



Guardian

America's First Choice for Environmental Restoration

A Publication of the Environmental Restoration Program

Travis Air Force Base, California

October 2006

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Viewpoint:

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For the first time, a member of the Travis AFB Environmental Restoration Staff has left the program to tackle different cultural as well as environmental challenges and then returned to finish the job he started..... **3**

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(Photo by Rob Pexton [CH2M HILL])

Rig Work: Field team members carefully collect groundwater samples from a soil boring, using a hydropunch sampler. Hydropunch is a method of water sample collection that does not require an established well. The water samples will be analyzed for chlorinated solvents.

Doubling the Dual Phase

System Upgrade Designed to Improve Cleanup Performance

By Glenn Anderson

Travis Project Manager

Have you ever tried to remove soap from a sponge? It seems that there is always a little bit of soap in the rinse water, even after numerous squeezes. After a while, you are happy with a sponge that is "clean enough".

A groundwater cleanup of dissolved solvents is equally challenging when there is a lot of clay in the soil, because the clay acts like a sponge and grabs onto the solvents and releases them slowly. So, the most effective way to clean up solvents is to start the cleanup while they are in a pure form, before they get the chance to dissolve into the local ground-

water and become a groundwater contaminant.

Dual-Phase Extraction (DPE) is a technology that can remove solvents from the subsurface in an efficient and cost effective manner. As the name implies, it involves two phases: liquid and vapor. A groundwater pump extracts contaminated water from the subsurface and transports it to a treatment plant for processing. An attached vacuum line transports contaminated vapor from the subsurface to a treatment plant.

One of the advantages that DPE systems offer over traditional pump-and-treat systems is the ability of the vacuum line to lower the local water table and expose pools of pure

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John Foster, *City of Fairfield representative*

Alan Friedman, *Regional Water Quality Control Board*

John Lucey, *U.S. EPA*

Cyrus Morad, *Fairfield resident*

Eamon Moriarty, *Goodrich Corporation*

Michael Reagan, *County Supervisor 5th District*

Jose Salcedo, *Cal. Department of Toxic Substances Control*

William Taylor, *Travis Unified School District*

Philip Velez, *Vacaville Ch. of Commerce*

The *Guardian* is a publication of the 60th Civil Engineer Squadron's Environmental Restoration Program (ERP). The newsletter is designed to inform and educate the public about the base's ongoing environmental cleanup program. Contents expressed herein are not necessarily the official views of, or endorsed by, the U.S. government, the Department of Defense, or the Department of the Air Force. Additional information about the program can be obtained from the public website at <http://public.travis.amc.af.mil/enviro>. Questions and comments about the program may be sent to this address:

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An Air Force Advocate

Readers of this newsletter and those community members who are interested in environmental cleanup are probably aware that the process for making technically accurate and cost effective cleanup decisions is not an easy one. It involves several federal and state regulatory agencies that follow different laws and regulations. It takes into account a number of scientific and engineering disciplines. And, it requires a dedicated organization to coordinate the flow of information to all interested parties and to keep the focus on a successful outcome.

Basically, it is the people involved with the process that determine the quality of the cleanup decisions, and there are times when the lines of communication between groups of people break down. This happens between organizations as well as within the same organization. It can be caused by the way an organization conducts business, it can be due to different personalities, or it can be due to factors outside of the decision process entirely. Let's face it; when it comes to people, anything can happen!

Sometimes, it takes an outside set of eyes and ears to help get the decision-making process back on track, and this is where we come in. My name is Dr. Bahia Zarah, and I am the Regional Environmental Officer (REO) for California. I work in the San Francisco Western Regional Environmental Office (WREO), a forward-deployed section of the Air Force Center for Environmental Excellence (AFCEE). Along with two sister Regional Offices in Dallas and Atlanta, we serve as an advocate for local Air Force organizations when it comes to environmental and encroachment issues. We support environmental compliance and restoration projects, pollution prevention and conservation through partnering and developing sound cleanup and compliance strategies with local regulatory agency representatives. We are also engaged in minimizing the effects of encroachment such those that may occur from the planned construction of wing energy generating facilities or energy corridors near Air Force facilities.

Each REO consists of a director, three



VIEWPOINT

Dr. Bahia Zarah
Regional Environmental Officer

regional environmental officers, three co-located attorneys from the Air Force Legal and Operations Agency, six program managers, and an office manager. Each program manager focuses on specific areas of expertise. In our office, they cover water issues, natural and cultural resources, hazardous materials and pollution prevention, restoration issues, air compliance, and state project planning.

