

DEPARTMENT OF TOXIC SUBSTANCES CONTROL

Region 4

West Broadway, Suite 425
Fresno, CA 93802-4444
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MCAS EL TORO
SSIC NO. 5090.3.A

May 2, 1996

Mr. Joseph Joyce
BRAC Environmental Coordinator
U.S. Marine Corps Air Station - El Toro
P. O. Box 95001
Santa Ana, California 92709-5001

COMMENTS ON DRAFT QUARTERLY GROUNDWATER MONITORING REPORT AND
DRAFT GROUNDWATER DATA TRENDS AND RECOMMENDATIONS REPORT,
MARINE CORPS AIR STATION (MCAS) EL TORO

Dear Mr. Joyce:

The California Environmental Protection Agency (Cal/EPA) has completed the review of the above subject reports both dated April 18, 1996, prepared by CDM Federal Programs Corporation. The reports present the results of the January-February 1996 groundwater sampling round from a network of 163 monitoring wells/monitoring ports conducted at MCAS El Toro. Also, the reports propose a modified plan for the sampling frequency and analysis program. During the sampling round, groundwater samples were analyzed for volatile organic compounds (VOCs), semivolatile organic compounds, pesticides, herbicides, general chemistry, metals (filtered and unfiltered samples), treatability parameters, and other site-specific analytes.

The reports are well written. The enclosed comments have been coordinated between the Department of Toxic Substances Control (DTSC) and the Regional Water Quality Control Board (RWQCB). The RWQCB concurs with DTSC comments. Please incorporate the agreed upon changes, where appropriate, and send us a response to comments along with a revised document.

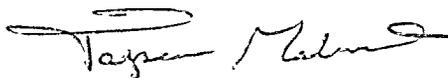


RECYCLED PAPER

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Thank you for your cooperation. If you have any questions, please call me at (310) 590-4891.

Sincerely,



Tayseer Mahmoud
Remedial Project Manager
Base Closure Unit
Office of Military Facilities
Southern California Operations

Enclosure

cc: Ms. Bonnie Arthur
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cc: Ms. Sherrill Beard
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DEPARTMENT OF TOXIC SUBSTANCES CONTROL

Region 4
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MEMORANDUM

TO: Mr. Tayseer Mahmoud
Office of Military Facilities
Region 4

FROM: Sherrill Beard, RG *Sherrill Beard*
Geological Services Unit
Region 4

Concur: Karen Baker, CHG *Karen Baker*
Geological Services Unit
Region 4

Larry Vitale (*Verbal Concurrence 5/2/96*)
Regional Water Quality Control Board
Santa Ana Region

DATE: 02 May 1996

SUBJECT: Comments on "Draft Quarterly Groundwater Monitoring Report and Draft Groundwater Data Trends and Recommendations Report, Marine Corps Air Station El Toro, California"

As requested by the Office of Military Facilities, the Geological Services Unit (GSU) of the Department of Toxic Substances Control (DTSC) have reviewed the documents entitled Draft Quarterly Groundwater Monitoring Report and Draft Groundwater Data Trends and Recommendations Report, Marine Corps Air Station (MCAS) El Toro, California, both dated 18 April 1996. These documents were prepared by CDM Federal Programs Corporation (CDM) for Southwest Division Naval Facilities Engineering Command (Navy).

The following items are a compilation of GSU and the Santa Ana Regional Water Quality Control Board (RWQCB) comments. GSU and the RWQCB concur that the next quarterly groundwater sampling event should follow the same protocol as the January-February 1996 sampling event, unless otherwise noted in the comments below. Additionally, it is recognized that many of the monitoring wells included in this groundwater sampling event have not been sampled for over two years, and therefore, inherent and unavoidable problems would occur during CDMs first round of sampling. Some of the comments below reflect these problems, and we encourage the Navy to address such problems before the next groundwater sampling event occurs.



