

Commander praises AEDC's glycol response

No risk to area communities' water; updates to be posted on AEDC website

By Philip Lorenz III
Aerospace Testing Alliance

AEDC Commander Col. Michael Panarisi is impressed with the way the center's work force handled a challenging situation last Friday after low amounts of ethylene glycol were found in one building's water supply.

Colonel Panarisi said the detection, investigation and mitigation efforts initiated by the work force were key.

"I want to personally thank all those involved with the discovery and reporting for their diligence, initiative and willingness to bring this forward," Colonel Panarisi said. "Since that time, we have been working parallel efforts to locate, isolate and contain the source, as well as inform and protect the workforce. I am grateful to the



Penny Miller, an ATA senior chemist at Arnold AFB's Chemistry Lab, loads a water sample into the auto-sampler of a gas chromatograph to determine the concentration of ethylene and propylene glycol. (Photo by Rick Goodfriend)

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TEDAC ribbon cutting sets milestone at ASTF

Project expected to result in operational, energy savings

By Shawn Jacobs
Aerospace Testing Alliance

The ribbon cutting signaling the completion of the Turbine Engine Dry Air Capability (TEDAC) Phase I — a project that will eventually usher in lower maintenance requirements and energy savings — was performed Jan. 20 at the site of the new facility at AEDC.

According to Kris Hughes, Air Force program manager for TEDAC, the TEDAC program eliminates the single point of failure for turbine altitude testing by constructing the desiccant dryer facility and then refurbishing the Refrigeration Cooler (RC-1). RC-1 will be taken out of service for refurbishment in 2012. Phase II construction is scheduled to begin in September 2011 and conclude in June 2013.

Hughes said the new equipment will result in less maintenance and energy savings when all phases of TEDAC are complete.

"That [energy savings] is really test load dependent," Hughes said. "We've made estimates in the past and it's going to vary greatly whether you use the



AEDC Commander, Col. Michael Panarisi, cuts the ribbon marking the completion of Phase I of the TEDAC facility Jan. 20. Also pictured are Dr. David Elrod, ATA general manager; David Browning, ATA TEDAC program manager; Kirk Rutland, Maintenance Division deputy chief; Col. William Bailey, Test Division chief; Ron Polce, Test Systems Division chief; Mike Abeln, U.S. Army Corps of Engineers, Mobile District Construction Division chief; and Kris Hughes, Air Force TEDAC program manager. (Photo by Gary Johnson)

system 200 hours a year or 1,000 hours a year. We've done some estimates beforehand... on the very high end of utilization — if we utilize it and have similar years to the past decade that it could be on the order of \$1 million a year, but that would

have to be with very high utilization."

The project, consisting of eight desiccant dryers and other components, was constructed in the Aeropropulsion

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Information Line established to keep employees up to date

By Patrick Ary
Aerospace Testing Alliance

On the eve of Jan. 20, many weather forecasters were readying people for a potentially icy commute to work the next morning.

The next morning any ATA employee wondering what the conditions were at AEDC just had to call the new AEDC Information Line at 454-3600 to find out.

"This message pertains to ATA personnel only and is effective as of Jan. 21, at 0300 local," the message stated. "AEDC is open for normal operations. Road conditions are passable; however, caution should be exercised due to the possibility of icy intersections, side streets, and parking lots."

It's a welcome message for employees who drive in from counties all around the area on a daily basis and need information that could keep them safe during their commute.

In fact, the snow event on Jan. 9-10 that dropped several inches of snow in

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Traffic stop reinforces importance of safe driving

By Patrick Ary
Aerospace Testing Alliance

Police at AEDC will tell you driving while typing or reading a text message is just as bad as drunk driving.

They even have a point of reference.

Recently AEDC officer Steve Luttrell pulled over a driver operating his vehicle in an erratic manner on Wattendorf Highway.

"The initial call was a possible DUI," said Don Miller, operations officer for AEDC police. "So when Luttrell got behind him, he was weaving all over the place, and when he finally stopped he said he was texting."

Doing both at the same time is against the law. Police point to another example on Jan. 24 as someone who made the right move — to the shoulder of the road.

That night, officer Larry Swan was

working the night shift when he saw a vehicle on the side of the road. He pulled over to make a welfare check on the driver, who said she had pulled over on the shoulder to send a text message.

In the first case, AEDC police say the man was issued a citation that could end up costing him about \$200. The woman who pulled over to text had no worries. AEDC Police Chief Rick Trull says the latter is the preferred option if you feel compelled to read or type a message on the phone.

"It's good to know that someone has the forethought and discipline to at least pull over," Trull said. "Obviously the best course of action is to wait until you come upon a safe place to pull off the road if possible, but if you must read or type a text urgently, then



Patrol officers like Scott Mullins are constantly looking for drivers at AEDC who are paying more attention to their phones than the road. (Photo illustration by Rick Goodfriend)

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HIGH MACH

Arnold Engineering Development Center
An Air Force Materiel Command Test Center

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The center's vision: AEDC as the test center of choice, the workplace of choice for our people and a model of environmental excellence.



Vision

"ATA will be a trusted partner in delivering best value warfighter support and assert stewardship to AEDC"

Core Values

- Be accountable for our own actions
- Ensure the safety of individuals and equipment
- Demonstrate the highest integrity and ethical standards
- Communicate clearly and openly
- Deliver professional and technical excellence
- Nurture, enable and treat people fairly
- Align with customer goals and objectives
- Use disciplined and innovative processes
- Continually improve in all that we do



Core Values

- Integrity first
- Service before self
- Excellence in all we do

Water situation's response deserves praise

By Col. Michael Panarisi
AEDC Commander

This week proved to be a "hot one" in the front office, as we learned late last Friday, that despite multiple safeguards, glycol found its way into our drinking water. This event boasts countless lessons, but I'd like to highlight a few that apply well beyond this discovery.

First and foremost, integrity. The technician that discovered the contamination in the industrial water supply had to make a choice

... report or not report. Maybe in this case it was a "no-brainer" but I must applaud his decision, and state for the record that it serves as a model for all of us. This is not the last time we will find something "not quite right" in our operation. We have a duty, and an obligation to make it right, no matter how bad the news might be. We all owe him a "thank you!"

Next, initiative. Sure, we found the agent in the industrial water supply. What about the drinking



Panarisi

water? Those are supposed to be separate, right? Well, as it turns out, not exactly. Our chem lab wins the prize for this one. On their own

initiative, they checked the drinking water. While the levels they found are very low, we aren't taking any chances. Armed with their discovery, we've been on the hunt trying to find the source. They "saved our bacon" big time. And what's really cool about their discovery? Nobody had to tell them to do that. They acted on their own concerns. That's initiative!

Finally, teamwork. We've been in full tilt getting the word out, preventing exposure, putting up signs, distributing water, and encouraging each other to lighten the load by tossing a few bottles into our lunch boxes, backpacks, and briefcases. Once we knew what we were dealing with, the team dove right in and put plans in motion, many worked over

the weekend. Where plans didn't quite fit, they made new ones (like passing out notices at the gate ... who thought of that? AWE-SOME!) Everyone is pitching in to get this problem solved and minimize the impact to our ops. This is what makes this place magical.

As of today, we're still working through solutions, but I'm thrilled to report that despite Murphy's best efforts, we're still firing on all eight cylinders. Again, my thanks to everyone who has had a part in minimizing the effects of this event, and accelerating our return to "ops normal." I know we will solve this one, and come out the other side stronger, better prepared, and even better stewards of this national asset we call AEDC.

From foster care to the forefront

By Master Sgt. Alan Braden
88th Force Support Squadron

Wright-Patterson Air Force Base, Ohio—Growing up in foster homes left me with few educational opportunities and options. Struggling to find work, I enlisted in the Air Force in Feb. 1996 and began my career at Seymour Johnson Air Force Base, N.C.

I was eager to learn and get in school, but I found that many noncommissioned officers said, "You don't need a degree" and "Be an Airman, not a full-time college student." Listening to the advice of those NCOs, I did little studying and put education on the back burner. However, after moving to Colorado Springs, I quickly changed my perspective.

I began working with cadets at the Air Force Academy, and I saw what an impact education made on their lives and how important it was to the bigger Air Force. So, as a senior airman, I enrolled in school and began taking classes.

I had recently married and was working 12- to 15-hour night shifts. That made school difficult, but I managed to knock out

three classes. However, with one class left for my Community College of the Air Force degree in Allied Health Science, I was tasked for a four-month deployment to Saudi Arabia with follow-on orders to Scott AFB, Ill.

Scott AFB was a great assignment; however, my wife flew aero-vac and was deployed non-stop, and we had just had a brand new baby boy. I tried scheduling classes, but it was difficult. So I just stopped going.

Fortunately, I got lucky and was selected for instructor duty and forced to complete my last CCAF class in order to stay in the Air Force and move to Sheppard AFB, Tex. It was tough, but I made it work. I had to juggle coordinating baby sitters and working long shifts, but I finally finished that last algebra class to earn my CCAF degree.

After attending my first college graduation, I felt like I had accomplished something. That day something happened—I became hungry for education.

Once I was assigned to Sheppard, I earned my

second CCAF degree in Instructor Technology and Military Science and continued working on my bachelor's degree. It was no easy task, but my efforts paid off, and in 2007 I earned my bachelor's degree in education, graduating with honors. Immediately after receiving my BA, I decided to continue my education, and in 2008, I completed my master's degree in Education, graduating summa cum laude.

I credit my educational success to that first CCAF degree. I'm eager to promote education, and I've applied for and was accepted into a doctoral program. I began taking classes while deployed to Kuwait. People think I'm crazy, and I've been called an Air Force student; however, all of my school work has been done after hours and never to the detriment of the Air Force. These comments only increase my motivation to mentor our great Airmen on the importance of CCAF and advanced education. I tell them, if a foster kid from Detroit can be a doctoral candidate, they can do anything. And it all started with my CCAF.



How did you find out about the water contamination at AEDC?



Alvin Cleek

"A supervisor called all employees under his organization."



Ayla Wells

"A co-worker told me at work on Monday morning."



Danny Rewis

"I received a Google alert on my cell phone, based on an article released in the local paper."



