

December 18, 1996  
961163NB

Mr. Richard Kraber  
Wind River Systems  
1010 Atlantic Avenue  
Alameda, CA 94501

**Subject: Proposal for Environmental Characterization  
Berth 5 Parcel, 2020 Sherman Avenue Parcel, and Alameda Beltline Parcel,  
Alameda, California**

Dear Mr. Kraber:

Woodward-Clyde Consultants (WCC) is pleased to provide this proposal for Environmental Characterization of the Berth 5 Parcel, the 2020 Sherman Avenue Parcel, and the Alameda Beltline Parcel in Alameda, California (the site). The purpose of the activities is to characterize the site soil and groundwater environmental conditions. We understand that Wind River may purchase all three parcels and develop the site as commercial office space. The proposed activities include sampling of soil and shallow groundwater at selected locations, laboratory analyses, and preparation of a report presenting the sampling results, conclusions and recommendations. We will also utilize existing information developed during exploration of the Alameda Beltline Parcel.

## FIELD SAMPLING ACTIVITIES

We selected soil and groundwater sampling locations based upon a review of available record and information regarding the site (including aerial photos and maps), which has been historically used as a loading point for ships. A small portion of the Berth 5 Parcel shallow groundwater was previously investigated for volatile organic compounds (VOCs) by Geomatrix Associates (1995), therefore we will avoid duplication of such activity in that portion.

The field activities consist of surficial soil sampling at 22 locations and, at 14 of those locations, sampling of shallow groundwater. Since the site is paved, concrete or asphalt pavement will be cored prior to sampling. Surficial soil sampling will be performed by hand auger where no water sample is collected. Geoprobe sampling technology will be used at the other locations where groundwater is sampled. On the 2020 Sherman Avenue Parcel three borings will be drilled through the floor of the warehouse. In addition, five composite samples will be collected from existing soil stockpiles for analysis for total lead.

ENCLOSURE 961163NB 001

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The proposed sampling locations are shown on the attached Figure 1. These locations are approximate and the actual location will be selected in the field prior to sampling.

Fourteen Geoprobe borings will be advanced from the ground surface to a depth of about 10 feet below ground surface (bgs). Prior to starting, concrete or asphalt pavement will be cored. One section of soil core from between depths of about 0.5 and 1.5 feet bgs will be sealed in a sample tube with plastic end caps. A grab groundwater sample will be collected from the bottom of each Geoprobe boring using a bailer and then placed in clean laboratory supplied containers. Each soil and groundwater sample will be labeled and placed in a chilled ice chest for transport to the laboratory under chain-of-custody control. It is anticipated that groundwater will be encountered at a depth of about 6 to 7 feet bgs.

Nine shallow soil samples will be collected using a hand auger or a shovel. Prior to sampling, concrete or asphalt will be cored. Shallow soil samples will be collected from depths of about 0.5 to 1 foot below the ground surface. The samples will be placed in laboratory supplied containers for shipment to the laboratory, as described above.

It is assumed that the site was developed by placement of fill over bay mud. For this cost estimate, we assumed that the Geoprobe method will be able to advance through the fill material and will not encounter refusal. We assume that you will provide WCC with maps for utility clearance.

Perforated PVC pipe will be placed in the eight Geoprobe borings to allow measurement of the stabilized depth to groundwater. Locations will be surveyed by a licensed surveyor. Logs will be prepared showing the materials encountered in the borings. The ground elevation will be surveyed and the elevation of groundwater will be measured in order to prepare a groundwater gradient map.

Soil cuttings from the exploratory borings and rinse water will be properly disposed of on or off-site per appropriate regulations, following review of the laboratory analyses. It is assumed that one 55-gallon drum of soil cuttings and one drum of rinse water will be disposed.

