



# Guardian

America's First Choice for Environmental Restoration

A Publication of the Environmental Restoration Program

Travis Air Force Base, California

January 2009

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### Viewpoint:

Actually, there are three viewpoints this time. Dr. Javier Santillan from the Air Force Center for Engineering and the Environment evaluates the progress made in the Travis AFB restoration program. Mr. David Cooper, a federal Environmental Protection Agency regulator, promotes community involvement in the program. And Mr. Glenn Anderson from Travis AFB offers his viewpoint on viewpoints.....**2,3,6**

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(Photo by Dale Malsberger (Travis))

**Solar Sustainability:** Solar arrays have been providing electrical power to two groundwater extraction pumps in the northeast corner of Travis AFB since 2004. Future groundwater cleanups will use solar and other sustainable technologies to reduce reliance on the base electrical power grid.

## Green Sustainable Cleanups

### Energy Usage Is A Big Focus In Environmental Cleanup

By Lonnie Duke

Travis Environmental Project Manager

Regardless of one's personal feelings about the subject, Global Warming is no longer just another concept that focuses on saving polar bears and glaciers. It is a serious driver of government policy that is having an increasing impact on our lives.

Closely associated with global warming are energy generation and consumption, because the energy industry is one significant source of carbon dioxide that contributes to global warming. Our country's energy policy is being revised based on both environmental and geopolitical considerations; the big push

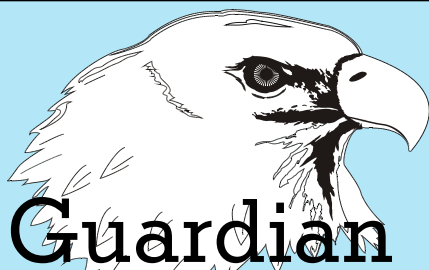
nationwide is to establish environmentally-friendly energy sources that are sustainable.

Sustainability is also more than another buzz word; it encompasses environmental, economic and social actions that impact almost every aspect of our lives. Wikipedia describes sustainability as the ability to meet current needs without compromising the ability to meet future needs.

The Environmental Protection Agency has even incorporated energy considerations into the way that we carry out cleanup actions. Recently, it developed the strategy of Green Remediation or GR. GR is the practice of considering environmental impacts of cleanup activities at every stage of the remedial process in order to maximize the net

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



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# Travis Cleanup On Track

A team of Air Force and consulting scientists reviewing the environmental cleanup program has found that base officials managing environmental cleanup will meet or exceed key milestones. The accelerated progress made at Travis AFB means base environmental officials are on track for early compliance with the Air Force goal of implementing "Remedy-in-Place" at all bases by 2012. The advisers say continuing to focus on several polluted areas near the flightline and base border, where solvents used to clean aircraft parts and machinery pose cleanup challenges, will set the stage for negotiations with State of California officials to "closeout" base-wide cleanup efforts.

The 11-15 August 2008 expert review is part of a unique program sponsored by the Air Force Center for Engineering and the Environment (AFCEE) to assist bases by providing an intense, week-long evaluation of cleanup efforts to ensure they are protective, efficient, timely, and that decision-makers are informed. These "Environmental Restoration Program Optimization" (ERP-O) reviews are conducted to accelerate the closure of sites that are poised to enter the final stages of environmental cleanup.

ERP-O reviews led to the closure of 45 specific polluted sites on Air Education and Training Command bases last year and have sped up the pace of closures by a minimum of 5 years across the board. The reviews promote cost-effective cleanups with an emphasis on effectiveness. This ensures cleanups are protective and promote a range of other health, community, administrative, and pollution-reduction benefits.

The ERP-O team of engineers, scientists, regulatory specialists and water experts tour base sites where contamination is being addressed, study reports, and perform new analysis of information. After 5 days of careful review, they then brief regulators, the base, and other Air Force environmental officials on their findings. In addition, they collaborate with base officials in discussing the recommendations and can also get out in the field to measure results upon request.