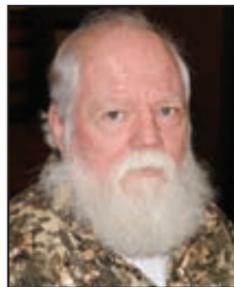
Dr. William L. Barnes

"E-mail and at the front gate on Monday."



Milt Davis

"The Tullahoma News on the Internet."



Charles Evans

"The base computer at Outdoor Recreation."

Tennessee income taxes explained

Tennessee income taxes and their application to those in Tennessee is a common question at the Arnold Air Force Base Legal Office.

The answer is fairly simple. The only personal income Tennessee taxes is "dividends from stocks or by way of interest on bonds ..." (TCA 67-2-102) in combined excess of \$1,250 for single filers and \$2,500 for married filing jointly (TCA 67-2-104(a)) with higher exemption amounts for persons over 65 years of age (TCA 67-2-104(b)). The tax is imposed on all persons in Tennessee "who received, or to whom accrued, or to whom was credited [dividends or interest income]" (TCA 67-2-102) except blind or quadriplegic persons (TCA 67-2-104(c)). Tennessee does not tax dividends or bond interest income from governmental and other limited sources, listed at TCA 67-2-104(e).

Under the Servicemember's Civil Relief Act (SCRA), a servicemember who established and maintains residency in another state is not subject to Tennessee's dividend and interest income tax.

November 2009 amendments to SCRA, called the Military Spouses Residency Relief Act, granted spouses of servicemembers the same protection concerning domicile or residency for taxation purposes

provided "the residence or domicile, as the case may be, is the same for the servicemember and the spouse." 50 App. USC § 571(a)(1).

Thus, spouses who established residency in their servicemember's state after Nov. 11, 2009, enjoy the same relief from Tennessee's dividend and interest income tax. If establishing concurrent residency has not been possible and the spouse wishes to avoid the tax, the spouse could consider transferring the underlying financial instrument to the servicemember's name solely, thus enabling the family to enjoy that income stream tax-free.

Those entitled to legal assistance (active duty, dependents, retirees, and guardsmen and reservists on Title 10 orders) and Arnold AFB civilian employees making under \$49,000 in adjusted gross income qualify for limited free income tax filing assistance and services through the Arnold AFB Volunteer Income Tax Assistance program.

Additionally, persons qualifying for legal assistance can receive tax advice through the Arnold AFB Legal Office's Legal Assistance program. Call 931-454-7814 for more information or to schedule an appointment.

(Information provided by the Arnold AFB Legal Office.)

Action Line

Team AEDC

I believe in free and open communications with our Team AEDC employees, and that's why we have the Action Line available. People can use the Action Line to clear up rumors, ask questions, suggest ideas on improvements, enter complaints or get other issues off their chests. They can access the Action Line in one of three ways: via the AEDC intranet home page, Action Line boxes at the base cafeterias and by calling 454-6000.

Although the Action Line is always available, the best and fastest way to get things resolved is by using your chain of command or by contacting the organization directly involved. I encourage everyone to go that route first, then if the situation isn't made right, give us a chance.

Col. Michael Panarisi
AEDC Commander

Smoking Policy

1. The following revised AEDC smoking policy is effective immediately. Smoking is permitted solely in designated areas identified by a plastic "smoke genie." This receptacle is for the sole purpose of cigarette butt disposal. If there is no receptacle, you cannot smoke in that area. It is the responsibility of all smokers to clean up the area surrounding the receptacles for any cigarette butts on the ground. Smoking in government-owned vehicles is strictly prohibited. Personnel are allowed to smoke in their personal vehicles at any time. In case of inclement or cold weather, employees are encouraged to use their personal vehicles if a sheltered designated smoking area is not available nearby. Smoking areas will be held to the absolute minimum and will be located in low traffic, low visibility areas away from points of building ingress/egress and air intakes. A map of all authorized smoking areas is available on the AEDC web portal at [https://lpapro.arnold.af.mil/PORTALimages/Smoking area map. pdf](https://lpapro.arnold.af.mil/PORTALimages/Smoking%20area%20map.pdf). Smoking near a facility in an area not designated on the map is prohibited and any smoking receptacles located in areas not shown on the map will be removed. All "smoking permitted" and "no smoking" signs will be removed unless specifically required by OSHA.

The fact a person smokes has no bearing on the number of breaks they may take. Breaks should be taken in accordance with the company/agency personnel policies that apply to all employees.

Regarding use of smokeless tobacco, containers of tobacco waste product, including sealed containers, must not be left unattended or disposed of in trash receptacles. Users of smokeless tobacco must flush tobacco waste down the toilet. Smokeless is strictly prohibited in conference room meetings and other areas, e.g. PMEL, where Air Force regulations specifically prohibit.

- Supervisors at every level will ensure this policy is followed. Disciplinary action is appropriate for repeated violations.
- Updates to this policy will be made in the future to further align with Air Force guidelines.
- This letter supersedes previous letter dated 28 October 2006, subject as above.

Officials announce court-martial sentence for former command chief

Scott Air Force Base, Ill. (AFNS) – The week-long court-martial of Chief Master Sgt. William Gurney, the former command chief of Air Force Materiel Command, concluded Jan. 28 with a six-member panel of male officers sentencing the chief to 20 months confinement, reduction to rank of E-1 and a dishonorable discharge for 15 violations of the UCMJ.

Of those violations, Chief Gurney initially had pleaded guilty to seven violations of Article 92 for dereliction of duty for failing to maintain a professional relationship with seven different female Airmen, all who were junior in rank to him; one violation of Article 92 for wrongful misuse of government property for other than official purposes; one violation of

Article 120 for indecent conduct with a female master sergeant; and four violations of Article 134 for committing adultery with four separate female Airmen, all who were junior in rank to him.

During the court-martial, the panel found the chief guilty of two violations of Article 93, maltreatment.

They found him not guilty of one violation of Article 120, unwanted sexual contact; and two violations of Article 134, misuse of official position. When the court-martial began, there were 19 charges against him.

One charge of obstruction of justice was dismissed by the judge during the arraignment portion of the trial.

Before sentencing, Chief Gurney stood before members of the court to apologize for his actions.

“I would not wish this on my worst enemy,” he said.

He said he hopes that this trial brings a measure of closure for all involved, and he publicly apologized to the 10 women named in the case, and to his family.

He also offered an apology to his commanders and Airmen “for not living up to the core values that are instilled in us.”

Following sentencing, Chief Gurney’s case will move into legally required post-trial proceedings.

During those proceedings, he will have the opportunity to present matters for the convening authority’s consideration in determining a final sentence.

However, by regulation that sentence cannot exceed that which the court hands down.

ESOHHCAMP process kicks off

The 2011 edition of the annual Environmental, Safety, and Occupational Health Compliance Assessment and Management Program (ESOHHCAMP) will commence in February.

Each industrial area of AEDC can expect an inspection visit between February and August by teams consisting of ATA and Air Force personnel.

Areas are scheduled randomly throughout the period with a two- to three-day advance notice given prior to each visit.

There will be special emphasis this year on hazardous material usage, storage and labeling.

Reference materials are available on the ATA Environmental website, <https://aedcgisweb.arnold.af.mil/enviro/>, including the “Container and Cylinder Checklist” and the “ESOHHCAMP Preparation Guidelines.”

The inspection teams con-

sider a number of protocols including:

- Air emissions
- Environmental management
- Hazardous materials
- Hazardous waste
- Pesticide management
- Petroleum, oils and lubricants
- Solid waste
- Storage tanks
- Toxic substances
- Wastewater
- Water quality

The ESOHCAMP process is an important part of maintaining compliance with environmental, safety and health regulations. AEDC has done an excellent job over the last several years, with the number of findings steadily decreasing.

Any questions regarding the ESOHCAMP process can be directed to Kraig Smith (ATA, 454-4284) or Keith Carnley (AF, 454-7252).

More snow at Tunnel 9



This historic gazebo, held over from U.S. Navy operation and a focal point for AEDC White Oak Morale, Welfare and Recreation functions, shows the telltale signs of a storm that moved through the Washington, D.C., area Jan. 27. While more than 10 inches fell in the local commuting area and much of the area experienced power outages, Tunnel 9 is up and operating supporting the USAF/DARPA HTV program. (Photo provided by Arnold Collier)

Junior Force Council has goal to bridge knowledge gap

By Shawn Jacobs
Aerospace Testing Alliance

Bridging the communication and knowledge gap between junior work force and senior leadership poses a difficult problem for many industries.

At AEDC, the Junior Force Council (JFC) aims to bridge this experiential gap as well as promote a variety of other activities to train and mold future leaders.

According to newly-elected president Carrie Reinholtz, a technology project manager in the Test Technology Branch, the JFC is a relatively new Air Force Materiel Command (AFMC) initiative, brought to AEDC in 2007. Unlike the Company Grade Officer Council (CGOC) or the Top 4 (Top 3 at other Air Force bases), which serve junior officers and enlisted service men and women, the JFC works with all members of the junior work force.

“The JFC’s primary mission is to offer information on career paths and progression, build a culture of mentorship and provide supervisory skills, all while establishing a formal avenue for feedback between junior members and senior leadership,” Reinholtz said. “Communication and camaraderie are facilitated by monthly meetings, quarterly forums and various social activities.”

Reinholtz said the forums aim to provide career-pertinent information, for example, officer/en-

listed performance report (OPR/EPR) preparation, professional military education (PME) and civilian deployment opportunities. The events and activities are geared toward team building exercises, career broadening field trips and visits with distinguished visitors.

Elections were held last month for new JFC board members. In addition to Reinholtz, as president, they include Donna Spry, civilian vice president; Staff Sgt. Jennifer Stokes, enlisted vice president; 2nd Lt. Will Parker, officer vice president; Chris Leone, secretary/treasurer; Ben Weaver, webmaster; and Will Mallory, Technical Excellence Board representative.

“I want to extend a special ‘thank you’ to all of the exiting officers whose shoes will be hard to fill in the coming years – this year especially – with all of the hard work they dedicated to the JFC last year,” Reinholtz said. “The outgoing officers include Tracy Carter, Josh Meeks, Staff Sgt. Shana Lodge, Capt. Joe Byker, Rebecca Gardner and Leslie Tuttle.”