As far as restoration issues are concerned, we see several challenges that the Air Force (as well as other military and private industrial facilities) will face in the coming years. Emergent chemicals are those that have not received a lot of scientific study and have no cleanup levels. Although most regulatory agencies encourage industrial facilities to begin cleanup operations when an emergent chemical has been released, it is not possible to know when the cleanup action is complete without a cleanup level.

Stable funding of environmental cleanup projects is another challenge, particularly when there are so many other demands on taxpayer dollars, such as the global war on terror. So far, we have not seen any cuts to military cleanup budgets as a result of our increased operational tempo, but we realize that the Air Force cleanup program has a finite life and a foreseeable end date. The cleanup program started in the mid 80's and was originally forecasted to end by the early 2000's. Unforeseen conditions have stretched the end date to around 2010-2012.

On the positive side, we view the Travis cleanup program as exemplary. It was very encouraging and heartwarming to learn that the Regional Water Quality Control Board chose Travis AFB as a place to showcase its cleanup and compliance

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Phase

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solvents to moving soil gas. Solvents evaporate into soil gas much quicker than they dissolve in water. As a result, a high percentage of the solvents are removed via the vapor phase.

In 2000, a DPE system was tested at the base battery and electric shop, where a former battery acid neutralization sump had been used to dispose of solvents as well as battery acid. Over 250 pounds of solvents were removed by the DPE system in a very short period of time, and 99.3 percent of this material was removed via the vapor phase. As a result of this successful test, a permanent single-well DPE system was installed in 2001.

"We believe the best way to clean up this site is to deal with the most contaminated area first," stated Mr. Mark Smith, Travis Remedial Program Manager. "Pure solvents are heavier than water, and it is difficult to clean up groundwater when a pool of solvents sits beneath the water table and slowly dissolves into the water."

Recently, the base installed a second

Duke of ERP

By Glenn Anderson

Travis Project Manager

It has been over five years since the April 2001 Guardian reported that Mr. Lonnie Duke, an environmental protection technician, was leaving the Environmental Flight to assume duties at Aviano Air Base (AB) in Italy as an environmental protection specialist.

Today, he's baaaaack! And he's better than ever.

Mr. Duke took over the environmental field manager responsibilities from Mr. Steve Stopher, who retired from federal civil service last September.

Although he is assigned to the Restoration Branch and will oversee soil and groundwater cleanup activities, he will also work with the Compliance Branch to verify that construction projects are complying with



DPE well at the battery and electric shop to improve the ability of the DPE system to remove the remaining amount of pure solvents from the subsurface. The selection of the location of the new well was based on the highest concentrations of solvents in the local soil gas. Soil gas is the air found between individual sand grains. Theoretically, there can be pure solvents mixed in with subsurface soil near areas where the soil gas contains high solvent concentrations.

With a second well, the DPE system will pump twice the amount of groundwater and potentially increase the exposure of the solvents to soil gas. It will also increase the area that the system covers.

"We will continue to carry out optimization efforts to all of our remedial processes to speed up groundwater cleanup and reduce the time needed to reach cleanup goals," Mr. Smith said. "The ultimate goal is to shut down the pumps and call it a successful cleanup, and we hope that actions such as this one will get us there."

environmental laws and regulations.

There was a whole lot more to his European assignment besides the occasional visit to Vienna and trips to the wine country. Mr. Duke was the first U.S. civilian assigned to the Aviano AB Environmental flight. He was assigned to manage the base hazardous waste, and toxics programs. With his knowledge of U.S. and State of California hazardous waste laws, he was quickly recruited to participate as

an assessor for the Headquarters U.S. Air Forces in Europe Environmental Compliance and Management Program (ECAMP) team. ECAMP is a comprehensive compliance inspection of a facility's environmental programs; it verifies that the

facility is complying with appropriate environmental laws and regulations. As an ECAMP assessor, he evaluated programs in England, Germany and Turkey. He also performed Staff Assistance Visits at

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efforts as part of the Water Boards' semi-annual Department of Defense Roundtable meeting in Sacramento.

As I implied earlier, people make this job interesting, which is why I enjoy it so much. Similar to the top three factors for real estate success (location, location, and location), our office has its own top three success factors: relationships, relationships, and relationships. We cannot imagine how any cleanup decision could be made without establishing working relationships between the regulators and the regulated, between the scientists and the attorneys, between the contractors and the project managers, between the base and the local community. It is in the development of relationships where we see our biggest gains.