Mr. Mahmoud

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General Comments

1. Water level measurements - GSU and the RWQCB agree with the recommendation to change from monthly to bi-monthly water level measurements.
2. Pesticide and herbicide sampling - GSU and the RWQCB agree with the recommendation to change to semiannual sampling for pesticides and herbicides to confirm non-detect results from the January-February 1996 round.
3. Section 5.0 Recommendations - Neither GSU nor the RWQCB can agree with the recommendations for sampling round 5 or 6 until the round 4 data is collected, analyzed, and reported. Furthermore, to adequately evaluate the groundwater data and the recommendations, please allow more review time than was given for the sampling round 3 reports.
4. Please collect samples for volatile organic compounds (VOCs) analysis from extraction wells 02NEW14 and 02NEW 13 during round 4 of the groundwater sampling program. These wells are currently being installed as part of the vacuum assisted and conventional groundwater extraction pilot study. The BCT has agreed to pump 02NEW13 for an extended amount of time, not only to generate data for aquifer parameters, but also to possibly reduce TCE concentrations. Data collected from these wells during the round 4 sampling event would help to determine if the extraction pilot test was successful in regard to mass removal.
5. Please add all new monitoring wells that were installed during the remedial investigation (OU-2A and OU-2B) into future groundwater sampling events.
6. Please include all groundwater data generated from the remedial investigation (OU-2A and OU-2B) in the next quarterly groundwater report.
7. In addition to the summary tables provided, please provide one comprehensive data table which includes all analytes.
8. Figures showing base boundaries in CDM documents are different than the base boundaries shown on figures in Bechtel documents. Please reconcile this discrepancy.
9. Chemical constituents with concentrations above regulatory standards, such as MCLs, should be flagged in all data tables.

Specific comments

Draft Groundwater Data Trends and Recommendations Report

1. Section 3.2.5 Concentration Trends For Selected Areas, Page 3-24: The text states "The reduction in concentration of the primary VOCs of concern particularly under a regime of increasing regional water levels, suggests that the source(s) of VOCs to the Main VOC plume are not contributing VOC mass at levels which were documented during the Phase I RI." This statement may or may not be true, however, at this time in the investigation it is difficult to substantiate. It is recommended to delete this sentence until further evaluation is completed.
2. Figure B-1, Groundwater Monitoring Wells: Please include an explanation for the symbol (☉) in the legend.
3. Appendix A, Table A-1: Either provide a separate table from Table A-1 with a summary of well completion and pump installation information such as Table 3-4 in the 21 July 1994 CH2MHill document, MCAS El Toro...Draft Groundwater Monitoring Program Plan, dated 21 July 1994, or indicate in the title of Table A-1 that there is also well completion data. For example, title the table "Water Level Measurements, Groundwater Elevations, and Summary of Well Completion".

Draft Quarterly Groundwater Monitoring Report

1. Section 2.2 - Groundwater Sampling and Analysis, Page 2-3: The last paragraph of this section discusses problems which occurred while sampling multiport monitoring wells containing dedicated packers. The section refers the reader to Table A-1, Appendix A with the presumption that the problem wells would be identified. However, it is unclear from Table A-1 which wells housed packers that would not pressurize properly. Furthermore, it is reported that monitoring wells with damaged packers were sampled with either a submersible two-inch pump or manual bailer. Due to the construction of multiport wells it is necessary to physically separate well ports with packers to collect groundwater samples from discrete intervals or mixing between intervals will occur. Therefore, it is unclear how representative samples from discrete intervals were collected if the reported sampling techniques was implemented.

It is recommended that the packers be replaced in the appropriate wells before the next sampling event or possibly implementing micropurging techniques during groundwater sampling. Also, please provide an explanation in the final editions of the subject document outlining the sampling procedures at multiport wells with damaged packers, including support showing that reported analytical data represent discrete depth intervals.

2. Section 2.3 - Air Entrainment Evaluation, Page 2-3: Please elaborate on the air entrainment evaluation. As reported, only two of the eight wells were included in the air entrainment evaluation because of inoperable pumps. However in the two wells with operable pumps, field teams observed the presences of entrained air during purging, then varied the discharge rate and pumping water level to eliminate the air entrainment. At what depth was the pump set relative to the waterlevel in the well? How was the sample collected, with a bailer or through the constant speed four-inch pump? How was the discharge rate varied on a constant speed pump? Was the discharge outlet downsized with a nozzle? If the wells were sampled with the constant speed pump only, it is recommended to sample both with the pump and a bailer for all eight wells during the next sampling event and then compare the data. If there are not discrepancies between the data collected with the constant speed pump and a bailer, this information may support, and alleviate any question regarding previous VOC data originating from wells with four-inch constant speed pumps.
3. Appendix C; Table C-1: Many of the reported dissolved oxygen values are very high and the redox values are probably inaccurate. These type of field parameters are difficult to collect properly and precautions should be taken to decrease the questionable nature of the results. Therefore, it is recommended whenever measuring dissolved oxygen and/or redox a flow through cell be used. With regard to redox, when groundwater is brought to the land surface and into contact with air, the redox system in the water may be quickly overwhelmed by reactions involving oxygen. Hence, a measurable redox potential may be obtained, but most likely not a measurement that is representative of the groundwater. Since these field parameters will most likely be used to support the Navy's geochemical model, developed to show concentrations of inorganics in groundwater are not affected by base activities, these field parameters should be collected with the utmost care.

If you have any questions or need clarification please call me extent 5528.