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

March 16, 2009

Mr. Sean Joyce
City of Irvine
One Civic Center Plaza
P.O. Box 19575
Irvine, California 92623-9575

RE: Potential for Vapor Intrusion from Trichloroethylene in Ground Water under the City of Irvine due to Ground-Water Contamination from the Former Marine Corps Air Station El Toro

Dear Mr. Joyce:

I am writing in response to your letter of February 19 to Rich Muza of my staff regarding the potential for vapor intrusion (VI) from trichloroethylene (TCE) in ground water under the City of Irvine due to the former Marine Corps Air Station (MCAS) El Toro. We understand your concerns and hope that we will be able to address your issues to the extent possible in this letter.

The EPA Region 9 Superfund Program has been overseeing the investigation and cleanup of contamination from station operations since listing this facility on the National Priorities List (NPL) in February 1990. Our records for the former MCAS El Toro date back to the late 1980s when we first became involved with the NPL listing for this facility. EPA's involvement at this site is focused primarily on the oversight of the United States Department of the Navy (Navy), the lead agency for the investigation and cleanup of MCAS El Toro. Two sites on the facility were determined to have ground water contaminated with TCE. Cleanup actions for the source areas of these two TCE plumes have been accomplished and remedial actions to clean up the ground-water contamination and assure long-term protection of public health and the environment are ongoing.

With regard to the potential VI exposure pathway from TCE in ground water under the City of Irvine, the Navy previously assessed the potential for the VI pathway on the former station. The highest concentrations of TCE in ground water have been detected in the Shallow Ground-Water Unit (SGU) on the former station. The "Final Technical Memorandum, IRP Sites 16 and 24, Indoor Air Risk Evaluation, Former Marine Corps Air Station El Toro, California" (Bechtel, June 2004) concluded that "no action is required and no restrictions on reuse of these two sites are necessary relative to this potential exposure route." EPA and the State of California concurred with the conclusions of this on-station assessment of the potential VI exposure pathway.

For the off-station TCE plume no formal assessment of risk from the potential VI exposure pathway has been performed as the existing water-quality database for the off-station SGU monitoring wells does not show levels of TCE that would warrant such an evaluation. The Navy performs routine monitoring of ground water in the off-station plume under the City of Irvine and submits reports with the TCE results to EPA and the State of California. To date no TCE has been detected in any of the water-table monitoring wells in the SGU that are located in the off-station neighborhoods in the City of Irvine. The lack of TCE detections in ground water at the water table suggest that no quantifiable levels of TCE are available to off-gas into the unsaturated zone. As noted in the "Interim Final Guidance for the Evaluation and Mitigation of Subsurface Vapor Intrusion to Indoor Air" (California EPA Department of Toxic Substances Control, December 2004), "contaminants at the top of the water table, rather than deeper contamination, are responsible for causing potential vapor intrusion problems." Therefore, without TCE present at detectable concentrations in water-table monitoring wells located in the off-station neighborhoods in the City of Irvine, the data does not suggest that a potential threat to indoor air quality exists in the neighborhoods through the VI pathway. EPA will continue to assess the results of the off-station water-quality monitoring of the SGU with focus on the water-table monitoring wells data to assure that conditions do not change from those seen to date. The Navy is required to monitor the ground water until the remedial actions in place for ground water have attained of cleanup goals.

As the Navy is the lead federal agency for MCAS El Toro, they will be completing a Five-Year Review of the on-going Superfund remedies in 2009. At the recent site inspections EPA requested that the Navy consider reassessing the previous VI evaluations for Sites 16 and 24 to confirm that there continue to be no issues. Further, due to recent public concerns alluded to in your February 19th letter, EPA asked that the off-station potential for the VI pathway also be addressed in the Five-Year Review.

Prior to completion of this work, EPA recommends that you contact the Navy for any additional information that they might have on assessment of the VI pathway. The Navy point of contact for MCAS El Toro is Ms. Debra Theroux He can be reached by phone at 619-532- or by email at debra.theroux@navy.mil. In addition, the Navy operates a public information repository in Building 307 on the former station that includes a collection of reports and documents used in the selection and monitoring of the on-going ground-water restoration efforts (contact Ms. Sue Rawal at 949-726-5398).

If you have any other questions or comments, please do not hesitate to call Rich Muza of my staff at 415-972-3349 or e-mail him at muza.richard@epa.gov.

Sincerely,

Claire Trombadore, Chief
Air Force and DOE Section
Federal Facilities and Site Cleanup Branch