



DEPARTMENT OF HEALTH & HUMAN SERVICES

Public Health Service

Agency for Toxic Substances  
and Disease Registry  
Atlanta, GA 30333

July 1, 2014

Mr. Frank Vera III

Dear Mr. Vera:

Thank you for your April 19, 2013, email to the Agency for Toxic Substances and Disease Registry (ATSDR). In your email and conversations with Ms. Libby Vianu, ATSDR Regional Representative, you described your concerns regarding the former George Air Force Base (AFB) located near Victorville, California. You indicated the public health assessment (PHA) released in 1998 may not accurately describe the level of contamination in the groundwater beneath the golf course or the risk of the groundwater contaminants to drinking water wells located east of the base. Additionally, you asked us to address several concerns that were beyond the scope of the original PHA. You asked that ATSDR consider the information you provided and to update the PHA and address, to the extent possible, some of your most pressing questions. This letter provides information on ATSDR's Petition Program, how ATSDR reviewed your request to update the PHA, and the information gathered from sharing your questions with United States (US) Air Force staff.

ATSDR's Petition Program was established by Congress in the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA, also known as Superfund). The Program is designed to determine whether people have been, or are currently being, exposed to harmful levels of substances released into the environment from a hazardous waste site or facility. These evaluations are based on the available environmental sampling data typically collected by the US Environmental Protection Agency (EPA), state, and local regulatory agencies. It is also important to note that ATSDR is a non-regulatory public health agency and does not investigate or evaluate actions or activities conducted by other agencies.

ATSDR reviewed the information you provided in your website (<http://www.georgeafb.info/>). ATSDR also requested and received documents from the US Air Force that provided information concerning the groundwater contamination beneath the golf course that was not described in the 1998 PHA. After reviewing the information from both sources, ATSDR concluded that the additional information does not change the conclusions or recommendations presented in the original PHA. As a result, ATSDR will not conduct any additional activities to update the 1998 PHA.



ATSDR did identify the following reports concerning the previous practice of using George AFB waste water treatment plant effluent to water the golf course:

- November 1986, Installation Restoration Program Phase II – Confirmation/Quantification Stage 2, George AFB, California: Well water samples were obtained from the Air Force Base Water Supply Wells 1, 2, and 8; Victor Valley Waster Wastewater Reclamation Facility Well 01; and Oro Grande Wells 150E, 150W and 650. All of these public wells are near the golf course and down gradient (although they withdraw water from a deeper aquifer). No VOCs were detected in these well samples. To date, monitoring of these wells has not detected any VOCs at levels of health concern.
- November 1986, Installation Restoration Program Phase II – Confirmation/Quantification Stage 2, George AFB, California: The three private wells near the golf course were sampled three times. Only chloroform (a known laboratory contaminant) was confirmed twice at each home and methylene chloride (another known laboratory contaminant). Trichloroethylene (TCE) was detected only once in one of the private wells at a level just above the detection limit but below health comparison values. That well was sampled an addition two times and TCE was not detected in any of those samples.
- August 1988, Installation Restoration Program Remedial Investigation Report, George AFB: Environmental investigations at the Sewage Treatment Plant Percolation Ponds did not detect any VOCs above health comparison values in the soil or groundwater. The water from the Sewage Treatment Plant Percolation Ponds was used to irrigate the golf course. It is important to note that the process of irrigating the golf course would have likely striped out VOCs before they had an opportunity to impact the golf course groundwater.
- July 2011, Final Third Five-Year Review for the former George AFB: That document provides a detailed description geology and hydrogeology of the area and the distribution of groundwater contaminants beneath the golf course. That document indicates groundwater beneath the golf course contains areas with elevated dieldrin concentrations. Dieldrin was first detected in the groundwater in 1994. Additional investigations, most conducted since 2000, have been used to determine the extent of the groundwater contamination. The City of Adelanto has a supply well in the area that is periodically monitored for VOCs and dieldrin. As of July 2012, dieldrin and VOCs have not been detected in the city's well ([http://www.ci.adelanto.ca.us/index.asp?SEC=5BC02820-E8CA-4882-BDEF-56D4910F95A5&Type=B\\_BASIC](http://www.ci.adelanto.ca.us/index.asp?SEC=5BC02820-E8CA-4882-BDEF-56D4910F95A5&Type=B_BASIC) )

