

Fort Ord Environmental Justice Network, INC.

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Report #2

July 8, 2004

Ms. Gail Youngblood
BRAC Environmental Coordinator
Fort Ord Base Realignment and Closure Office
P.O. Box 5004
Monterey, CA 93944-5004

RE: Groundwater Sampling Monitoring Report

Dear Ms. Youngblood:

Please see enclosed report submitted by Fort Ord Environmental Justice Network, for The Administrative Record. Included in this report are comments and questions from the local community members.

If you wish to discuss this report further, please contact LeVonne Stone, FOEJN TAG Program Manager at 831-899-0803.

Thank You,

LeVonne Stone
TAG Program Manager

Enclosure

cc:

Viola Cooper, Project Coordinator

Please sign upon receiving and I will take copy of signature page:

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Comments on:

Draft Report of Quarterly Monitoring

October through December 2003
Groundwater Monitoring Program
Former Fort Ord, California
May 4, 2004

Prepared by
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July 8, 2004

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These comments were prepared at the request of the FOEJN to provide technical comment to the Army and summarize the report for the community

Summary of the groundwater monitoring program

The groundwater sampling program report now addresses all of the groundwater contamination problems on the base. The specific areas in the program are Operable Unit I (Sites 2 and 12), Operable Unit 2, the Carbon Tetrachloride plume (at Lexington Court), and other areas. Results from all these areas are reported together in this document. The Quarterly Monitoring report is the summary of information that the Army received from the contractor (N4ACTEC) on groundwater contamination.

The contractor samples and measures groundwater from wells that have been installed for the purpose of detecting contaminants in the groundwater. The contractor samples two types of wells installed for different purposes. One set of wells is used to determine the depth of the groundwater and the relationship to sea level. The information from these wells is used to estimate the flow of groundwater. The other wells are installed to sample the water for chemicals and other materials in the water; some drinking water wells are also sampled in this part of the program. The groundwater wells were placed in the areas where groundwater is or was contaminated, and in areas beyond the contaminated groundwater. Ideally, one or more wells are located "upgradient" from the contamination- upgradient is comparable to upstream in flowing

surface waters. Other wells should also be placed farther away in areas that are believed to be unaffected by groundwater.

Comments and concerns from FOEJN:

We are not familiar with the company (NUCTEC), nor its employees. We have no way of knowing what was sampled, what contaminants were actually found and to what degree the contaminants registered. In other words, we have no of knowing what was actually found, or how much.

The monitoring program uses three different sampling techniques and devices for obtaining groundwater samples. One method is to suspend special plastic bags in the well and allow organic chemicals to move into the water in the bag. This method is a "passive diffusion bag" and is used in waters when other types of sampling would be difficult, require huge quantities of water, or disturb the water being sampled.

The other kind of sampling is with a special type of well that allows water to be sampled from specific depths in the well, without mixing. This system is called the "Westbay" well and is actually a different kind of well with special ports for sampling.

The sampling system also uses traditional groundwater wells from which water is pumped into sampling containers. Some drinking water wells and one irrigation well are sampled in this group of wells.

Groundwater is sampled quarterly in order to detect changes in contaminant levels (increases or decreases), direction and extent of contamination, identity of chemicals, or any other significant change in the groundwater contamination. The samples must be collected and analyzed by licensed and certified professionals, the samples handled and processed according to requirements listed in the contracts and legal agreements. The samples are taken at a frequency of once per quarter because groundwater movements are much slower than rivers and streams and experience has shown that quarterly monitoring provides the necessary data to identify groundwater problems. Quarterly sampling is also what is required according to federal law.

FOEJN comments and concerns:

We have not seen the licensed and certified professionals. We have no clue as to how the samples are tested, nor have we seen the legal agreement or / and contracts. This is a Federal Superfund, NPL site. Normal procedures do not apply here or at any other such site. In what instances has quarterly groundwater monitoring provided the necessary data to identify groundwater problems? Especially at Federal Superfund, NPL sites?

This report includes an important change in the reporting of groundwater data for Fort Ord- in the future, the groundwater data for OU 1 will not be included in the routine quarterly reports for groundwater, but will be included in a separate report. The Army needs to take some steps to inform the public of this administrative change. At present, the results of all four sampling areas are combined in this report. The future separation of OU 1 data will make the results more understandable. The remaining results need to be better separated in the report so that it is easier to identify specific groundwater sites.

