



Guardian

America's First Choice for Environmental Restoration

A Publication of the Environmental Restoration Program

Travis Air Force Base, California

October 2004

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(Photo by Dale Malsberger)

Remote Pumping Station: Two extraction wells use solar arrays as a source of electrical power to bring contaminated water up from the subsurface and to transport it to a local treatment plant. An off-base monitoring well sits north of the base boundary.

Solar Powered Solution

Innovative Design Harnesses Sun's Energy to Complete Groundwater Cleanup

By Dale Malsberger
Travis Project Manager

'Pump and Treat' is the standard approach for cleaning up contaminated groundwater, but Travis Air Force Base applied a little innovation when installing an extraction and monitoring system to resolve the last of its off-base groundwater issues.

LF007 is a former municipal landfill just inside the northeastern boundary of the base, and Area C (LF007C) is a small solvent plume that had migrated up

to 200 feet off base to the north. A plume is a body of contaminated groundwater, and at LF007C the contamination consists primarily of trichloroethylene (TCE), an industrial solvent once used at the base.

Over the last two years, the base completed the system design and the installation of all wells needed to monitor and clean up the plume. Groundwater sampling and analysis had shown that the plume had moved a short distance from the base and that a small extraction system was needed to remove the off-base portion of the plume. The base decided to install a solar-powered



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Visit our Environmental Restoration Program web site at <https://public.travis.amc.af.mil/pages/enviro>



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- Dick Curtis, *N. Solano County Realtors*
- John Foster, *City of Fairfield representative*
- David Kanouff, *NARFE*
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- Ron Tolentino, *Solano Garbage Company*
- 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 <https://public.travis.amc.af.mil/pages/enviro>. Questions and comments about the environmental cleanup program may be sent to the following base Public Affairs office address:

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Questions and comments about the environmental web site may be sent to:

enviropa@travis.af.mil

New Co-Chair Joins RAB

By Linda Weese
 Travis Public Affairs

Col. Scott Hanson will join the Restoration Advisory Board as the Air Force co-chair at its Oct. 28 meeting.

Colonel Hanson is the vice commander of the 60th Air Mobility Wing at Travis Air Force Base and the chairperson of the base's Environmental Protection Committee.



"I'm looking forward to being involved in our restoration programs," Colonel Hanson said. "Taking care of Travis AFB in a way that minimizes negative impacts on the environment while accomplishing our mission is critical.

"During my first few months, I will be reviewing past environmental issues and getting up to speed on current issues and concerns that impact Travis. I will attack the most environmentally threatening issues first and remain aggressive toward the remediation of other sites," he said.

"Being good stewards of the environment, Team Travis will continue to be up front about what we find, what clean-up measures we will take, and avoid practices that could lead to new clean-up sites that will effect future generations. Staying in compliance with environmental

standards as well as tracking and reporting is an integral part of our mission," said Colonel Hanson.

"As an outdoors enthusiast I am attuned to environmental issues, and look forward to working with state and federal agencies as a member of the Restoration Advisory Board," he said.

As vice commander of the 60th AMW, Colonel Hanson serves as the assistant to the commander for leadership in Air Mobility Commands largest air mobility wing, supporting 26,000 active duty, reserve and civilian personnel and their families.

Before assuming his current position at Travis in July, Colonel Hanson's command tours include the 99th Airlift Squadron, Andrews AFB, Md, where he operated a fleet of specially configured aircraft supporting the President, Vice President, members of the Cabinet, U.S. Congress, and other U.S. and foreign senior statesmen.

Colonel Hanson earned his Bachelor of Arts degree from Luther College, Decorah, Iowa in 1980. He also received a masters degree from Embry-Riddle Aeronautical University in 1994.

Colonel Hanson is a command pilot with over 3,300 hours in the T-37, T-38, KC-135, KC-10, C-20 and C-37.

Outgoing Air Force co-chair, Col. Mike Sevier, is now the Inspector General for 12th Air Force at David-Monthan AFB, Ariz. 

Power

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system to pump contaminated groundwater from two extraction wells at the site.

Several restrictions made the use of solar powered pumps a good

choice. There is a large vernal pool above the plume that has to be protected, the former landfill is located in a remote portion of the base, and the plume is small in size and contains low contaminant

Power

■ From page 2

concentrations. A vernal pool is a type of wetland that is wet during part of the year and is home to a number of unique plants and animals. As a result, a small extraction system meets all design criteria.

Groundwater extraction began in August 2004 at a rate of approximately four gallons per minute. The two pumps are powered by 90-Watt photovoltaic solar arrays during daylight hours and will operate when there is no standing water in the surrounding vernal pool each year (approximately April 1 to November 1).

“A significant benefit with the solar arrays is the cost savings,” stated Mr. Mark Smith, Travis AFB Environmental Program Manager. “We eliminated the need for a step-down electrical transformer, electrical control circuits, electrical conduit, and wire. We also avoided the cost of complex storage batteries by operating the system only during daylight hours.”

Each pump has enough power to transfer the contaminated water to the North Groundwater Treatment Plant for treatment and disposal. The reduced operating hours attains complete capture of the off-base portion of the plume while reducing the amount of treated water that is sent to an irrigation system or to Union Creek for disposal.

“We will be looking for other opportunities to use this technology at other groundwater cleanup sites, remarked Mr. Smith. “The life expectancy of the solar panels exceeds thirty years, so they will operate until the groundwater at this site is clean. Since we have not tapped into the base electrical power grid, this approach offers the most cost-effective and environmentally-friendly remedy available.”



(Photo by Tom Sreenivasan)

Wall Drilling: Site workers use an auger rig to install footings for a sound wall at the Central Groundwater Treatment Plant. The finished wall reduces the ambient noise from the water treatment equipment and meets base architectural standards.

Keeping Cleanups Quiet

New Sound Walls Protect Workers and Equipment

By Tom Sreenivasan
Travis Chemical Engineer

Travis recently wrapped up its 2004 construction season with the completion of two sound walls around its two most visibly active groundwater treatment plants to improve hearing protection for base workers.

Like most industrial facilities, the Central Groundwater Treatment Plant (CGWTP) and the West Transfer and Treatment Plant (WTTP) consist of combinations of pumps, motors, vacuum blowers and other types of rotating equipment that generate noise at levels in excess of 100 decibels. These equipment networks create an environmental problem for base personnel who work in nearby offices or who occasionally travel near the plants.

“By installing these sound walls, we should be able to reduce the noise levels by at least 30 percent,” stated Mark Smith, Travis Remedial

Program Manager. “Plus, they provide several other aesthetic and structural advantages.”

Each wall consists of ribbed concrete masonry blocks that are of the same color, texture, and architectural style that is prescribed for all structural features in the Travis Architectural Guide. The CGWTP and WTTP walls are approximately 414 feet and 184 feet in length, respectively. Each wall is 6 foot, 8 inches high and presents a 10 foot clearance around each containment pad.

Along with noise reduction, sound walls significantly reduce the exposure of treatment plant equipment to strong winds and other adverse weather conditions.

“I also see these walls as another way to protect our environmental cleanup investment,” remarked Mr. Smith. “Our treatment systems were built to last, but the walls serve to reduce the wear and tear on equipment components and keep the plants running for years to come.”

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 Status
 - Indoor Air Quality
 - Mosquito Abatement

Break
- V. **Cleanup Program Status**
 - LF007C Groundwater Action
 - Sound Wall Construction
- 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

Travis AFB Restoration Advisory Board Meeting

October 28, 2004
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.



or view our web site at <https://public.travis.afm.af.mil/pages/enviro>

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