## VIEWPOINT

Dr. Javier Santillan  
AFCEE Restoration  
Technical Division

The ERP-O team evaluating Travis AFB recommended some reductions in monitoring while continuing to ensure that areas undergoing solvents and fuel cleanups make progress. They urged careful tracking of the performance of pollutant removal systems and suggested turning off some water- and energy-intensive contaminant removal options when the systems are no longer capturing pollutants. These technologies draw water from wells underground and pump it towards a treatment plant to remove contaminants like solvents and jet fuel. Base managers could re-consider using this approach at specific points in favor of other less water- and energy-intensive methods as the base has done elsewhere, according to the advisers. Travis environmental managers have made significant strides in ensuring "green" technologies are used in cleanup efforts, including using solar-powered wells, tracking carbon dioxide emissions to minimize climate change impacts, and considering the costs and use of energy in selecting cleanup options, the ERP-O experts found.

Travis's ERP-O focused on the challenge of addressing solvents and fuel contamination under the flightline and other restricted areas. The base's approach to cleaning up these areas has been effective to date and the ERP-O advisers urged the base to continue to develop the program by setting decision criteria to ensure cleanup technologies are performing efficiently. Updating missing information pictured in a "conceptual site model," which depicts the types of soil and the movement of underground water and pollutants, will help guide cleanup efforts as base managers prepare to discuss the closeout of cleanup efforts with the approval of State of California regulators, the advisers said.

# Travis AFB: An EPA Perspective

## VIEWPOINT

David Cooper  
EPA Community In-  
volvement Coordinator



Travis AFB has a long history with its surrounding communities. When it came time to clean up legacy waste from its years of helping defend America, it again looked to its neighbors to become involved.

Travis AFB is on the National Priorities List (commonly called the Superfund List) of contaminated sites where the federal government has lead cleanup responsibility. The federal law that directs and organizes that effort acknowledges that Americans have a right to be involved in the government decisions that affect their lives. Travis AFB has a Community Involvement Plan that organizes its program to involve the public in the cleanup decision-making process.

The cleanup program operates as a team with the regulatory community, which includes the federal Environmental Protection Agency and two parts of the State of California Environmental Protection Agency. The base has already accomplished a significant amount of cleanup work.

### Past Successes

Following a public comment period and the signing of the cleanup decision documents for the North/East/West Industrial Operable Unit (NEWOU) and West/Annexes/Basewide Operable Unit (WABOU), most of Travis AFB's contaminated soil was excavated and consolidated to an area called a Corrective Action Management Unit (CAMU). In total, about 21,522 cubic yards of soils were placed in the CAMU.

Soil with contaminant concentrations that exceeded the CAMU acceptance levels were taken to an approved off-base disposal facility. Due to funding constraints, cleanup activities for a number of soil sites for the NEWIOU have been

deferred to 2009.

Travis AFB had extensive groundwater contamination, include a plume that stretched beyond the base boundaries, so the environmental team did not wait to act. After a public comment period, two preliminary cleanup decisions were made that resulted in interim groundwater cleanup systems operating at multiple sites. The treatment systems have been in place since January 1996 and have removed over 16,000 pounds of volatile organic compounds (VOCs).

### Future Work

The base is working to complete its final Basewide Groundwater Remedy. The public is encouraged to be a part of that process by providing public comments to the proposed plan that will be released after all studies are completed.

As part of the requirement for developing the final basewide groundwater cleanup plan, Travis AFB is conducting a vapor intrusion assessment study to determine if there are indoor air concerns that may have to be addressed. The vapor intrusion assessment data is currently under review.

Also in the future, Travis AFB will be conducting a public comment period for its final cleanup plan for the Potrero Hills facility. Currently, the base is waiting for the State Water Board to complete its oversight of the company doing cleanup work. This process is expected to take several more years.

### Five-Year Review Completed

At all Superfund sites where the final cleanup remedy leaves waste in place, federal law requires that the cleanup systems be evaluated every five years to see if they are operating correctly and to make any changes that improved health science or technology deem appropriate. The public is notified at the beginning of the process so that interested parties can learn about site conditions and, in particular, can offer any information they might have on the performance of the cleanup systems.

Travis AFB has just completed its

second Five-year Review and the results show that the cleanup systems are operating as designed and that all health risks are being controlled.