Just a few final thoughts: as an AFCEE satellite office, we do not set Air Force policy. Rather, we assist bases in implementing policy. This allows us to act as an intermediary between groups with similar goals but different viewpoints. As the local Air Force advocate, we are a resource center and a sounding board for innovative ideas and potential solutions to environmental challenges. So, to the members of the Travis Environmental Flight, we say that we love to hear your success stories, and we will always be there to back you up when needed.

several other locations in Italy and assisted the 16th AF with waste disposal concerns.

When Lonnie Duke arrived at Aviano AB, the Kosovo conflict was still under way. He assisted the Turkish, Canadian, Spanish and Royal Air Force with hazardous waste disposal issues, earning him the NATO Kosovo Medal. Also, his work with the U.S. Army and Air Force during Operation Iraqi Freedom and the Global War on Terror earned him the US Air Force Exemplary Civilian Service Award.

"Although my tour to Aviano was very rewarding, it feels great to be back home," stated Mr. Duke. "I learned so much while overseas and look forward to applying those new skills to my new position at Travis."

Meeting Agenda

6:30 - 7:00 p.m. Open Forum:

The open forum allows RAB and community members to discuss ongoing Travis AFB restoration program activities with the Travis AFB environmental staff on a one-to-one basis.

7:00 - 9:00 p.m. RAB General Meeting

- I. Welcome and Introduction to New RAB Members
- II. Approval of Minutes
- III. Additional Agenda Items and Questions
- IV. Discussion Topics
 - NEWIOU Soil ROD
 - DP039 Groundwater Optimization
- Break
- V. Cleanup Program Status
 - Performance Based Contract Award
 - EOHAMP Results
 - Water Board Visit
- VI. Regulatory Agency Reports
- VII. Focus Group Reports
- VIII. RAB/Public Questions
- IX. Set Time and Place for Next RAB Meeting
- X. Set Focus Group Meeting Times

Adjourn

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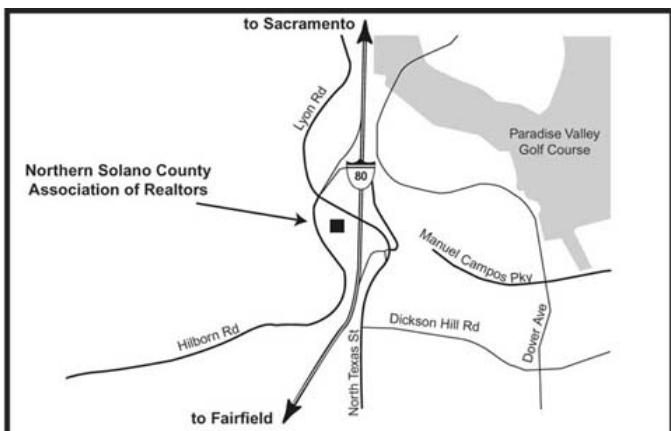


If you would like more information or need special accommodations for the RAB meeting, please contact Mark Smith, (707) 424-3062. You can also view our web site at <http://public.rabvis.af.mil/enviro>

Travis AFB Restoration Advisory Board Meeting

October 26, 2006
7 p.m.

Northern Solano County
Association of Realtors
3690 Hilborn Rd
Fairfield, CA



LOCATION OF INFORMATION REPOSITORIES

Vacaville Public Library

1020 Ulatis Drive
Vacaville, CA 95688

(707) 449-6290

Monday-Thursday: 10 a.m.

- 9 p.m.

Friday-Saturday: 10 a.m. -
5 p.m.

Sunday: 1 p.m. - 5 p.m.

Fairfield-Suisun Com. Library

1150 Kentucky Street
Fairfield, CA 94533

(707) 421-6500

Monday-Thursday: 10 a.m.

- 9 p.m.

Friday-Saturday: 10 a.m. - 5
p.m.

Sunday: 1 p.m. - 5 p.m.

Mitchell Memorial Library

510 Travis Boulevard
Travis AFB, CA 94535

(707) 424-3279

Monday-Thursday: 10 a.m.

- 9 p.m.

Friday: 10 a.m. - 6 p.m.
Saturday: Closed

Sunday: 12 p.m. - 6 p.m.

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