The previous investigations indicate the groundwater contamination under the golf course is the result of pesticide preparation and application that occurred during the construction maintenance of the base housing and maintenance of the golf course. The pesticides were applied to the surface soil and a portion was carried to the underlying aquifer as irrigation water moved through the soils. Dieldrin, a termiticide commonly used between 1950 and 1970, is the primary contaminant of concern. After multiple investigations, no VOC contamination has been found under the golf course. In addition, no TCE has been detected in off-site drinking water wells at levels of health concern.



Currently, the US Air Force is developing a corrective action plan to address the environmental and public health concerns associated with the dieldrin groundwater contamination. That plan has been reviewed by the Lahontan Regional Water Quality Control Board, the lead regulatory agency with the responsible for protecting human health, the environment, and water quality. The Water Board has reviewed the draft corrective action plan and submitted their comments to the US Air Force. The US Air Force will address those comments in the final version of the plan. ATSDR has shared your concerns about groundwater contamination under the golf course with colleagues at the Water Board.

In your conversation with Ms. Vianu you shared your concern that you may have been exposed to radioactive materials contained in an unmarked barrel and disposed in an unmarked location in an undeveloped area of the base. You described the health effects you experienced after contact with the barrel and reasons for believing the contents were radioactive. You asked ATSDR to assist you in gathering information about the contents of the barrel. ATSDR contacted staff at several different US Air Force offices requesting additional information about past investigations of sites where radioactive materials may have been disposed. ATSDR received a copy of the RW-09 Site Characterization Report Operable Unit 3 George Air Force Base, California report released in March 1995. The document described the results of radiological and chemical sampling conducted in multiple excavation trenches located in the Southeast Disposal Area. The results presented in that report were described in the 1998 PHA and do not provide any new information related to potential radiological exposure.

In your conversation with Ms. Vianu you also shared your concern that women stationed at George AFB were advised by the base medical personnel to not become pregnant during their stay. You asked ATSDR to assist you in gathering information on why this advice was given. ATSDR described your concern to colleagues at the US Air Force Surgeon General's office and requested any information they may have regarding that type of recommendation. The US Air Force Surgeon General's office responded that they were not aware of any policy that would have recommended that women at George AFB not become pregnant. In addition, they did not identify any information related to this concern.

In summary, ATSDR investigated all of your questions and concerns and did not identify any information that would change our previous recommendations and conclusions found in the 1998 PHA. I appreciate your concerns about the environmental contamination that occurred at the former George AFB during its operational years and concerns that you and others may have been exposed to those contaminants while stationed at the base or living near the base. The US Air Force continues to investigate and remediate the environmental contamination at the base. If any new information or data becomes available that indicates the public may be exposed to site-related contaminants, ATSDR will reevaluate our decision to not conduct additional activities to update the 1998 PHA.

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Thank you for forwarding your concerns to ATSDR. If you have any additional questions regarding ATSDR's process to review this petition request please contact Dr. Sven Rodenbeck, acting Western Branch Petition Coordinator, at (770) 488-3660 or email at [SRodenbeck@cdc.gov](mailto:SRodenbeck@cdc.gov).

Sincerely,

A handwritten signature in black ink that reads "Tina Forrester". The signature is fluid and cursive, with the first name "Tina" and last name "Forrester" clearly distinguishable.

Tina Forrester, Ph.D., M.S.  
Acting Director  
Division of Community Health Investigations  
Agency for Toxic Substances and Disease Registry

bcc:

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ATSDR:DCHI:WB:SRodenbeck:DM:7/1/2014

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Spelling Verifier DMurphy