

**MOFFETT FEDERAL AIRFIELD**  
**RESPONSE TO COMMENTS ON**  
**DRAFT WASH RACK AREA INVESTIGATION**  
**FIELD WORK PLAN**

**JULY 3, 1995**

This report presents point-by-point responses to regulatory agency comments on the Draft Wash Rack Area Investigation Field Work Plan prepared April 21, 1995 by PRC Environmental Management, Inc. (PRC) for Moffett Federal Airfield (Moffett Field), California. Ms. Elizabeth Adams of the U.S. Environmental Protection Agency (EPA) submitted comments in a letter dated May 8, 1995. Mr. Michael Gill of EPA indicated he had no additional comments in a letter dated June 5, 1995. Mr. Joseph Chou of the California Environmental Protection Agency (CAL/EPA), Department of Toxic Substances Control (DTSC) and Mr. Michael Bessette of the Regional Water Quality Control Board, San Francisco Bay Region (RWQCB) submitted comments in a letter dated June 5, 1995.

**1.0 COMMENTS FROM MS. ELIZABETH ADAMS, EPA**

Comment 1.        Though this investigation seems to be adequately designed to determine groundwater quality in the wash rack area, there are no proposed soil samples adjacent to catchment basin 297B or the drain line to Sump 25. Soil borings in these areas are necessary to determine if the integrity of the basin and the line have been compromised, potentially leaking contaminants into the vadose zone directly below the structures. Past releases of contaminants to the soil may continue to act as a source to the groundwater.

Response:        *Section 4.3 of the work plan indicates the minimum number (three) and locations of soil borings planned for this investigation. Data collected during the cone penetrometer test (CPT) and HydroPunch sampling phase of the investigation will be useful in evaluating the need for and locations of additional soil borings and groundwater monitoring wells. Results from HydroPunch samples will be valuable in assessing releases to groundwater near catchment basin 297B and in the general wash rack area. As discussed in Sections 4.3.1 and 7.0, the Navy will provide these data to the regulatory agencies and discuss appropriate locations for all soil*

*borings and groundwater monitoring wells before starting the drilling and well installation phase of the investigation.*

Comment 2. The text mentions a fourth soil boring, located near Tank 41A, that will be part of another investigation. In a telephone conference with Mike Young, PRC's project manager, he indicated that those soil samples will be analyzed for volatile organic compounds (VOCs) in addition to petroleum constituents. It would be helpful to indicate this additional soil analysis for VOCs in the "Notes" section of Table 1.

*Response: The notes for Table 1 have been modified to indicate that soil samples collected from the soil boring to be drilled downgradient from Tank 41A will be analyzed for VOCs.*

## **2.0 CAL/EPA COMMENTS**

### **2.1 COMMENTS FROM MR. JOSEPH CHOU, DTSC**

Comment 1. Please clarify how this investigation can be used to "evaluate the need and responsibility for an A1-aquifer zone groundwater extraction well" in Section 2.0.

*Response: The main criterion that will be used to evaluate the groundwater in the wash rack area will be the difference in VOC concentrations between upgradient (WWR-2) and downgradient (WWR-1) monitoring wells. Concentration differences greater than approximately one order of magnitude will be considered significant and indicative of a VOC source. This level of difference is based on ranges of VOC concentrations observed in groundwater samples collected from the regional VOC plume from wells throughout the western side of Moffett Field. Analytical results from groundwater samples collected from other monitoring wells in the area, HydroPunch groundwater samples, soil samples, and subsurface lithologic information also will contribute to the evaluation of the wash rack area as a potential VOC source. Hydrogeologic interpretation is subjective and the Navy will present the rationale supporting the interpretation in the technical memorandum that summarizes this investigation. This additional information has been added to Section 2.0 of the field work plan.*

Comment 2. The petroleum cleanup level is not applicable to the commingled plume of petroleum and other VOCs at Moffett Field. Instead, individual chemical data should be available for site-specific risk assessment and cleanup activities. If there is a commingled plume in the wash rack area, then semivolatile organic compounds (SVOCs) analysis should be included in the soil and groundwater investigation. Furthermore, the detection limits of all analytes should be low enough to reflect the cleanup levels.

