



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

JUN 07 2000

Marianna K. Potacka, IH, RN
BRAC Environmental Coordinator
Moffett Federal Airfield
SWESTNAVFACENGCOM
1230 Columbia St., Suite 1100
San Diego, CA 92101

Dear Ms. Potacka:

The U.S. Environmental Protection Agency respectfully submits the enclosed comments to you for your consideration regarding your "Response to Comments on the May 1999 and August 1999 Quarterly Reports for Moffett Federal Airfield, California," dated April 20, 2000. In addition we have reviewed and are submitting comments on your "Summary of February 17, 2000 Meeting about Quarterly Reporting for Moffett Federal Airfield, California," dated March 3, 2000.

Please call me if you have any questions regarding the enclosed comments. I can be reached at (415) 744-1685.

Sincerely,

A handwritten signature in cursive script that reads "Roberta Blank".

Roberta Blank
Remedial Project Manager

cc: Eugenia Chow, EPA
Joseph Chou, RWQCB
Andy Piskin, SWDIV

Enclosure (10 pages)

Review of the “Response to Comments on the May 1999 and August 1999 Quarterly Reports for Moffett Federal Airfield, California”

GENERAL COMMENTS ON THE MAY 1999 QUARTERLY REPORT

1. **General Comment 1:** The Navy’s response appears to be adequate. However, during the February 17, 2000 meeting, it was agreed that text will be added to the quarterly reports to indicate that other chemicals of concern are co-located with the trichloroethylene (TCE) plume and that the TCE plume represents the maximum extent of groundwater contamination at Moffett Field. In addition, it was agreed that anomalous concentrations for all compounds will be discussed in the reports as outliers. Therefore, please indicate that the above-mentioned text will be included in the quarterly reports.
2. **General Comment 2:** The Navy’s response appears to be adequate. However, during the February 17, 2000 meeting it was agreed that the Navy select a few perimeter wells on which to perform the statistical analysis for the key constituents in groundwater at Moffett Field and that VOC mass transport would be evaluated. Therefore, please indicate that perimeter wells will be selected and that a statistical analysis will be performed on these wells for each of the key constituents. In addition, please indicate that VOC mass transport will be evaluated on this basis in future annual reports.
3. **General Comment 3:** The Navy’s response appears to be adequate for future reporting needs. However, it seems that the May 1999 quarterly report will not be revised to include the requested information. Please, revise the May 1999 quarterly report to include the originally requested information.
4. **General Comment 4:** The Navy’s response does not appear to be adequate. Although the May 1999 groundwater analytical data were collected by International Technology (IT), the Navy should have access to the quality control portion of the data and perform the data validation. It is unclear why the data validation is not possible for the May 1999 data. Therefore, please either provide the data validation for the May 1999 data or discuss how the lack of data validation will affect the usability of the May 1999 data. In addition, please indicate that data validation will be performed on future data sets and that the results will be included in the quarterly reports.

5. **General Comment 5:** The Navy's response appears to be adequate for future reporting needs. However, it seems that the May 1999 quarterly report will not be revised to include the requested information. Please, revise the May 1999 quarterly report to include the originally requested information.
6. **General Comment 6:** The Navy's response appears to be adequate for future reporting needs. However, it seems that the May 1999 quarterly report will not be revised to include the requested information. Please, revise the May 1999 quarterly report to include the originally requested information. In addition, as agreed to during the February 17, 2000 meeting, please indicate that the figures currently contained in Appendix A will be kept as part of future quarterly reports, although the Navy may propose fewer wells or different wells for graphing. The criteria for selecting the wells to be graphed should be included in the quarterly reports.

SPECIFIC COMMENTS ON THE MAY 1999 QUARTERLY REPORT

1. **Specific Comment 1:** The Navy's response appears to be adequate.
2. **Specific Comment 2:** The Navy's response appears to be adequate. However, since the sodium dithionite pilot test impacts groundwater flow at Moffett Field, activities related to the pilot test should be discussed in future quarterly reports.
3. **Specific Comment 3:** The Navy's response appears to be adequate for future reporting needs. However, it seems that the May 1999 quarterly report will not be revised to discuss the outliers as originally requested. Therefore, please either revise the May 1999 quarterly report to include a discussion of outliers as requested or provide a discussion of outliers as part of the response to comments.
4. **Specific Comment 4:** The Navy's response appears to be adequate. However, a new set of legible figures should be provided as replacement pages to the existing May 1999 quarterly monitoring report.

