

CLEAN

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**NAVAL AIR STATION
MOFFETT FIELD, CALIFORNIA**

**RESPONSE TO COMMENTS
DRAFT FINAL FIELD SAMPLING PLAN**

REMEDIAL INVESTIGATION/FEASIBILITY STUDY

Prepared by

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**RESPONSE TO COMMENTS OF THE EPA TO
NAVAL AIR STATION, MOFFETT FIELD
MOUNTAIN VIEW, CALIFORNIA**

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DRAFT FINAL FIELD SAMPLING PLAN**

APRIL 1992

This report presents PRC Environmental Management, Inc.'s (PRC) point-by-point responses to comments from the U.S. Environmental Protection Agency (EPA) on the draft final field sampling plan (FSP) for Naval Air Station Moffett Field. These comments were dated April 16, 1992. PRC received additional comments from the EPA in a letter dated May 6, 1992 regarding PRC's initial point-by-point responses to agency comments on the draft final FSP. The FSP has been revised in accordance with responses provided below.

GENERAL COMMENTS

Reporting Format

Comment Number 1. No maps were presented to indicate the proposed sampling points. These are essential to an understanding of the special relations between onsite structures, physical features, and site boundaries. EPA also recommends these maps be included as elements of a complete field sampling plan (see Reference section).

The plan presented did not adequately describe proposed locations for the various types of sampling to be undertaken. It is stated in Section 9.2 that the locations for the proposed ground water monitoring wells "...will be selected based on the results of soil gas surveys, surface and subsurface geophysical surveys,..." The locations described under these sections (3.0 Surface Geophysics and 5.0 Soil Gas Surveys) are quite nebulous and rely on future documents for specific site locations. Personnel referencing this document in the field will be handicapped by its incompleteness. In order for the Field Sampling Plan (FSP) to be the most useful it should be a stand-alone document. Its reliance on other documents should be eliminated.

The Analytical Methods described in Section 2.1.1 do not mention analysis for dioxins. Burn pits have been identified from aerial photographs in the Golf Course Landfill Area (Site 2). Potentially anything ever stored or used as NAS Moffett Field may have been burned or buried there. Dioxins may have been produced from the burning of solvents and as by-products of waste oil burning. However, no analytical method has been proposed for detection of this contaminant.

Response: *The FSP is intended as a project-wide document that helps to establish consistent methods and procedures for collection of data at Naval Air Station (NAS) Moffett Field, as discussed in the response to comments on the draft FSP (April 1, 1992). The FSP is not intended to be (and should not be confused with) a site-specific field work plan (FWP). The FWP discusses locations and frequency of sampling, analytical methods, and site-specific conditions or requirements. Language has been added to the FSP to clarify this distinction.*

Specific locations for sampling cannot be determined in advance because of the iterative nature of scientific investigations. That is, future sampling locations cannot be identified until current data are evaluated. Therefore, the FSP will support and complement site-specific FWPs as the investigations at NAS Moffett Field progress. If site-specific FWPs require methods or procedures not discussed in the FSP, the FSP will be amended as appropriate.

Recently, three FWPs were submitted for field investigations scheduled for April and May 1992. These work plans were for (1) additional investigations at operable unit (OU) 4; (2) additional tank and sump investigations; and (3) additional investigations at Zook Road, Patrol Road Ditch, and the golf course/landfill area. These three work plans provide examples of the level of detail required for selecting sampling locations, frequencies, and analytical methods, but incorporate by reference the standard operating procedures and

methods presented in the FSP. Neither the FSP or FWP is intended as a stand-alone document, both are designed to coexist for consistency, efficiency, and effectiveness.

Analytical methods proposed for dioxin detection appear in Table 4-2 of the site-wide Quality Assurance Project Plan (QAPjP). The information has been added to Table 3 of the FSP.

Risk Assessment

Comment Number 2. Nothing has been presented discussing the steps being taken toward future risk assessment work. Are the data quality objectives appropriate for baseline risk assessment or risk assessment needs?

Response: The need for future risk assessment work at NAS Moffett Field is unknown. It is anticipated that future risk assessment work may be necessary in conjunction with the OU6 (wetlands) remedial investigation (RI). However, future risk assessment work at OU6 is contingent on detecting contamination, if any, during preliminary RI activities. If additional risk assessment work is warranted or required at NAS Moffett Field, and appropriate field sampling procedures are not documented in the FSP, the FSP will be amended.

In terms of data quality objectives (DQOs), the project-wide QAPjP includes the possibility of future risk assessments. According to Guidance for Data Useability in Risk Assessments (EPA, 1990), there are five major data quality issues that impact data useability in a risk assessment. The DQOs described in the project-wide QAPjP sufficiently address these issues and provide an adequate description of data quality appropriate for future risk assessment needs.