The new officers assumed their roles the first week of February.

Upcoming events for the JFC include a quarterly forum Feb. 16 in the Commander’s Conference Room starting at 10 a.m. The forum, titled “The Art of Conveying the Message in Nine Lines or Less,” will discuss get-

ting one’s points across in a short note, meeting or e-mail.

“As we begin 2011, expectations are high for the Junior Force Council this year, given the success of the events and participation in 2010,” Reinholtz said. “The JFC plans to be just

as successful in the coming year and spark more interest and enthusiasm for our Junior Force at AEDC.”

For more information, contact Reinholtz at (931) 454-6639 or e-mail carrie.reinholtz@arnold.af.mil. More information is also

available on the events calendar on the JFC SharePoint site. Under Organizations on the Team AEDC website, click Command Section. Under the Links section on the top right, there is a link to the AEDC Junior Force Council SharePoint site.



Newly-elected officers of the AEDC Junior Force Council include Donna Spry, civilian vice president; 2nd Lt. Will Parker, officer vice president; Carrie Reinholtz, president; and Will Mallory, Technical Excellence Board representative. Not pictured: Ben Weaver, webmaster; Staff Sgt. Jennifer Stokes, enlisted vice president; and Chris Leone, secretary/treasurer. (Photo by Rick Goodfriend)

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building managers, supervisors and others who worked through the weekend to find and stop the contamination, as well as get the word out on post-discovery actions.”

Colonel Panarisi emphasized that the levels of ethylene glycol, a biodegradable organic compound, were only at “trace” levels and the chemical is expected to fully degrade in the base water treatment plant and retention pond prior to the water being released back into Woods Reservoir. The base conducts frequent checks to ensure the safety of the water flow into the reservoir.

Pam King, AEDC’s chief of the civil engineering branch’s asset man-

agement section, said it is important for the workforce and public to fully understand the situation regarding the contaminant.

“The presence of glycol in the AEDC drinking water system and our efforts in response to this incident is localized to the AEDC industrial area,” she said. “It has not and will not have any impact to Woods Reservoir, any local community public water systems, nearby private wells or groundwater.”

All water used on base subsequently undergoes testing for toxicity and evaluation to ensure it is safe, by EPA standards, before being returned to Woods Reservoir for future use.

AEDC Laborer Charles Trussell, who first discovered the possible presence of the chemical, wasted no time in communicating his findings to John VanScoten, a machinist assigned to ATA’s Space and Missiles Operations and Maintenance Branch, who in turn immediately passed along the information to Jonathan Mansfield, the section leader for that area.

Mansfield, who described his coworkers as “conscientious and knowledgeable,” said their collective and decisive actions were paramount to the successful early detection and containment of the contamination.

Bill Lock, AEDC’s Chemistry Laboratory

Technical Director, recounted the sequence of events that quickly followed.

“On Friday, Jan. 28, Alex Freehardt, an ATA test engineer in the ELA Building (the Space Systems Test Facility), delivered a water sample from their clean room to our chemistry lab,” Lock recalled. “Alex told us that it was from an industrial water source that they used to mop the clean room floors, and that it had an odor of glycol. To ensure that the water didn’t contaminate the clean rooms, he asked that we analyze it and compare the results to what we would normally see in the base potable water.”

Industrial water, in this

specific area, is potable water diverted for industrial applications in the Space Systems Test Facility.

Lock said the lab staff wasted no time in identifying any possible contaminants.

“The ELA sample was run for metals, anions and glycol,” he continued. “Normally, for comparison, I would send the averages of past potable water samples. Because we do not normally test for glycol in potable water, I pulled a sample from a tap in the chemistry lab, and submitted it as a [control] sample to the chemists.”

“Later that afternoon, I received the results from the glycol analysis and the ELA sample was contami-

nated with glycol,” he said. “The Chem Lab potable water was also contaminated, albeit at a much lower level. I confirmed the test results with the chemist and immediately called ATA Environmental, and then the OPS (operations) center to put an immediate hold on the drinking water.”

Colonel Michael Panarisi said this was the point he and his staff initiated the “No Drink/No Contact” order. The “No Contact” order has been removed, but the no drinking order remains in effect.

An investigation to determine the cause of the contamination is on-going. AEDC has notified state officials. For updates, go to <http://www.arnold.af.mil>.

TEDAC from page 1

Systems Test Facility (ASTF) complex and will provide conditioned, dry air for turbine altitude testing.

The current refrigeration system has sustained numerous leaks and spills that jeopardize reliable test operations.

“The project is the culmination of a four-phase effort begun in 2009 to eliminate 45,000 gallons of trichloroethylene, 48,000 pounds of R12 refrigerant and their potential environmental hazards,” Hughes said. “AEDC will no longer require these hazardous chemicals for plant operations with the completion of TEDAC. The project will significantly improve plant reliability while reducing AEDC’s environmental risks.”

David Browning, TEDAC program manager for ATA, said he was proud of the project, which met the requirements and came in on time and on budget.

“This plant provides a more cost efficient means of drying air versus large mechanical refrigeration

equipment,” he said. “It will provide a dry air source that can be used to support large flow tests and can support low flow tests without using the existing refrigeration equipment.”

We expect to see some cost avoidance based on the rate of testing, because it’s cheaper to run desiccant dryers using natural gas and not run the large mechanical refrigeration equipment.”

TEDAC was planned, designed, constructed and validated using the Department of Defense’s System Engineering (SE) process.

The effort began with identification of the system requirements and followed a rigorous engineering approach as the project was planned, designed and executed.

Through the process, engineering reviews continually mapped the solution back to the user requirements to assure TEDAC would satisfy AEDC’s needs.

The \$28.2 million Air Force contract was administered by the U.S. Army



Visitors from on- and off-base attended the ceremony marking the end of the initial TEDAC construction phase. Pictured with AEDC Commander, Col. Michael Panarisi, is Leanne Durm, district director for 4th District U.S. Rep. Scott DesJarlais. (Photo by Gary Johnson)

Corps of Engineers, Mobile District.

Chicago Bridge and Iron (CB & I) Constructors was the design/build contractor for the project.

Browning said cooperation and teamwork are the biggest reasons for the success of the project.

“This was, first of all, the Air Force teaming with

Corps of Engineers, ATA teaming with the government and CB & I doing the design and construction,” he said. “This teaming effort has matured during

Phase I, and we’re going to carry this forward in Phase II. We’ll be using a different design and build contractor, but it’s the same approach for Phase II.”

INFO from page 1

Middle Tennessee and kept some ATA employees from reporting to work was the impetus for creating the AEDC Information Line.

“This winter has been unique,” said ATA Director of Resource Provisioning David Eldridge. “We experienced two significant snow/ice events by early January. Since most of these type events occur overnight, we knew employees would wonder if the base was open for normal operations and how the road conditions were before they left for work.”

“An information line seemed to be the best option for making weather related emergency information available to our employees. This line can handle 40 simultaneous callers – the phone continues to ring for

the next caller until one of those lines is vacated.”

The line was previously used by Air Force Public Affairs as a Straight Talk line, now changed to 454-4204.

When weather-related emergencies occur, such as the recent major snow/ice events, a message will be placed on the line providing the caller with the level of impact to base operating hours, conditions of the base roadways, and any specific driving hazards that exist at the time.

There are five different condition messages a caller to the Information Line may hear depending upon the conditions that exist. They range in severity from Condition One – which was the case with the light snow on Jan. 26 – to Condition

Five, which is a complete base closure.

The information for those conditions will come from AEDC police monitoring road conditions, Eldridge said. They relay the information to base police Chief Rick Trull. The chief or the director of the Support Services Department, Pat Eagan, can make the call on Condition Levels One through Three. Condition Four and Five designations must be approved by the ATA Office of the General Manager.

Conditions Four and Five, which include some level of base closure, would only be used in extremely hazardous and rare situations. Over the 60-year history of AEDC there have been only a few such events.

“We do not anticipate that we will ever need to declare Condition Four or Five but if we do, we will be prepared,” Eldridge said.

Right now the intent of the Information Line is to focus on winter weather emergencies, but the line is available to disseminate information on a wide variety of emergency circumstances (tornadoes, floods, etc.) that may directly affect AEDC. It is also being used for non-weather related emergencies, such as the recent ethylene glycol problem.

“If a weather emergency arises that may have impact on the base operations or to driving conditions that would be relevant for their drive into work, then we would put that information out there,” Eldridge said.

Employees should always be aware of driving hazards. Severe weather may occur at any time of the day and with little warning. Circumstances may not warrant a special Information Line message or there may be insufficient time to forewarn employees of potential road hazards. Each of us should always

exercise the proper level of caution while driving during inclement weather.

To access the Information Line, ATA employees can call 454-3600. The message recorded on the line will always be prefaced with the date and time, to ensure employees get the timely information they are looking for.

Information line conditions:

Condition 1: AEDC is open for normal operations. Road conditions are passable.

Condition 2: AEDC is open for normal operations. Road conditions are safe for travel; however, caution should be exercised due to the possibility of hazards such as isolated areas of ice or fallen trees.

Condition 3: AEDC is open for normal operations. Road conditions are passable but remain hazardous. Driver caution is advised. Should local conditions prevent your safe travel, liberal use of vacation is allowed. Employees should contact their supervisor.

Condition 4: Due to extremely hazardous driving conditions, shift times will be delayed until road conditions are expected to be passable (but they may remain hazardous). Mission Essential personnel (Fire, Security, Utilities, Ops Center) should report to work as normal. Should local conditions prevent safe travel, liberal use of vacation and excused leave without pay will be allowed. Employees should contact their supervisor.

Condition 5: Due to extremely hazardous driving conditions, AEDC will be closed until further notice. The Information Line will be updated periodically for reopening information. Mission Essential personnel (Fire, Security, Utilities, Ops Center) should report to work as normal. Vacation or excused leave without pay should be used to cover normal shift hours lost.

