



Guardian

America's ~~First~~ Choice for Environmental Restoration

A Publication of the Environmental Restoration Program

Travis Air Force Base, California

July 2018

Award-Winning

INSIDE

Viewpoint:

The Travis AFB Restoration Program Manager read the main article in this newsletter concerning the way his program supports the base's missions and found it to be incomplete. So, he added the Rest of the Story..... **2**

Next RAB Tour:

Because the 2018 field schedule is so fluid, and it is not easy to get everyone together during the summer, the members of the Travis Restoration Advisory Board will be invited to tour the base when specific soil cleanup actions are taking place..... **4**

Editor's Corner

In February I bought my first smart phone. Months later, I still view with child-like amazement all of the cool things that it can do. So far, it has replaced a dumb phone, digital music device, laptop, GPS navigation aid, watch, notepad, dozens of cookbooks, and most of the stuff in my wallet. Yes, I am hooked on this technological marvel but still worry about its security (and what will happen if the battery dies). Also, its browser cannot access all of the information on our environmental program website, which saved my laptop from the recycling yard. Minds smarter than mine are working on these compatibility issues, but in the meantime, cherish the past by picking up a newspaper!



(Display by Charles A. Lauberth (Burns & McDonnell))

The Concept in Construction: This artistic display shows the conceptual design for the new KC-46 Pegasus three-bay hangar. It will be the largest hangar on Travis AFB and will allow work on three aircraft at the same time. The small square to the left of the aircraft is the bioreactor system.

Cleanup and Construction

How Travis Restoration Efforts Support a new Weapon System

By Glenn Anderson

Travis Environmental Project Manager

Avid readers of the Guardian are well aware of the basic mission of the Travis AFB Environmental Restoration Program (ERP): to clean up past soil and groundwater contamination and to protect human health and the environment. They also know that we focus on innovative technologies and strategies that accelerate the cleanup process and reduce cleanup times and costs. Usually, when a cleanup action is finished, the story ends there.

However, an aspect of the ERP that is rarely mentioned is the direct impact of the cleanup work on the Travis AFB mission. How does the excavation and disposal of contaminated soil help our airmen to improve their strategic airlift, aeromedical evacuation, and aerial refueling capabilities and support their warfighting efforts? Does the ERP increase the value of Travis AFB as a vital contributor to this nation's defense?

Whenever an installation receives a new weapon system to improve its mission capabilities, one of the first critical tasks to bring the weapon sys-

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Visit our Environmental Program web site at <http://www.travis.af.mil/About-Us/Environment>



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The *Guardian* is published by the Air Force Civil Engineer Center's Western Region Restoration Support Team, located at Travis Air Force Base. The newsletter is designed to inform and educate the public about the ongoing environmental cleanup program at Travis Air Force Base. 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 web site at <http://www.travis.af.mil/enviro>. Questions and comments about the program may be sent to this address:

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The Rest of the Story...

Paul Harvey was a famous radio broadcaster who would begin a story, pause for a commercial, and then add a surprising and entertaining finish. As it turns out, there is more environmental support for the construction of a new KC-46 Pegasus three-bay hangar than just soil and groundwater cleanup as mentioned in the main article.

Near the footprint of this new state of the art facility lies a solvent plume. When volatile compounds are dissolved in groundwater, there is a potential for them to move out of the water, enter the air between soil particles above the water table (known as soil gas), move with the soil gas to the area beneath a building, and enter an office space through cracks in the building foundation. This occurrence is called Vapor Intrusion (VI), and it can result in a human health hazard to building occupants who breathe this contaminated air.

To ensure that the future occupants of the new KC-46 hangar are protected from any potential VI risk, I am working with the regulatory agency representatives, base civil engineers, and the building design team to develop design specifications for VI mitigation and have them added to the construction plans for this facility.

A key feature for VI mitigation is the construction of a geomembrane liner under the building's foundation. A geomembrane liner is a synthetic liner or barrier made of any geotechnical material that controls fluid (or gas) migration into a human-made structure or system. The liner will physically prevent the flow of any vapors that may come out of the groundwater from entering the new hangar.

But there's more! Under the office spaces that will be continuously occupied inside the hangar, we will place a Passive Ventilation system. A passive ventilation



VIEWPOINT

Lonnie A. Duke
 Travis AFB Restoration
 Program Manager

system is a series of slotted pipes that will be installed under the geomembrane and will terminate outside the hangar. Contaminated vapor that collects under the geomembrane liner will enter the slots in the pipes and flow out of the pipes into the atmosphere where the ultraviolet radiation in sunlight will break them down into harmless compounds.

How can we be certain that these mitigation measures work after the hangar is built? As an additional safety measure, we will collect soil gas samples from the passive ventilation system and send them to a laboratory for analysis. If the analytical results show that contaminated vapors are collecting under the geomembrane liner, we will retrofit the passive ventilation system with air pumps to increase its air flow. This forced vapor removal will ensure that VI does not occur. Sampling ports installed under the liner for soil gas collection will provide another way to confirm that VI mitigation is working.

