MOFFETT FEDERAL AIRFIELD RESPONSE TO COMMENTS ON REVISED DRAFT FINAL OPERABLE UNIT 5 FEASIBILITY STUDY REPORT

JULY 21, 1995

This report presents point-by-point responses to regulatory agency comments on the revised Draft Final Operable Unit (OU) 5 Feasibility Study (FS) Report (redline and strikeout version) prepared June 1, 1995 by PRC Environmental Management, Inc. (PRC) for Moffett Federal Airfield (Moffett Field), California. Mr. Michael Gill of the U.S. Environmental Protection Agency (EPA) submitted comments in a letter dated June 21, 1995. Mr. Joseph Chou of the California Environmental Protection Agency (CAL/EPA), including the Department of Toxic Substances Control (DTSC) and the Regional Water Quality Control Board, San Francisco Bay Region (RWQCB), submitted comments in a letter dated June 22, 1995.

1.0 COMMENTS FROM MR. MICHAEL GILL, EPA

Specific Comments

Comment 1. Figure 1-17, Page 47. Great differences in interpretation are apparent between the total petroleum hydrocarbons (TPH) plume map in the draft final version of the FS and this version with no explanation for the change. Please explain this reinterpretation of the TPH contamination plume.

Response: *The apparent difference in the extent of the extractable TPH plume at Site 5 resulted from an error in the draft final FS report. Figure 1-8 of the draft final FS report should have presented the same plume contours as Figure 1-7 of the revised draft final FS report. These contours represent extractable TPH concentrations in groundwater greater than the 700 micrograms per liter (µg/L) cleanup level and are the same contours as presented in the final petroleum sites corrective action plan (CAP) (PRC 1994). Instead, Figure 1-8 of the draft final FS report incorrectly presented extractable TPH concentrations of 10 µg/L or more. This contour was incorrectly labeled as 700 µg/L. In summary, the change from the draft final FS report represents a correction and not a change in interpretation.*

Comment 2. Section 6.2, Page 146, Alternative 2. If the Navy wishes to retain this change to Alternative 2, then it requires more detail. EPA is skeptical of the feasibility of ever being able to implement this alternative, indirect restoration. Does the Navy have any insurance from its funding source that environmental restoration budget money can be used to fund an activity like that contained in Alternative 2? Also, how was the $2.5M reached as an amount to provide the community?

Response: *The inclusion of Alternative 2 was discussed during the remedial project managers' meeting on July 12, 1995 and this response summarizes these discussions. The Navy has investigated funding of an indirect restoration action. Current funding is prioritized based on risk; sites presenting the largest risks to the public and the environment receive funds first. The rationale supporting Alternative 2 is that OU5 presents only a small risk and other actions would provide more benefit to the community than treating groundwater at OU5. Consequently, indirect restoration would be unlikely to receive funding. However, the Navy believes it is important to maintain Alternative 2 in the final OU5 FS report to record its investigation into other potential mechanisms to reduce risk to the community and the environment.*

The amount of funding to be provided to the community was based on the estimated cost of a water treatment plant (part of Alternative 3). However, the exact amount of funding would depend on the indirect restoration program chosen by the community and the Navy.

Comment 3. Section 6.2, Page 150, State Acceptance. EPA feels that the language deleted in this version should be retained. This language consists of "The state considers the A1-aquifer zone in the southern plume area to be a future drinking water source. This alternative is not acceptable to the state since it will not actively restore this zone as a potential source of drinking water." We have not heard the State echo these sentiments.

Response: *The deleted text in Section 6.2 will be maintained as suggested. However, the Navy sent the proposed text of the state acceptance section via facsimile to DTSC and RWQCB for comments on May 30, 1995. Mr. Joseph Chou of DTSC stated he had no*

comments on the text in a telephone conversation with Ms. Deirdre O'Dwyer of PRC on June 1, 1995.

Comment 4. Section 6.3, Page 155. Same comment as Section 6.2.

Response: *The deleted text in Section 6.3 will be maintained as suggested. Please also refer to the response to EPA specific comment 3.*

Comment 5. Section 6.4.1, Page 163, Cost. In looking at this alternative's cost estimate in some detail, there appear to be some inconsistencies that may artificially increase the cost in the draft final. EPA realizes that adding the slurry walls will increase the cost of the alternative. But do they need to be included in system replacement costs? Why does this new estimate have twice the volume (and cost) of iron filings? Why did the cost of a dozer and front end loader rise about 20 percent? All of these items raise the cost of this alternative perhaps incorrectly.