GENERAL COMMENTS ON THE AUGUST 1999 QUARTERLY REPORT

1. **General Comment 1:** The Navy's response appears to be adequate for future reporting needs. However, it seems that the Navy does not intend to revise the August 1999 quarterly report to include an executive summary as originally requested. Therefore, please either revise the August 1999 quarterly report to include an executive summary or provide this summary as part of the response to comments.
2. **General Comments 2, 3, and 4:** The Navy's responses appear to be adequate. However, it should be noted that, during the February 17, 2000 meeting, it was agreed that all activities taking place at Moffett Field will be discussed during the monthly Regional Project Managers (RPM) meetings. It was also agreed that the RPM meeting agenda will be issued no later than two weeks prior to the next RPM meeting so that all EPA concerns may be addressed during the meeting. In addition, the EPA requested that the results and conclusions of all other site-related activities will be provided in the executive summary of the quarterly reports.
3. **General Comment 5:** The Navy's response appears to be adequate for future reporting needs. However, it seems that the Navy does not intend to revise the August 1999 quarterly report to include the requested information. Therefore, please either revise the August 1999 quarterly report to include the requested information or state in the responses to comments that the CLEAN program wells are part of the petroleum sites at Moffett Field and provide the sampling objectives for these wells.
4. **General Comment 6:** The Navy's response appears to be adequate for future reporting needs. However, it seems that the Navy does not intend to revise the August 1999 quarterly report to make the requested changes. Therefore, please revise the August 1999 quarterly report or provide replacement pages for the affected sections.
5. **General Comment 7:** The Navy's response does not adequately address the EPA comment. The Navy states that future reports will consider high-level non-detect data more carefully, but plume shapes will not be modified from previous versions based on the non-detect values unless the data clearly warrant the change. The intent of EPA's original comment was to determine a way to accurately depict compound concentrations above the Maximum Contaminant Levels for Drinking Water (MCLs). However, it is impossible to depict compound concentrations above MCLs if the laboratory reporting limits exceed the MCL. Since it is the Navy's responsibility to adequately depict the extent of contamination in the groundwater, a more conservative approach is recommended. For example, for compounds that were deemed not-detected, but for which the reporting limit exceeds the MCL, the concentration of the compound should be set at the detection limit or at one-half the detection limit for contouring purposes. A notation on the map should explain this procedure to the reviewer. EPA believes that at monitoring locations where contaminants were detected above the MCL during previous quarters, contaminant concentrations are unlikely to have dropped below the MCL in

August 1999 since a “not-detected” concentration at a detection limit that is ten times the MCL is not sufficient proof to justify changing the presentation of the contaminant plumes in the report, especially since the TCE concentration contours establish the maximum extent of on-site contamination (assuming all other compounds are co-located). Therefore, please reconsider EPA’s original comment for the August 1999 and future quarterly reports.