Promotion ceremony



A host of active and retired chief master sergeants was on hand at AEDC Jan. 25 for a dinner honoring the promotion of Senior Master Sgt. Curtis Allen, the base Maintenance Division superintendent, to chief master sergeant. From left, Dean Mohler, John Keese, Jeff Mason, Terry Hood, Mike Hood, Sergeant Allen, Charles Fryer, AFMC Command Chief Master Sgt. Eric Jaren, Gary Blaisdell, Marty Martin, Rick Orzino, Dave Compton and Terry Firman. (Photo provided)

AEDC provides aid in restaurant fire



Firefighter Billy King sprays water on a fire at Damron's Restaurant in Tullahoma Jan. 27 as crew chief Jimmy Phillips backs him up. AEDC firefighters helped by putting water on the fire and on nearby buildings to prevent the fire from spreading. "It's good to practice and train together, and it pays off on days like that," said AEDC Fire Chief Daryle Lopes. (Photo provided by Norris Carden/Carden Photography)

TEXTING from page 1

then ensure you pull completely off the roadway and out of the lane of traffic. Use your emergency flashers to warn approaching drivers that you're stopped and complete your communications."

In July 2009, it became illegal in the state of Tennessee to operate a motor vehicle while using a cell phone to send or receive text messages. By policy, ATA employees are not allowed to even put the phone to their ear for a conversation on base. Offenders are looking at a minimum of three points against their base driving privileges.

Police say the reason is simple: the risks of talking on the phone when you should be paying attention to the road far outweigh the benefits.

"Most of our people are responsible people," Trull said. "By and large, our folks are not going to drink in excess and get behind the wheel and drive. They know that's not the right thing to do and they're responsible enough not to do it. They're not going to get on a crowded road and try to drive 100 miles an hour, because they're responsible enough to know it will get them or someone else killed. And they should feel the same way about talking on a cell phone or texting while they're driving, because all those are lumped into the same category."

ATA safety manager Warner Holt says it's a safety issue that is similar to the workplace; people have to buy into the fact that it keeps them safe and can prevent an accident before they will follow the rules.

"What we fight against all the time is 'It won't happen to me,'" Holt said. "But those with that true safety mindset have had some

kind of an event in their life or someone close to them – most of the time – that has prompted them to buy into safety."

Holt says sometimes disciplining offenders is the answer, but base leaders could also be important in preventing an accident before it occurs.

"The key and task of the leaders ... is how do you get across to somebody that it's dangerous and get them to buy in?" Holt said.

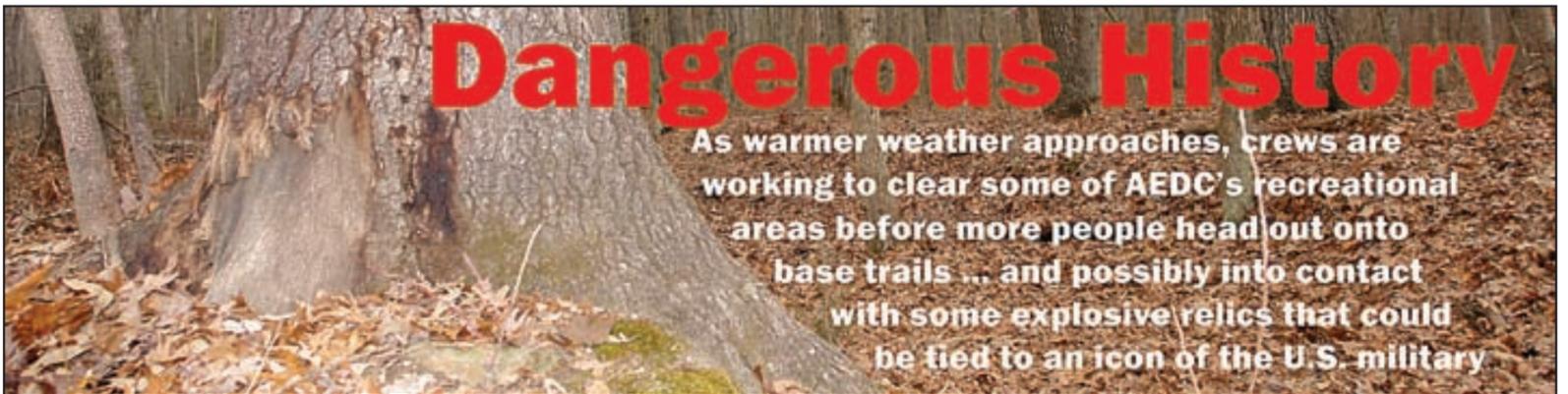
And buying in could be difficult as the people who enforce the law try to keep up with technology that seems to change every day, offering more that can take a driver's attention away from what they should be doing.

"Smart phones in general have so many apps (applications) now that you can get an app to do all kinds of stuff," said Dan Hawkins, ATA's installation security section supervisor. "There are always new levels of distractions being added in, and I think that's a concern that's going to be amplified over the next few years."

In the meantime, police will be watching to make sure ATA employees are following the rules on base. Officer Miller said the department has a low number of phone usage tickets, but they know there are still people out there sneaking calls or text messages on their phones.

"It's a human behavior you're trying to change," Miller said. "It's just like a bad habit."

If you see someone on the highway driving dangerously, Chief Trull says you should write down a description and tag number of the vehicle if possible and report it immediately to police dispatch at 454-5662. That way, they can pay offenders a visit.



The bark at this tree's base, photographed Jan. 25, is still missing after EOD teams detonated a mine found in September 2009. (Photo by Patrick Ary)

By Patrick Ary
Aerospace Testing Alliance

It started with an AEDC security officer reporting unexploded ordnance (UXO) on a two-track trail in September 2009. The UXO was lying under and next to a tree near the boat ramp off South Hap Arnold Drive. It was round, brown and about eight inches in diameter.

It was a mine. More specifically, it was a training version of an M1 anti-tank mine.

AEDC's Operations Center sent out a team to investigate. Denny Timmons, AEDC's manager of the base's Military Munitions Response Program (MMRP), was one of the people who went out with Jim Raabe from AEDC Safety.

Timmons stood in the woods where the mine was located and tried to get a GPS signal so he could record where the device was found, but he was unable to secure one because of the tree coverage overhead. He crossed a ditch to get a better reading about 15 feet away.

"I'm standing there and I say 'Hey Jim, I got coordinates,'" Timmons recalls. "And Jim says 'Well you might as well get the coordinates there, because you're standing right next to another one.'"

And he was; a second mine was right next to his foot.

An EOD team from Eglin Air Force Base was called in to handle the ordnance. They decided the mines weren't safe enough to move and detonated both on-site.

If they could find two



mines in the area so easily, Timmons wondered, how many more were there? And why were they there?

Unexploded ordnance is nothing new at AEDC. An MMRP project ongoing since April has been cleaning up UXO in the areas formerly used as artillery and firing ranges for Camp Forrest. The Air Force teamed with the U.S. Army Corps of Engineers-Omaha to contract Bay West, Inc., a firm that specializes in munitions cleanup, to handle the work.

But the two mines found in 2009 were well outside the Camp Forrest historical ranges boundary that was identified by a comprehensive range inventory base survey in 2003; in fact, they were located in the old Camp Forrest Maneuver Area (CFMA) and in close proximity to base housing – just a two-minute walk from a road frequented by hikers and mountain bikers.

Last spring, during a kick-off meeting for the

current surface clearance project, Timmons showed USACE-Omaha and Bay West the UXO location and requested the team make a run along the two-track trail where the two mines were found to see if there was anything else in the area.

They found seven more mines, including one less than two feet from where the first was found.

The number of mines and their location was enough to spur another cleanup project that the Air Force Center for Engineering and the Environment quickly signed off on.

The good news was the mines they found weren't meant to do serious damage. They were practice mines from the World War II era that discharge red smoke when triggered.

"They had a smoke charge, so when a tank would run over them it would emit smoke like it was an actual mine and simulate battlefield condi-



A crew from Bay West, Inc. sweeps a recreational area at AEDC for possible practice mines left over from the World War II era. After two mines were found, the Bay West team found seven more, pictured at left. The find spurred a comprehensive cleanup operation involving several trails around the base. (Photos provided)

tions," Timmons said.

While a mine that just smokes sounds relatively benign when compared with one designed to put holes in a tank, there is still a charge that has to detonate before the smoke can discharge, said Bay West site manager Dave Egbert. The smoke is also a concern.

"Those aren't super-dangerous per se, but they're dangerous enough to put an eye out because of the fuse that's still in there," Egbert said. "Some of the mines had a red phosphorous filler, and that can be particularly nasty too."

AEDC Restoration and Weapons Safety, along with

USACE-Omaha and Bay West, began to research historical records and old aerial photographs. The part that still eluded explanation to everyone involved was why the mines were found in a location outside the previously designated ranges used at Camp Forrest.

"Before, we had concentrated on the Camp Forrest historical range areas because that's where you would expect the UXO to be after firing, and that is where we have found UXOs in the past," Timmons said. "There were never any tank training ranges identified in the CFMA during past investigations."

He and his team started looking at current and historic area satellite photos and historic Camp Forrest maps as well as overhead shots that had been taken in 2006 using Light Imaging Detection and Radar (LIDAR). The images show terrain in a way that made it easier to identify craters and other delineations.

They plotted the coordinates of the found mines and realized they were along the visible two-track ditch that could be seen in the aerial photos taken in the early 1940s, when Camp Forrest

See UXO, page 8

UXO from page 7

was active. The two ruts, Timmons was told by Emlin EOD team members, were about the width of an Abrams tank and probably were the ruts of an M4 Sherman tank.

The team started putting more puzzle pieces together when they overlaid their LIDAR images with an aerial photo of Camp Forrest taken in 1941.

What they found was a large cantonment area lo-

cated east of what is UTSI Road today. Several of the two-track trails radiate out from that area, Timmons said. But because of the resolution it's hard to tell whether the image is tents, tanks or something else.

Timmons and his team found more delineations within the CFMA. Those two-track trails, they determined, were most likely made by tanks practicing maneuvers sometime dur-

ing the 1940s – a time when one of the most famous U.S. military figures in history was in Middle Tennessee training with his tank corps: Army Maj. Gen. George S. Patton.