Response: *Bentonite slurry walls were added to the permeable reaction cell alternative. However, system replacement costs were intended only for the iron curtains and associated monitoring wells. The bentonite slurry wall costs were inadvertently included in the cost spreadsheets for system replacement costs. The system replacement costs have been revised to reflect costs only for replacement of the iron curtains and associated monitoring wells. Costs in Section 6.4.1 and Table 7-2 will be updated to reflect these changes.*

The draft final cost estimate assumed that the permeable reaction cell matrix would be a mix of 50 percent sand and 50 percent iron filings. The rate of reaction primarily depends upon the surface area of the iron within the permeable matrix. Since the draft final was published, it was found that 50 percent iron filings in a 3-foot-thick wall may not be sufficient to treat contaminants at OU5 over an extended time frame. To increase effectiveness, the iron content of the permeable reaction cell matrix was increased to 100 percent iron filings in the final cost estimate, thus increasing the estimate by twice the volume (and cost) of iron filings.

The costs shown in the draft final cost estimate for the dozer and front end loader were 1992 costs unadjusted to San Francisco rates and, thus, required revision for the final cost estimate. The costs are included in the final cost estimate for the dozer and front end loader are the correct present value costs adjusted for the San Francisco area.

Comment 6. Section 6.6.2, Page 194, Cost. An almost 60 percent cost estimate increase for this pump and treat alternative has occurred since the draft final FS. This appears to be because the number of extraction/injection wells has increased from 10 to 36 wells. We assume this increase in wells has occurred because of new modeling results. This increase in wells has driven construction costs up by ten times and the total capital and construction costs up by almost eight times. Please clarify the reasons for these cost increases.

Response: *The increase in the number of extraction and injection wells is the result of revised modeling scenarios. However, these new wells account for only a portion of the total increase in costs associated with this alternative. The increase in the number of wells also contributes to the increase in lengths for trenching and piping, which connects the wells and treatment system. In addition, hydraulic fracturing was added to the final cost estimate as a means to facilitate more consistent groundwater flow through the heterogeneous lithology found at Moffett Field. Also, for all of the alternatives in the final cost estimate, distributive costs (such as work plan and report preparation) as well as mobilization and demobilization costs were added because they were not, but should have been, included in the draft final cost estimate.*

Comment 7. Section 6.7, Page 197, Last Paragraph. Is the pumping rate of 60 gallons per minute (gpm) truly achievable in this aquifer?

Response: *Groundwater modeling based on knowledge of OU5 and professional judgment indicates the 60 gpm groundwater extraction rate is achievable. Only actual implementation of a pumping system would provide confirmation of the pumping rate for this alternative.*

Comment 8. Appendix E's expansion is appreciated. The additional work done on groundwater flow and fate and transport modeling allows a better understanding of how chlorinated solvents in the subsurface have moved and will move in the future. While modeling can never provide inconclusive answers, it certainly can be an aid in evaluating a situation.

Response: *Comment noted.*

Comment 9. Appendix I. The remedial action objectives in this appendix discuss "further characterization" in the Tanks 2 and 43 areas. It is also mentioned on page I-7, paragraph 3. Please elaborate on this additional work. How will it impact a decision document for OU5? When will the work be performed?

Response: *Additional groundwater samples were collected during June 1995 from wells that had the largest detections of TPH constituents (wells WT2-1, W7-7, and W7-6) at the former Tanks 2 and 43 areas. These samples were analyzed for polynuclear aromatic hydrocarbons (PAHs) using high pressure liquid chromatography (EPA Method 8310). Table 1 presents the results from these analyses. No detections of any PAHs were observed above corresponding maximum contaminant levels (MCLs) or preliminary remediation goals (PRGs). Consequently, none of the PAHs are considered chemicals of concern (COCs) in the commingled areas. No effect on the OU5 record of decision is anticipated because the PAH results are available for the final FS report. Table 1 will be added to Appendix I and the text will be modified as follows.*

The following paragraphs will be deleted from Section 2.0 of Appendix I.

