UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street
San Francisco, Ca. 94105-3901

April 16, 1992

Stephen Chao
WestDiv Engineer in Charge
Department of the Navy
Western Division
Naval Facilities Engineering Command
900 Commodore Way, Bldg. 101
San Bruno, CA 94066-0720

Dear Mr. Chao:

The U.S. Environmental Protection Agency is submitting the enclosed comments on the 1) Draft Final Quality Assurance Project Plan, and 2) the Draft Final Field Sampling Plan for NAS Moffett Field. These comments were prepared by our representative, SAIC. We should resolve these issues prior to the close of the 30 day comment period for these documents, which according to my records would be April 30, 1992. Please call me at (415) 744-2385 to set up a meeting or conference call. Thank you.

Sincerely,

Roberta Blank
Remedial Project Manager

Enclosures (2)

cc: Cyrus Shabahari, DTSC
Wilfred Bruhns, RWQCB

1385

F/N 42

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April 15, 1992 DCN: TZ4-C09015-RN-M11556

Ms. Roberta Blank (H-9-2)
U.S. Environmental Protection Agency
Region IX
75 Hawthorne Street
San Francisco, CA 94105

Ref: EPA Contract No. 68-W9-0008; Work Assignment No. C09015
SAIC/TSC Project No. 06-0794-03-0630
Draft Final Quality Assurance Project Plan

Dear Roberta:

SAIC/TSC's technical review comments concerning the referenced document are enclosed. Comments from the California Department of Toxic Substances Control were addressed as were previous comments relating to the Draft Quality Assurance Project Plan.

If you have any questions or any comments require further clarification, please call me at (415) 399-0140.

Sincerely,

SCIENCE APPLICATIONS INTERNATIONAL CORPORATION
Technology Services Company

Fred Molloy

Fred Molloy
Work Assignment Manager

DCN: TZ4-C09015-RN-M11556

Response to Region IX U.S. Environmental Protection Agency Comments Evaluation
NAS Moffett Field Quality Assurance Project Plan

2/3/92
EPA
Comment **4/92 EPA Response to NAS Moffett (Navy) Response**

General: The responses do not follow in numerical order or in content to the comments submitted by U.S. Environmental Protection Agency (EPA) Region IX. Further, some of the Navy responses are addressing items not found in the original EPA comments on the Navy QAPjPs. This applies to the Navy response numbers 1, 10, 15, 16, 18, 25 and 26. Thus, the failure to follow the format makes evaluating Navy responses to specific EPA comments quite difficult. See recommendations-general.

Comment 1: Response 1 does not address the comment; however, the listed sections appear in the QAPjP as cited. Response 3 does address the comment, and is acceptable.

Comment 2: Response 2 is acceptable, as presented.

Comment 3: Response 4 is acceptable, as presented.

Comment 4: Response 5 is not complete. See Recommendation 1. Furthermore, QAPjP Section 3.3 does not contain the information that describes the procedures to be used to assess accuracy, precision, and completeness of data generated in the field and laboratory. That information is found in Section 3.4.

Comment 5: Response 6 is not acceptable, since the information requested has not been completely provided. See Recommendation 2.

Comment 6: Response 7 is acceptable as presented.

Comment 7: Response 8 is marginally acceptable, since not all of the information provided in the response, as well as in QAPjP Section 3, do not address the deficiencies cited in the comment. See Recommendation 2.

Comment 8: Response 9 is acceptable to the extent that the Field Sampling Plan (FSP) will be provided for review; however, the response does not address the more substantive issues concerning scientific and regulatory objectives for sample collection and target compound and element selection, statistical methods or scientific rationale for sample location and sample collection frequency selection, and extent to which site selection will impact analytical and field data validity and project objectives. See Recommendation 2.

Comment 9: Response 11 is incomplete, as presented. See Recommendation 3.

Comment 10: This comment has not been addressed.

Comment 11: Response 12 is acceptable, as presented.

Comment 12: Response 13 is acceptable, as presented.

Comment 13: Response 17 is acceptable, as presented.

Comment 14: Response 14 is acceptable; however, the response would be more complete if information concerning the suspected contaminant type (e.g., fuel hydro-carbons) were identified.

Comment 15: Response 19 is not acceptable, since non-Contract Laboratory Program (CLP) analytical methods rarely require (i.e., EPA solid waste methods contains quality control [QC] recommendations) extensive validation criteria. The Navy QAPjP should provide data validation criteria for non-CLP methods that are equivalent to CLP criteria.

Comment 16: Response 20 is acceptable, as presented.

Comment 17: Response 21 is acceptable, as presented.

Comment 18: Response 22 is acceptable, as presented.

Comment 19: This comment has not been addressed.