### LABORATORY ANALYSES

Approximately 23 soil samples, 16 groundwater samples, and one trip blank will be submitted to Inchscape Analytical Laboratory, San Jose, California. Five 4-point composite soil samples will be collected from existing soil stockpiles. Soil and groundwater samples will be analyzed by the following methods:

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Analysis	Surficial Soil Analyses	Shallow Groundwater Analyses
Title 22 metals	23	16 (15 samples - 1 trip)
Total Petroleum Hydrocarbons by EPA Method 8015	23	16
Volatile Organic Compounds - EPA Method 8260	23	16
Semi-volatile Organic Compounds and Polynuclear Aromatic Hydrocarbons - EPA Method 8270	23	16
Pesticides and PCBs - EPA Method 8081	23	16
Herbicides - EPA Method 8150	23	16
CWET TCLP	4	
Total Lead (Composite)	4	

## REPORTING ACTIVITY

WCC will prepare a report summarizing the results of the subsurface investigation. The report will contain a site map on CADD showing the sample locations. The estimated groundwater gradient will be shown on a map of the site, based upon groundwater levels measured in the Geoprobe borings. The report will contain tables presenting the results of laboratory analyses. The results of laboratory analyses will be evaluated based on frequency, spatial distribution, and potential human health and environmental concern by comparing them with relevant regulatory standards such as: California and Federal drinking water standards, USEPA Region IX Preliminary Remediation Goals (PRGs), and the State of California Total Toxic Limit Concentrations (TTLCs). The report will provide our conclusions regarding site conditions and recommendations regarding the future use of the site as a commercial development. We have previously detected shallow soil with lead and motor oil on the railroad parcel that will likely require remediation. As part of this report we will provide an assessment of remediation options for these soils.

## ESTIMATED SCHEDULE AND COST

We estimate the cost for the environmental assessment will be approximately \$69,800. A detailed breakdown of costs is shown in Table 1, attached. The costs for the analytical laboratory services under Task 2 - Laboratory Analyses, will be paid directly by you. WCC will review laboratory invoices and forward them to you for direct payment to the laboratory.

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Costs will be accrued on a time and materials basis in accordance with our current Schedule of Charges. We will not exceed this estimate without your approval.

Upon receiving authorization to proceed, we anticipate that about one week will be required to schedule coring and Geoprobe subcontractors. We assumed that four days will be necessary to conduct Geoprobe and shallow soil sampling. The sampling cost will increase if more days are needed. Laboratory reports are anticipated to be available within about ten working days following sampling. The report will be available within about two weeks following receipt of the laboratory reports. We anticipate that this work would not begin until January 1997.

## AUTHORIZATION

If you are in agreement with this proposal please initial below and sign the contract and addendum and return one original authorized document to our office as authorization for us to proceed. We look forward to assisting you with this interesting project. If you have any questions, please call Albert Ridley at (510) 874-3125.