> *Because investigative efforts at petroleum-contaminated sites have focused primarily on TPH contamination in soils and groundwater and not on specific hydrocarbon contaminants, limited PAH data for the Tanks 2 and 43 areas are available. Neither benzo(a)pyrene, benzo(a)anthracene, benzo(b)fluoranthene, nor naphthalene were measured above the analytical method detection limit of 10 µg/L in samples collected from well W19-1 in 1988 and 1989 (see Attachment 1). Additional PAH analyses (for all the chemicals of potential concern [COPCs]) will be conducted during sampling to support OU5 remedial designs.*
>
> *Only the PAHs detected as a result of further characterization in the vicinities of former Tanks 2 and 43 may be retained as COCs. Should results of*

TABLE 1
MOFFETT FEDERAL AIRFIELD OU5
PETROLEUM PAHs IN GROUNDWATER SAMPLES

Chemical	Groundwater Sample Results (μg/L)		
	Well WT2-1	Well W7-6	Well W7-7
Naphthalene	ND (<1.5)	ND (<1.5)	2.9
Acenaphthylene	ND (<1.5)	ND (<1.5)	ND (<1.5)
1-Methylnaphthalene	ND (<1.5)	ND (<1.5)	9.9
2-Methylnaphthalene	ND (<1.5)	ND (<1.5)	ND (<1.5)
Acenaphthene	ND (<2.0)	ND (<2.0)	ND (<2.0)
Fluorene	ND (<0.30)	ND (<0.30)	0.75
Phenanthrene	ND (<0.20)	ND (<0.20)	0.21
Anthracene	ND (<0.049)	ND (<0.049)	0.075
Fluoranthene	ND (<0.29)	ND (<0.29)	ND (<0.30)
Pyrene	ND (<0.098)	ND (<0.098)	ND (<0.099)
Benzo(a)anthracene	ND (<0.098)	ND (<0.098)	ND (<0.099)
Chrysene	ND (<0.098)	ND (<0.098)	ND (<0.099)
Benzo(b)fluoranthene	ND (<0.20)	ND (<0.20)	ND (<0.20)
Benzo(k)fluoranthene	ND (<0.049)	ND (<0.049)	ND (<0.050)
Benzo(a)pyrene	ND (<0.098)	ND (<0.098)	ND (<0.099)
Dibenzo(a,h)anthracene	ND (<0.20)	ND (<0.20)	ND (<0.20)
Benzo(g,h,i)perylene	ND (<0.20)	ND (<0.20)	ND (<0.20)
Indeno(1,2,3-cd)pyrene	ND (<0.20)	ND (<0.20)	ND (<0.20)

ND Not detected (detection limit indicated in parentheses)

Samples collected June 5, 1995 (wells W7-6 and W7-7) and June 12, 1995 (Well WT2-1). Samples analyzed using EPA Method 8310.

additional groundwater sampling reveal that none of the PAHs of potential concern are present above MCLs (or PRGs for constituents with no MCLs), no petroleum-related constituents will be identified as COCs in the commingled areas.

The following paragraph will be added to Section 2.0 of Appendix I.

Neither benzo(a)pyrene, benzo(a)anthracene, benzo(b)fluoranthene, or naphthalene was measured above the analytical method detection limit of 10 µg/L in samples collected from well W19-1 in 1988 and 1989 (see Attachment 1). Additional groundwater samples were collected during June 1995 from wells that had the largest detections of TPH constituents (wells WT2-1, W7-7, and W7-6) at the former Tanks 2 and 43 areas. These samples were analyzed for PAHs using high pressure liquid chromatography (EPA Method 8310). Table I-2 presents the results from these samples. No detections of any PAHs were observed above corresponding MCLs or PRGs. Consequently, none of the PAHs are considered COCs in the commingled areas.

The following sentences will be deleted from Section 4.0 (Area of Attainment) of Appendix I.

Insufficient data are currently available regarding concentrations of COPCs discussed in Section 2.0 to define an area of attainment. The areas of attainment will be redefined if further contaminant characterization reveals that any of the COPCs are present above MCLs.

The following sentence will be deleted from Section 4.0 (Cleanup Goals) of Appendix I.