Comment 20: Response 23 is acceptable, as presented.

Comment 21: Response 24 is not acceptable, since project-specific goals must be described in the QAPjP, as repeatedly cited in these comments.

Comment 22: This comment has not been addressed.

Response to California State Department of Toxic Substances Control Comments Evaluation NAS Moffett Field Quality Assurance Project Plan

Comment 1: Response 1 is not acceptable, since the header information referred to by this comment is specifically cited on Page 4 of the *US EPA Region 9 Guidance for Preparing Quality Assurance Project Plans for Superfund Remedial Projects* (September 1989), in addition to appearing on each page of that document.

Comment 2: Response 2 is not acceptable. If the EPA special analytical services (SAS) method will not provide the data quality required, alternate methods must be evaluated, such as analyzing those samples using selective ion mode (SIM) gas chromatography/mass spectrometry (GC/MS).

Comment 3: The revision does appear as cited on page 16. However, it should be noted that the analytical laboratory is not presented on the project organization chart or described in the project organization text.

Recommendations
NAS Moffett Field Quality Assurance Project Plan

General: For future submissions, the following format should be used: comment number, page number, applicable document section, and response. In addition, should the comment require revisions to the existing text, the changes should be provided, along with the response, exactly as that revision will appear in the document. Figure 1 has been provided as an example.

Rec. 1: This recommendation is applicable to original EPA Comment 4. Irrespective of the section title, the QAPjP must contain those procedures used to evaluate the field and analytical data with respect to the impact of these data points on the project-specific DQOs, including determining whether the data are representative, whether data quality was sufficient to support a quantitative risk assessment, whether the data are adequate to propose eliminating selected compound groups or elements or to expand the field scope (i.e, stricter focus on the remedial investigation [RI]), or whether the lateral and vertical extent of contamination has been determined.

Rec. 2: This recommendation is applicable to original EPA Comments 5, 7, 8. The original comment must again be reviewed with respect to each individual issue cited. A response or text revision must be provided for each issue cited in the comment.

Rec. 3: This recommendation is applicable to original EPA Comment 9. The QAPjP should describe or provide examples of situations requiring quick turnaround analyses. In addition, the QAPjP should describe how the data generated by the CLP regular analytical services (RAS) method, (especially for those compounds for which the contract-required quantitation limits (CRQL)) do not meet EPA maximum contaminant levels (MCLs) or other applicable, relevant, and appropriate requirements (ARARs), but can still be used in the RI decision-making process.

No.[1]	Page[2]	Section[2]	Response[3]
15	3-22	3.2.1.2	Antimony is recognized as an extremely difficult analysis to conduct. EPA Method 3005 cautions that this element is susceptible to volatization if the sample digestion is not conducted slowly. The antimony spike sample results were evaluated strictly by the EPA CLP guidelines; however, the laboratory control sample (LCS) results also were evaluated to determine whether the antimony recoveries were due to matrix interference or some systematic laboratory QC failure. The CLP analyses are conducted on standard samples received from EPA or other approved sources and these results would indicate whether the laboratory was properly conducting the analyses. As a result of the LCS results evaluations, the antimony spiked sample results are considered to be matrix interference related and beyond the control of the laboratory, as indicated in this section (i.e., sentence number 5). In addition, the 28 antimony results represent less than 2 percent of the total number results for this element.
16	3-22	3.2.1.2	Sentence number 10 was revised as follows: "Of this information, 14 data points...(i.e., barium, antimony, potassium, and silver)."
17	3-24	3.2.1.3	The following sentence was inserted into the text in this section: "Five piezometers were installed using cable tool drilling techniques at locations (i.e., Site 1, 4, 6, and 10) where shallow bedrock was encountered."
18	3-25	3.2.1.5	The percent completeness was revised to 98.6 percent.
19	3-25	3.2.1.5	See the response to Comment Number 112. As a result of the resampling effort, all pesticides/PCB data are considered unstable and the SVOC rejected (i.e., 337 rather than 846) data total was revised, as indicated in the response to Comment number 112. The SVOC data points represent 5 analyses that were rejected due to surrogate recovery results (i.e., 2 analyses) or exceeded holding times (i.e., 3 analyses) and 8 analyses in which selected compounds (i.e., pentachlorophenol, 1,3-dichlorobenzene, ideno(1,2,3-o,d)pyrene, and dibenzo(a,h)anthracene) were rejected due to continuing calibration results. Of the analyses rejected for holding time consideration, two were reanalyses conducted as a result of poor surrogate recoveries. These samples (i.e., SB4-1-2, SB11-3-5, and SB17-1-3) were not recollected, since other data (i.e., VOCs and trace metals) could be used to support site-specific conclusions. The percent completeness was revised to 98.6 percent.
20	3-26	3.2	For the purposes of the SI, all TICs, in addition to the target VOCs and SVOCs detected, were used to support the conclusion that fuel contamination existed at any site. TICs were used to support the petroleum fuel contamination, since only six target VOCs and two target SVOCs are contained in a representative JP-4 sample. A more comprehensive discussion of JP-4 fuel hydrocarbon mixtures is contained in the response to Comment Number 113.

