



**northgate  
environmental  
management, inc.**

May 8, 2003

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

Alameda County  
MAY 13 2003  
Environmental Health

Re: Work Plan for Environmental Investigation  
Malabar Avenue Property (Tract 7305), Castro Valley, California

Dear Ms. Chu:

On behalf of Delco Builders & Developers, Northgate Environmental Management, Incorporated (Northgate) is submitting this work plan for environmental investigation at the Malabar Avenue property in Castro Valley, California. The purpose of the work will be to provide additional evaluation of the potential environmental concerns outlined your April 15, 2003 e-mail memorandum to Mr. Ariu Levi and Ms. Donna Drogos of Alameda County Environmental Health (ACEH). Our proposed scope of work is based on review of previous environmental investigations prepared for the site, and discussions with you and the former owners of the property.

### **Background**

The site consists of an approximate 3.5-acre parcel located at 4605, 4611, and 4643 Malabar Avenue in Castro Valley, California. The site is reportedly developed with four vacant structures, generally located near the center of the property.

A previous environmental assessment performed at the site (*Phase I Environmental Site Assessment on Proposed Residential Development, 4605, 4611, and 4643 Malabar Avenue, Castro Valley, California* dated September 27, 2000, by Terrasearch, Inc.) indicates that the site was developed as a chicken farm from the early 1900s through the 1960s. Aerial photographs viewed during the investigation reportedly indicated that the southwestern and southeastern portions of the site were used for row crops beginning sometime between 1975 and 1981. The aerial photograph review indicates that agricultural land use ceased sometime prior to 1988. An underground storage tank (UST) was reportedly removed from the site sometime in the 1960s, and an old hand-dug well was reportedly filled-in in the 1960s. The Phase I investigation concluded that specific soil and groundwater testing should be performed in the area of the former UST. The report also recommended that soil testing be performed in the former agricultural land use area to evaluate potential soil quality impacts due to pesticides.

Terrasearch subsequently performed an additional investigation at the site in accordance with recommendations contained in the Phase I assessment. The investigation results are presented in a report titled *Surface and Subsurface Environmental Site Assessment on 4605, 4611 and 4643 Malabar Avenue, Castro Valley California* dated November 3, 2000. Terrasearch's investigation included collecting four soil samples within one foot of the ground surface from the southwest and southeast portions of the site (the former agricultural area observed on the historic aerial photographs), and analyzing the samples for organochlorine pesticides, arsenic, lead, and mercury. Terrasearch also drilled one soil boring in the vicinity of the former UST in an attempt to collect soil and groundwater samples for chemical analysis. However, the report indicates that the boring could not be drilled deeper than five feet due to hard rock encountered in the boring. One soil sample collected from a depth of four feet was analyzed for petroleum hydrocarbons as gasoline and diesel, purgeable aromatic compounds, MTBE, and lead. The previous sampling locations are shown on the attached figure.

The shallow soil samples did not contain organochlorine pesticide compounds above the laboratory method reporting limits. Arsenic was measured in two of the samples at concentrations of 4.3 and 5.3 parts per million (ppm). Lead was present in all four samples, with concentrations ranging from 4.4 to 17 ppm. Mercury was detected in one sample, at a concentration of 0.096 ppm. Terrasearch concluded that the measured concentrations of metals were within the range of naturally occurring background levels. As organochlorine pesticides were not detected in the samples, the report concluded that the previous agricultural land use had not impacted shallow soil quality at the site.

The soil sample collected from a depth of four feet near the former UST did not contain hydrocarbon compounds above the laboratory method reporting limits. Based on these test results, Terrasearch concluded that no additional environmental assessment was required at the site.

ACEH has now requested that additional testing be performed to further evaluate the potential for impacts to soil and groundwater quality at the site related to the former UST and possible former agricultural land uses. ACEH is also requesting additional evaluation of the closure status of the former hand-dug well. The scope of work outlined in this proposal is intended to address the ACEH request.