Cleanup goals for the areas of commingled TPH contamination within OU5 are MCLs for COPCs that are ultimately designated as COCs based on further contaminant characterization.

The following sentence will be deleted from Section 5.0 of Appendix I.

Because additional characterization is necessary to more fully evaluate the nature and extent of contamination in the commingled areas, the technology assessments are based on available information, and will be reviewed once additional sampling results have been interpreted.

The following sentence will be added to Section 5.0 of Appendix I.

Evaluation of applicable technologies for remediation of petroleum constituents in the commingled areas will be reviewed after completion of three pilot-scale tests (biosparging, air sparging and soil vapor extraction, and recirculating in situ treatment).

Section 2.3 of the FS report will also be modified. The following sentences will be deleted from Section 2.3.

> *There are currently no semivolatile organic compound (SVOC) data at the wells with the highest TPH contamination levels. Therefore, petroleum-related constituents are not identified as COCs at this time. Additional data will be collected in 1995 for each of these areas. If the data indicates that any of the petroleum-related COPC exceed MCLs, the COPC will be named as a COC for the commingled plume areas.*

The following sentences will be added to Section 2.3.

> *Additional groundwater samples were collected during June 1995 from wells that had the largest detections of TPH constituents (wells WT2-1, W7-7, and W7-6) at the former Tanks 2 and 43 areas. These samples were analyzed for PAHs using high pressure liquid chromatography (EPA Method 8310). Table I-2 in Appendix I presents the results from these analyses. No detections of any PAHs were observed above corresponding MCLs or PRGs. Consequently, none of the PAHs are considered COCs in the commingled areas.*

Comment 10. Response to Comment 15. This response stated that certain text would be included in the final FS. We were unable to find this text in the FS.

Response: *The specific text presented in the response to comments was not added because of an oversight during report preparation. However, Section 3.0 of Appendix E was revised to include discussion of the applicable aquifer pumping test conducted within the model area (see paragraph 2 on page E-10 of the revised draft final FS report). Table E-1 presents vertical hydraulic conductivity data and replaced the text description included in the response to comments. In summary, the information in the response to EPA specific comment 15 has been incorporated into Appendix E, although not in the exact form presented in the response to comments.*

Comment 11. Response to Comment 21. This response was not incorporated into the text.

Response: *This response was not added to the text due to an oversight during report preparation. The additional information concerning the occurrence of trichloroethene (TCE) and bis(2-ethylhexyl)phthalate (BEHP) in the B2- and B3-aquifer zones will be added to Section 1.4.2.2 of the final FS report. The following information will be added:*

TCE was detected in 5 of 145 samples collected from B2-aquifer zone wells (W3-4, W3-7, W7-15, and W10-3) at concentrations ranging from an estimated value of 1 to 2 µg/L. These low concentrations may represent artifacts from field procedures (such as contamination carryover between wells during sampling or cross-contamination during sample storage and transport) or laboratory methods (such as instrument carryover). In any case, TCE concentrations are below the MCL (5 µg/L). BEHP was detected in 2 of 20 samples collected from B2-aquifer zone wells (both at W3-15) at estimated concentrations of 3 and 4 µg/L. TCE and BEHP were not detected in samples collected from the B3-aquifer zone.

Editorial Comments

Comment 12. Section 4.4.1, Page 110. On page 100 and in other places within the document, the no-action alternative was changed to groundwater monitoring. This is not the case in Section 4.4.1. Was this an oversight? It appears to be inconsistent.

Response: *The discussion of no action in Section 4.4.1 is correct. This description within the evaluation of process options is intended to present a true no-action option. As discussed in Section 4.4.1, true no action is not acceptable to the regulatory agencies. However, no action with groundwater monitoring is maintained as a baseline for comparison with other options. The term no action throughout the remainder of the OU5 FS report refers to no action with groundwater monitoring, and therefore, no action was changed to groundwater monitoring in these portions of the report.*

Comment 13. Section 5.0, Page 137. The season of flooding should have been winter 1995, not 1994.

Response: *Section 5.0 will be revised to indicate that flooding occurred during winter 1995.*

Comment 14. Figures 6-1 and 6-2. These figures have the same title label. It appears that Figure 6-2 should be labeled "Conceptual Single-Interval Configuration."