Timmons said he knew of General Patton training his Second Armored “Hell on Wheels” Division in Middle Tennessee in the early 1940s for the Tennessee Maneuvers, but there was no specific documen-

tation on whether or where he may have conducted any exercises at Camp Forrest – and no way to know for sure whether the famed general set up camp in the cantonment area seen on the old map.

“We went to the AEDC, Manchester and Tullahoma libraries and searched as much as we could,” Timmons said. “We talked to several people here on base and out at Motlow and they

said yes, they remember he was here. But as far as trying to find any evidence of training areas ... we have old range fans and we have maps of those, but we couldn't find anything that could show exactly where a tank training course was set up.”

They've been left to put two and two together, but Timmons said after talking with UXO experts from Emlin AFB, USACE-Omaha

and Bay West, they know that the mines they have found were used during that era to simulate battlefield conditions. Their belief is they were planted as training exercises for Patton's men.

“I think we're pretty confident that's what they were used for,” he said.

Tech Sgt. Marvin Gardner, AEDC's weapons safety expert, says investigating where the mines came from has gotten him more interested in the base's history. Sergeant Gardner says he knows more today than he ever thought he would learn when he came to the base six years ago.

“Whenever I go TDY (on temporary duty) people always ask what Arnold is,” Sergeant Gardner said. “I tell them where Arnold is in Tennessee and then, being the weapons safety guy, I throw my UXO story in there about Patton.”

History or not, the mines have to go. Bay West crews got started on Jan. 11, and they're expected to finish around the end of February. They have 18 miles of recreation trails that need to be swept for similar conditions for a total of 504 acres total to survey.

“The priority is the sweeping the 35 acres immediately surrounding the two-track trail where the nine UXO training mines were previously found, and then go ahead and start surveying the rec trails,” Timmons said. “And once we do the rec trails, we'll go out and look at these other features that showed up on the LIDAR and are still visible on the surface.”

Timmons said the hiking, biking and horseback trails in the area won't be closed off because there is not a high density of the devices, and the ones already found have been stable enough to move to a remote corner of the base for detonation.

Sergeant Gardner said his main concern is not people affiliated with AEDC, because they are more likely to be familiar with the ongoing UXO cleanup through communication at work. He's concerned about people from outside the AEDC community who decide to spend the day hiking or riding on one of the trails.

“We try to mitigate the hazard by placing and maintaining the UXO warning signs and the briefings, but people that aren't associated with the base, they don't get those briefings,” Sergeant Gardner said. “They don't get that information.”

And he says even though it's interesting to think about the amount of history that could be out there under the leaves, no one should ever go looking for it.

“The main thing from us on the safety side is that people don't go out hunting for souvenirs and take something home,” he said.

Sergeant Gardner says anyone who comes in contact with a device that looks explosive or dangerous should mark the area in some way before leaving. They should then contact authorities through one of several channels: base security at 454-5662, the Operations Center at 454-7752, Weapons Safety at 454-7293 or by reporting to the guard at the main gate of the base. If reporting by cell phone, the caller should not be within 50 feet of the device when making the call, out of an abundance of caution.

ATA

Overall Team Member of the Quarter

The Overall ATA Team Member of the Quarter is Chad Bloom. Bloom, a Precision Measurement Equipment Laboratory scheduler, was recognized for outstanding abilities to quickly learn and master all aspects of the PMEL scheduling section. He is responsible for the accuracy and completeness of the Test, Measurement and Diagnostic Equipment inventory and recall system. Bloom's efforts have ensured the safe handling of TMDE, so they are available for technicians to calibrate and ensure they are expeditiously returned to the customer. Bloom has also stepped up to the plate as an assistant building manager who conducts inspections and coordinates with the base Operations Center and responsible supervisors to maintain the PMEL in a fully operational status.



Bloom

Overall Craft Member of the Quarter

The Overall Craft Member of the Quarter is AEDC Police Officer Charles Scott. Scott was recognized for his professional appearance and perfectionist attitude, which make him the police department's top choice to provide traffic enforcement during special events like the Children's Christmas Party in December. In October, Scott noted several non-base affiliated softball league players attempting to enter the base housing area without proper identification and several who were not wearing seat belts when they approached the gate. His attention to detail and genuine concern for public safety were the catalysts that drove a call to the AEDC police chief from one of the vehicle's occupants, who thanked the department for Scott's professionalism.



Scott



Gary Chain
Team Member
Facilities Operations

Chain, fuels operations supervisor, was recognized for successfully receiving and storing two types of biofuels and ensuring that funding was put to good use in maintaining infrastructure.



Tom Northcott
Team Member
Facilities Operations

Northcott, electrical system engineer, was recognized for taking over the arc flash program while still performing his normal duties of supporting the base-wide electrical distribution system.



Brent Morris
Team Member
Investments

Morris, project manager for the Upgrade V-Plant Controls project, was recognized for stepping up as lead designer on the project and correcting several shortfalls found in the proposed design.



Jared Wrather
Team Member
Information Technology & Systems

Wrather, information technologist, was recognized for taking over as manager of the "Artemis" cluster used by both AEDC and Eglin AFB, as well as for the rapport he has built with both user communities.



Brent Cox
Team Member
Integrated Test & Eval.

Cox, technical specialist, was recognized for making trips to Toledo, Ohio, – sometimes on less than a day's notice – to provide test support to a customer and maintain the program's schedule.



Mark Chappell
Team Member
Integrated Test & Eval.

Chappell, propulsion analyst, was recognized for delivering high-quality information products documenting the relative performance of the F100-220 while using alternative fuels.



Dave Kline
Team Member
Resource Provisioning

Kline, technical specialist, was recognized for meeting the demands of directing Senior Leadership during exercise and real world contingencies in his role as the Commander's Crisis Action Team director.



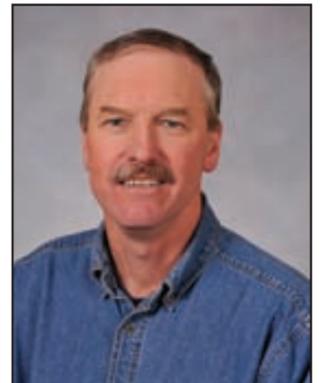
Ashley Gunn
Team Member
Performance Management

Gunn, export compliance officer, was recognized for quickly learning and obtaining the knowledge of export requirements during a six-month transition period of learning with the outgoing export compliance officer.



Angelia Garrard
Team Member
Support Services

Garrard, assistant OPSEC program manager, was recognized for assuming oversight responsibility of the security program due to an extended medical absence of the company security officer.



Jimmy Burrows
Craft Team Member
Facilities Operations

Burrows, boilermaker lead, was recognized for his leadership, attitude and ownership of the systems in his area – qualities that were key to VKF operations support as the plant was reactivated after a period of upgrades.



John England
Craft Team Member
Facilities Operations

England, boilermaker working foreman, was recognized for his problem solving and motivational skills that allow him to lead his team in the execution of complex projects like the Tunnel A return-to-service project.



Joseph McCabe
Craft Team Member
Integrated Test & Eval.

McCabe, outside machinist, was recognized for his major contributions to the development of a new target simulation system, as well as a level of confidence that leads to timely completion of tasks.



John Kelley
Craft Team Member
Resource Provisioning

Kelley, lead storekeeper, was recognized for continued success and efficiency of operations in warehouse distribution – despite dealing with a number of re-assigned personnel in the delivery group.



Warren Mullinax
Craft Team Member
Integrated Test & Eval.

Mullinax, working foreman, was recognized for sustained and superior performance in the execution of tasks in support of APTU's control system upgrade project.



Jon Mansfield
AEDC Safety Achievement Award
Integrated Test & Eval.

Mansfield, craft supervisor, was recognized for his diligence in correcting any and all discrepancies from safety walks, audits and inspections in the Space Chambers Test Area and the G-Range Area.

Mary Beth Barlow
Customer Service – Internal
Resource Provisioning

Barlow was recognized for her prompt and courteous service in ATA-wide training activity, taking extra steps and pursuing improvement actions well beyond the reach of her direct duties and areas of responsibility.



J.T. Thompson
Customer Service – External
Integrated Test & Eval.

Thompson was recognized for his outstanding project engineering service to the Boeing client engaged in the F-15 Store Separation 16T test, applying a keen attention to planning details of the model buildup sequencing.



Government



2nd Lt. William Parker
Company Grade Officer
& Honor Guard Member

Lieutenant Parker was recognized for revitalizing \$9.5 million in UTSI and Vanderbilt contracts and directing a \$4 million hypersonic flow research collaboration with Princeton University. As a member of the Honor Guard, Lieutenant Parker also performed flawlessly in all seven of his details during the quarter.



Tech. Sgt. Randall H. Lusk
Non-Commissioned
Officer-in-Charge

Sergeant Lusk was recognized for driving high standards. That includes reducing lost and broken tools by 58 percent, cutting corrosive bacteria in coolant tanks and acquisition of a \$2.3 million milling machine for the Model Shop.



Master Sgt. Patrick Lazarus
Senior Non-Commissioned
Officer-in-Charge

Sergeant Lazarus, quality assurance superintendent, was recognized for reducing tool spending an estimated \$85,000 annually and for driving high standards that resulted in zero housekeeping or safety violations in the Model Shop.



Tony Martin
Services Employee of the
Quarter, Category I

Martin, automotive worker, filled in for the golf course superintendent's absence with superior results. Among his accomplishments are fixing broken equipment during peak times and supervising two part-time employees during a busy holiday weekend.



Greg McCreary
Services Employee of the
Quarter, Category II

McCreary, lodging manager, was recognized for quality control of a parking lot addition. He also is on top of industry standards and issues, having bought a steamer as a proactive measurement against bed bug infestation.



Kristopher Hughes
Civilian of the Quarter
Scientist/Engineer

Hughes, general engineer, was recognized for leading the TEDAC program, which is AEDC's highest priority revitalization effort. He also established a comprehensive source selection process for the second phase of the project.



Charlene Williams
Civilian of the Quarter
Clerical/Technical Support

Williams, office automation secretary, was recognized for excellence and timeliness in managing the division's many tasks. She also set the standard for timeliness and quality in ensuring Division time cards were completed on time.