### Ways to learn more and be involved

There are multiple ways that the public can be involved in the cleanup decision-making process at Travis AFB. The best first step is to be added to the base's mailing list, which is used to distribute fact sheets on the cleanup, the Proposed Plan for the Basewide Groundwater Remedy, and "The Guardian," the base's quarterly publication from the Environmental Restoration Program. Contact Mr. Glenn Anderson at (707) 424-4359 to be placed on the mailing list.

The Proposed Plan is the key public participation document in the federal cleanup program. During the comment period associated with the plan, Travis AFB asks the public to comment on all of the cleanup alternatives it has identified, and in particular on the base's preferred remedy.

Information on Travis AFB's cleanup investigations and technology feasibility studies is available in its Information Repositories at three nearby libraries (Vacaville, Fairfield-Suisun Community, and Mitchell Memorial). In addition, many of those documents are available on the Travis AFB web site: <http://public.travis.af.mil/enviro>.

One of the best ways to learn about the cleanup program and talk to Travis AFB's environmental experts is to attend a semi-annual stakeholder meeting called the Restoration Advisory Board (RAB). The public can ask questions, provide comments and hear presentations on the status of cleanup actions and future cleanup plans. The meetings and their agenda are announced in "The Guardian."

### Public Participation: An American Right

Public participation is an American right and a privilege. Travis AFB has a number of ways to support that right,

See **VIEWPOINT2** page 5



# The Next Generation of Cleanups

Bioreactor Gets Rid of Groundwater Contaminants in Environmentally-Friendly Manner

**By Glenn Anderson**

Travis Environmental Project Manager

Like most industrial facilities with groundwater issues, Travis AFB has relied upon mechanical technologies to clean up contaminated groundwater. The base has built large networks of extraction wells to pump contaminated water out of the ground. It has also built four treatment plants to remove contaminants from the water.

Known as "pump-and-treat," this approach has effectively reduced contaminant concentrations and decreased the size of the contaminated areas at every site on base. In the October 2007 edition of the Guardian, the base reported that over 8 tons of solvents had been removed from groundwater.

Unfortunately, to reach that milestone, over a billion gallons of groundwater had to be extracted and treated. The operation of water pumps and treatment plants require a lot of electrical power, which comes from the base electrical power grid. Pumps and plants also require upkeep and maintenance for proper operation. Between power requirements and equipment maintenance, pump-and-treat is not cheap. Its annual operating cost is nearly \$500,000.

In addition, as concentrations drop, the plants have to process more water to extract the same amount of contaminant. In other words, pump and treat works great at highly contaminated sites, but it becomes less efficient over time. "The example we often use to describe this challenge is the squeezing of soap from a sponge," says Mr. Mark Smith, Travis AFB Remedial Program Manager. "A lot of soap comes out from the first few squeezes, but over time less soap comes out with the same amount of effort. After a while, you are getting almost clean water, but the sponge is still not completely clean. So, we need a new way to get rid of residual contamination, complete the groundwater cleanup,

and close these sites."

While building these treatment systems at its facilities, the Air Force has also been evaluating biological and chemical technologies to see if they offer improvements in cleanup and cost efficiency. Most of these technologies involve the injection of a material into the subsurface to stimulate biological or chemical processes that break down contaminants. These technologies tend to have much lower power and upkeep requirements, so their maintenance costs are also lower. However, the injected material is often a unique chemical compound, so the initial costs of starting this sort of groundwater treatment can be high. Also, they work only when



*Heavy equipment operators excavate the area around a former battery acid neutralization sump to prepare for the installation of an in situ bioreactor.*

there is enough injected material in the subsurface to keep the processes going. When the material runs out, more of it has to be injected where it is needed.

Recently, the Air Force Center for Engineering and the Environment (AFCEE) began to test a treatment system that offers the advantages of both Pump-and-Treat and biological treatment with few of their disadvantages. Known as an in situ bioreactor, it uses inexpensive organic material to promote biological cleanup. "In situ" is a term that means "in place," so the bioreactor treats groundwater contaminants wherever they are present.

