October 2021

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Contractor's Corner

Starting next year, the Guardian will undergo a series of visual and content changes.

Primarily, the Guardian will be written and edited by the environmental consulting firm that was selected to continue cleanup efforts under the new Optimized Remediation Contract. So, we can expect to read more technical discussions as well as see the program from the contractor's perspective. However, every effort will be made to keep the discussion as interesting and understandable as possible, and the Viewpoint will still be the place for frank discussions from the Travis Environmental Program Manager and other key stakeholders. So, stav tuned!



Field of Dreams: Mr. Chet Storrs, project manager for the Travis Installation Support Section, provides oversight over the collection of groundwater samples at a potential chemical release area. Because of the high sensitivity of the laboratory techniques used for sample analysis today, the field team must follow strict protocols to prevent samples from being contaminated during collection.

The Focus on Fluorination

Field Investigation for a New Class of Chemicals Starts

By Lonnie Duke

Travis Environmental Program Manager

You may know the old saying when facing a complex situation - *How do you* eat an elephant?

Answer - *One bite at a time*. This is an appropriate adage as we dive into the multi-faceted challenge of understanding the presence and impacts of per- and polyfluoroalkyl substances (PFAS) at Travis AFB.

PFAS compounds are man-made chemicals used in many industries and

personal products around the globe. Common uses include food packaging, stain-repellent fabrics, carpets and upholstery, nonstick products (e.g., Teflon), waterproof clothing and materials, cleaning products, sunscreens and cosmetics, and many others – essentially, they are just about everywhere! PFAS were also manufactured to create an effective fire suppression product known as aqueous film-forming foam (AFFF). AFFF has been used at military bases, including Travis AFB, commercial airports, and refineries.

Despite their widespread use in modern society, increasing scientific study

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Visit our Environmental Program web site at https://www.travis.af.mil/Information/Environment/

(Photograph by Megan Duley [Oneida])

October 2021 -- GUARDIAN VIEWPOINT



Travis Air Force Base, California

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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 https://www.travis.af.mil/Information/Environment/. Questions and comments about the program may be sent to this address:

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Change Is Life's Only Constant

There has been a lot of change in the Travis AFB Environmental Restoration Program (ERP), starting with myself.

Over half of my 35-year federal career has been spent in the Travis AFB ERP. I've worked on nearly every aspect of the program during this time: field inspector, field team manager, project manager and for the last six years, the Restoration Program Manager (RPM). When I took over as the RPM, I felt it might be my last position with the federal government. This would have been just fine, but I still had ambitions to do something else at the end of my career.

Recently, a different division of the Air Force Civil Engineer Center (AFCEC), the Legislative and Regulatory Engagement Division (AFCEC/ CZP) advertised to fill a vacancy for a Regulatory Media Expert (RME). AFCEC/CZP is divided into East and West branches, and the West branch (AFCEC/CZPW) is located on Travis AFB just two buildings down from the Travis Installation Support Section (ISS) office where I currently work. AFCEC/CZPW analyzes pending state legislative bills and rules and forecasts how they may impact Air Force restoration programs. This staff also promotes outreach and partnering efforts with state and federal environmental agencies.

The CZPW team leader wanted to hire someone with ERP experience to be the Restoration RME. I've always been interested in how the legal system works and with my ERP experience, it seemed like I would be a good fit for this challenging position. So, I threw my hat into the application ring and was selected as the new Restoration RME!

There is no timeline yet on when I will be fully working for CZPW as I've agreed to wear two hats until the vacancy for a new RPM at the ISS is filled. Given how successful the Travis ERP has been over the years, I have an



VIEWPOINT

Lonnie Duke Travis AFB Restoration Program Manager

interest in making sure the transition goes as smoothly as possible, even if it takes a while.

Another big change for the Travis ERP is the selection of a new environmental services contractor for the new Optimized Remediation Contract (ORC). Over the past 18 months, the Air Force has been working with the Sacramento District of the US Army Corps of Engineers to coordinate the solicitation and award of the ORC. As a cost saving measure, this ORC combined the requirements for Travis AFB and Air Force Plant 42 (AFP 42), a manufacturing plant in Palmdale CA, into one procurement package.

We had some very competitive bids, and the team of FPM Remediations and Jacobs Engineering Group was awarded this 10-year, \$29 million dollar contract. FPM Remediations is a small business services contractor that has been working on the AFP 42 program for many years while the Jacobs team has supported the Travis ERP since 1994. With the same teams involved at both locations, this should be a seamless transition that will work very well for both ERPs.

Unfortunately, another change that I must mention is the passing of our longtime Restoration Advisory Board (RAB) Community Co-Chair, Mr. Dave Marianno. Dave was a great person and a big supporter of Travis restoration efforts. He lived in the local area for most of his life, including many years on his ranch located just south of the base. He loved working on his ranch and raising sheep and stayed very active in retirement. You never knew what Dave was going to talk about during the RAB meetings, but you always knew it would be

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PFAS

From page 1

of PFAS over the past decade has shown that exposure to elevated concentrations can lead to adverse health

effects. The number of identified PFAS compounds is also changing rapidly and, depending on the source, ranges from 4,000 to over 9,000 compounds. Imagine all the acronyms! But gaining a better understanding of those effects is made more difficult by the sheer number of PFAS compounds, and their chemical composition. PFAS compounds are characterized by their carbon-fluorine bond, which is one of the strongest chemical bonds, resulting in many complex compounds that do not readily break down.

