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October 19, 1999
Project 005553.004.0

Mr. Ernesto Galang
Engineering Field Activity, West
Naval Facilities Engineering Command
Bldg. 208, 2nd Floor
900 Commodore Drive
San Bruno, California 94066-2402

Subject: Appendix A of the Draft Field Sampling Plan Addendum for Additional Investigation in the Vicinity of Buildings 1202, 1217, 1228, and 1230, Site 12 Naval Station Treasure Island San Francisco, California

Dear Mr. Galang:

This letter presents the results of a review of Appendix A of the *Draft Field Sampling Plan Addendum for Additional Investigation in the Vicinity of Buildings 1202, 1217, 1228, and 1230, Site 12* (Draft Appendix), which was prepared by Tetra Tech EM Inc. (TtEMI), on behalf of the Department of the Navy Engineering Field Activity West (the Navy). The Draft Appendix presents the data quality objectives (DQOs) for the proposed investigation. This review was performed by Geomatrix Consultants, Inc. (Geomatrix) and Olivia Chen Consultants (Olivia Chen) on behalf of the City and County of San Francisco, Mayor's Office, Treasure Island Project (the City). Our comments on the Draft Appendix are summarized below:

- DQO Step 1, Problem Description – Please be more specific about how close the preexisting trenches, borings, and geophysical anomaly are to the study area to minimize confusion with trenches, borings, and/or geophysical anomalies that are the basis for investigations of other areas. In addition, we suggest ending the last sentence after "...human health risk,..."; the rest of the sentence appears unnecessary.
- DQO Step 2, Identify the Decision – We believe it would be more logical if the current first bullet was actually the third bullet. At a minimum, the word "soil" should be changed to the word "debris" in that sentence to more clearly reflect the current agreement that soil that does not have field evidence of debris, staining or odor is considered sufficiently characterized and does not need additional investigation.
- DQO Step 3, Identify Inputs to the Decisions – Please add observations of soil staining and of the presence of debris to the current third bullet and clarify the nature of the referenced PID readings by stating whether they are to be measurements made of vapors emitted from freshly excavated soil or debris or some other type of PID measurement. In addition, we suggest adding the following bullets to the list for

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completeness: (1) location and nature of the geophysical anomaly, and (2) location and observations from the RI soil borings. Finally, to avoid confusion, we believe "...for soil..." should be deleted from the last bullet.

- DQO Step 4, Define the Study Boundaries – Please give explicit boundaries to the study area so that the relationship between the number and locations of proposed test pits and the area of investigation can be readily seen and, if results are favorable, a clearly defined area can be considered "cleared."
- DQO Step 4, Define the Study Boundaries – The third bullet gives 5 feet as the depth of the investigation without any explanation. We believe it would be better to state that the depth of interest from a risk assessment standpoint, and therefore from an investigation standpoint, is the depth of the vadose zone (i.e., it is unlikely that receptors will be exposed to material below the groundwater table), and then provide an estimate of that depth in the particular area under consideration. In this case, the third bullet would be revised as follows: "The vertical extent of the study is the depth of the vadose zone, which in this area is approximately 5 feet below ground surface, because it is unlikely that receptors will be exposed to material below the groundwater table."
- DQO Step 5, Develop a Decision Rule – We suggest revising the first sentence of the first bullet as follows: "If odor, staining, or debris is observed, then samples will be collected from each distinct type of debris, stained soil, and/or odorous soil observed in the test pit." Similarly, we suggest deleting the word "soil" from the first sentence of the second bullet.
- DQO Step 5, Develop a Decision Rule – Please move the second sentence of the second bullet to "Problem Description" under DQO Step 1, to better clarify the status of existing agreements.
- DQO Step 5, Develop a Decision Rule – Please add the following sentences to the end of the third bullet: "PRGs have not been developed for total petroleum hydrocarbons (TPH) or asbestos. For purposes of this evaluation, screening levels of 447 milligrams per kilogram (mg/kg) and 1 percent (by weight) will be used for TPH and asbestos, respectively."
- DQO Step 5, Develop a Decision Rule – We strongly suggest deleting the last bullet because it is confusing and not pertinent to the sampling plan.



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- DQO Step 6, Specify Acceptable Limits on Decision Errors – The basis for the acceptable decision error in the first bullet should be explicitly stated.
- DQO Step 7, Optimize Sampling Design – Please revise the first bullet to reflect our previous comment for DQO Step 6. We suggest deleting the second and third bullets because they are confusing and not pertinent to the sampling plan.
- Table A-1 – This table should be revised, as necessary, to reflect changes made in response to these or other comments.

If you have any questions about these comments, please call me at (510) 663-4232.

Sincerely yours,

GEOMATRIX CONSULTANTS, INC.


Gregory P. Brorby, DABT
Principal Toxicologist

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