6. **General Comment 8:** The Navy’s response appears to be adequate. However, it should be noted that, during the February 17, 2000 meeting, it was agreed that TCE and PCE concentration maps will be included in the quarterly reports and text will be added to the reports indicating that all other compounds are co-located with the TCE plume. As part of the annual report, concentration maps for all compounds listed in Table 4 will be prepared.
7. **General Comment 9, 9a, 10, and 11:** The Navy’s responses appear to be adequate to address future reporting needs. However, it seems that the Navy does not intend to revise the August 1999 quarterly report. Therefore, please revise the August 1999 quarterly report to address EPA’s original comments.
8. **General Comment 12:** Based on the discussions during the February 17, 2000 meeting, the Navy’s response appears to be adequate. However, it is EPA’s position that it is professional practice to dash contours and capture zones in areas where groundwater flow and capture zones are inferred due to a lack of monitoring points.
9. **General Comment 13:** The Navy’s response appears to be adequate for future reporting needs. However, it seems that the Navy does not intend to revise the August 1999 quarterly report to address the original EPA comment. Therefore, please revise the August 1999 quarterly report as originally requested.
10. **General Comment 14:** The Navy’s response is not adequate. The Navy states that as discussed in the February 17, 2000 meeting, historical TCE trends in samples collected at W9-33 and W9-8 indicate that the decrease in concentrations may not be anomalous. However, the data presented during the meeting do not have sufficient weight to account for the anomalous TCE concentrations detected at the two wells. The Navy’s response does not offer any explanation for the significant TCE decreases detected at these wells. It appears that the Navy does not intend to revise the August 1999 quarterly report as originally requested. Therefore, please either revise the August 1999 quarterly report or provide an explanation for the significant TCE decrease in the response to comments. In addition, it should be noted that, as discussed during the February 17, 2000 meeting, the Navy agreed to discuss anomalous concentrations in future quarterly reports.
11. **General Comment 15:** The Navy’s response appears to be adequate, with one exception. The Navy’s response states that “The evaluation *may* include whether the extraction well system is adequately capturing the appropriate portion of the contaminant plume, whether

the water level or chemical concentration monitoring system is adequate, or whether changes in the treatment system are necessary” instead of stating that the annual report *will* include the evaluation of the above-mentioned items. Therefore, please indicate that the annual report will include an evaluation of whether the extraction well system is adequately capturing the appropriate portion of the contaminant plume, whether the water level or chemical concentration monitoring system is adequate, or whether changes in the treatment system are necessary

SPECIFIC COMMENTS ON THE AUGUST 1999 QUARTERLY REPORT

1. **Specific Comment 1:** The Navy’s response appears to be adequate for future reporting needs. However, it seems that the Navy does not intend to revise the August 1999 quarterly report to address the original EPA comment. Therefore, please revise the August 1999 quarterly report as originally requested.
2. **Specific Comment 2:** The Navy’s response appears to be adequate. However, it is unclear why 29 monitoring wells have not been surveyed. Please provide a list of the wells that have not been surveyed, yet, and an explanation for why these wells have not been surveyed.
3. **Specific Comment 3:** The Navy’s response only partially addresses the EPA comment. First, it appears that the August 1999 quarterly report will not be revised. To adequately address the original EPA comment, the August 1999 quarterly report should be revised. Second, the August 1999 quarterly report or the response to comments should provide an explanation of the sampling objectives for all wells sampled as originally requested. Third, the Navy’s response does not address why the percent fulfillment for TPH-P (total petroleum hydrocarbons purgeable) analysis was only 62 as originally requested.
4. **Specific Comment 3a:** The Navy’s response only partially addresses the EPA comment. A discussion of “completeness” should either be provided in the August 1999 quarterly report or in the response to comments as originally requested.
5. **Specific Comment 4:** The Navy’s response appears to be adequate.
6. **Specific Comment 5:** The Navy’s response only partially addresses the EPA comment. Please provide the name of the third-party validation company as originally requested. In addition, for clarity, please indicate that TtEMI did not perform any of the data validation.
7. **Specific Comment 6:** The Navy’s response only partially addresses the EPA comment. It appears that the Navy does not intend to revise the August 1999 quarterly report to include the requested changes to Table 11 or provide a discussion regarding how future contamination of equipment will be avoided. It is recommended that the Navy provide a

discussion on how future equipment contamination will be avoided and revise Table 11 as originally requested.