General comments on the Report

The report has no maps that are useful in understanding the report and the data. The Army should insert basic maps that show the location of the groundwater in the Marina area.

The data are contained on a separate CD that is included in the hard copy of the report, making the report difficult to fully understand without a computer. The data are so voluminous that it is not practical to print a hard copy of the data for every report. However, in the interest of public availability, the Army needs to make one hard copy of the data available to the public and inform the public of where and how to view this copy.

The report needs to have a better summary of the tabular data that are on the CD. Presently there is no tabular summary of the chemical data in the report, the report tables, or the appendices of the report. The report should give some indication of what chemicals were measured above the limit of detection, and which chemicals are present at levels above regulatory levels.

The technical data were reviewed to determine if there were any apparent errors, inconsistencies or other problems that would limit or question the use or applicability of the results. There seem to be no problems with the data- the samples were collected according to the protocols, measurements made according to specifications and the results seem acceptable. The qualified data are not out of the ordinary and do not present any particular problem in using the data.

The results do provide some disturbing information regarding the extent and nature of contamination in the groundwater on Fort Ord. The report explains that the OU I area is the place where **fire** training was conducted by putting out intentional fires set with waste solvents, including TCE. Thus, TCE is used as the major indicator of the contaminants in this groundwater. Table 2 reveals that the following chemicals were found in the groundwater above the level of detection:

Freon 113

Methyl ethyl ketone Methylene chloride Carbon tetrachloride Dichloroethene

Other monitoring well result show similar patterns of multiple chemicals:

Tetrachloroethene Trichloroethene Vinyl chloride Benzene

Dichloroethane (2 forms) Dichloropropane Chloroform

Several samples had very high levels of total dissolved solids and chloride, usually together (see samples NV- BW-38-368). These are generally taken as indicators of contamination, which is already known to be a problem in these areas. The changes over time in total dissolved solids and chloride should indicate if the contamination is lessening or becoming worse. The continued high levels of these contaminants indicates that the source of the contamination has not let up in some of these areas- presumable in areas beneath the landfills.

FOEJN comments and concerns:

Looking at a report and viewing the actual process, such as seeing the actual sample Collected, analyzed and tested. Then viewing the results is quit different from reading and analyzing what is already in hard copy form.

Discussion of Results:

Page 11- The results indicate some change in the pattern of TCE contamination of the groundwater in the area. The report indicates that TCF, contamination had extended to another well where TCE had not been previously detected. Although this pattern did not continue, the Army needs to take appropriate action to insure that any extension of the contamination is detected and remedial actions taken to prevent migration into the Bay or other groundwater areas. The decrease in TCE levels is encouraging, but the plume can be expanding or moving while the concentrations decrease. The two processes are related, but not the same, and some actions need to be taken to investigate or prevent further migration.

Page 14 - "TCE concentrations found in wells indicate migration of the plume.
- highest concentration of TCE found in wells NV-BW-41 and W-BW-42"

The report indicates that the present system is not working to capture the contamination and prevent it from moving any farther. The contamination in the groundwaters in this area has clearly extended beyond the previous "boundary". The results indicate that additional remedial actions are necessary and appropriate to prevent further contamination, including of drinking water wells and drinking water sources.

Page 15 - "TCE detected in sample from FO-29 at low levels" - "MCWD has taken precaution of reducing demand from
- this production well to further minimize influence from the OU 2 plume."

Both of these points indicate that the contamination problem continues and may be worsening MCWD is not only wise to restrict use of the production well in question, but as a precautionary measure, the well should be taken off line until the contamination is removed.

Page 16 –“Contaminant Level (MCL) of 0. 5 ug/L is currently used to define plume in this area (OU CTP)".

It is not clear that the strategy of using the California MCL is sufficiently protective. A more protective strategy for defining the plume would be to use any value over the detection limit for carbon tetrachloride.

Page 17 - "The downgradient extent of CT plume in the A-Aquifer, NW of monitoring wells MW-BW-49-A
- and 65-A remains undetermined and will be addressed in the RI/FS."

What actions are underway to determine the extent of the downgradient migration?