[1]Refers to the EPA Comment
[2]Refers to Document Previously Reviewed
[3]Refers to Facility's Response to the EPA Comment

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April 10, 1992 DCN: TZ4-C09015-RN-M11520

Ms. Roberta Blank (H-9-2)
U.S. Environmental Protection Agency
Region IX
75 Hawthorne Street
San Francisco, CA 94105

Ref: EPA Contract No. 68-W9-0008
Work Assignment No. C09015
SAIC/TSC Project No. 06-0794-03-0630
Draft Final Field Sampling Plan

Dear Roberta:

SAIC/TSC has completed its technical review of the referenced document. Comments to the Draft Field Sampling Plan were reviewed along with this newest document to determine if SAIC/TSC's concerns were adequately addressed.

For the most part, the responses were satisfactory. Some items, such as reliance on future and/or additional documents to complete the Field Sampling Plan requirements effectively creates a multi-volume Field Sampling Plan. Additional deficiencies, e.g. sample holding times also require further refinement.

If you have any questions on the enclosed, please call me at (415) 399-0140.

Sincerely,

SCIENCE APPLICATIONS INTERNATIONAL CORPORATION
Technology Services Company

Fred Molloy
Work Assignment Manager

FM/mg

DCN: TZ4-C09015-RN-M11520

TECHNICAL REVIEW

NAVAL AIR STATION, MOFFETT FIELD

MOUNTAIN VIEW, CALIFORNIA

REMEDIAL INVESTIGATION/FEASIBILITY STUDY

DRAFT FINAL FIELD SAMPLING PLAN

APRIL 1992

Submitted to:

U.S. ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 HAWTHORNE STREET
SAN FRANCISCO, CALIFORNIA 94105

Submitted by:

SCIENCE APPLICATIONS INTERNATIONAL CORPORATION
TECHNOLOGY SERVICES COMPANY
20 CALIFORNIA STREET, SUITE 400
SAN FRANCISCO, CALIFORNIA 94111

EPA CONTRACT NO. 68-W9-0008
EPA WORK ASSIGNMENT NO. C09015
SAIC/TSC PROJECT NO. 06-0794-03-0630

TECHNICAL REVIEW
NAVAL AIR STATION, MOFFETT FIELD
MOUNTAIN VIEW, CALIFORNIA
REMEDIAL INVESTIGATION/FEASIBILITY STUDY
DRAFT FINAL FIELD SAMPLING PLAN
APRIL 1992

GENERAL COMMENTS

Reporting Format

No maps were presented to indicate the proposed sampling points. These are essential to an understanding of the spatial 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 at 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.

Risk Assessment

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?

Standard Operating Procedure No. 021

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 11.6.7 "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.

Cone Penetrometer/HydroPunch Sampling

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 and 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.

Standard Operating Procedure No. 045

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.

Surface Geophysical Methods

Electromagnetic Induction (EM) and Magnetometry (MAG) are 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 or results during the course of this investigation.

Quality Assurance/Quality Control (QA/QC)

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. 005 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. 045 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

SPECIFIC COMMENTS

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.

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 Regulations (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 a part of future samples. The rationale for this purging is to assure independence of samples.

3. SOP No. 071, Section 1.5, Page 2 of 16

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. 023 - Slug Test - Pneumatic Method.

TABLE 2

SOIL AND SEDIMENT

PARAMETER	METHOD NO.	HOLDING TIME	CLP CONTRACT REQUIRED ANALYSIS HOLDING TIME	SAIC/TSC COMMENTS
Volatile Organic Compounds (VOCs)	CLP-RAS	14 days	10 days	Because CLP-RAS has been specified as the Method No. the 14 day holding time is contradictory and does not apply.
Purgeable Halocarbons	CLP-RAS 8010	14 days	10 days	Because CLP-RAS has been specified as the Method No. the 14 day holding time is contradictory and does not apply.
Purgeable Aromatics	CLP-RAS 8020	14 days	10 days	Because CLP-RAS has been specified as the Method No. the 14 day holding time is contradictory and does not apply.
Semivolatile Compounds (BNAs)	CLP-RAS	14 days/40 days	10 days	Because CLP-RAS has been specified as the Method No. the 14 days/40 days holding times are contradictory and do not apply. The 10 day CLP holding time is incomplete. The proper citation should be 10 days/40 days.