8. **Specific Comment 7:** The Navy's response appears to be adequate for future reporting needs. However, it seems that the Navy does not intend to revise the August 1999 quarterly report to address the original EPA comment. Therefore, please revise the August 1999 quarterly report as originally requested.
9. **Specific Comment 8:** As discussed in General Comment 4 on the May 1999 quarterly report, the Navy's response does not appear to be adequate. Although the August 1999 groundwater analytical data were collected by International Technology (IT), the Navy should have access to the quality control portion of the data and perform the data validation. It is unclear why the data validation is not possible for the August 1999 data. Therefore, please either provide the data validation for the August 1999 data or discuss how the lack of data validation will affect the usability of the August 1999 data. In addition, please indicate that data validation will be performed on future data sets and that the results will be included in the quarterly reports.
10. **Specific Comment 9:** The Navy's response appears to be adequate for future reporting needs. However, it seems that the Navy does not intend to revise the August 1999 quarterly report to address the original EPA comment. Therefore, please revise the August 1999 quarterly report as originally requested.
11. **Specific Comment 9a:** The Navy's response only partially addresses the original EPA comment. The original EPA comment requested an explanation as to why the field duplicate results varied to such a high degree. However, the Navy's response did not include such an explanation. Please, provide an explanation as to why the field duplicate results varied to such a high degree and the steps the Navy will take to prevent this variation from occurring in the future.
12. **Specific Comment 10:** As already discussed in General Comment 7, please reconsider EPA's original comment for the August 1999 and future quarterly reports.
13. **Specific Comment 10a:** The Navy's response appears to adequately address the EPA comment. However, it seems that the Navy does not intend to revise Figure 11 to implement the correction. Therefore, please revise Figure 11 in the August 1999 quarterly report to correct the TCE concentration contour.
14. **Specific Comments 11:** The Navy's response does not appear to be adequate. None of the EPA suggestions were discussed. It should be noted that the EPA disagrees with the Navy's interpretation of groundwater contours and estimated capture zones in Figure 18. In order to support the Navy's interpretation of the presented capture zones with actual data points, additional groundwater monitoring locations (piezometers) should be

installed as requested by the EPA in a letter to the Navy dated March 30, 2000. The EPA is still awaiting the Navy's response to the March 30, 2000 letter.

15. **Specific Comment 12:** The Navy's response does not appear to be adequate. None of the EPA suggestions were discussed. It should be noted that the EPA disagrees with the Navy's interpretation of groundwater contours and estimated capture zones in Figure 19. Especially, where the -3-foot contour is drawn twice, the error should be corrected on Figure 19, as this error cannot be explained by a difference in professional judgement. In order to support the Navy's interpretation of the presented capture zones with actual data points, additional groundwater monitoring locations (piezometers) should be installed as requested by the EPA in a letter to the Navy dated March 30, 2000. The EPA is still awaiting the Navy's response to the March 30, 2000 letter.
16. **Specific Comment 13:** The Navy's response appears to be adequate. However, it appears, that the Navy does not intend to revise Figure 21 to include the correct TCE concentration contours. Since the current display of TCE contours in Figure 21 is incorrect, please revise the August 1999 quarterly report, Figure 21, to include the correct TCE concentration contours.
17. **Specific Comment 14 (which is actually part of original Comment 13):** The Navy's response does not appear to be adequate. None of the EPA suggestions were discussed. It should be noted that the EPA disagrees with the Navy's interpretation of groundwater contours and estimated capture zones in Figure 21. Especially the capture zone around REG-10B1 should be deleted as none of the water levels of the surrounding wells were used for contouring, and as this error cannot be explained by a difference in professional judgement. In order to support the Navy's interpretation of the presented capture zones with actual data points, additional groundwater monitoring locations (piezometers) should be installed as requested by the EPA in a letter to the Navy dated March 30, 2000. The EPA is still awaiting the Navy's response to the March 30, 2000 letter.

MINOR COMMENTS ON THE AUGUST 1999 QUARTERLY REPORT

1. **Minor Comment 1, 2, and 3:** The Navy's responses appear to be adequate for future reporting needs. However, it seems that the Navy does not intend to revise Table 10, Figure 22, and Appendix A in the August 1999 quarterly report. Therefore, please revise the August 1999 quarterly report to correct the errors and make the changes as originally requested.

**Review of the “Summary of February 17, 2000 Meeting about Quarterly Reporting for
Moffett Federal Airfield, California”**

GENERAL COMMENTS

1. During the February 17, 2000 meeting, it was agreed that text will be added to the quarterly reports to indicate that other chemicals of concern are co-located with the trichloroethylene (TCE) plume and that the TCE plume represents the maximum extent of groundwater contamination at Moffett Field. Therefore, please indicate that the above-mentioned text will be included in the quarterly reports.
2. During the February 17, 2000 meeting, it was agreed that anomalous concentrations for all compounds will be discussed in the reports as outliers. Therefore, please indicate that the text discussing anomalous concentrations for all compounds will be included in the quarterly reports.
3. During the February 17, 2000 meeting, it was agreed that the figures currently contained in Appendix A will be kept as part of future quarterly reports, although the Navy may propose fewer wells or different wells for graphing. The criteria for selecting the wells to be graphed should be included in the quarterly reports. Therefore, please indicate that future quarterly reports will include figures similar to the ones currently contained in Appendix A and that the criteria for selecting the wells to be graphed will be provided.

