



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

March 30, 2000

Ms. Marianna K. Potacka, IH, RN  
BRAC Environmental Coordinator  
BRAC Operations, Code 06CM.MP  
SWESTNAVEFACENGCOM  
1230 Columbia St., Suite 1100  
San Diego, CA 92101

RE: U.S. EPA Comments on Groundwater Contours and  
Capture Zone Analysis for May 1999 Data  
West-Side Aquifer Treatment System (WATS) Area  
Moffett Federal Air Field, Mountain View, CA

Dear Ms. Potacka:

The U.S. Environmental Protection Agency (EPA) has reviewed the May 1999 estimated capture zone figures, submitted in the May 1999 Draft Quarterly Groundwater Monitoring Report, dated October 4, 1999. General and specific comments are attached and need to be addressed.

If you have any questions or would like to discuss these comments, please call Eugenia Chow at (415) 744-2258.

Sincerely,

Handwritten signature of Eugenia Chow in cursive script.

Eugenia Chow, P.E.  
MEW Project Manager

Handwritten signature of Roberta Blank in cursive script.

Roberta Blank  
Moffett Field Project Manager

cc: Joseph Chou, RWQCB  
Heike Mueller, TechLaw  
Tim Mower, Tetra-Tech  
Fred Banker, RMT, Inc.  
Hollis Phillips, URS  
Ingrid Chen, Raytheon

**U.S. EPA Comments on the Capture Zone Analysis  
West Aquifer Treatment System  
Moffett Federal Air Field Site**

**GENERAL COMMENT**

In evaluating the capture zones, it became evident to EPA that in order to draw groundwater contours and to define capture zones based on actual data rather than professional interpretation, additional groundwater monitoring locations are needed in the West-Side Aquifer Treatment System (WATS) area. For example, the closest well to assess the eastern edge of the capture zone around EA1-6 is located approximately 350 feet east of EA1-6.

Since the groundwater contamination is the responsibility of multiple parties and since groundwater plumes have co-mingled, it is recommended that groundwater contour maps and estimated capture zones be based on actual data points, especially in the vicinity of the extraction wells, to produce defensible data which can be used in the evaluation of remedy effectiveness.

EPA is, therefore, requesting that:

1. the extent of a sufficient groundwater capture zone for each extraction well be determined;
2. Piezometers be installed near each extraction well and placed at a pre-determined distance from the associated extraction well, so that the water levels measured in the piezometers indicate whether the capture zone has been achieved (i.e., whether the groundwater flow gradient is from the piezometer towards the extraction well); and
3. a sufficient number of piezometers be installed near each extraction well to determine the lateral extent of the capture zone.

**SPECIFIC COMMENTS**

1. Figure 18: The 4-foot contour is shown curving south of extraction well EA1-5 creating an approximately 400 ft area with a flat gradient. EPA's evaluation shows that only the 5-ft contour curves south of EA1-5 creating a more realistic representation of groundwater flow in this area.
2. Figure 18: Since the groundwater level is essentially flat in the area between extraction wells EA1-6 and REG-6A, it appears appropriate to draw a combined groundwater capture zone for both wells.
3. When EPA's estimated capture zones are compared to the extent of the trichloroethylene (TCE) plume in the A1-Aquifer (as presented in Figure 7 of the "May 1999 Draft

Quarterly Report" dated October 4, 1999), it appears that several portions of the TCE plume are not captured by the current regional groundwater extraction system:

- a) TCE-contaminated groundwater with concentrations between 10 ug/l and 100 ug/l underlying the area east of Hangar 1;
- b) contaminated groundwater underlying an approximately 30-foot wide area starting north of extraction well EA 1-1 and extending to the area between extraction wells EA1-4 and EA1-5; and
- c) contaminated groundwater underlying the area between the capture zones of extraction wells EA1-1 and EA1-2.

Please indicate what measures will be taken to address these areas.

4. It appears inappropriate to draw capture zones around EA1-1, since no constant drawdown in the well has been achieved at this time. Please indicate the actions which will be performed to achieve the design flow rate or show that sufficient capture can be achieved with a lower flow rate.