Response: *The title of Figure 6-2 will be corrected to indicate it presents the conceptual single-interval configuration.*

Comment 15. Figure 6-2, Page 165. This figure appears as a blank page in our copy of the document. In addition, there is already a Figure 6-2 on page 140. Are they the same figure?

Response: *This blank page was inadvertently included. No figure belongs at this location within Section 6.4.2. The reference to Figure 6-2 in this section applies to the single-interval configuration drawing on page 140.*

Comment 16. The redline/strikeout method helps, but was not always consistently used. It was not used for all tables (for example, applicable or relevant and appropriate requirements [ARARs]). This makes it difficult to review the document without concern that other sections were updated and not highlighted as well. While the technique is helpful, we would urge the Navy to use it consistently throughout a document.

Response: *Comment noted.*

2.0 COMMENTS FROM MR. JOSEPH CHOU, CAL/EPA

General Comments

Comment 1. The State believes that Alternative 2 must remain the same as it was presented in the draft final FS. It is not clear how and why these changes were made, but they were not suggested nor recommended by the agencies. The revised Alternative 2 should not be considered as "indirect restoration." It is a form of compensation and contains many uncertainties. Compensation is not considered mitigation. It might be appropriate for the Navy to evaluate the possibility of combining the active and passive treatment alternatives (for example, Alternatives 4A and 5A) to reach the cleanup goals (MCLs) in a more efficient manner.

Response: *Modifications to Alternative 2 were made in response to discussions during the March 28, 1995 OU5 meeting between the Navy and the regulatory agencies. The inclusion of this modified Alternative 2 was discussed during the remedial project managers' meeting on July 12, 1995 and this response summarizes these discussions. The Navy has investigated funding of an indirect restoration action. Current funding is*

prioritized based on risk; sites presenting the largest risks to the public and the environment receive funds first. The rationale supporting Alternative 2 is that OU5 presents only a small risk and other actions would provide more benefit to the community than treating groundwater at OU5. Consequently, indirect restoration would be unlikely to receive funding. However, the Navy believes it is important to maintain Alternative 2 in the final OU5 FS report to record its investigation into other potential mechanisms to reduce risk to the community and the environment.

Analysis of the groundwater modeling results indicates that a remedial alternative combining elements of Alternatives 4A and 5A would not be significantly more efficient in reaching cleanup goals than alternatives already presented.

<u>Specific Comments</u>

Comment 1. <u>Page 20, Paragraph 1, Section 1.3.3.2</u>. The Santa Clara Valley Water District (SCVWD) requires a minimum 50-foot sanitary seal for water and cathodic protection wells to provide minimum protection to both shallow and deep aquifers. However, to our understanding, there is no other restriction of using the C aquifer posed by SCVWD.

Response: *With the exception of well construction requirements, the SCVWD has no mandatory restrictions concerning water usage. SCVWD, as a wholesale water supplier, purchases surface water from the Sacramento-San Joaquin River delta and uses the water to recharge the groundwater aquifers in the southern and western portions of Santa Clara Valley. However, the physical position of Moffett Field in the valley and its location within the regional stratigraphy preclude aquifer recharge in the vicinity of Moffett Field (Micko 1995). Consequently, SCVWD could restrict groundwater withdrawals from the aquifers beneath Moffett Field if pumping at Moffett Field influenced other groundwater users in the surrounding area. The following sentence will be removed from the FS report to more accurately describe SCVWD restrictions.*

> *Although groundwater extraction from the C aquifer is not prohibited, use of the C aquifer is currently restricted by SCVWD to prevent land subsidence and salt water intrusion.*

Comment 2. Page 49, Paragraph 3, Section 1.4.2.2. Again, as we've mentioned in our previous comments, the Navy should clarify the source(s) of TCE and other volatile organic compounds (VOCs) found in the B2- and B3-aquifers.

