were found in the area where the former UST was identified to have existed. In order to be conservative in siting the boring, a location in the downgradient direction of the waste oil UST will be identified for siting boring B-1. Soil samples will be collected from the boring by driving a sampler containing vinyl acetate tubing using a power probe. Soil samples will be collected at depths of approximately 6 feet and 12 feet below the existing ground surface (bgs). Additionally, soil samples will be collected at lithologic changes and at areas of potentially affected soils. The total depth of boring B-1 will extend to a depth of approximately 12 to 13 feet bgs. A groundwater sample will also be collected from boring B-1 using a hydropunch. Hollow diameter PVC casing containing a perforated PVC screen at the bottom of the casing will be advanced to approximately 3 feet below the first permeable zone. The casing will then be retracted approximately 4 feet to allow infiltration of groundwater. The groundwater sample will be collected by lowering a Teflon bailer through the hollow casing. The sample will be transferred into 1-liter amber jars.

A second groundwater sample will be collected at boring location (B-2) downgradient of the former service station USTs at the southern portion of the Site (Figure 2). The groundwater sample will be collected from the first permeable zone using a hydropunch. The sample will be transferred into 40-mL VOAs and 1-liter amber jars.

The soil and grab groundwater samples collected will be stored in a chilled cooler containing crushed ice for delivery to the laboratory. Strict chain-of-custody protocols will be followed in all phases of sample handling.

All equipment used during this investigation which comes into contact with affected material will be thoroughly cleaned and decontaminated before and after each use. This

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will be accomplished by washing with Alconox (a laboratory-grade detergent) and rinsing with deionized or distilled water.

The boreholes will be backfilled with neat cement grout upon completion of soil and groundwater sampling activities. The neat cement will be tremied from the bottom of the borehole to the top of the borehole.

### **LABORATORY ANALYSIS**

The soil and grab groundwater samples collected will be sent to McCampbell Analytical Inc. of Pittsburg, California, a state-certified laboratory.

Soil and groundwater samples collected from boring B-1 located within the approximate vicinity of the former waste oil tank will be selectively analyzed for:

- TOG using EPA Method 1664/5520 E/B&F; and
- PAHs using EPA Method 8270 SIM/HPLC 8310.

At a minimum, soil samples collected from obvious potentially affected zones and at depths of approximately 6 and 12 feet bgs will be analyzed for the abovementioned constituents. The soil and groundwater samples will be analyzed on a normal turnaround basis.

The groundwater sample collected from boring B-2 located in the downgradient direction of the former USTs will be analyzed for:

- TPHg and TPHd using EPA Method 8015M/602;
- BTEX and MTBE using EPA Method 8021B/602; and
- VOCs using EPA Method 8260B.

The groundwater sample will be analyzed on a normal turnaround basis.

### **REPORT DOCUMENTATION**

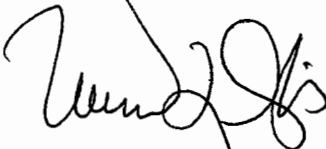
A written report will be prepared following receipt of laboratory analytical results. The report will describe our field observations, sample collection, laboratory analytical

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results, and conclusions regarding the investigation activities. The report will be submitted to the Alameda County Health Care Services Agency within three weeks following the completion of field activities and receipt of laboratory analytical results.

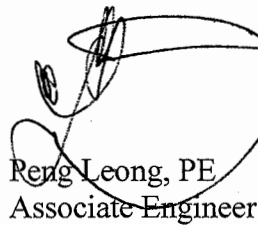
Please do not hesitate to contact me if you have any questions or comments.