Comment on

Response No. 2: Data should be collected now that will be useable should a future risk assessment be warranted. Examples would be attaining health based action levels required for a risk assessment and the collection and analysis of unfiltered groundwater samples for metals analysis. All of the field work and data collected should be driven by the risk assessment or NAS Moffett Field may find that considerable effort expended has not been adequate to meet risk assessment goals.

Response: *The DQOs have been carefully defined for use with a quantitative baseline risk assessment (BRA). The Guidance for Data Useability in Risk Assessments (EPA, 1990) details the necessary requirements for data useability. This data set will be appropriate for current and future BRAs. Although changes in methodology cannot be anticipated, current procedures meet or exceed established standards.*

Standard Operating Procedure No. 021

Comment Number 3. This Standard Operating Procedure (SOP) was revised on March 24, 1992 to incorporate new language related to air-lift pumping. However, Chapter Eleven of SW-846 states in Section 17.6.7, "Approval must be obtained from the Regional Administrator prior to using jetting, airlift pumping or air surging for well development." This well development practice is not recommended by EPA.

Response: *PRC SOPs serve as a reference for all PRC remedial activity procedures. As a result, some information contained in SOPs may not be relevant to all projects. In this particular case, the well development practices of jetting, airlift pumping, or air surging are not being used.*

Comment on

Response No 3: If PRC's Standard Operating Procedure (SOP) is not relevant to the work being performed at NAS Moffett Field, then the language in it should be modified accordingly.

Response: *All information pertaining to jetting, airlift pumping, and air surging, which is not relevant to work at NAS Moffett Field, has been removed from SOP 021.*

Comment Number 4. Section 7.0 discusses use of the cone penetrometer and HydroPunch methods for soil testing and the collection of ground water samples. There are no SOPs provided in Appendix A for these activities. The SOPs are necessary to outline operating procedures, provide definitions and lend some degree of continuity to the use of interpretation of the resultant data. These SOPs, including those presently contained in the FSP, should constitute a separate document to be more readily manageable for field use.

Response: *Cone penetrometer (CPT) and HydroPunch activities have been subcontracted to James M. Montgomery, Inc. (JMM) and various local drilling firms. JMM is currently establishing SOPs for these activities. Operating procedures for CPT and HydroPunch sampling will follow ASTM methodologies or the manufacturer's recommended methodologies until JMM completes SOPs for these procedures.*

Comment on

Response No. 4: If PRC is unable to incorporate James M. Montgomery, Inc.'s (JMM's) SOPs for the cone penetrometer and HydroPunch methods into the Field Sampling Plan (FSP), then the manufacturer's recommended methodologies should be included. At the very least a reference to the reader should be provided in the text, directing them to the manufacturer's operating procedures.

Response: *The FSP has been updated to reference that the manufacturer's recommended operating procedures for CPT/HydroPunch activities until development of SOPs.*

Standard Operating Procedure No. 45

Comment Number 5. Reference to this SOP in the List of SOPs found at the beginning of Appendix A cites the title as General procedures, hollow stem auger drilling. The actual title of the SOP is Borehole Drilling, Hollow Stem Auger Drilling. This difference is important when one considers the procedures that may potentially be included under each heading. If field personnel were attempting to find information on well abandonment it is more likely that Borehole Drilling... would be referenced rather than General procedures, hollow stem auger drilling, considering several drilling techniques are included in this FSP. Ideally, a separate SOP should address well abandonment for all types of wells and borings proposed.

Special considerations for well abandonment such as the Santa Clara Valley Water District requirements for borehole sealants have not been addressed. Any special requirements should be researched and included in the SOP addressing borehole abandonment.

Response: *The title page for PRC SOPs at the beginning of Appendix A has been updated to be consistent with individual SOP titles. Any special requirements for well abandonment, such as the Santa Clara Valley Water District requirements, that are not discussed in SOP No. 045 will be addressed in any site-specific FWP which includes well abandonment.*

Comment on

Response No. 5: PRC should include a statement in the FSP about addressing special requirements (example, Santa Clara Valley Water District) should they arise during the investigation. This citation can refer the reader to the site specific work plan(s).

Response: *The text has been updated to address special requirements (such as the Santa Clara Valley Water district requirements for well abandonment) should they arise during the NAS Moffett Field investigation.*

Surface Geophysical Methods

Comment Number 6. Electromagnetic Induction (EM) and Magnetometry (MAG) were discussed as methods of obtaining subsurface data. However, no SOPs were included to discuss the operation, objectives, methodology, procedures and utility of the data obtained. Without established SOPs EPA cannot be assured of consistent operation of results during the course of this investigation.