Source: Remedial Investigation/Feasibility Study
Draft Final Field Sampling Plan
PRC/JMM 04/01/92

TABLE 2 - CONTINUED

SOIL AND SEDIMENT

PARAMETER	METHOD NO.	HOLDING TIME	CLP CONTRACT REQUIRED ANALYSIS HOLDING TIME	SAIC/TSC COMMENTS
Total Petroleum Hydrocarbons (TPHs)-Extractables	Mod. 8015	14 days/40 days	10 days	Because there is no CLP procedure for the analysis of TPH extractables, the 10 day holding time does not apply.
Total Petroleum Hydrocarbons (TPHs)-Volatiles	Mod. 8015	14 days	10 days	Because there is no CLP procedure for the analysis of TPH volatiles, the 10 day holding time does not apply.
Organochlorine Pesticides/PCBs	CLP-RAS	14 days/40 days	10 days	Because CLP-RAS has been specified as the Method No. the 14 days/40 days holding times are contradictory and do not apply. The 10 day CLP holding time is incomplete. The proper citation should be 10 days/35 days.
Metals	CLP-RAS	Mercury-28 days; other metals-6 months		Because CLP-RAS has been specified, the holding times provided should be displayed in the CLP holding time column. The holding times should also be corrected to reflect Mercury - 26 days and other metals 180 days.

TABLE 3

SURFACE WATER AND GROUND WATER

PARAMETER	METHOD NO.	HOLDING TIME	CLP CONTRACT REQUIRED ANALYSIS HOLDING TIME	SAIC/TSC COMMENTS
Volatile Organic Compounds (VOCs)	CLP-RAS	14 days	10 days	Because CLP-RAS has been specified as the Method No. the 14 day holding time is contradictory and does not apply.
Purgeable Halocarbons	CLP-RAS	14 days	10 days	Because CLP-RAS has been specified as the Method No. the 14 day holding time is contradictory and does not apply.
Purgeable Aromatics	CLP-RAS	14 days	10 days	Because CLP-RAS has been specified as the Method No. the 14 day holding time is contradictory and does not apply.
Semivolatile Compounds (BNAs)	CLP-RAS	7 days/40 days	5 days	Because CLP-RAS has been specified as the Method No. the 7 days/40 days holding times are contradictory and do not apply. The 5 day CLP holding time is incomplete. The proper citation should be 5 days/40 days.

Source: Remedial Investigation/Feasibility Study
Draft Final Field Sampling Plan
PRC/JMM 04/01/92

TABLE 3 - CONTINUED
SURFACE WATER AND GROUND WATER

PARAMETER	METHOD NO.	HOLDING TIME	CLP CONTRACT REQUIRED ANALYSIS HOLDING TIME	SAIC/TSG COMMENTS
Total Petroleum Hydrocarbons (TPHs)-Extractables	Mod. 8015 (Extractable)	7 days/40 days	5 days	Because there is no CLP procedure for the analysis of TPH extractables, the 5 day holding time does not apply.
Total Petroleum Hydrocarbons (TPHs)-Volatiles	Mod. 8015 (Purgeable)	14 days	10 days	Because there is no CLP procedure for the analysis of TPH volatiles, the 10 day holding time does not apply.
Organochlorine Pesticides/PCBs	CLP-RAS	7 days/40 days	5 days	Because CLP-RAS has been specified as the Method No. the 7 days/40 days holding times do not apply. The 5 day CLP holding time is incomplete. The proper citation should be 5 days/35 days.
Metals	CLP-RAS	Mercury-28 days; other metals-180 days.		Because CLP-RAS has been specified, the holding times provided should be displayed in the CLP holding time column. The holding times should also be corrected to reflect Mercury - 26 days and other metals 180 days.

REFERENCES

Section 2550.7(e)(12)(B), Article 5, Subchapter 15, Chapter 3, Title 23 of the California Code of Regulations.

U.S. EPA. October 1988. Guidance for Conducting Remedial Investigations and Feasibility Studies Under CERCLA. EPA/540/G-89/004, U.S. EPA.

U.S. EPA. October 1989. Preparation of a U.S. EPA Region 9 Sampling and Analysis Plan for Private and State-Lead Superfund Projects. Quality Assurance Management Section, U.S. EPA Region 9, San Francisco, California.

U.S. EPA Contract Laboratory Program. Statement of Work for Organics Analysis. Document Number OLM01.0, including revisions OLM01.1 (December 1990) and OLM01.1.1 (February 1991).

U.S. EPA Contract Laboratory Program. Statement of Work for Inorganics Analysis. Document Number OLM01.0.