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April 2, 1999
Project 4850.01

Mr. Ernesto M. Galang
Remedial Project Manager
Department of the Navy
Engineering Field Activity, West
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Subject: Review of *Draft Field Sampling and Analysis Plan for Additional Sampling at Corrective Action Plan Sites 04/19, 06, 14/22, 15, 16, 20, and 25*
Naval Station Treasure Island
San Francisco, California

Dear Mr. Galang:

This letter presents the results of a review of the *Draft Field Sampling and Analysis Plan for Additional Sampling at Corrective Action Plan Sites 04/19, 06, 14/22, 15, 16, 20, and 25* (Draft FSAP). This review was performed by Geomatrix Consultants, Inc. (Geomatrix), on behalf of the City and County of San Francisco, Mayor's Office, Treasure Island Project (the City). The scope of the Draft FSAP was discussed in a working meeting of the Remedial Project Managers/BRAC Cleanup Team (RPM/BCT) on December 21, 1998. Representatives from Tetra Tech EM Inc. (TtEMI) proposed sampling and analysis plans for each of the Corrective Action Plan (CAP) sites on behalf of the Navy. Other members of the RPM/BCT provided comments to TtEMI and the Navy during this meeting for inclusion in the Draft FSAP.

In addition to the Draft FASP, Geomatrix has reviewed comments on the Draft FASP provided to the Navy by the California Regional Water Quality Control Board-San Francisco Bay Region (RWQCB) dated March 16, 1999. Geomatrix agrees with all of the RWQCB's comments and has additional comments. Our general comments are summarized below and are followed by specific comments.

GENERAL COMMENTS

- It is unclear why the scope of the Draft FSAP is limited to delineating the vertical and lateral extent of chemical-affected soil and groundwater based only on screening criteria for total petroleum hydrocarbons (TPH) mixtures. The Draft CAP included screening criteria for individual petroleum constituents [e.g., benzene, toluene, ethylbenzene, and xylene (BTEX)] as well as for TPH mixtures. No attempt is made to correlate the results of TPH analyses to the results of individual chemical analyses (as discussed in Section 2.5) to justify such an approach.

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- No rationale or justification is provided for the analyses selected at each CAP site. In most cases, insufficient background information is provided to independently assess the appropriateness of the proposed analyses.
- Information regarding the number of samples to be collected is often inconsistent between the text, tables, and figures. Because of these inconsistencies, it is unclear what is being proposed in the work plan.

SPECIFIC COMMENTS

- The RWQCB's comments state that samples collected to determine the vertical extent of chemical-affected soil must include a sample from the most highly impacted zone and a sample from below the impacted zone. Aside from the CAP sites identified by the RWQCB as requiring additional samples to meet these objectives, Geomatrix believes that additional samples may also need to be collected at the following locations to determine the vertical extent of chemical-affected soil in these area: Area of Concern (AOC) S-1 at CAP Site 15 (AOC 15-S1), AOC 16-S3, AOC 16-S4, and AOC 20-S1.
- Groundwater AOCs are not delineated on the figures.
- Section 3.5.2.3 refers to several soil samples collected from soil boring 16-O to justify that the lateral extent of chemical-affected soil at AOC 16-S3 is delineated to the northeast. However, Figure 10 suggests that only one sample was collected from this location. In addition, the depth of this single sample is inconsistent between the text and the figure.
- Section 3.5.2.4 refers to soil samples collected from sampling locations 16-PAS101 and 16-PAS 103 to justify that the lateral extent of chemical-affected soil at AOC 16-S4 is delineated to the north and south. However, the results for these samples are not presented in the text or in Figure 10.
- Section 3.7.1 discusses soil and groundwater samples collected as part of the investigation of Underground Storage Tank (143); however, these data are not provided on Figures 13 and 14.
- Section 3.7.2 discusses a soil sample collected from sampling location 25-HP-015 at 3.5 to 4.0 feet below ground surface (bgs); however, the data for this sample are not provided on Figure 14.



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- Section 4.2.4 states that soil and groundwater samples will be analyzed for methyl tert-butyl ether (MTBE) using EPA Method 8020A. This method is subject to positive interferences for this compound; therefore, MTBE detections should be confirmed with another analytical method (e.g., EPA Method 8260).
- Figure 4 does not identify what the concentration contours represent (e.g., total petroleum hydrocarbons).

Please feel free to call the undersigned at (415) 434-9400 if you have any questions.

Sincerely yours,

GEOMATRIX CONSULTANTS, INC.

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