Department of Toxic Substances Control

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December 21, 2000

Mr. Dean Gould
BRAC Environmental Coordinator
Marine Corps Air Station El Toro
Base Realignment and Closure
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DRAFT WORK PLAN, PHASE II EVALUATION OF RADIONUCLIDES IN GROUNDWATER AT FORMER LANDFILL SITES AND THE EXPLOSIVE ORDNANCE DISPOSAL (EOD) RANGE, MARINE CORPS AIR STATION (MCAS) EL TORO

Dear Mr. Gould:

The Department of Toxic Substances Control (DTSC) received the above document (draft Work Plan), dated December 2000. The draft Work Plan details the objectives and procedures to evaluate the origin of radionuclides detected in groundwater at the former landfill sites and the EOD range. This Phase II evaluation supplements the previous evaluation presented in the *Draft Technical Memorandum, Evaluation of Radionuclides in Groundwater at Former Landfill Sites and the EOD Range, Marine Corps Air Station, El Toro* (Earth Tech, Inc., March 2000).

According to the draft Work Plan, groundwater samples will be collected from the same wells sampled in the previous evaluation. Additionally, at the request of the Orange County Water District (OCWD), samples will also be collected from groundwater wells located within the on-station portion of the volatile organic compound (VOC) plume (IRP Site 24). OCWD will receive aliquots of each sample collected by the Department of the Navy (DON) to perform independent isotope analyses.

After review of the Work Plan, DTSC has the following comments:

1. Section 3.2 - Sample Collection: Item Number 4 states, ". . . The samples will be filtered through 0.45-micron disposable filter cartridges attached to the outles of the discharge hose."

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It appears that only dissolved metals (material that passes through a 0.45-micron filter) will be analyzed. Provide an explanation for analyzing only dissolved metals and not suspended metals.

2. Section 3.6 - Investigation-Derived Waste, IDW Disposal Plan: This section states, "Based on the results of the preliminary assessment of the site, it is not anticipated that hazardous waste will be generated, therefore, an IDW disposal plan has not been prepared to date."

   The *Groundwater Monitoring Data Summary Report, 1999 Monitoring Rounds 9, 10, and 11 for Marine Corps Air Station, El Toro, California* (CDM Federal Program Corporation, June 30, 2000) includes data for some of the wells to be sampled for this evaluation (18_DW135, 09_DBMW45, 24EX60B1, 24EX50B2 and 24EX30B1). The report shows that trichloroethene (TCE) was detected in these wells at concentrations up to 870 micrograms per liter (µg/L) in 09_DBMW45. According to Title 22 of the California Code of Regulations, Section 66261.24, the regulatory level for TCE (also known as trichloroethylene) is 500 µg/L for a hazardous waste exhibiting the characteristic of toxicity. Based on this information, it is anticipated that hazardous waste will be generated. As a result, an IDW disposal plan needs to be prepared.

3. Section 3.7.1 - Field Quality Control, Field Duplicates: This section states, "Groundwater replicates will be collected at a frequency of one per ten field samples."

   The Third Edition of *Test Methods for Evaluating Solid Wastes, Physical/Chemical Methods, SW-846*, prepared by the United States Environmental Protection Agency (SW-846) states that field duplicates should be collected at a rate of one per day per matrix type. Revise the text to show that this rate will be met or exceeded.

4. Table 3-6 - Planned Analyses and Method References: General chemistry analyses include calcium, magnesium, sodium, potassium, chloride, sulfate and alkalinity.

   As stated in Section 3.9 - Laboratory Analysis, common ions can also be used to support analysis of groundwater sources. Carbonate (CO_3^{2-}) and bicarbonate (HCO_3^-) are also major ionic species present in most natural waters. Include these ions in the laboratory analysis.

Please contact me at (714) 484-5395 if you have any questions.

Sincerely,

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