Karen Buckner
Civilian of the Quarter
Administrative

Buckner, contracting officer, was recognized for successfully administering 13 investment, maintenance and civil engineering contracts valued at \$16 million. At the same time, she oversaw and trained two new contracting interns.

Paredez wins William M. Dunne People's Choice Award

Donna Paredez, a data analyst in the Test Management and Maintenance division, received the William M. Dunne People's Choice Award for the quarter.

Paredez was recognized for designing a preventive maintenance database used by AEDC's Test Asset Branch to track, summarize and report preventive maintenance by status. The database eliminated the need for manual calculations and amounts to a time savings of 60 hours a year.

Paredez also went beyond her normal duties. She conducted an in-depth study of Maintenance Scheduling Effectiveness Rates to find improvement opportunities, and aided the Electrical Asset Manager with tracking assets and preparation of a manager's handbook to AEDC's electrical infrastructure.

Paredez was also recognized for going beyond to accomplish all tasks ahead of a customer's schedule, no matter what the



Paredez

ease or difficulty of tasking is. Her expertise also has led to correction or clarification of issues in data entry and tracking maintenance data items.

From a customer service standpoint, Paredez has developed databases that have resulted in streamlined reports and gains in oversight capability for customers.

Paredez has worked at AEDC for two years.

Milestones

30 YEARS

James Parker, AF
Al Simmons, AF
Chester Dibenedetto, AF
Linda Cottrell, AF
Winston Howell Jr., ATA
Tommy Rust Jr., ATA
Ricky Arnold, ATA
Wayne Shetters, ATA
Andrew Jackson, ATA
Phillip Cyree, ATA
Larry Parks, ATA
Gary Knox, ATA
Thomas Ore, ATA

25 YEARS

Michael Arnold, FRC
Narlane Hampton, ATA
Pamela McCullough, ATA
David Thomas, ATA
Benjamin Mills Jr., ATA
Cindy Bernd, ATA
Rodney Hoefler, ATA

20 YEARS

Brandon Clark, AF
Kathy Gattis, ATA

15 YEARS

Donald Bailey, ATA
Thomas Johnson Jr., ATA
Bryan Jones, ATA

5 YEARS

Richard Hoots, ATA
Terry Archey, ATA
Frank Wonder, ATA
Charles Conrad, ATA
Paul Mosley, ATA
Brandon Lawson, ATA
James Puckett, ATA
R.B. Ray, ATA

OUTBOUND MILITARY

2nd Lt. Jack Ambridge, AF

RETIREMENTS

Maj. Trevis Bergert, AF
Tom Best, AF
Art Fuller, AF
Richard McWhite, AF

NEW HIRES

Joseph Baxter, AF
Milton Davis, AF
Nick Hibdon, AF
Donald Malloy, AF
Patricia Stiggins, AF
Dana Taylor, AF

GRADUATE / DEGREES

Nicholas Fredrick, MS
James Masters, Ph.D.
Marshall Polk, MSIE
Eric Van Horn, M.S.
Daniel Warren, M.S.
Jeff Harvey, B.S.
David Whitton, A.S.

Engineers getting ready for Engineers' Week events

This year's celebration of National Engineers' Week will take place Feb. 20-26.

Local area activities will include a MathCounts competition, a student design competition, an Engineer for a Day program and a banquet.

These activities are sponsored by the Tullahoma chapter of the Tennessee Society of Professional Engineers (TSPE), the Highland Rim chapter of the American Society of Mechanical Engineers (ASME) and the Tennessee section of the American Institute of Aeronautics and Astronautics (AIAA).

Howard Frederick, vice-president of the Tullahoma TSPE chapter, is the chairman for the Engineers' Week activi-

ties. He can be reached at 454-3238. Paul Kelly is a second contact at 454-6542.

The MathCounts competition will take place Feb. 12, at the Manchester/Coffee County Conference Center at 8 a.m.

Middle school students from Coffee, Franklin, Moore, Lincoln, Grundy, Bedford and Warren counties will compete on teams from their schools in a three-round competition. Each round gets successively harder.

The winning team will be honored at the Engineers' Week Banquet and will compete in the state competition. Retired AEDC engineer Richard Dix is the chairman for this event.

Dix is in need of volun-

teers to help proctor rooms or grade exams. He can be reached at (931) 728-0509 or at redix@bellsouth.net.

The Student Design Competition will take place Feb. 22 at the Hands-On Science Center in Tullahoma.

High school students in grades 10, 11 and 12 compete on two-person teams to design, build, and compete their design against the other teams. They will not know what they will be asked to design until they arrive at the competition.

The teams will be given kits with identical materials and will have about an hour and a half in the morning to design, build and test.

After lunch, the teams will compete their designs against each other.

Prizes will be awarded to the top three scoring teams.

Total participation is limited to 25 teams and three teams per school. Deadline for school teams to sign up is Feb. 16. Paul Kelly is the chairman for this event.

The Engineer for a Day program is also geared toward high school students, generally juniors and seniors.

The students will have a tour of AEDC, lunch and then go with a mentor to observe engineers at work.

Some students will stay at AEDC, and others will go to companies in the local area.

The date for this program is Feb. 23. Engineers to serve as mentors are needed. Contact Early

McKnight at 454-4968 if interested in being a mentor.

The Engineers' Week Banquet will be held on Feb. 24, at the Manchester/Coffee County Conference Center.

The winning MathCounts team and winners of the Student Design

Competition will be guests at the banquet, as will students who take part in the Engineer for a Day program.

There will be a guest speaker. Randal Braker is the chairman for this event and contact for ticket reservations. Braker can be reached at (931) 455-6458.

Commander's Fit Tip: work beans into diet

By Col. Michael Panarisi
AEDC Commander

If you've ever spent time in Great Britain, you would have heard the term "give it the beans" used by motorists and aviation enthusiasts, rather like our term "give it the gas."

But for this edition of the CFT, I'd like to break from our routine a bit and look at a nutrition topic, more specifically, make the case that it's time to get some beans into your diet.

Because we like to sound sophisticated, we can say that beans are "legumes," which are supposed to be something different from a stalk, a tuber, root or a bulb.

What makes legumes really different is that they are nature's best nitrogen catchers, pulling "N2" from the air, reducing the need for fertilizers and making them easy and inexpensive to grow in all kinds of soil.

What they do pull from the sun and the soil ends up stored in nice, convenient packages. But what's interesting for weight loss is how they offer a great source of plant based protein, along with some carbs, all this in a low-fat, high-fiber package.

I'm not talking "green beans," but rather red kidney beans, garbanzo beans, black beans and the ever popular great northern beans.

So what's the rub? Why aren't beans a staple in our diets? Hopefully, when you learn all the goodness packed into these little gems, you'll add them to all kinds of meals.

First and foremost, beans are CHEAP!! Dried beans are under a dollar a pound,

and even canned beans are just a little more, often on the shelf for a dollar for a 15-ounce can.

They are really "dense" from a calorie perspective too, making them one of the least expensive ways to get lots of energy for your shopping dollar. Just one cup provides more than 600 calories.

Prep is a piece of cake. For dried beans, it's just a matter of soaking them overnight, and for the canned beans, just wash and eat. For all this "trouble" you get a host of benefits.

Remember our look into "glycemic index?" Unless you are about to start a race, you'll do well to stick to foods with a lower glycemic index, and beans fit right in, thanks mainly to their protein and fiber content.

You can expect one third of the calories to come from protein, and two thirds from carbs. No need to worry about a "sugar crash" with these little bundles of joy.

Most varieties boast high levels of really sophisticated-sounding phytochemicals and phytoestrogens, bioactive compounds like isoflavones and other hard to pronounce nutrients known to reduce cancer risks.

On the more conventional side, you'll find vitamin A, iron, calcium, and loads of fiber. In fact, one cup is nearly twice the amount of fiber you need for the whole day.

I suspect that wolfing down a whole cup at lunchtime might not make you the most popular attendee of the afternoon staff meeting, so there are some better options.

If you like to munch on

a crispy salad for lunch, sprinkle on a half cup of red kidney beans and you'll add more than 20 grams of protein, and all those greens will buffer the fiber so you won't be asked to leave before the third slide on the agenda.

Plus you'll get more of a "full feeling," so if you often feel hungry in the early afternoon, the beans will help keep the cravings under control.

For overall health and nutrition, beans need to be on your shopping list. If you are trying to lose weight, these are "no brainers."

So forget all those bad memories of mushy French cut green beans drowned in cream of chicken soup, and put some beans on the table. You just can't go wrong with nature's "batteries."

Scholarship Program now taking 2011-2012 applicants

Scholarship Management Services, a division of Scholarship America, is accepting applications for the Dr. Joseph J. Jacobs Global Scholarship Program. Employees with students who would like to be considered for scholarships for the 2011-12 school year must apply by Friday, April 1, 2011.

Over the last two years, the Jacobs Engineering Foundation has awarded 40 academic scholarships of \$3,000 each from over 700 applications submitted.

This program was introduced in memory of founder Dr. Joseph J. Jacobs. His vision, leadership, and commitment helped make Jacobs one of the world's largest and most diverse providers of technical, professional and

construction services. Dr. Jacobs showed a particular devotion to education and recognized the significant value of making higher education attainable for any child who sought it.

The program is independently administered by Scholarship Management Services, a division of Scholarship America. Scholarship America is a nonprofit educational support and student aid service organization located in the United States.

Information on eligibility, the scholarship awards, the application, and the selection process is available on the AEDC Portal.

Click on the Employee Resources Tab on the Human Resources panel (which is on the right hand side of the screen), choose Human Resources Branch (at the bottom of the HR panel), then choose Benefits and scroll down and select the Scholarship link.

It can be found as well as on Scholarship America's webpage for the Dr. Joseph J. Jacobs Global Scholarship Program at <http://sms.scholarshipamerica.org/jacobs>. If you have additional questions, feel free to reach out to Scholarship America or your local human resources representative.

Arnold Golf Course 454-7076

Arnold Golf Course and Mulligan's Coffee Bar and Grill now have base numbers. Arnold Golf Course has a new base number that is easy to remember: 454-GOLF (4653). Mulligan's Coffee Bar and Grill now has its own number for ease and convenience in placing advance or to go orders. This new base number is also easy to remember: 454-FOOD (3663).

