

STIPS ENVIOUS PROTECTION

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November 4, 1998

Mr. Thomas Peacock Alameda County Environmental Health Services 1131 Harbor Bay Parkway #250 Alameda, California 94502-6577

Reference: Workplan for Well Installation, Development, and Sampling

2585 Nicholson Street in San Leandro, California (Site).

Versar Project Number: 4422-001.

Contract Number: 97-056, Work Order Number: 05582-02

Dear Mr. Schovanec:

At the request of Bank of America NT&SA (Bank of America), Versar, Inc. (Versar) is pleased to present this workplan for well installation, development and sampling at the above referenced Site (the Site). Well installation is being performed in accordance with the recommendations set-forth in the McLaren/Hart report entitled "Soil and Groundwater Characterization," dated May 1, 1998. Procedures for the activities proposed are presented below.

WELL INSTALLATION AND PERMITTING

To further assess the condition of groundwater at the Site, Versar proposes to install two groundwater monitoring wells. The proposed well locations, along with previous sampling locations are depicted in the attached Figure 1. Prior to drilling activities, Versar will mark the locations of the borings at the Site and notify Underground Service Alert (USA) within 48 hours of the drilling activities. The monitoring well boreholes will be installed with a truck-mounted drill rig using 8-inch outside diameter hollow stem augers. Soil cuttings generated during drilling will be placed in 55-gallon drums. The drums will be sealed, labeled, and stored on-site pending characterization.

First encountered groundwater beneath the Site was observed at approximately 7.0 feet below ground surface (bgs) during the previous Site characterization activities. It is anticipated that the monitoring wells will be constructed with 10 feet of 2-inch diameter, 0.020-inch slotted polyvinyl chloride (PVC) casing to a maximum depth of 15 feet bgs. The annulus from the bottom of the boring to approximately one foot above the screen will be filled with 2/12 sand and one foot of bentonite chips will be placed above the sand and hydrated to create a transition seal. The remainder of the annulus will be filled with a cement grout mixture and the monitoring wells finished with traffic-rated boxes and a locking cap with lock.

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Following well installation, the two new monitoring wells and the existing well will be surveyed. The survey will be conducted by a California Licensed Land Surveyor with a vertical control of 0.01 feet and horizontal control of 0.1 foot.

WELL DEVELOPMENT, SAMPLING AND ANALYSIS

Versar will develop and sample the two new monitoring wells. Development will be performed immediately following well installation. Development will consist of bailing, and purging approximately ten well volumes of groundwater. Sampling will occur at least 48 hours following construction. Sampling will be performed following purging of a minimum of three well volumes. Purge water from development and sampling will be contained in drums pending receipt of monitoring well sampling results. The drums will be sealed, labeled, and stored on-site pending characterization.

Groundwater samples will be collected using a disposable bailer, and placed in clean containers for submittal to the laboratory. Samples will be labeled, placed on ice, and submitted under chain of custody documentation to a California Department of Health Services certified laboratory for analysis. Samples will be analyzed for total petroleum hydrocarbons as gasoline (TPH-G) using Environmental Protection Agency (EPA) Method 8015 Modified; benzene, toluene, ethylbenzene, and xylenes (BTEX), and methyl tertiary butyl ether (MTBE) using EPA Method 8020.

REPORT PREPARATION AND SCHEDULE

Versar will prepare a letter report documenting the results of the well installation and groundwater sampling activities at the Site. The report will include figures, tables, boring logs with well construction details, and the laboratory analytical reports. In addition, Department of Water Resources (DWR) well completion reports will be prepared in accordance with State regulations. All work described herein will be performed under the supervision of a California Registered Geologist.

Versar is prepared to implement the activities described in this workplan immediately upon written approval to proceed. It is anticipated that the activities described herein will require approximately six weeks to complete. However, a Site access agreement is currently being negotiated with the adjacent property, which may result in schedule delays.



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If you have any questions regarding the proposed scope of work, please call Mr. John Schovanec with Bank of America at (949) 260-5812, or myself at (916) 863-9325.

Sincerely,

Scott Allin

Senior Program Manager

cc: Mr. John Schovanec (Bank of America)

