



# Department of Toxic Substances Control



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MCAS EL TORO  
SSIC #5090.3

March 18, 1999

Mr. Joseph Joyce  
BRAC Environmental Coordinator  
U.S. Marine Corps Air Station - El Toro  
AC/S, Environmental (1AU), BRAC Building #899  
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Santa Ana, California 92709-5001

Dear Mr. Joyce:

## COMMENTS ON DRAFT GROUNDWATER REMEDIATION PILOT TEST REPORT, SITE 24, MARINE CORPS AIR STATION (MCAS) EI TORO

The Department of Toxic Substances Control (DTSC) has reviewed the above subject document dated December 23, 1998, prepared by Bechtel National Inc. The report presents the rationale, methodology, and results from the groundwater remediation pilot test work that was conducted between July 1997 and July 1998 at Site 24, the Volatile Organic Compound (VOC) Source Area, at MCAS El Toro. The pilot tests evaluated standard and vacuum-enhanced groundwater extraction and groundwater injection based on their effectiveness to remediate or contain VOCs in groundwater.

DTSC comments are as follows:

Overall, the report is well written and adequately describes the evaluation of vacuum-enhanced groundwater extraction at Site 24. DTSC generally agrees with the findings and recommendations based on the results of the pilot tests.

The report states that "Vacuum-enhanced groundwater extraction increased the well yield in all wells except 24EX5, where a higher pumping rate could not be tested due to limited injection well capacity". Extraction well 24EX5 had the highest well yield and the largest capture zone using vacuum-enhanced extraction but the least improvement of VOC removal compared to normal groundwater extraction. This apparently was caused by not dewatering the well to allow



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soil vapor extraction to occur. The report states that well 24EX5 could have been pumped at a higher rate but was maintained at forty gallons per minute in order not to exceed the capacity of the nearby injection well. Since VOC extraction at other wells increased as a result of removing VOCs from groundwater and soil vapor, well 24EX5 should have also been pumped to evaluate VOC removal from soil vapor.

Please elaborate on the rationale for not attempting to increase the pumping rate at 24EX5. Thank you for your cooperation. If you have any questions, please call me at (714) 484-5418.

Sincerely,



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Remedial Project Manager  
Office of Military Facilities  
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