Mulligan's Coffee Bar and Grill expands seating with enclosure of the patio. Work has already begun for the winter seating capacity to increase by 48 when completed. The area will be heated and lights have already been installed. Carpet will go in after the curtains are completed. The curtains have the option to be raised or lowered depending on the weather.

Customer Loyalty Program for golf advanced green fee players to start for 2011 season. Purchase an annual green fee at Arnold Golf Course for 2011 and receive:

- 10 percent discount on Pro Shop merchandise
- 10 percent discount on cart rental
- 10 percent discount on Driving Range tokens
- 10 percent discount on food and beverage purchases at Mulligan's Coffee Bar & Grill

These discounts will be good during the 2011 season which runs April 2011 through March 2012. This discount program is not to be used in conjunction with the Members First Plus discounts. Maximum discount allowed is 10 percent. Sale items and alcohol are not authorized for these discounts. Come by to purchase your annual green fee and get your card for a year of savings.

Arnold Lakeside Center 454-3350

The doors will open at Arnold Lakeside Center at 4:30 p.m. on **Super Bowl Sunday**, Feb. 6, with kickoff scheduled for 5:30 p.m. Will your favorite team make it to the final of all football finals? Come watch on the big screen in the ballroom or any of the televisions in The Landing. Order from the Pizza or Express menus or enjoy the Super Snack Buffet (pizza, wings, chips & dip, etc.), \$6.99 for members and \$7.99 for nonmembers. Special of the day is \$5 Wings by the Dozen for members only. Brush up on your football trivia for the half time trivia contest. All in attendance, age 18 and older, are also eligible to participate in the square board contest by placing their name in a square. Members get to place their name on two squares. There will be a winner each quarter during this contest. The winner each quarter gets a prize and a seat in the recliner until the next quarter. The recliner winner for the first quarter will be by random drawing of those in attendance.

Books Are Fun is back for a book fair from 9:30 a.m.-3 p.m. Feb. 8 in the A&E Building's new training rooms (A125 and

A127). Discounted selections include paperbacks, best-sellers, educational, reference, cookbooks, children's items, gift selections and more. Save up to 70 percent off retail prices and find some great items for Valentine gifts, Mother's Day, Father's Day or any occasion.

Second Friday Karaoke will be Feb. 11 from 6-10 p.m. All ages are welcome from 6-8 p.m., but 8-10 p.m. is reserved for adults only. Special for members only 7-9 p.m. - 25-cent wings and half-priced pizzas. Dining room special will be spicy garlic lime chicken, \$9.95 members, \$10.95 nonmembers served 4-9 p.m. Call ahead for dinner reservations at 454-3350.

Celebrate Valentine's Day in style by joining the AEDC Woman's Club at their annual **Valentine's Dance** on Feb. 12. Come for a Razzle Dazzle fun time at the Arnold Lakeside Center. The social hour starts at 6 p.m., gourmet buffet dinner at 7 p.m., then dancing to the sound of Nashville's "Timeline." Cost is \$35 per person and dress is coat and tie. A silent auction will be held throughout the evening to benefit the Scholarship Foundation. This event is open to the public, all are invited to attend. Reservations and/or cancellations must be made by noon Feb. 4 to Liz Jolliffe, 393-2552 or lizjolliffe@yahoo.com, or Jane Ricci, 962-1378, or dickanjane@comcast.net.

Arnold Lakeside Center will open to the public on Feb. 19 to host the **Second Annual Bridal Fair**. The event will be from 1-5 p.m. with multiple vendors expected. The ALC staff will be available for menu planning and event booking for eligible patrons. Those who book an event will receive a complimentary Air Force Catering Wedding Planner (while supplies last). A deli buffet will be served for \$6.95 for members, \$7.95 for nonmembers and \$3.95 for ages 12 and under. Bottled water and sodas will be available throughout the day for \$1.25 each. Call 454-3350 for more information.

Wednesday Lunch is available for dine in or carry out from 11 a.m.-1 p.m. Call ahead to 454-5555 to place orders. No delivery available. For better service, you may call on any day and preorder. In addition to the Hap's Pizza menu, chef salad is available for \$4.50 which comes with ham, turkey, cheese and boiled eggs. Add grilled or fried chicken for \$2 more. Call to see what other specials are available each week.

Movie nights are every Thursday with movie start time of 6 p.m. and dinner available from the Express or Pizza menus from 5-8 p.m. The schedule for February is: **Feb. 10** - "Unstoppable," rated PG-13 starring Denzel Washington and Chris Pine. With an unmanned, half-mile-long freight train barreling toward a city, a veteran engineer and a young conductor race against the clock to prevent a catastrophe. **Feb. 17** - "Morning Glory," rated PG-13 starring Rachel McAdams, Harrison Ford and Diane Keaton. An upstart television producer accepts the challenge of reviving a struggling

morning show program with warring co-hosts. **Feb. 24** - "Megamind," rated PG starring voices of Will Ferrell and Brad Pitt. The super villain Megamind finally conquers his nemesis, the hero Metro Man ... but finds his life pointless without a hero to fight.

Friday night dining room specials available from 4-9 p.m. Feb. 4: Scallops with mango salsa on fresh spinach, \$13.95 member, \$14.95 nonmember. First Friday Jam is 6-10 p.m. **Feb. 11:** spicy garlic lime chicken, \$9.95 member, \$10.95 nonmember. Second Friday Karaoke 6-10 p.m. Member's Special: 25-cent wings and half-priced pizzas 7-9 p.m. **Feb. 18:** Penne with shrimp and goat cheese stuffed tomatoes, \$8.95 members, \$9.95 nonmembers. **Feb. 25:** Cream cheese & prosciutto stuffed chicken, \$11.95 members, \$12.95 nonmembers. Last Friday Trivia 6:30 p.m. All specials and times are subject to change without notice. Please call ahead to ensure availability and openings.

Saturday availability and specials: Feb. 5: Closed. **Feb. 12:** Woman's Club annual Valentine's Dance, social starts 6 p.m., gourmet buffet dinner 7 p.m., dancing to Nashville's "Timeline," \$35. **Feb. 19:** T-bone with parmesan dusted mushrooms, \$13.95 member, \$14.95 nonmember. **Feb. 26:** Butter beef on noodles with mashed cauliflower, \$8.95 member, \$9.95 nonmember. The dining room is open on Saturdays from 5-9 p.m. unless otherwise specified. Please call for reservations to ensure these specials are available. All specials and times are subject to change without notice. Please call ahead to ensure availability and openings.

Trivia Contest returns 6:30 p.m. Feb. 25. Teams can have up to four people. No cell phones are permitted during the event. Anyone using a phone while a question is underway will be disqualified. A tutorial will be given promptly at 6 p.m. to all participants prior to the start of the game. Six rounds of questions will be administered consisting of three questions in each round. Each round is worth 10 points. The team with the most points at the end will have their choice of available prizes. Remaining teams will select prizes in order of finish in point standings. Ties will be broken by a trivia play-off.

Family Member/Youth Programs (FamY) 454-3227

Youth Movie Night will be Feb. 4 from 5-7 p.m. Ages 9 and up are invited to the Open Rec Center to watch a movie. There will be free popcorn, juice and water.

Drum Lessons will begin a new session Feb. 19. Cost is \$50 for four 30-minute sessions and is open to ages 7 and up. Classes are held on Saturdays from 12-4 p.m. in 30-minute blocks for four week sessions. New sessions will begin March 19 and April 16. Call to set up your time preference.

4-H meeting is set for Feb. 25 from 4-5 p.m. The 4-H program is for youth in fourth grade through

Mission Support Division hours of operation:

Arnold Lakeside Center - Special function luncheons available. Call 454-3350 for arrangements. Catering/Management offices Tuesday-Friday 10 a.m.-3 p.m.; Lunch: limited menu Wednesdays, 11 a.m.-1 p.m., call 454-5555 to place orders; Dinner: Arnold Express Menu or Hap's Pizza only Thursday 5-8 p.m., dinner or Arnold Express Menus and Hap's Pizza Friday 4-9 p.m. and Saturday 5-9 p.m.; Main Bar Thursday 5-8 p.m., Friday 3:30-10 p.m. and Saturday 5-10 p.m.; Social Hour Friday 4-6 p.m., Movie Night Thursday 6 p.m.

Family Member/Youth Programs - Tuesday through Friday 10 a.m.-5 p.m., Saturday 12-5 p.m., First Friday Movie Night 5-7 p.m.

Outdoor Rec - Main Office, Check In and Auto Shop Tuesday through Saturday 10 a.m.-5 p.m., Marina by appointment only.

Fitness Center - Monday-Friday 5 a.m.-9 p.m.; Saturday 8 a.m.-4 p.m.; Sunday 12-5 p.m. Open 5 a.m.-6 p.m. Feb. 21.

Arnold Golf Course - Pro Shop 8 a.m.-5:30 p.m., Driving Range open 24 hours with pre-purchased key card. Mulligan's Grill: 6:30 a.m.-2 p.m. Monday through Friday, 7 a.m.-2 p.m. Saturday and Sunday.

Recycling - Monday through Friday 7 a.m.-4 p.m.

Wingo Inn - Monday through Friday 7 a.m.-6 p.m., Saturday and Sunday 8 a.m.-4 p.m.

Barber Shop: by appointment - Monday, Wednesday & Friday 8 a.m.-2p.m.; Thursday 8 a.m.-noon.

18 years of age. Future meetings are scheduled for March 24 and April 28.

Special Demonstration Projects planned for Feb. 25 from 5-10 p.m. Come out and learn how to make an apple pie with three easy steps. Learn how to make recycled paper with three easy steps. Even if you aren't into these projects everyone is still welcome to come hang out with your friends and enjoy some new games and a spaghetti dinner. The meal includes spaghetti with meatballs, corn, tossed salad and garlic bread. Beverages include water, soda and fruit punch. Cost is \$15 per person ages 5 and up. Additional children from the same household will pay \$10 each. Deadline to sign up is Feb. 21. Late registration fee and/or cancellation fee of \$10 each will be applied after Feb. 21. There must be at least 10 signed up to hold this event. Maximum number of participants allowed is 15.