Sincerely,



Albert P. Ridley, CEG 926  
Project Manager

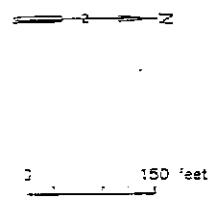
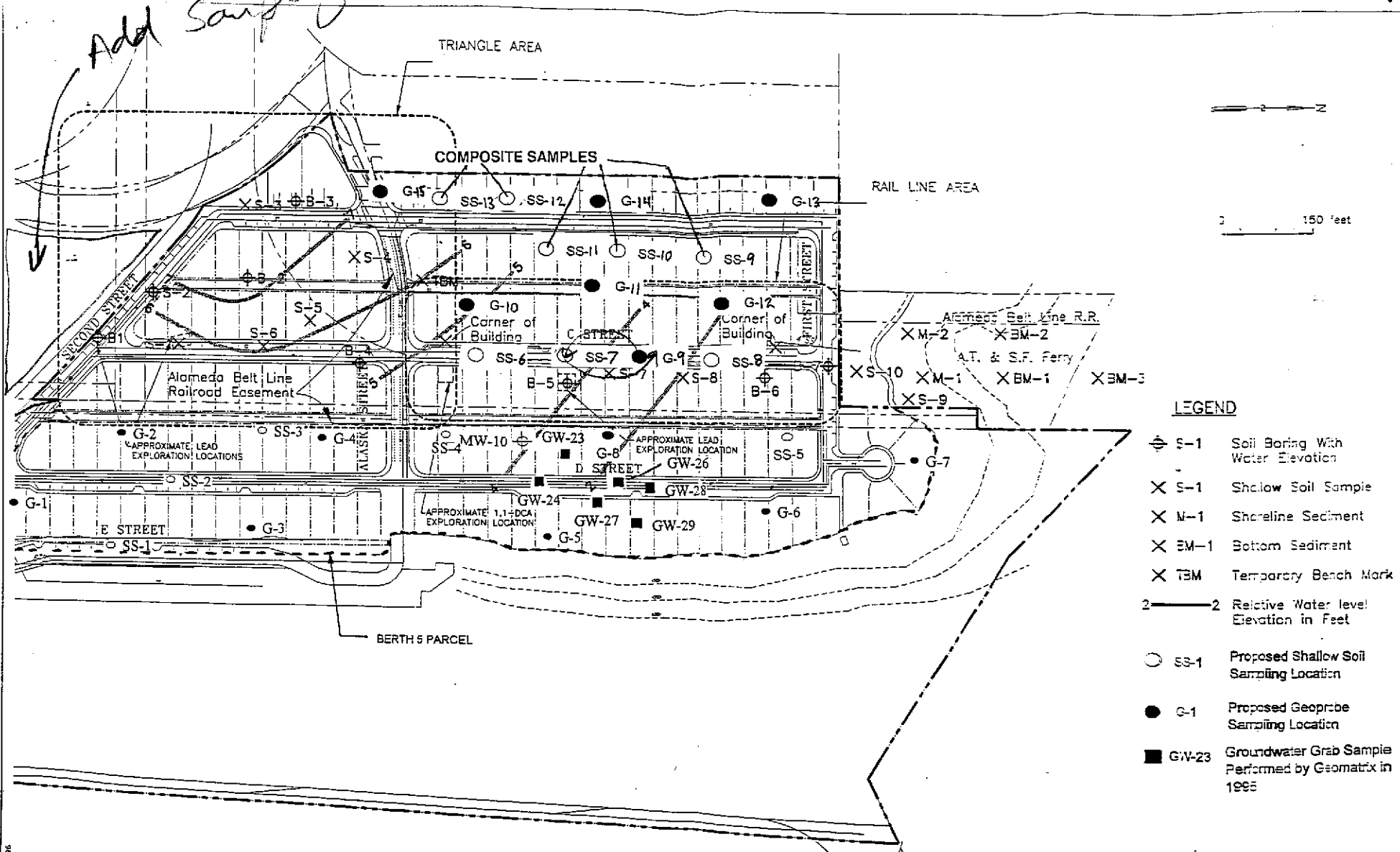
Attachments: Figure 1 - Proposed Sampling Locations  
Table 1 - Cost Estimate For Environmental Assessment Activities  
Contract Addendum #1

Authorization:

Client Initials: Rhain W. Kraber

Date: 12/23/96

Add Sampling here



- LEGEND**
- ⊕ S-1 Soil Boring With Water Elevation
  - × S-1 Shallow Soil Sample
  - × M-1 Shoreline Sediment
  - × BM-1 Bottom Sediment
  - × TBM Temporary Bench Mark
  - 2——2 Relative Water level Elevation in Feet
  - SS-1 Proposed Shallow Soil Sampling Location
  - G-1 Proposed Geoprobe Sampling Location
  - GW-23 Groundwater Grab Sample Performed by Geomatrix in 1995

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Project No. 961163NA	SAWPLING LOCATIONS WIND RIVER PROJECT	Figure 1
Woodward-Clyde Consultants		