Sincerely,



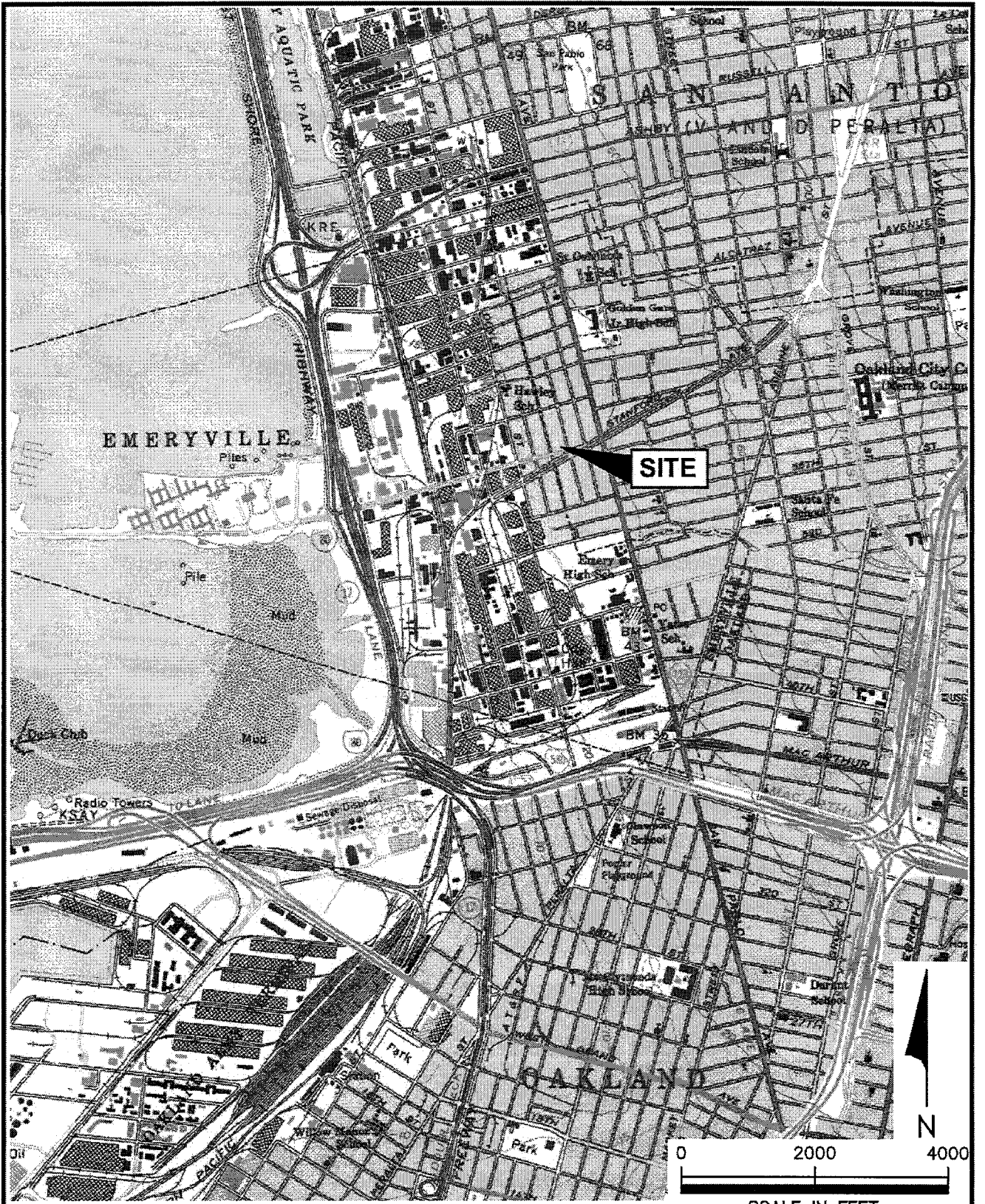
Norm Ozaki, Ph.D.  
Principal Toxicologist