Response: *Additional information concerning the occurrence of TCE and BEHP in the B2- and B3-aquifer zones was inadvertently omitted and will be added to Section 1.4.2.2 of the final FS report. The following information will be added:*

> *TCE was detected in 5 of 145 samples collected from B2-aquifer zone wells (W3-4, W3-7, W7-15, and W10-3) at concentrations ranging from an estimated value of 1 to 2 µg/L. These low concentrations may represent artifacts from field procedures (such as contamination carryover between wells during sampling or cross-contamination during sample storage and transport) or laboratory methods (such as instrument carryover). In any case, TCE concentrations are below the MCL (5 µg/L). BEHP was detected in 2 of 20 samples collected from B2-aquifer zone wells (both at W3-15) at estimated concentrations of 3 and 4 µg/L. TCE and BEHP were not detected in samples collected from the B3-aquifer zone.*

Comment 3. Page 51, Paragraph 1, Section 1.4.2.3. Please explain if there is any difference in antimony concentrations between the C-aquifer wells of Moffett Field and the data from the City of Mountain View.

Response: *The Navy has researched concentrations of inorganic constituents in groundwater in areas of Santa Clara County outside of Moffett Field to further investigate naturally occurring levels of inorganic constituents. Information sources examined included the remedial investigation report for the Middlefield-Ellis-Whisman (MEW) Superfund site (HLA 1988), U.S. Geological Survey reports (Averett, Wood, and Muir 1971), and conversations with water quality specialists from the Santa Clara Valley Water District (Iwamura 1995) and the cites of Mountain View (Gnam 1995) and Sunnyvale (Farnham and Hoffman 1995). The primary inadequacy with all these sources of information is that only data for dissolved inorganic constituents were available. In contrast, the analysis presented in this appendix is based on total metals concentrations. As discussed in Section 1.1 of Appendix A, total metals analyses incorporate not only dissolved metals but also metals in colloidal form or sorbed to larger particulate matter that is retained in the sample. Consequently, direct comparisons between these other data sources are not possible. In addition,*

variations in sampling methods, analytical methods, and water pretreatment protocols further restrict comparisons to the data collected at Moffett Field.

Some useful observations may be made from these other data sources even though only dissolved metals data are available from sources outside Moffett Field. A report by the U.S. Geological Survey addressing the water chemistry of the Santa Clara Valley (Averett, Wood, and Muir 1971) and conversations with water quality specialists Iwamura and Gnam indicated wide variations in metals concentrations were an expected outcome of the wide range of sediment types observed in subsurface sediments within Santa Clara Valley. Rapid changes in sediment type occur as geologic depositional environments change from alluvial fans near the Santa Clara Mountains to floodplain and estuarine environments near San Francisco Bay. Ms. Gnam indicated that wide variations in concentrations of dissolved metals were frequently observed within samples from City of Mountain View wells. Past intrusions of salt water are an additional source of metals that further complicate the distribution of dissolved metals concentrations at Moffett Field. Historic intrusions of salt water as far south as U.S. Highway 101 (Iwamura 1980) also may have deposited metals as mineral salts within the aquifers beneath Moffett Field. Continued dissolution of these salts also may contribute to the observed distribution of metals in groundwater throughout Moffett Field.

In summary, data available from sources outside Moffett Field are not directly comparable to data analyzed in the FS report. However, data from these other sources indicate large variations in metals concentrations in groundwater in Santa Clara Valley and are to be expected based on the wide range of sediment types present. These statements further support observations of highly variable metals concentrations in groundwater at Moffett Field. This information is contained in Section 3.4 of Appendix A of the revised draft final FS report and will be maintained in the final FS report.

Comment 4. <u>Page 74, Paragraph 2, Section 2.2</u>. Please clarify what is the significance of the following statement "During the natural flow of groundwater...has created the distribution of metals observed in groundwater at Moffett Field." Does it imply that

there is a distinctive metal distribution pattern at Moffett Field than from neighboring areas?

Response: *Naturally occurring metals concentrations in groundwater depend on the distribution of sediments through which groundwater flows. Wide variations in sediment types are observed at Moffett Field and in surrounding areas. Consequently, groundwater metals concentrations at Moffett Field can be expected to vary from other areas, especially in directions parallel to the dominant sediment transport direction (southwest to northeast). Please also refer to the response to DTSC specific comment 3.*

Comment 5. Page 77, Paragraph 1, Section 2.3. Please clarify if there are no SVOCs detected at those wells with the highest TPH contamination or SVOCs were not analyzed.