*Response: Petroleum hydrocarbons are not expected to be commingled with VOCs in the wash rack area. Total petroleum hydrocarbon analyses are included in the field work plan because of the potential use of fuels associated with aircraft operations in the wash rack area. If petroleum hydrocarbons are identified in the wash rack area during the CPT and HydroPunch sampling phase of the investigation, SVOCs will be added to the analytical suite for the soil and groundwater samples to be collected during the soil boring and monitoring well installation phase of the investigation. This information has been added to Sections 4.3.3 (subsurface soil sampling) and 4.5 (groundwater sampling) of the field work plan.*

## **2.2 COMMENTS FROM MR. MICHAEL BESSETTE, RWQCB**

Comment 1. How will the information obtained from this investigation demonstrate the need and responsibility for the proposed A1-aquifer zone groundwater extraction well (TBD-1A)? Please state what criteria will be evaluated to make these determinations; thus, insuring appropriate first-round data collection. If the objective includes determining the nature and extent of contamination, additional chemical analysis and a strategy for delineation of the extent of contamination should be presented.

*Response: The objective of this investigation is only to evaluate the wash rack area as a potential VOC source to the regional groundwater contaminant plume. The study is not intended to meet the broader goal of investigating the nature and extent of contamination in the area. Nature and extent of contamination information was collected and reported during the remedial investigation (IT 1993). Also please refer to the response to DTSC comment 1.*

Comment 2. Describe the reporting of the investigation data, results, and conclusions and include this item in the schedule in Section 7.0.

*Response: A technical memorandum will be prepared to summarize the data, results, and conclusions from this investigation. The report will discuss the field activities conducted, samples collected, and any deviations from the field work plan. The report also will summarize the sample lithological and analytical results (including tables, maps, and cross sections necessary to accurately present the data). The report will summarize the hydrogeological interpretation of these data and discuss whether the wash rack area is considered a source of VOCs to the regional contaminant plume. Appendices to the report will contain CPT logs, soil boring logs, well completion records, and tables of soil and groundwater analytical data. This information has been added as a new section in the field work plan. Submittal of the draft technical memorandum has been added to the schedule in Section 7.0. The proposed submittal date is March 1, 1996.*

Comment 3. Indicate the proposed location of groundwater well TBD-1A on Figure 3 and, if not possible, on Figure 2.

*Response: The location of groundwater monitoring well TBD-1A proposed in the final design for the regional groundwater remediation program (Canonie 1994) has been added to Figure 2. The location of this well is outside the area of Figure 3.*

Comment 4. Please include the detection limits for all proposed chemical analytical analysis of soil and groundwater samples.

*Response: Table 1 has been modified to list expected detection limits for soil samples. Ranges are presented because analytical detection limits for soil analyses depend on soil moisture content and matrix interference effects. Table 2 has been modified to list expected detection limits for water samples. Similar to soil samples, matrix interferences can affect detection limits and, therefore, the detection limits are approximate values rather than strict requirements. The following table lists the detection limit information that has been added to Tables 1 and 2.*

Analytical Method	Soil Sample Detection Limit ( $\mu\text{g}/\text{kg}$ )	Water Sample Detection Limit ( $\mu\text{g}/\text{L}$ )
CLP VOA	5 - 10	2
TPH Purgeable	5 - 10	5
TPH Extractable	10 - 50	10

CLP            U.S. Environmental Protection Agency Contract Laboratory Program  
 TPH            Total petroleum hydrocarbons  
 VOA            Volatile organic analysis  
 $\mu\text{g}/\text{kg}$             Micrograms per kilogram  
 $\mu\text{g}/\text{L}$             Micrograms per liter

### 3.0 REFERENCES

Canonie Environmental Services, Inc. (Canonie). 1994. Final Design Regional Ground Water Remediation Program North of U.S. Highway 101, Middlefield-Ellis-Whisman Site, Mountain View, California. March.

International Technology Corporation. (IT). 1993. West-side Groundwater Site Characterization Report, Naval Air Station Moffett Field, California. March.