Travis AFB is one of several Air Force installations where a bioreactor will be

built and evaluated. The Travis test site is a former battery acid neutralization sump that was used to get rid of solvents as well as battery acid. At the start of the cleanup, the battery acid was gone, but the solvents were present in high concentrations. A pump-and-treat system removed a significant amount of solvents from the subsurface, but the residual contaminants cling to clay soil and are hard to extract.

Construction of the bioreactor began in early November 2008 and ended in mid-January 2009. The AFCEE Technology Transfer Office provided the funding and technical support for this project, and CH2M HILL is the prime environmental contractor that is overseeing the construction and testing of the bioreactor.

Once turned on, the bioreactor will undergo a sixteen-month evaluation period to determine whether it can reach groundwater cleanup goals or whether additional cleanup is not technically or economically feasible. Eventually, the cleanup area will enter a rebound period to see if the contaminants are detected after system shutdown. At the end of the project, Air Force

and environmental regulatory agency representatives will decide on future cleanup actions at the test site.

"Travis AFB has a history of promoting innovative ways to clean up the environment," says Mr. Smith. "Our engineered tree plantings, vegetable oil injection tests, and use of solar power panels are all in line with the current EPA view of cleaning the environment while reducing electrical power consumption and green house gas emissions. However, this bioreactor represents the next generation of groundwater technologies that could potentially reduce cleanup times from decades to months, significantly reduce funding requirements, and eliminate altogether the need for fossil fuel-generated electricity. It is exciting to be a part of this endeavor."



# Viewpoint

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Travis officials are successfully working with cleanup contractors and are well-ahead of broader Air Force goals of having cleanups in place at all bases by 2012. As their work approaches finalization, the Travis AFB environmental team can now begin planning for the future by preparing "exit strategies," which are plans to closeout cleanup efforts. The process is challenging because of the need to meet both state and federal standards, and AFCEE is providing support to the base in addressing this with the relevant authorities.

According to AFCEE Program Management Office representative Roger Wilkson, "The ERP-O review points the way toward key steps that will improve the performance and management of the Air Force cleanup program, accelerate discussions with state regulators, and foster a collaborative effort to meet program goals."

The ERP-O team recommended that planning now for closeout is warranted, especially as responsibility for the next phases of site cleanup will be assumed by AFCEE in 2009. Other ERP-O visits took place in 2008 at bases in Alaska, Ohio, Utah and many other areas, including some overseas locations. For more information on ERP-O programs, see the program description on the AFCEE web site: <http://www.afcee.brooks.af.mil/products/rpo/default.asp>.

*Dr. Santillan is a Subject Matter Expert in Restoration Engineering with the Environmental Restoration Branch of AFCEE's Technical Division. Articles on AFCEE's latest advances in environmental cleanup can be found in CenterViews, the quarterly AFCEE newspaper, which can be found at <http://www.afcee.af.mil/publications/centerviews/index.asp>.*

# Viewpoint2

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including helping educate the public with its documents, responding to public input during comment periods, and supporting RAB meetings for face-to-face discussions of the base's program. With the public's help, Travis AFB will successfully complete its cleanup responsibilities.

# How It Works

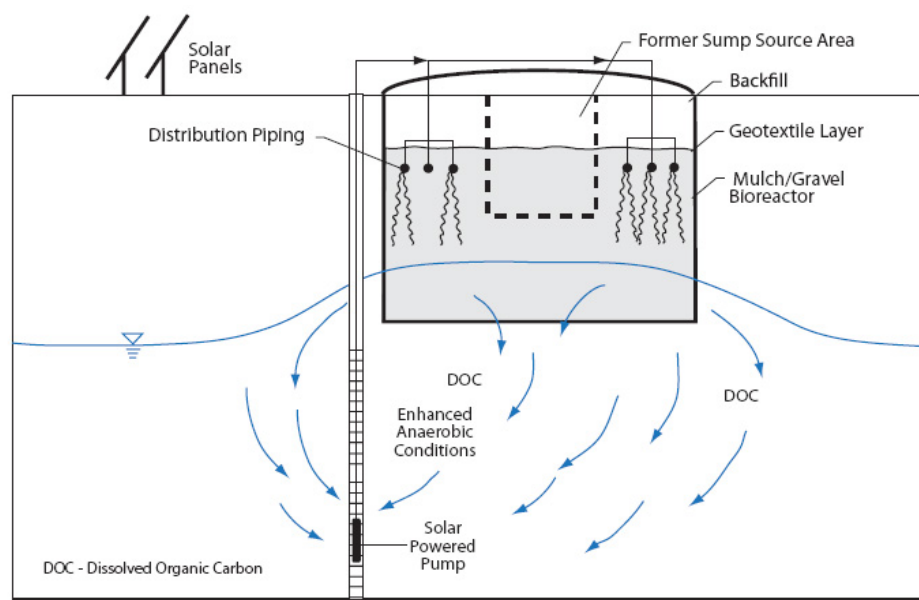
The Travis AFB bioreactor has a lot in common with a household coffee percolator. A pump draws contaminated groundwater from a nearby extraction well. The groundwater is then sprayed over a column of organic material and an iron sands/gypsum mixture.