As you can imagine, it is taking lots of emails and phone calls with all parties involved in this process over the last several months to identify and approve the final design. Since the Airmen that will use the new hangar deserve a safe place to work, it is very important to take the time to design the facility correctly. When all of this design work is behind us, I will look forward to seeing construction start on this crown jewel of a hangar and the arrival of a new airframe, the KC-46 Pegasus refueler!

And THAT is the rest of the story!



Construction

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tem onto the installation is the construction of supporting infrastructure, such as maintenance buildings and office space. For example, when Travis AFB welcomed the “Spirit of Solano,” the first of thirteen new C-17 Globemaster III cargo aircraft, on 8 August 2006, the maintenance hangars and ground equipment needed to operate and maintain the C-17 were already in place and ready to go to work.

In January 2017, Air Force officials announced that Travis AFB was one of two preferred

installations to receive the new KC-46A Pegasus refueling aircraft. Although this was exciting news, it was also the start of considerable long-term planning for the construction of maintenance buildings specifically designed for this airframe.

The jewel of the KC-46 facility layout is a three-bay hangar that will be built just north of the main aircraft parking ramp. The footprint of this huge facility will cover several 1950’s-era buildings, so the construction effort will start with a number of building demolitions, starting in 2019. This footprint also covers two areas of surface soil contamination associated with past aircraft maintenance activities.

To ensure that the construction of the three-bay hangar is not

delayed, the cleanup of the surface soil contamination must take place during the 2018 summer construction season. The Travis ERP staff is coordinating this cleanup action with federal and State of California environmental regulators to ensure that it fits in with the hangar design

sembles an underground percolator that creates the conditions needed for microscopic organisms to break down groundwater contaminants into harmless compounds. The October 2010 Guardian describes the bioreactor in more detail.

“We have been working with

regulatory agency representatives and the design contractor to add the decommissioning of old wells and the construction of new wells to the hangar design specifications,” said Mr. Duke. “Groundwater cleanup has to continue during the hangar’s construction



The Future in Refueling: The KC-46 Pegasus is a military aerial refueling and strategic military transport aircraft developed by Boeing from its 767. The KC-46 can carry 114 passengers and over 106 tons of fuel. The KC-46 will replace the older KC-135 Stratotanker aircraft. This stock photograph shows the KC-46 in action with another Travis AFB weapon system, the C-17 Globemaster III cargo aircraft.

and construction schedule while complying with all environmental laws and regulations.

“We have to get rid of the contaminated soil this year before the building demolition starts next year,” said Mr. Lonnie Duke, Travis AFB Environmental Restoration Program Manager. “Fortunately, we have the funding and services contract to carry out this work.”

Not surprisingly, the cleanup of soil contamination is not the only environmental challenge associated with this hangar project. The footprint of the new hangar also covers a number of groundwater monitoring wells and a portion of the underground infrastructure, including a 300-foot horizontal extraction well, that supports an adjacent bioreactor. A bioreactor re-

and after the first KC-46 arrives on station. Fortunately, everybody involved with this project has been very supportive, and the bioreactor’s performance may actually improve after the new wells are installed around the new hangar.”

Base officials look forward to the day when the first KC-46 rolls into this new hangar to receive its first maintenance check. They also want to make sure that the health of the construction workers and military personnel involved with the hangar’s construction is protected. By working side-by-side with regulatory officials and construction designers, the Travis ERP staff is doing its part to help bring a new addition to the Travis arsenal onto the base in an environmentally safe manner.



Community Relations Corner

Documents Soon to be Available in 2018 for Public Review

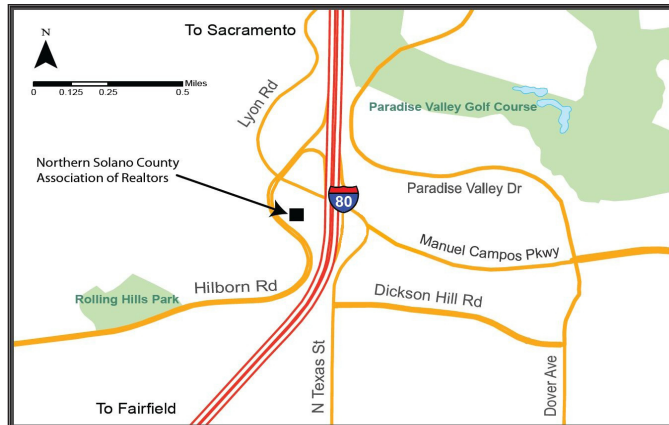
- 1. Fourth Five-Year Review Report
- 2. Amendment to the West/Annexes/ Basewide Operable Unit Record of Decision
- 3. Amendment to the North/East/ West Industrial Operable Unit Record of Decision
- 4. No Further Action Record of Decision for the TS060 Munitions Response Area (Old Skeet Range)

Please check our environmental program website for these and future opportunities to support the Travis AFB Environmental Restoration Program.

Travis AFB Restoration Advisory Board Meeting

April 18, 2019
7 p.m.

Northern Solano County Association of Realtors
3690 Hilborn Road
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.

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If you have any questions or would like more information about the RAB tour, please contact Lonnie Duke, (707) 424-7520.

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