UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
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July 12, 2006

Mr. Thomas Macchiarella, Code 06CA.TM
Department of the Navy
Base Realignment and Closure
Program Management Office West
1455 Frazee Road, Suite 900
San Diego, CA 92108-4310

RE: Draft Field Workplan for Data Gap Sampling Installation Restoration Site 26, Alameda Point

Dear Mr. Macchiarella:

EPA has reviewed the above referenced document, prepared by Innovative Technical Solutions, Inc and submitted by the Navy on May 12, 2006. The document is well thought out and presented, and we enclose as comments only a few technical questions regarding sampling protocols.

Please call me at (415) 972-3029 if you have any questions.

Sincerely,

Anna-Marie Cook

Anna-Marie Cook
Remedial Project Manager

enclosure

cc list: Lou Ocampo, BRAC PMO SW
Dot Lofstrom, DTSC Sacramento
Judy Huang, SFRWQCB
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EPA COMMENTS ON DRAFT FIELD WORKPLAN FOR DATA GAP SAMPLING, IR SITE 26, ALAMEDA POINT

1. **Section 3.4.3, Monitoring Well Sampling, Page 11:** Although the text states that the purge rate will be low enough to maintain a minimal drawdown (less than 4 inches), if possible, it does not state the maximum allowable drawdown. Please revise the work plan to include the maximum allowable drawdown.

2. **Section 3.4.3, Monitoring Well Sampling, Page 11:** The text states that turbidity, dissolved oxygen (DO), and oxidation-reduction potential (ORP) are not considered stabilization criteria, but for VOCs, DO is the most critical parameter because it indicates aeration of the groundwater. For metals, one of the most critical parameters is ORP. In addition, the Sampling and Analysis Plan (SAP) procedures specify that DO, ORP, and turbidity should stabilize within specified ranges. Please revise the monitoring well sampling procedures to require stabilization of DO and ORP before samples are collected.

3. **Appendix A, Section 1.5.1, Data Quality Objectives, Step 5: Develop Decision Rules, Page A-14:** The decision rules may not be sufficient to optimize well locations because 4 of the 5 initial sample locations are beyond the known plume boundary. The rules state that if the concentrations of VOCs in the initial grab groundwater samples do not exceed the site-specific cleanup goals listed in Table A-2, then "those samples will be considered to be outside the plume and additional step-out samples will not be performed." If the configuration of the plume has changed since the 1995 and 2002 sampling, the proposed sampling locations may not provide sufficient coverage to determine the current configuration of the plume. Please revise the decision rules to specify that if VOCs are not detected above the cleanup goals in the initial round of sampling, one round of step-out sampling will be performed within the area of the plume where Work Plan Figure 4 and SAP Figure A-5 indicate that total VOC concentrations were greater than 5 micrograms per liter (ug/L) to optimize monitoring well locations.

4. **Appendix A, Section 1.5.1, Data Quality Objectives, Step 6: Specify Tolerable Limits on Decision Errors, Page A-15:** The decision errors do not consider the consequences of incorrect decisions or a null hypothesis as suggested in the *Guidance for the Data Quality Objectives Process*, EPA QA/G-4 (EPA/400/R-96/055, August 2000). Since it is possible that the initial sampling points are outside the plume boundaries and that the plume configuration has changed, it is important to consider the consequences of incorrect decisions. Please revise the Step 6 discussion to include a null hypothesis and to consider the consequences of incorrect decisions.

5. **Appendix A, Section 1.5.1, Data Quality Objectives, Step 7: Optimize Sampling Design, Page A-15:** The text in this subsection does not acknowledge that some data

used to create the concentration contours and select initial sampling locations was collected in 1995. Given the age of this data, it is likely that concentrations and/or the plume configuration has changed. Please acknowledge that some data was collected in 1995 in the text of this subsection.

6. **Appendix A, Section 2.2.2, Grab Groundwater Sampling Procedures, Page A-33:** The text of the SAP does not state that groundwater quality parameters (i.e., temperature, pH, specific conductivity, DO, ORP, and turbidity) will be measured during grab groundwater sampling, but with the exception of turbidity and specific conductivity, this information could be useful for understanding the analytical results. This is critical for evaluating samples collected in areas of low porosity (e.g., the procedures in the first full paragraph on Page A-34), when groundwater is allowed to collect in a PVC screen and casing for periods ranging from a few hours to overnight. Please revise the SAP to include collection of temperature, pH, DO, and ORP measurements before and after grab groundwater sampling.

7. **Appendix A, Section 2.2.4, Monitoring Well Construction Procedures, Page A-37:** The text does not specify that the deep well, which will be installed to a depth of approximately 50 feet, will be suspended during installation to keep it straight and plumb or, alternatively, that centralizers will be used. Please specify installation procedures to ensure that the deep well will be straight and plumb.

8. **Appendix A, Section 2.2.6, Water-Level Measurement, Pages A-39 and A-40:** The text does not specify the number of times that water level measurements will be repeated, nor does it specify the allowable margin of error between consecutive measurements. Please revise the text to specify that water level measurements will be repeated at least 3 times and specify the allowable margin of error.

9. **Appendix A, Section 2.4.2, Laboratory Selection and Oversight, Page A-55:** The analytical laboratory is not specified as required by *EPA Requirements for Quality Assurance Project Plans*, QA/R-5. Please provide the name(s) of the analytical laboratory(ies) selected for this project in the next version of the Work Plan.

10. **Appendix A, Table A-2, Analytical Methods, Parameters for Analysis, and Reporting Limits:** It is not clear why there is no Remedial Action Objective (RAO) for trichloroethene (TCE). Please provide a RAO for TCE or specify the cleanup goal for TCE for Step 5 of the Data Quality Objectives (DQOs).

    In addition, the reporting limit (RL) for TCE, 5.0 (ug/L), is high; it should be possible to obtain a reporting limit in the 0.5 to 1.0 ug/L range, since the RL for 1,2-dichloroethane is 0.5 ug/L. Please reduce the RL for TCE to something in the 0.5 to 1.0 ug/L range or explain why a higher RL is appropriate.