Response: *No SVOC data were available at wells with the highest TPH concentrations when the revised draft final FS report was prepared. However, additional groundwater samples were collected during June 1995 from wells that had the largest detections of TPH constituents (wells WT2-1, W7-7, and W7-6) at the former Tanks 2 and 43 areas. These samples were analyzed for PAHs using high pressure liquid chromatography (EPA Method 8310). Table 1 presents the results from these samples. No detections of any PAHs were observed above corresponding MCLs or PRGs. Consequently, none of the PAHs are considered COCs in the commingled areas.*

Section 2.3 of the FS report will be modified. The following sentences will be deleted from Section 2.3.

> *There are currently no SVOC data at the wells with the highest TPH contamination levels. Therefore, petroleum-related constituents are not identified as COCs at this time. Additional data will be collected in 1995 for each of these areas. If the data indicates that any of the petroleum-related COPC exceed MCLs, the COPC will be named as a COC for the commingled plume areas.*

The following sentences will be added to Section 2.3.

Additional groundwater samples were collected during June 1995 from wells that had the largest detections of TPH constituents (wells WT2-1, W7-7, and W7-6) at the former Tanks 2 and 43 areas. These samples were analyzed for PAHs using high pressure liquid chromatography (EPA Method 8310). Table I-2 in Appendix I presents the results from these samples. No detections of any PAHs were observed above corresponding MCLs or PRGs. Consequently, none of the PAHs are considered COCs in the commingled areas.

Comment 6. Page 99, Paragraph 2, Section 4.1.6. Please explain the relation between "130 pounds of chlorinated solvents" and the actual amount of chlorinated solvent wastes at Moffett Field.

Response: *The 130 pounds of chlorinated VOCs described in Section 4.1.6 is simply the result of a mass balance calculation from the solute transport model. Anecdotal reports (NEESA 1984) of solvent disposal at OU5 are not supported by observations of contaminant concentrations in groundwater made during the remedial investigation or additional investigations to support the FS. Source locations and strengths used in the solute transport model in the FS are estimates. Discrepancies between anecdotal reports and observed concentrations probably result from errors in solvent volume estimation as well as physical attenuation caused by processes such as volatilization and degradation.*

Comment 7. Page 150, Paragraph 2, Section 6.2. The deleted sentence should remain. The State's position of considering the southern plume area as a drinking water source has not been changed. Furthermore, the State will not accept this alternative because it does not restore the OU5 area as a potential drinking water source.

Response: *The deleted text in Section 6.2 will be maintained as suggested. Please also refer to the response to EPA specific comment 3.*

3.0 REFERENCES

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PRC Environ
1099 18th Stre
Suite 1960
Denver, CO 80202
303-295-1101
Fax 303-295-2818

PRC

July 21, 1995

Mr. Stephen Chao and Mr. Hubert Chan
Department of the Navy
Engineering Field Activity West
Naval Facilities Engineering Command
900 Commodore Drive, Building 208
San Bruno, California 94066-5006

CLEAN Contract Number N62474-88-D-5086
Contract Task Order 0236

Subject: Response to Comments on Review Copy of Final Operable Unit 5 Feasibility Study Report Dated June 1, 1995, Moffett Federal Airfield

Dear Messrs. Chao and Chan:

Enclosed are three copies of the above-referenced report. Additional copies are being forwarded to the regulatory agencies. PRC Environmental Management, Inc. (PRC) will prepare the final feasibility study (FS) report following regulatory agency concurrence with the response to comments.

The cover letter from the U.S. Environmental Protection Agency (EPA) stated that the agency had expected a final document to be submitted. California EPA requested during the May 5, 1995 conference call that a final document not be submitted until all the changes could be examined by the State. The PRC project team has made a special effort to keep the agencies abreast of developments and changes in the report which have resulted from additional data and agency comments. We apologize for any delays in the schedule which may have occurred; however, we believe that the remediation decision which the Navy must make should be based on a thorough evaluation of all data available.

If you have any questions, please call us at (303) 295-1101.

Sincerely,

Timothy E. Mower
Geotechnical Engineer

For Michael N. Young
Project Manager

TEM/cmg

Enclosure

cc: Michael Gill, EPA
Joseph Chou, DTSC
Michael Bessette, RWQCB

contains recycled fiber and is recyclable

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