cc: Mr. Ron Silberman



Reng Leong, PE  
Associate Engineer







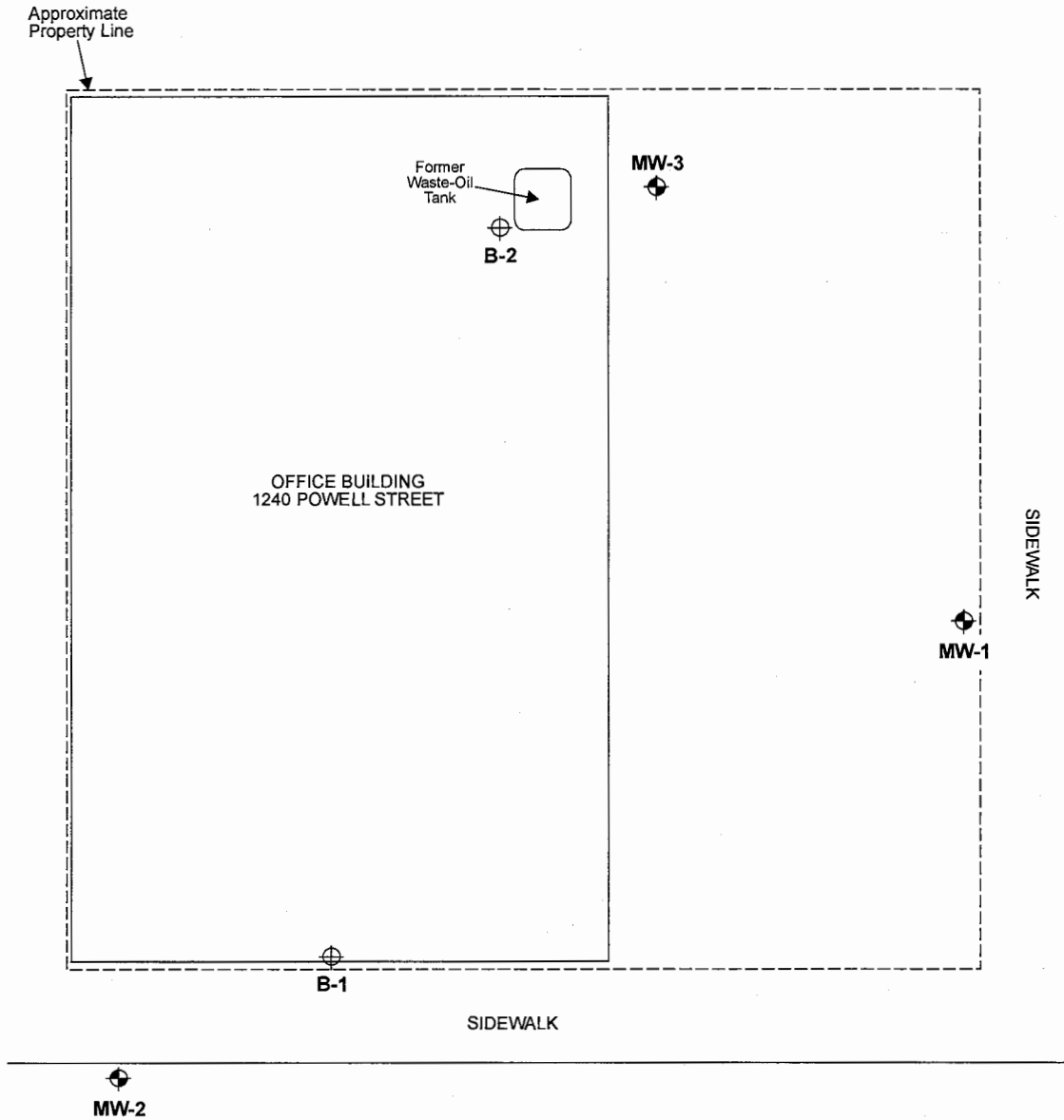
SOURCE: USGS Map 7.5 Min Series (Topographic) BERKELEY QUAD, California, Terraserver.

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|---|--|---|------------------|-----------------|
| <h1 style="text-align: center; margin: 0;">ENVIRON</h1> | <p style="text-align: center; margin: 0;"><b>Site Location Map</b><br/>1240 Powell Street<br/>Emeryville, California</p> | <p style="text-align: center; margin: 0;">Figure<br/><b>1</b></p> |                  |                 |
| <p>Drafter: RS</p>                                      | <p>Date: 5/28/08</p>   | <p>Contract Number: 03-BPNT008</p>                                | <p>Approved:</p> | <p>Revised:</p> |

EXPLANATION:

-  Monitoring Well Location
- MW-1**
-  Proposed Boring Location
- B-1**



Scale: 1" : ± 20'      October 2009

**N Ozaki**

**BORING LOCATIONS**  
1240 Powell Street  
Emeryville, California

Figure **2**