



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

May 19, 1994

Mr. Stephen Chao
Naval Facilities Engineering Command
Western Division
900 Commodore Way, Bldg. 101
San Bruno, CA. 94066

Re: West Side Aquifer Initial Well Placement and Responsibility

Dear Mr. Chao,

In response to the Navy's letter to the U. S. Environmental Protection Agency (EPA) dated February 18, 1994, a clarification of our position regarding well placement and responsibility and a correction of some Navy statements is in order. EPA agrees with the statement you made many times in your letter, that Navy cannot assume responsibility for remediation of regional contaminants not attributed to Navy sources. In our December 17, 1993 letter, EPA made the decision that two additional wells in the A/A1 aquifer, EA1-2 and EA1-7, as designated were necessary to properly remediate the west side aquifer of Navy sources. Further investigation of quarterly sampling data and groundwater pumping modeling has shown that these two wells are not necessary. In addition, EPA may have misunderstood the issues regarding well locations in the B1/A2 aquifer. These and other issues are clarified below.

1. The placement of a well at the corner of McCord Avenue and Wescoat Road (EA1-2) would not effectively remediate the Navy's PCE plume from Building 88. Capture zone analyses of the A/A1 aquifer from the Navy's Site 9 Design Report of January 7, 1993 and the MEW North of 101 Regional Groundwater Remediation Program 100% Design Report of March 1994 (Figure A-26) both show that a well at the location of EA1-2 would be remediating upgradient (MEW) and not cross-gradient (Navy PCE) contamination. Therefore, EPA agrees that the well designated EA1-2 is not necessary for Navy source control.
2. Quarterly sampling data for May and September 1993 showed high concentrations of contaminants in wells W56-1, W56-2 and W9-47 in the EA1-7 area (corner of McCord Avenue and Bushnell Road)¹. This is shown in the following table.

¹May 93 Quarterly Report, Figure 16 (TCE plume)

Well Number	May 93 Concentrations	September 93 Concentrations
W56-1	16 ppb TCE 1200 ppb 1,2-DCE	No Sampling
W56-2	1500 ppb TCE 200 ppb 1,2-DCE	2000 ppb TCE 49 ppb 1,2-DCE
W9-47	28 ppb 1,2-DCE	20 ppb TCE 31 ppb 1,2 DCE

Building 31, the location of the old NEX Gas Station and commissary storage is in this area. In the Draft Final Additional Investigation of Inferred Sources Technical Memorandum (February 18, 1994), Building 31 is listed in Table 1 as being a past source of petroleum and solvents and is included in the Site 9 source control measure. This shows a valid reason to include the Building 31 area in the network of remediation wells for petroleum and solvents. The Navy has included EA1-6, a well slightly to the northeast of the EA1-7 area (near Bushnell Rd.) in west side aquifer source control designs. Upon further investigation of the capture zone analysis mentioned in the previous paragraph, well EA1-6 is enough to extract both petroleum and VOCs, but only if screened throughout the saturated thickness of the complete aquifer. The Navy should screen EA1-6 through the complete saturated zone to allow remediation of both petroleum and solvents in this area.

3. Regarding the B1/A2 aquifer, EPA stands by what we heard in the September 30, 1993 meeting, that all parties were in agreement regarding well placement and responsibilities. The details of this agreement may have been misunderstood. We also recognize the Navy's letter of September 29, 1993 where the Navy said they will install 2 wells in this deeper aquifer, approximately in the locations of EA2-3 and EA2-4 of EPA's December 17, 1993 letter. With no official meeting minutes from September 30, 1993, our understanding was incorporated into the December 17th letter. The two wells mentioned above, EA2-3 and EA2-4, should be included as locations for the source control of the B1/A2 aquifer. If they are not sufficient, more wells may be necessary. But during this September 30th meeting, EPA's notes reflect that everyone agreed to well locations in B1/A2 aquifer. This two well contribution from the Navy is an acceptable initial setup for remediation. In a letter from Raytheon², it is stated that "Canonie's modeling as of September 30 indicated that it was possible that two wells would accomplish the desired control". The MEW 100% Design for the Regional Groundwater Remediation Program for North of 101 (March 1994) also discusses this issue.³ EPA agrees that the Navy's

²A. Eric Madera to EPA (Caraway, Gill, Mintz), dated April 5, 1994 (Re: Navy correspondence of February 18, 1994)

³Section 3.2.1, page 39

responsibility for the B1/A2 aquifer in this area is limited to two wells, those designated EA2-3 and EA2-4. We regret the misunderstanding.