The organic material is mulch from the shredding of branches and leaves from

clay particles where contaminants are hiding, treatment takes place 'in place.'

Eventually, the water is drawn up by the pump again, and the cycle continues. The recirculation of contaminated groundwater through the bioreactor increases the time that the water is in contact with the mulch and iron sulfides; this promotes a more complete conversion of the solvents into harmless compounds.

Also, some of the DOC-rich water will



on-base eucalyptus trees. When the mulch decomposes, it releases dissolved organic carbon (DOC) into the local groundwater. The DOC supports the growth of naturally-occurring bacteria that break down contaminants and reduce the amount of oxygen in the groundwater, which the bacteria need to thrive. The bacteria also grow on mulch particles, so they remain in contact with both the organic material and the contaminants; this also promotes contaminant destruction.

The iron sands and gypsum create iron sulfides when wet. The iron sulfides further degrade the contaminants, contributing chemically to the treatment process and increasing the longevity of the reactive material.

After percolating through the column, the DOC-rich water reenters the local water table where it can reach contaminated areas (such as layers of tight clay) that are normally not accessible by standard pump-and-treat methods. Generally, it is a lot easier to place a chemical into clay than to extract it out. Because the DOC can reach

escape from the recirculation pathway and continue to move with the local groundwater flow. When this happens, the DOC is chasing the contaminants that previously flowed away from the source area, increasing the treatment area. Thus, the bioreactor concept is superior to many standard treatment technologies that attempt only to draw contaminants out of the nearby soil.

To jumpstart the biological processes in the bioreactor, two tons of vegetable oil were sprayed over the mulch/iron/gypsum column during construction. The vegetable oil promotes microbial growth and the establishment of an oxygen-poor environment for the bacteria.

Unlike your coffee maker, the pump within the Travis AFB bioreactor is powered exclusively by the sun's rays. Solar panels generate sufficient energy to keep the water flowing through the column, even on cloudy days. Of course, the pump shuts down at night, but this just gives the bacteria more time to do their work. So, this cleanup technology is truly sustainable.

# A Viewpoint on Viewpoints



## VIEWPOINT

Glenn Anderson  
Travis Environmental  
Project Manager

Did you notice that there is more than one viewpoint presented in this edition of the Guardian?

Although there have been many opportunities for Travis AFB personnel, federal and State of California environmental regulatory agency representatives, and Restoration Advisory Board members to share their thoughts and perspectives with the Guardian readership, there has always been only one viewpoint in each edition.

This is not really a surprise. All of the past Viewpoint contributors selected their words carefully, reflecting their personal writing style and their desire to be clearly understood.

At the same time, these contributions took time and effort to be put together. Often, they had been so busy with the immediate tasks at hand that they really had no time to put their opinions down on paper. But, with a little prodding, there was always one hard-working individual who came through for us.

Just to be clear, a viewpoint represents a particular point of view of its author, but it is written in the author's own words. A submitted viewpoint is published as is, whereas a regular article is always edited and revised (sometimes significantly) to ensure that the subject matter is discussed clearly and completely. There are often two or more contributors to an article, so it is usually a group effort. There is only one contributor to a viewpoint.

