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17 FEB 1993

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

RE: Navy Responsibility and Remedial Approach for West-Side Aquifer Sources,
Naval Air Station (NAS) Moffett Field

Dear Ms. Blank:

The purpose of this letter is to summarize the Navy's position with respect to requirements and responsibilities for long-term source remediation within the west-side aquifers at NAS Moffett Field. After analysis of existing data at NAS Moffett Field, evaluation of the preliminary remedial approach proposed for the regional volatile organic compound (VOC) plume, and evaluation of requirements under the federal facilities agreement (FFA) the Navy has reached the following conclusions:

- As a potentially responsible party (PRP) to the regional VOC plume, the Navy is only obligated to clean contamination (soils and ground water) associated with Navy sources and equally liable for any comingled contamination.
- Because contamination of west-side aquifers, in part, is likely to be the Navy's responsibility, the Navy is willing to expand the existing and currently planned source control measures (Sites 14 and 9) into long-term remedial actions focusing on Navy contaminants. The Navy, also, intends to remediate all soil contamination, at these sites, which presents a potential threat to human health and the environment, and ground-water quality. The Navy is willing to include these remedial measures in the FFA schedule.
- The Navy believes that any significant, unidentified contaminant sources affecting ground-water quality and subsequent remediation would be evident from available data. The Navy has conducted a comprehensive and thorough investigation of soils and ground water on the western side of NAS Moffett Field. These investigations have involved more than 300 soil borings, 230 cone penetrometer tests (CPTs) and HydroPunch samples, 9 soil gas surveys (320 samples), and 200 monitoring wells throughout the area. Analytical costs alone exceed \$2 million. As previously discussed, the Navy is conducting a preliminary assessment/site inspection (PA/SI) of potential sources identified by other PRPs. The Navy has demonstrated substantial efforts to characterize, identify, and address all soil and ground-water contaminant sources. The Navy will not be responsible for continuously evaluating the alleged existence of additional sources, when the data to date do not indicate source presence. Rather, the responsibility for proving the existence of alleged sources should be placed on those who suggest potential sources exist.

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Additionally, preliminary mass allocation calculations suggests that a very small percentage of contamination is attributable to unidentified Navy sources, if they exist. Since the Middlefield-Ellis-Whisman (MEW) companies' design takes into account engineering safety factors, a small percentage variance should not affect their remedial design.

- Navy investigations indicate that the majority of ground-water contamination in the west-side aquifers is from upgradient sources. The primary contaminant of concern is trichloroethene (TCE). TCE has been detected north of U.S. Highway 101 upgradient from any Navy sources, in the A2 aquifer zone at concentrations in excess of 65 milligrams per liter (mg/L) and in the A1 aquifer zone in excess of 6.5 mg/L. Concentrations of TCE upgradient and downgradient from the Navy tetrachloroethene (PCE) source at Building 88 in the A2 zone are essentially equal, indicating degradation of PCE has not added a significant amount of TCE to the regional VOC plume. In the A1 zone, only one well immediately downgradient from Building 88 has a TCE concentration higher than that of the upgradient regional plume. Therefore, Navy believes that possible contributions to the regional VOC plume from Navy sources are minor. For these reasons the Navy will focus on remediation of PCE and petroleum contamination. Remediation of TCE and any other contaminants commingled with PCE and petroleum will be coincidental, for which the Navy will incur costs not of Navy origin.

In addition, the Navy believes there is compelling scientific evidence for the presence of dense nonaqueous phase liquids (DNAPLs) north of U.S. Highway 101 in the A2 aquifer zone. The DNAPLs affect the distribution of contamination at NAS Moffett Field but are clearly not a Navy responsibility, as the DNAPLs are upgradient from any Navy source locations. The Navy is concerned that DNAPLs not addressed as a part of the regional remedial design will be a source of continuous contamination to the regional plume on NAS Moffett Field.

- As a PRP the Navy has contributed, and continues to contribute, to the identification and characterization of the regional plume. For example, the Navy believes that the area north of Site 9 (including operable unit 6 [OU6] and discharges from the lift station at Building 191) contains commingled contamination from all the PRPs, including the MEW companies, and the National Aerodynamics and Space Administration (NASA). While sufficient data to apportion contamination in the North Base Area (NBA) have not been developed, there is evidence that the NBA should be an area of shared responsibility among all the PRPs. It is important to note that the Navy is the only PRP that has conducted extensive studies and has proposed additional investigations in the NBA. The Navy performed two phases of investigation following an EPA evaluation of the distal end of the regional VOC plume in this area. The Navy is also performing a horizontal conduit study and a site-wide ecological assessment; both studies address commingled contamination. In addition, the Navy is designing, and will construct and operate a treatment system at Building 191 to treat commingled contamination. The investigation costs are estimated to be about \$1.5 million.

Based on extensive Navy documentation to date, the following presents the Navy's conceptual approach to Navy contaminant remediation. First, the Navy will proceed with the construction and operation of the Site 9 source control measure, and with the operation of Site 14 South source control measure. These measures are designed to hydraulically contain further contaminant migration. Second, the Navy will remove or remediate all known sources of soil contamination on the west-side which present a threat to human health and the environment, and may affect ground-water quality. Currently, this includes tanks, sumps, and soils in the vicinity of Building 88 (a

PCE source), and tanks and soils which are sources of petroleum contamination. Finally, the Navy will design and implement a system for long-term remediation of ground-water contamination attributable to Navy sources. The Navy remedial system will focus on PCE and petroleum contamination in the A1 aquifer zone and PCE contamination in the A2 aquifer zone.

The Navy believes that the approach outlined above will satisfy EPA's position as outlined in your letter dated October 21, 1992. Source control measures for sites identified in Attachments 4 and 5 of the FFA, as well as other potential sources conclusively determined to be sources, will be part of the long-term remediation. Removal actions on the west side will become remedial actions and follow the MEW record of decision (ROD) and explanation of significant differences (ESD). The Navy is willing to perform this additional work, beyond the original scope of the FFA, in the interest of the long-term remediation of the aquifer.

In summary, in the interest of accelerating contaminant remediation at NAS Moffett Field, the Navy will make every effort to work with other PRPs in developing reasonable approaches for the regional remedial action program. However, it must be emphasized that Navy cooperation in working within the regional remedial design and remedial action framework does not constitute admission to further contaminant liability. The Navy is not signatory to the MEW ROD and consent decree, and has consistently maintained technical and legal reservations about the proposed approaches to implementing a regional remedial action program.

Sincerely,

Gilbert A. Rivera
Head, Installation Restoration Section "B"

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Department of Toxic Substances Control, (Attn: Cyrus Shabahari)

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JMM James M. Montgomery, Inc., (Attn: Joe LeClaire)
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