4. You state that the Navy has investigated the wash rack area (near Building 438) near the proposed regional well REG-3A and that we (EPA) concluded that no additional investigations were necessary (July 26, 1993 correspondence from EPA to Navy). This correspondence dated July 26, 1993 did state that only Buildings 123, 127 and 144 (Expanded Site 8 area) and Buildings 146 and 544 (Transportation Yard) from the list of inferred sources would require further investigation. But at the September 30th meeting, the Navy did agree to do further investigation in the wash rack area. Although the Additional Investigation of Inferred Sources Field Work Plan states that no further action is necessary (in the vicinity of Building 438), recent quarterly sampling in this area (wells WU4-10, WU4-15, W9-29 and W9-45) has shown high concentrations of contamination. This is shown in the table below. EPA cannot consider closing this issue when these levels of contamination exist. The Navy has admitted to solvent use in the past in the vicinity of Building 438. As you have stated many times, the Navy has agreed to take action to remediate sources if Navy sources are identified. It is clear to EPA that this is a potential Navy source. The Navy should either remediate this area or do confirmatory sampling to explain the existence of these VOC concentrations.

Well Number	November 92	May 93	September 93
WU4-10	140 ppb TCE 180 ppb 1,2-DCE	260 ppb TCE 180 ppb 1,2-DCE	No sampling this quarter
WU4-25	110 ppb TCE 120 ppb 1,2-DCE	100 ppb TCE 86 ppb 1,2-DCE	110 ppb TCE 100 ppb 1,2-DCE
W9-29	No sampling this quarter	520 ppb TCE 330 ppb 1,2-DCE	No sampling this quarter
W9-45	No sampling this quarter	960 ppb TCE 300 ppb 1,2-DCE	790 ppb TCE 250 ppb 1,2-DCE

5. It may have been true that EPA made the statement, in a response to an inquiry by Mr. Jim Boarer (Canonie) that the source control recovery wells assigned to inferred sources north of Highway 101 should be converted to regional recovery wells once aquifer testing proves that Navy sources are controlled. But for the record, the position made in EPA correspondence to Navy on July 26, 1993 did not address this subject. That letter only reiterated that the MEW companies are responsible for remediating the regional plume (including the area on Moffett Field) except for those areas that are in Attachments 4 & 5 of the Moffett Field Federal Facilities Agreement (FFA).
6. Conceptual well locations provided to MEW by the Navy in January 1993 correspondence may have been misinterpreted by MEW as an assumption of responsibility for contamination by the Navy. The MEW 35% design for North of

Highway 101 may have improperly allocated numerous source recovery wells to the Navy. Both of these issues indicate a lack of communication between the MEW companies and the Navy. Perhaps other forums of technical discussion should be developed to alleviate this problem.

7. While EPA is pleased with our agreement over the FFA amendment, the Navy's "cooperation" on working within the framework of the MEW ROD for remediating Navy sources contributing to west side aquifer contamination was attained only through lengthy negotiation with the parties to the FFA (approximately 1 year). On the contrary, it did not come with the immediate acceptance by the Navy.

In summary, the Navy is responsible for source remediation of sources that are attributable to the Navy. This can be accomplished by including a well screened throughout the saturated zone in the A/A1 aquifer at location EA1-6, in addition to wells agreed to in the September 30, 1993 meeting and included in the December 17, 1993 letter to the Navy. Wells EA1-2 and EA1-7 are not necessary to control Navy sources. The long term source remediation wells for the B1/A2 aquifer were agreed upon at locations EA2-3 and EA2-4 shown in the December 17, 1993 letter from EPA to Navy. Only these two wells are necessary for the B1/A2 aquifer, not six as originally stated. The Navy should assume responsibility for source control of contamination in the vicinity of the REG-3A well, as is evidenced by quarterly sampling results in this area. Items 5, 6 and 7 are communicated to set the record straight.

EPA agrees that the Navy should assume responsibility for regional contaminants only attributed to Navy sources, but hereby clarifies our position. Once again, EPA's decision regarding well placement and responsibility is for initial remediation wells only. Pump and treat systems require an iterative design process to be effective. EPA believes that this decision will lead to the most effective and fair design where containment of the plume can be assured. No doubt this system design will require modification once operational data is available. EPA is providing its most logical solution to a contentious problem. If disagreement continues on this issue, it should be considered elevated to management beyond Remedial Project Managers. EPA does not consider this decision a waste of money, but a necessary expense to remediate Navy sources. It is important to stop posturing and accept these responsibilities and get on with the cleanup. If you have questions, my number is 415-744-2383.

Sincerely,



Michael D. Gill
Remedial Project Manager
Federal Facilities Cleanup Office

cc: C. Joseph Chou (DTSC), K. Eichstaedt (URS), R. Gervason (RWQCB),
E. Madera (Raytheon), S. Olliges (NASA), P. Strauss (MHB), M. Young (PRC) (Fax)