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GEOMATRIX

30 July 1996
Project 1736.14

Ms. Juliet Shin
Alameda County Health Care Services Agency
Department of Environmental Health
1131 Harbor Bay Parkway, 2nd Floor
Alameda, California 94502

Subject: Work Plan for Additional Sampling Program,
Northwest Area
Alameda Marina Village
Alameda, California

Dear Ms. Shin:

On behalf of Alameda Real Estate Investments (AREI), Geomatrix Consultants, Inc. (Geomatrix), has prepared this work plan to perform additional activities at Alameda Marina Village, Northwest Area, in Alameda, California (Figure 1). Activities include: additional soil sampling as requested by the Alameda County Health Care Services Agency (ACHCSA) at a 2 May 1996 meeting to address data gaps prior to considering the site for closure; development of a closure strategy based on the recent Regional Water Quality Control Board, San Francisco Bay Region's (RWQCB) 5 January 1996 Memorandum regarding Interim Guidance on Required Cleanup at Low-Risk Fuel Sites; and review of existing health risk assessments and development of appropriate exposure scenarios to address potential health risk issues. In addition, ACHCSA requested evaluation of historical analytical results for creosote (EPA Method 8270) and additional groundwater analyses for lead. These data and the proposed sampling activities are described in detail below.

Analytical Results for Lead and Creosote-Related Compounds

As requested by the ACHCSA, unfiltered groundwater samples collected in April 1996 were analyzed for total lead. No total lead (<5 micrograms per liter) was detected in groundwater. These results indicate that low concentrations of lead previously detected in shallow fill material at the site is not impacting groundwater. These groundwater analytical results will be included in the groundwater monitoring report summarizing the sampling event that was performed in April 1996.

Geomatrix also evaluated existing analytical data for creosote (EPA Method 8270 - Compounds) in response to ACHCSA's concern that wood fragments observed in shallow fill material at the site might contain creosote. One groundwater sample collected from monitoring

well LF-8 (Figure 2) contained no detectable concentrations of creosote-related compounds. No creosote-related compounds were detected in a crude oil product sample from northwest test pit 11 (Figure 2) at a depth of 8 feet below ground surface; however, due to interference from the crude oil, detections limits on this sample were higher than the method detection limits. Based on these data, no creosote-related compounds have been detected at the site. Due to the low solubility and mobility of creosote-related compounds, the potential for creosote from wood fragments in shallow fill to impact groundwater is considered very low, and additional groundwater sampling for creosote-related compounds is not recommended. Health risks associated with potential exposure during site development to wood fragments possibly containing creosote in shallow fill will be addressed in the Health Risk Evaluation or Site Management Plan described below.

Surface Soil Sampling

A total of five shallow soil samples will be collected from a depth interval of approximately the ground surface to 3 feet below ground surface depending on specific location: two from Lot 1, two from Lot 5, and one 3-point composite from the soil stockpile located on Lot 1. Proposed sampling locations are shown on Figure 2. The soil will be accessed using a posthole digger. Geomatrix will collect bulk soil samples in 2-gallon-capacity freezer bags. The soil samples will be homogenized in the field prior to submittal to the analytical laboratory. The soil samples will be submitted to a California-certified laboratory and analyzed for total lead.

Health Risk Evaluation and Site Management Plan

The purpose of the Health Risk Evaluation primarily will be to assess the potential human health risks associated with the presence of residual middle- to high-boiling petroleum hydrocarbons in subsurface soil and in stockpiled soil that will be used as fill. The potential for exposure to wood fragments that are contained in shallow fill also will be addressed. In addition, the Health Risk Evaluation will address the need for notification or other requirements following site closure in a site management plan. Based on our understanding of site conditions and the intended future development of the Northwest Area for commercial use, future site occupants would not be expected to be exposed to the affected fill because the entire site will be covered with building(s), concrete or asphalt paving, or landscaping after development. However, construction workers could be potentially exposed to affected fill on a short-term basis during site development, and future maintenance workers could be potentially exposed on a periodic basis during maintenance activities that require intrusion into the subsurface (e.g., repair of an underground utility).

Previous risk evaluations have been conducted for the asphalt-like hydrocarbons remaining in soil at a nearby property occupied by 1101 Marina Village Parkway and the diesel remaining in

the stockpiled soil. Both evaluations concluded that the residual hydrocarbons did not pose a significant human health risk assuming future commercial development of the property. The results of these will be used in the Health Risk Evaluation to qualitatively assess the potential health risks associated with similar petroleum hydrocarbons remaining in soil in the Northwest Area. The results of this qualitative assessment will be used in conjunction with information developed in other tasks to demonstrate that the site represents a low-risk soils case.

ESTIMATED SCHEDULE

The proposed field program was implemented on 2 July 1996. Results of the field program and Health Risk Evaluation will be presented in a future meeting with ACHCSA, AREI, and Geomatrix.

Please call either of the undersigned if you have any questions or require additional information.

Sincerely,

GEOMATRIX CONSULTANTS, INC.

Yvonne G. Pierce, R.G.
Senior Geologist

Elizabeth A. Nixon, P.E.
Senior Engineer

YGP/EAN:ldu
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Enclosures

cc: Mr. Rahn Verhaeghe, AREI

Barnhill Construction Co. property

Boat docks

OAKLAND INNER HARBOR

Shoreline

Approximate alignment of sheet-pile wall

0 100 Feet

Scale: 1" = 100'

TP-1

LF-13

Property boundary

Fence

NWPIT-11

LF-8

TP-2

LF-7

TP-3

LOT 1

WORK STREET

LF-9 (not accessible)

Lot boundary

LF-12

TP-4

LF-6

Concrete slab

LF-11

Existing storm drain

Railroad spur

TP-5

GMW-2

Paved parking

LOT 5

LF-10

WC-3

MARINA VILLAGE PARKWAY

Bldg.

Headhouse

Shipway 1

Headhouse

Shipway 2

Headhouse

Shipway 3

Headhouse

Shipway 4

EXPLANATION

- Landscaped areas
- LF-10 ▲ Levine•Fricke monitoring well, 1988
- GMW-2 ◔ Geomatrix monitoring well, April 1992
- WC-3 ▪ Woodward-Clyde monitoring well, 1987
- Property line
- Lot boundary
- TP-1 ⊕ Proposed test pit
- NWPIT-11 ◇ Levine-Fricke test pit, 1988

Reference: Aerometric Surveys; Job #92733; 5/20/92; for Luk, Milani and Associates.

1736.14.008

PROPOSED SOIL SAMPLING LOCATIONS
Northwest Area
Marina Village
Alameda, California

GEOMATRIX	Project No. 1736.14	Figure 2