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ALAMEDA POINT
SSIC NO. 5090.3

Department of Toxic Substances Control

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April 19, 2007

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

DATA GAP SAMPLING INVESTIGATION, WORKPLAN INSTALLATION RESTORATION SITE 28, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Dear Mr. Macchiarella:

The Department of Toxic Substances Control has reviewed the workplan referenced above. The workplan was written by Innovative Technical Solutions, Inc, and dated January 29, 2007. Our comments are included as an attachment to this letter. If you have any questions, please contact me at (916) 255-6449.

Sincerely,

Dot Lofstrom, P.G.
Project Manager
Office of Military Facilities

Attachment

cc: See next page.

cc: Ms. Ellen Garber
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Department of Toxic Substances Control Review of the Workplan,
Data Gap Sampling Investigation
Installation Restoration Site 28
Alameda Point, Alameda California, January 2007

COMMENTS FROM THE DTSC GEOLOGICAL SERVICES UNIT

1) Section 4.3.3 – Monitoring Well Construction. The depth of the proposed monitoring well screen should be equivalent to the other monitoring wells at IR Site 28 (roughly 5 to 15 feet below ground surface, rather than 20 feet) so that comparable data can be obtained. The actual placement of the screened interval should be determined by the field geologist based on lithologic observations made at the time of drilling.

2) Appendix A, Section 2.2.2 – Soil and Grab Groundwater Sampling Procedures. The Navy proposes to use a bailer to collect grab groundwater samples, which will potentially result in turbid samples. Sample turbidity should be minimized as it may affect the analytical results for dissolved metals. The Workplan should specify how the results of these grab groundwater samples will be compared to the results of filtered groundwater samples collected from monitoring wells.

3) Appendix A, Section 2.2.3 – Monitoring Well Construction Procedures. Following development, newly constructed monitoring wells should be allowed a minimum of 72 hours to re-equilibrate with the natural groundwater chemistry before samples are collected.

4) Appendix A, Section 2.2.4 – Water-Level Measurement. Please ensure that water-level measurement is performed after sufficient time has been allowed for atmospheric equilibration as described in the following section on groundwater sampling.

5) Appendix A, Section 2.2.5 – Procedure for Groundwater Sampling from Monitoring Wells.

   - Please state the basis for determining that 8-liters is sufficient as a minimum purge volume for monitoring well sampling.
   - Please indicate that water-quality stabilization parameters will be measured after a minimum of one tubing volume (including the pump and flow-through cell volume) has been purged from the well. The frequency at which these parameters will be measured should also be specified.
   - GSU requests that the stabilization criteria for electrical conductivity be ± 3 percent, not ± 10 percent, microSiemens per centimeter, as per Yeskis and Zavala (2002).

- The Draft Workplan should specify that dissolved oxygen (DO) is considered a primary stabilization parameter. The stabilization criterion for DO should be ± 1 percent or ± 0.3 milligrams per liter, as per Yeskis and Zavala (2002).
- Please specify that stabilization of drawdown prior to sampling, in addition to minimization of drawdown during purging, will be achieved. While minimal drawdown during purging is important, stabilization of drawdown prior to sampling, together with stabilization of water chemistry parameters, have been identified as the most important indicators for obtaining representative groundwater samples using low-flow sampling techniques. If stabilization of drawdown cannot be achieved for a given well, even at very low flow-rates, then low-flow sampling is not suitable for that well and an alternative method (such as minimal purge) should be proposed.
- GSU does not accept the alternative sampling procedure of purging wells dry (as specified on page A-38) due to the potential for oxidation of metals associated with this method. Instead, low-yield wells should be sampled using a minimal purge approach.

COMMENTS FROM THE DTSC HUMAN AND ECOLOGICAL RISK DIVISION

1. Section 4.3.1, page 16. The Navy proposes to visually inspect soil samples from each soil boring for shipbuilding and/or railroad trestle debirs. Photographs should be taken of each sample selected for analysis demonstrating the extent of debris (Appendix A, Section 1.1.1, page A-33).

2. Section 3.0, page 10; Section 4.3.2, page 17; Section 4.3.4, page 19; and, Appendix A, Section 1.5, page A-17, Step 7. A recent general decreasing groundwater copper concentration is noted in three of the four groundwater wells. All the current groundwater wells appear to be within 70 feet of the Oakland Inner Harbor, based on the diagram (Figure 3) and would be expected to experience tidal influences. Please indicate the tidal period for the previously collected samples and stipulate that future groundwater samples will be collected on the ebb tide after the peak of ebb tide of the sampling day.

3. Appendix A, Section 1.5, page A-15, Step 3. Please amend the text to include the analytical method for mercury (EPA Method 7470A) with EPA Method 6020 in the description of the Data Quality Objectives (DQOs) analytic methods as this method is later listed (Appendix A, SAP Worksheet #18, page A-30).

4. Appendix A, Section 1.5, page A-17, Step 7; Appendix A, Table A-2. While copper and arsenic are the focus of the remedial action for IR Site 28, the analytical results for all inorganic elements scheduled for analysis should be reported for both soil and groundwater samples.

SUMMARY OF HERD COMMENTS

- Groundwater should be sampled during ebb tide after the peak ebb tide.
- Photographs should be taken of the soil samples selected based on visual evidence of shipbuilding and/or railroad trestle debris.
- Results of all chemical analyses for soil and groundwater should be reported.

REFERENCES

U.S. Environmental Protection Agency. 2007. Ecological Soil Screening Levels for Copper, Interim Final. 2007. Office of Solid Waste and Emergency Response. Washington, D.C. July 2006 Revised February 2007. **http://www.epa.gov/ecotox/ecossl/pdf/eco-ssl_copper.pdf**

Yeskis, Douglas and Bernard Zavala, 2002, Ground Water Forum Issue Paper: Ground-water Sampling Guidelines for Superfund and RCRA Project Managers; United States Environmental Protection Agency, Office of Solid Waste and Emergency Response, EPA 542-D-02-001