So, when you read a viewpoint, you are getting a message that is exactly as the author intended. In the interest of full disclosure, previous editors (including myself) have made spelling corrections and fixed grammar errors to improve readability. After all, we all make the occasional mistake. Also, we check with a viewpoint author whenever something seems to be missing or confusing, just to make sure that his/her word processor did not accidentally delete a paragraph. How-

ever, we never make changes without the author's consent.

For the most part, past viewpoints have been fairly positive. They rarely point fingers and assign blame, and they use words that can be freely spoken in front of your mother or favorite religious leader. Does this mean that everyone agrees with one another, that there are no professional conflicts, and that the Travis AFB stakeholders act as one big happy family?

Not at all. Whenever decisions involving budgets and schedules are made, there is usually some level of disagreement, especially when there is more than one way to get the job done. Plus, the big decisions usually require negotiation, and there is always the potential for conflict during negotiations. The way that conflict is resolved depends primarily on the professionalism of the people involved.

Although past contributors have had the freedom to write their viewpoints in a negative tone (and we would have published them as such), their underlying messages actually reflect positively on their management skills and leadership qualities. The most effective managers understand that the decision-making process is a team effort, so the successes and failures of the team are shared equally among its members. Their fingers point in the direction of progress, and they understand that constructive criticism may be a necessary ingredient for success.

Getting back to the two previous viewpoints, they were written by two supporters of the Travis AFB restoration program that come from completely different backgrounds. One is a project manager from the Air Force Center for Engineering and the Environment, and the other is a community involvement expert from the U.S. Environmental Protection Agency. One has attained significant educational achievements, and the other is pursuing a military reservist career. The list goes on.

Yet, they contribute to the restoration of more than one government facility and are seen as problem solvers in their particular areas of expertise. Their writings reflect their commitment to the professional goals of their agencies, and we are grateful that

they are a part of our team. We also appreciate their time and willingness to share their thoughts with us.

Well, that is my viewpoint.



## Green

■ From page 2

environmental benefit of a cleanup. These considerations include remedy selection, energy requirements, efficiency of on-site activities, and reduction of impacts on surrounding areas.

This is a change in mindset over how cleanup activities were, and in some cases still are, being conducted. During the 1990's, remediation activities focused on cleaning up contaminants but did not consider the big picture, such as the impact to air quality, energy usage and greenhouse gas creation. For example, digging up contaminated soil and trucking it to a landfill has been the answer for years at hundreds of cleanup sites across the country. However, no one considered that the digging and hauling was done by carbon monoxide-, nitrous oxide-, particulate matter-belching diesel trucks and equipment that fouled the air that we breathe.

So how does this affect Travis AFB? Here is an example. Longtime Guardian readers know that Travis AFB has been aggressively working to clean up contamination since the 1990's. Our first groundwater treatment system began operations in 1996 and has treated nearly 11,000 lbs of chlorinated solvents over the years. However, a part of the system treats soil vapor by Thermal Oxidation, meaning the contaminated soil vapor is burned up and destroyed. In order to burn the solvents in the soil vapor, they are mixed with natural gas and then ignited in a high temperature burner to ensure complete destruction. In one year this process uses over \$40,000 of natural gas, over \$12,000 of electricity and emits over 200 tons of Carbon Dioxide (CO<sub>2</sub>), a greenhouse gas. For every pound of TCE treated, 1120 pounds of CO<sub>2</sub> are generated and released to the atmosphere! By switching to activated carbon treatment, as the base plans to do, the amount of natural gas used will be reduced to zero, and CO<sub>2</sub>

See **GREEN** page 8



# The Bioreactor's Little Engine

**By Glenn Anderson**

Travis Environmental Project Manager

When most people think of bacteria, they reach for the soap or anti-bacterial liquid. These little microbes are lumped into the broad category of critters that spoil food in refrigerators or give you the common cold. However, one particular strain of bacteria serves as the workhorse behind the bioreactor.


Its name is *Dehalococcoides* (DHC), and it has been the subject of intense investigation by the DoD, universities and environmental contractors for years. It is a round, flat microbe that is only 5 one thou-

sandths of a millimeter in diameter. Like most bacteria, it lives in the soil beneath us. And it loves chlorinated solvents.