Response: *PRC does not have SOPs for EM and MAG. However, neither geophysical method is being used during NAS Moffett Field field activities. If these methods are used in the future, the manufacturers recommended methodologies will be followed until SOPs are developed.*

Comment on

Response No. 6: If Electromagnetic Induction (EM) and Magnetometry (MAG) are not to be used during the field investigations at NAS Moffett Field, then discussion of them in the FSP should be removed. If they need to remain due to possible future use, then a statement about utilizing manufacturer's recommended methodologies should be included. At such time that EM and MAG have been chosen for use, PRC should have developed SOPs.

Response: *The text has been updated to include a statement about utilizing a manufacturer's recommended methodologies if EM and MAG will be used during future NAS Moffett Field investigations.*

Quality Assurance/Quality Control (QA/QC)

Comment Number 7. An examination of the Appendix A title page - List of SOPs versus the actual SOPs produced discrepancies resulting from a lack of thorough QA/QC.

SOP No. 066 is titled Soil Sampling not Soil sampling at hazardous waste sites

SOP No. 012 is mislabeled as No. 010

SOP No. 013 is mislabeled as No. 010

SOP No. 024 is titled Recording Notes in the Field Logbook not Recording notes in the field

SOP No. 044 is titled Hand and Power Augering: Subsurface Soil Sampling not Hand and power augering: subsurface soil sampling methods

SOP No. 45 is titled Borehole Drilling, Hollow Stem Auger Drilling not General procedures, hollow stem auger drilling

SOP No. 051 is titled Borehole Sampling - Ground Water not Borehole sampling in-situ ground water sampling

SOP No. 087 is titled In-line Ground Water Filtration for Metals Analysis not In-line ground water filtration for metals

Response: *The title pages for PRC SOPs at the beginning of Appendix A have been updated to be consistent with individual SOP titles.*

SPECIFIC COMMENTS

Comment Number 1. Page 20, Table 2 and Page 22, Table 3. Errors and discrepancies were noted when comparing these tables with the most current Contract Laboratory Program Statements of Work for Organics Analysis and Inorganics Analysis.

Response: *Analytical methods proposed for investigative work appear in Section 6.0 of the sitewide QAPjP. The QAPjP and the FSP have been made consistent. As described in Sections 3.1 and 3.2 of the QAPjP, a subcontract laboratory will*

perform CLP RAS (EPA, 1988) and SAS (EPA, 1989) methods and other EPA-approved methodologies for which they have been certified by CDHS and approved by the Navy.

Comment on

Response No. 1: PRC did not address Tables 2 and 3 and SAIC/TSC's corresponding comments. Did PRC receive these tables and comments from EPA?

Response: *Errors or discrepancies between information provided in QAPjP and FSP tables concerning analytical methodologies have been addressed for consistency.*

Comment Number 2. SOP No. 010, Section 2.0, Page 4 of 15. This section states that a site-specific sampling plan will be developed prior to sampling. Consideration should be given to Section 2550.7(e)(12)(B) of Article 5 of Subchapter 15, Chapter 3, Title 23 of the California Code of Regulation (CCR). This rule requires that all monitoring wells be purged after sampling. This is required to remove the just-sampled water from the well-bore so that it will not become part of future samples.

Response: *PRC will comply with all applicable regulations concerning monitoring well purging or obtain a variance from the appropriate agency.*

Comment Number 3. SOP No. 071, Section 1.5, Page 2 of 14. The third line of this section incorrectly cites the SOP for conducting slug tests as SOP No. 022 and the SOP for conducting pumping tests as SOP No. 023. The proper citation should read SOP No. 022 - Aquifer Pumping Tests and SOP No. 23 Slug Test - Pneumatic Method.

Response: *SOP No. 071 has been updated to reflect this change.*

REFERENCES

EPA, 1988. Statement of Work for Organic Analysis, Multi-Media, Multi-Concentration. USEPA Contract Laboratory Program; July 1988.

EPA Region 9, 1989. USEPA Region 9 SAS Methods Compendium. DC No. 9QA-08-89. Prepared by the Quality Assurance Management Section; USEPA Region 9, December 1989.

EPA 1990. Guidance for Data Useability in Risk Assessments, Office of Emergency and Remedial Response EPA/540/G-90/008, October 1990.

International Technology Corporation, 1988. Final Work Plan for Remedial Investigations at Naval Air Station Moffett Field, California; March 30, 1988.