## **Scope of Work**

### **Task 1 – Field Investigation**

Northgate's proposed field investigation will include the following services:

#### **Former Agricultural Land Uses**

ACEH has requested that additional samples be collected at depths of one and three feet below the ground surface and analyzed for organochlorine and organophosphorous



pesticides. ACEH has requested that samples be collected at a frequency of one sample per 5,000 square feet of property.

Our recent conversation with Ms. Marie Alcorn, former owner of the site, indicates that a neighbor was allowed use the southern portions of the site to grow tomatoes and corn for resale at a roadside stand for a few years about 20 years ago. This report generally agrees with the short-term appearance of agriculture observed in the aerial photographs of the site by Terrasearch. Ms. Alcorn indicated that there were scattered apricot trees on the property when her parents purchased the site in 1929, but that the site was never operated as an orchard during the time her family owned the site. According to Ms. Alcorn, there was never any commercial agriculture at the site except for the very limited use noted above. Ms. Alcorn stated that to her knowledge, no pesticides were stored, mixed, or used at the site.

Previous testing by Terrasearch in the southwest and southeast portions of the site did not indicate the presence of organochlorine pesticides in surficial soils in these areas. While we could not rule out the presence of pesticides in shallow soil at the site, the site history as reported by Ms. Alcorn and as observed in the aerial photographs indicates that the probability of significant impact to the site by pesticide compounds is low. As such, it is our opinion that a sampling frequency of far less than the 5,000 square foot frequency mentioned in the ACEH e-mail memo is appropriate for evaluating the possible presence of pesticides in shallow soil at the site.

Based on our evaluation of the site history as described above, we propose to collect soil samples from depths of approximately one and three feet below ground surface at eight locations on the northern and central portions of the site, at the approximate locations shown on the attached figure. Samples will be composited at the laboratory by adjacent groups of four prior to analysis. The two composite samples collected from the one-foot depth will be analyzed for organochlorine and organophosphorous pesticides. Samples from the three-foot depth will be held at the laboratory, and analyzed only if pesticides are detected at significant concentrations in the one-foot samples.

As surface soils in the southeast and southwestern portions of the site have already been tested for organochlorine pesticides, two additional four-point composite samples will be collected at a depth of one foot from these areas and analyzed for organophosphorous pesticides only. Deeper samples will not be collected in this area.

#### Former UST

Northgate will attempt to advance one soil boring to a depth of at least 25 feet in the vicinity of the former UST location on the property. The former UST location will be identified at the time of drilling by Ms. Alcorn. The boring will be advanced using a truck-mounted drill rig equipped with hollow-stem augers. During drilling soil samples will be collected at approximate five-foot intervals using a modified California Sampler equipped with thin, brass liners. Samples will be screened in the field for hydrocarbon vapors using a photoionization detector. Soil samples collected at approximate five-foot



intervals will be analyzed for petroleum hydrocarbons as gasoline and diesel using EPA Method 8015, and for purgeable aromatic compounds and MTBE using EPA method 8021. These samples will be sealed with Teflon-lined lids, labeled, and stored on ice for transport to the testing laboratory under chain-of-custody control.

If encountered, groundwater samples will be collected from the open borehole using a clean, disposable bailer. Samples will be decanted into laboratory-supplied glassware, labeled, and stored on ice in a cooler for transport to the testing laboratory. Groundwater samples will be analyzed for petroleum hydrocarbons as described above.

The boring will be drilled under permit from Alameda County, and will be backfilled with neat cement upon completion. Soil cuttings will be spread on the ground surface, unless significant hydrocarbon vapors are encountered, in which case the cuttings will be covered with plastic and remain at the site pending evaluation of disposal options.

#### Hand Dug Well

Information in the previous reports indicates that a hand-dug well was formerly located on the site. Our interview with Ms. Alcorn confirms that the old well was backfilled in the early 1960s. Ms. Alcorn generally recalls that the well was a brick-lined well, several feet in diameter, and was approximately 60 feet deep. Ms. Alcorn did not recall whether the well was filled with rock or dirt.