DHC obtains energy by stripping the chlorine ions off of chlorinated molecules, such as trichloroethene (TCE), replacing them with hydrogen. This process, known as reductive dechlorination, converts TCE into a series of daughter products, from dichloroethene to vinyl chloride and finally to ethene. Once all of the chlorine ions are removed from the solvent molecule, it is no longer considered a toxic material.

Reductive dechlorination is the foundation for most biology-based solvent

cleanup strategies. These strategies focus on ways to promote DHC growth and create the conditions that encourage it to consume chlorinated solvents on a large scale. The most effective commercial solvent cleanup products generate the highest rates of reductive dechlorination under controlled environmental conditions.

So, a successful bioreactor needs bacteria that are both comfortable and hungry! It provides both food and improved living conditions for the DHC compared to the surrounding soil, so these microbes quickly multiply and increase the bioreactor's ability to break down contaminants. 

## How To Build A Bioreactor

Conceptually, a bioreactor seems easy to put together. You just dig a big hole, fill it full of yard waste and gravel, hook up an irrigation system, and flip on the switch. However, the success or failure of this approach to groundwater treatment depends on a number of small but important details.



(Photo by Glenn Anderson)

Before the bioreactor construction could start, the excavation area had to be cleared of a concrete extraction well cap and steel vault that were part of the initial groundwater treatment system (A). The



(Photo by Glenn Anderson)

extraction well itself was preserved so that it could support future groundwater remedies, if needed. A second extraction well nearby is the source of recirculating water.

The Travis Bioreactor is 20 feet long, 20 feet wide and 20 feet deep. A square trench box was used to keep the walls of the excavation void from collapsing while



(Photo by Lonnie Duke)

the excavation was taking place (B).

Once the excavation was complete, a mixture of mulch and iron sands/gypsum (C) was poured into the excavation void in discrete layers. After each layer was in




(Photo by Lonnie Duke)

place, it was sprayed with vegetable oil. The void was filled almost to the top of the original ground surface.

A PVC irrigation pipe frame was built and tested to ensure that it could distribute water over the surface of the reactive material (D). It was placed on top of the bioreactor, hooked up to a recirculation



(Photo by Glenn Anderson)

well, and covered with a layer of gravel (E). Finally, the excavation area was covered with clean soil, and a solar panel was hooked up to the pump system (F). 



(Photo by Glenn Anderson)

# Green

■ From page 6

generation will be significantly reduced.

Another example is the use of solar power to run two pumps that support groundwater cleanup in the northern part of the base, as described in the October 2004 Guardian. The use of solar power means that this groundwater cleanup does not rely on electrical power from the base electrical grid, so it does not create any greenhouse gases.

Travis AFB will continue to use solar power and other GR strategies to promote environmental cleanup while being good stewards of the nation's energy resources and reducing the overall carbon footprint of the base.



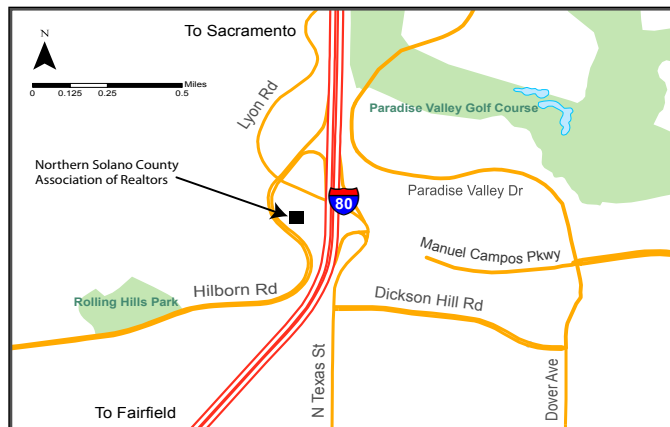
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## Travis AFB Restoration Advisory Board Meeting

April 23, 2009  
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:** Closed

**Saturday:** 12 p.m. - 6 p.m.

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

*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.travis.af.mil/enviro>*

**For more information about Travis AFB's restoration program, please contact:**  
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