Three particular PFAS compounds, perfluorooctane sulfonate (PFOS), perfluorooctanoic acid (PFOA), and perfluorobutanesulfonic acid (PFBS) have been more extensively studied regarding their composition, behavior, and

potential risks to human health and the environment. The U.S. Environmental Protection Agency (USEPA) has developed regional screening levels (RSL) in the parts per trillion range (ppt -1in 1,000,000,000,000) for these three compounds in groundwater (GW). The GW RSL for PFOS and PFOA is 40 ppt, and for PFBS is 600 ppt. As research continues, the scientific understanding and regulatory criteria will continue to evolve, presenting another challenge. For example, the California Water Board has issued notification and response levels below the RSLs, based on toxicology studies.

RSLs in the ppt unit of measure require low laboratory detection limits and strict field and laboratory procedures to avoid introducing PFAS compounds from every-day products into samples collected in the field. Therefore, laboratory and field methods also have been changing to meet the need to quantify PFAS at such a small scale.

One part per trillion is roughly equal to one drop of water compared to the volume of water in 20 Olympic-size swimming pools.

The 2015 Preliminary Assess-



Contractor Siting: Two field specialists collect water samples that will be analyzed in a laboratory for PFAS constituents. Although this work appears to be routine, it is critical for maintaining high quality control standards and ensuring the most precise data. (Photograph by Megan Duley [Oneida])

ment (PA) and 2017-2018 Site Inspection (SI) at Travis AFB identified 16 AFFF areas for further investigation based on elevated detections of PFAS compounds. The PA and SI are initial steps in the regulatory process, which is outlined under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). When release areas are identified in the PA and SI, the next step in the CERCLA process is to perform a Remedial Investigation (RI) to determine the extent of impacts in affected media; develop a conceptual site model (CSM), which is the understanding of site conditions and factors that govern the fate and transport of contaminants and their potential impacts on a site; perform human health and ecological risk assessments; and present comprehensive documentation of the collected data in an RI Report.

In July 2020, Travis AFB awarded a contract for the Phase I RI for AFFF Areas. The Phase I RI will characterize the horizontal and vertical (i.e., depth) extents of impacts in groundwater, soil, sediment, and surface water for PFOS, PFOA,

> and PFBS relative to USEPA RSLs. Project activities include installing sampling points and performing multiple sampling events across the AFFF areas as the team works to understand the presence of PFAS as well as the subsurface geology and hydrogeologic framework – a multidimensional problem! The Phase I RI will also include CSM development, though the formal risk assessment will be performed in a subsequent phase. All project data and recommendations will be provided in the Phase I RI Report.

Project activities have ramped up quickly, including project planning and meetings with our regulatory stakeholders: the USEPA, the California Department of Toxic Substances Control (DTSC) and the San Francisco Bay Regional Water

Quality Control Board (RWQCB). Our RI contractor, the Oneida Group, completed the first round of sampling in September 2021, which included the collection of groundwater samples from ~100 existing monitoring wells and from three groundwater treatment systems used to clean up other restoration sites. We look forward to receiving and evaluating the data from the initial event in order to design and carry out the multiple subsequent phases of sampling activities needed to complete the Phase I RI.

Project activities are scheduled to be completed by July 2025. There is a lot of field and analytical work to be done in the next few years to understand the environmental impacts associated with the AFFF areas. Navigating the challenges will require patience, persistence, and a strong team. We appreciate our stakeholder input and support as we all work together, one (bite-size) step at a time.

Viewpoint

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interesting! I really enjoyed his stories about local history at the Solano History Exploration Center and was very fortunate to get to spend some time with him on his ranch just weeks before his passing. Dave will be missed!

Conducting RAB meetings in the COVID era has been challenging. Our October 2020 meeting was recorded and posted on YouTube, but we did not receive much feedback on this approach. We had scheduled a meeting for October 2021 but with the contract change and other complications, it has been replaced with two RAB meetings scheduled for April 21 and October 20 of next year. By that time, the ORC will be up and running and a new RPM will be in place, so they'll be plenty to discuss. If you or anyone you know is interested in participating on the Travis RAB, please contact the Travis AFB Public Affairs office at (707) 424-5743.

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Travis AFB Restoration Advisory **Board** Meeting

April 21, 2022 7 p.m.

From the comfort of vour computer or at a selected public meeting location.

Editor's Meeting Commentary

We currently don't know with certainty whether we will meet in person or will produce another virtual presentation for all participants. This decision will take into account the safety and well-being of all attendees and will be posted at www.travis. af.mil/Information/Environment/News/ by 19 April 2022.







LOCATION OF LOCAL LIBRARIES

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

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.



for the KAB meeting, please contact Lonnie Duke, (707) 424-7520. I how would like more information or need special accommodations

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