SPECIFIC COMMENTS

1. **“Annual report schedule”, Page 2:** This section refers to four “semi-annual” groundwater monitoring events at EATS and WATS. However, during the February 17, 2000 meeting, the sampling frequency discussed was “quarterly”. Please revise this section to indicate that quarterly monitoring will take place.
2. **“Annual report schedule”, Page 2:** This section states that the first annual report will contain information from the August 2000 quarterly monitoring event, but goes on to say that the fourth monitoring event is scheduled for May 2000. Since the annual report will evaluate the most recent four quarters, it is unclear whether the last quarter presented in the annual report will be May or August 2000. Please revise this section to clarify which quarters will be included in the annual report.
3. **“Quarterly Reports, Data presentation”, Page 3:** This section states that a chemical concentration map for tetrachloroethylene (PCE) *may* be included as appropriate to track Navy-related contamination. However, at the February 17, 2000 meeting, it was agreed that a PCE concentration map *will* be included in each quarterly monitoring report.

Therefore, please revise this section to indicate that a PCE concentration map will be included in each quarterly monitoring report.

4. **“Report structure”, Page 3:** This section states that an executive summary will be added to each quarterly report. However, this section does not indicate that EPA requested (during the February 17, 2000 meeting) that the results and conclusions of all site-related activities be provided in the executive summary of the quarterly reports. Therefore, please revise this section to state that the requested results and conclusions of all site-related activities will be provided in the executive summary.
5. **“Data interpretation”, Page 3:** This section states that “In addition, chemical concentration maps may be presented, depending on the wells sampled during the quarter.” This statement suggests that different wells will be selected for sampling each quarter. However, it is unclear how it will be determined which wells will be selected for sampling as this procedure has not been previously discussed. Therefore, please clarify whether different wells will be selected for sampling each quarter, and if yes, indicate what the selection criteria are. It is recommended that the same wells be sampled as during previous quarters.
6. **“Data interpretation”, Page 3:** This section states that “In addition, chemical concentration maps may be presented, depending on the wells sampled during the quarter.” However, during the February 17, 2000 meeting, it was agreed that chemical concentrations maps for TCE and PCE *will* be prepared on a quarterly basis.
7. **“Annual Reports, Data evaluation and system modification”, Page 4:** This section does not indicate that VOC mass removal and VOC migration will be evaluated as discussed during the February 17, 2000 meeting. Therefore, please add to this section that an evaluation of VOC mass removal and VOC migration will be provided in the annual report.
8. **“Statistical analysis”, Page 4:** This section states that “Key constituents in samples from a limited number of monitoring wells *may* be analyzed using statistics...”. However, as agreed to during the February 17, 2000 meeting, the statistical analysis *will* be performed on select wells for key constituents. For clarity, please revise this section to indicate that a statistical analysis will be performed on select wells for key constituents.
9. **“Revised Quarterly Report Table of Contents”, Section 2, Page 5:** The table of contents should also include a discussion of the CLEAN wells. Please revise the table of contents to include a discussion of the CLEAN wells.
10. **“Revised Quarterly Report Table of Contents”, Section 5, Page 5:** The table of contents should also include a discussion of anomalies for the groundwater elevation and chemical concentration data and a brief discussion of the chemical data. In addition, an

analysis of the treatment system remedial action objectives and capture zones should be included in this section.

11. **“Revised Quarterly Report Table of Contents”, Page 5:** The table of contents should indicate that TCE and PCE concentration maps will be included and that Appendix A will include chemical trend figures for select wells.
12. **“Annual Report Table of Contents”, Section 2, Page 6:** This section should include a discussion of the CLEAN wells, VOC mass removal, and VOC migration.