During our field investigation, Northgate will examine the general area indicated by Ms. Alcorn as the location of the former well by probing the ground with a steel probe. If an indication of the old well is discovered, its location will be marked for further evaluation and possible mitigation activity during site development. However, in our opinion, these type of old hand-dug wells are not amenable to pressure grouting as suggested in the ACEH memorandum.

#### Task 3- Evaluation and Report

The results of the investigation will be presented in a written report. The report will include a description of the investigation methods, a summary of the chemical test results, and our conclusions and recommendations regarding the issues discussed above.

#### **Schedule**

We are currently scheduled to perform our field investigation on Friday May 16, 2001. Laboratory analytical results will be available for review one week after that. Our written report will be submitted to ACEH within two weeks of receipt of the analytical results.



**Closing**

Should you have any questions or require additional information, please do not hesitate to call.

Sincerely,

**Northgate Environmental Management, Incorporated**

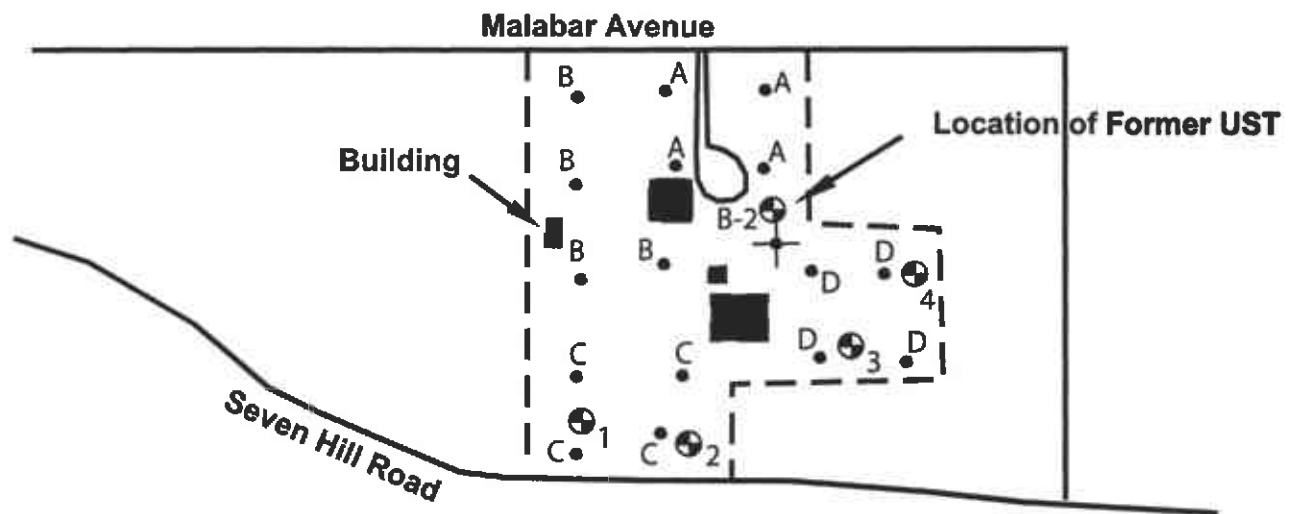
A handwritten signature in dark ink, appearing to read 'D. Laduzinsky', with a long horizontal stroke extending to the right.

Dennis Laduzinsky, C.E.G.  
Associate

Attachment: 1 Figure

Cc: Phil Rowe (Delco Builders & Developers)





A • Proposed Pesticide Sample Location

+ Proposed Boring at Former UST

⊕ Previous Sample Location

-no scale -

Source: Terrasarch, 2000

**FIGURE 1**  
**Proposed Sampling Plan**



**northgate**  
**environmental**  
**management, inc**

Malabar Avenue Property  
Hayward, California  
May 2003  
Proj. No. 1109.00