Air Force Air Society is currently accepting applications for our **General Henry H. Arnold Education Grant Program** which provides \$2,000 grants to selected sons and daughters of active duty, Title 10 AGR/Reserve, Title 32 AGR performing full-time active duty, retired, retired reserve and deceased Air Force members; spouses (stateside) of active duty members and Title 10 AGR/Reservists; and surviving spouses of deceased personnel for their undergraduate studies. The value and success of this program is demonstrated in the 91,095 grants disbursed since the first awards were made for the 1988-1989 academic year. Available to students who are in college or will be entering college next academic year. More information and eligibility requirements can be found at <http://www.afas.org/Education/Arnold-EdGrant.cfm>. Deadline for this grant is March 11. Air Force Air Society is now on Facebook!

Fitness Center 454-6440

Intramural Basketball League is underway with games played on Tuesdays and Thursdays at 6, 7 and 8 p.m.

Push Up / Pull Up / Sit Up Competition is set for Feb. 23. Stop by anytime during regular hours and complete as many properly performed reps in each category. The top finisher in each category will receive a prize.

Body Pump Boot

Camp is now a regular class on Mondays and Wednesdays at 6 a.m. lasting an hour. It incorporates plyometrics, jump squats, burpees, mountain climbers, calisthenics, jumping jacks, sit ups, push-ups, and strength training utilizing dumbbells, medicine balls and your own body weight. It also addresses cardiovascular endurance and core conditioning in interval fashion. Forums will also use concepts such as team exercises - grab a partner for additional fun and exercise. This class is progressive as the weeks go on and a progress sheet will be developed for all participants to track their improvement. This class is geared towards all levels of fitness so come out and have some fun. Classes are for eligible users only (Members First Plus members, active duty military, retired military and DoD civilians).

Fitness Center has assumed the roles and responsibilities of the Health and Wellness Center. The workout room in the A&E Building, Room C203 will now be referred to as the Fitness Center Annex. Programs and services designed to improve overall health as well as attaining a better sense of well-being will be offered. Among the services planned will be professional nutrition counseling, stress management, tobacco cessation, cancer, cardiovascular disease, diabetes and other preventative programs. These services and programs will be limited to installation active duty, DoD and NAF civilian workforce. Appointments must be made through the main Fitness Center by calling 454-6441.

Outdoor Rec (ODR) 454-6084

Paintball is set for Feb. 12. Ages 10 and older are invited to play. Meet at Outdoor Rec. at 9:30 a.m. Cost is \$20 and includes lunch. Remember to wear long-sleeved shirts and long pants.

FamCamp and Crockett Cove cut prices for winter months. Outdoor Rec has marked down prices by half for camping through February 2011. Call 454-6084 for further

information or to make reservations.

Battlefield Trips coming in March: Stones River Battlefield March 19 and Chickamauga Battlefield March 26.

The Battle of Stones River began on the last day of 1862 and was one of the bloodiest conflicts of the Civil War. The battle produced important military and political gains for the Union and it changed forever the people who lived and fought here. Join Outdoor Rec for a trip to Murfreesboro to tour the park guided by a park ranger. The tour will take place rain or shine and will cover the entire park with stops at certain points along the way to get a more in depth look at the importance of these areas within the battlefield. Then tour inside the visitor's center featuring artifacts from the war as well as accounts from those who were involved. The tour itself will be from 1-4 p.m. Meet at Outdoor Rec at 11:30 a.m. and plan to return approximately 5:30 p.m. There is an option to stop for food along the way if the group so chooses. Bring cameras if you want and extra money for souvenirs. This trip is for all ages and cost is \$10 (free for age 7 and under). Deadline to sign up is March 16. There must be a minimum of 8 to take the trip with maximum of 26.

In north Georgia and south Tennessee, Union and Confederate armies clashed during the fall of 1863 in some of the hardest fighting of the Civil War. The prize was Chattanooga, a key rail center and the gateway to the heart of the Confederacy. Learn more about the Chickamauga Battlefield on a park ranger guided tour. Meet at Outdoor Rec at 8:15 a.m. and return approximately 4 p.m. The tour will be from 11 a.m.-2 p.m. EST. Plan to stop for lunch after the tour. This trip is for all ages and cost is \$12 (free for age 8 and under). Deadline to sign up is March 23. There must be a minimum of 8 to take the trip with a maximum of 14. Remember to bring your camera and extra money for souvenirs.

It's time to learn more about the significant things that happened in this country's history in places that aren't that far away. Call 454-6084 to sign up or for more details.



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AEDC's Shappley keeps in touch around the world

By Philip Lorenz III
Aerospace Testing Alliance

AEDC's Bill Shappley is the first to acknowledge he is more into technology than socializing, but his hobby has brought him into contact with people literally from all over the world, from Easter Island to Sweden, from Fiji to Israel.

As an electrical engineer with ATA, the Tracy City resident said a life-long fascination with electronics has played a major role in his life, leading to a college degree and a career.

Having a father and siblings who were engineers also helped pave the way for a science-oriented future.

Shappley's interest in all things electronic had always extended well beyond his job as a technical lead with ATA's control and data systems development branch at AEDC.

However, it was Jack Frazier, a friend and coworker at AEDC, who finally convinced Shappley to look into amateur radio as a hobby to pursue with the same conviction that led to an undergraduate degree from Christian Brothers University in Memphis.

"I had been fooling around with restoring tube-type audio amplifiers, stereo amps, those types of things," Shappley said. "And Jack said, 'You ought to get into ham radio,' and this was about 2003. I knew about ham radio and told him I wondered why I hadn't ever looked into that."

Shappley was particularly intrigued with using the minimum amount of power and equipment to reach the furthest distances.

"You can communicate with Morse code with a piece of wire and a car battery," he said. "You [can] go halfway across the world – you can talk to [someone in] Europe with a car battery and a 100-foot piece of wire strung up in the trees, [with] no [other] infrastructure required."

Shappley is quick to point out that he is not an advocate of only "old school" technologies. He has been the first to embrace the latest software and other advances in ham radio operations and equipment. He is also fascinated by the way meteors, the moon and even aircraft, or the ionized paths they leave behind, could be used, under the right conditions, to help propagate radio signals. He has enjoyed making the best use of a combination of the older and newer equipment. Another source of satisfaction for Shappley has been learning how innovative scientists have used techniques devised for other purposes to benefit amateur radio.

Before he could enter the world of ham radio, Shappley had to tackle the requirements.

"There are three main levels of licensing and I got the initial license in 2003," he said. "By 2004, I had gone ahead and gotten the Amateur Extra license, which is the top level."

He said that being an electrical engineer helped minimize the preparation necessary for taking the licensing exams, but a Morse code test (that is no longer required) proved more challenging.

"Now, I'm not great at Morse code," Shappley acknowledged. "I am com-

fortable with it and I still hear the individual letters, so I have to write them down. The people who are really great at it hear whole words, they just fly. They had a guy on Jay Leno about five or six years ago named Chip Margelli."

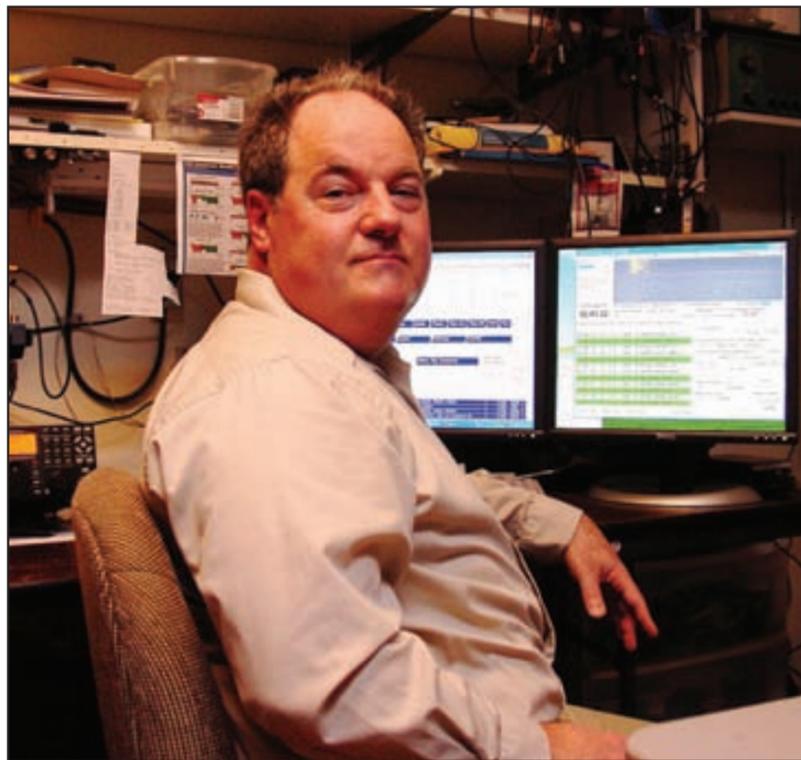
As he spoke about how Leno had Margelli and another "ham" pair up on a Morse code transmitter to compete with a couple of young people using text messaging to receive a short communication, Shappley's enthusiasm for amateur radio was hard to miss.

"I played the Jay Leno thing [program segment] back three times to hear what they were sending, they were sending so fast. But it was funny to see the look on that kid's face [when Margelli deciphered the message before his younger competitors]."

Frazier, a Jacobs Technology electrical engineer at AEDC who had been involved with amateur radio since 1960, recalled how his coworker got hooked on ham radio.

"Bill and I were working together on one of the control system upgrade projects not too long after I came to AEDC," Frazier said. "In a conversation, he mentioned that he was really into audio equipment, especially vacuum tube amplifiers and electronics in general as a hobby, but especially anything with tubes in it."

"I mentioned one day that I was an amateur radio operator and that there was still vintage equipment available that have vacuum tubes. I explained the basics and encouraged



Bill Shappley, an electrical engineering lead with ATA's control and data systems development branch, sits in his home-based "ham shack" while awaiting a reply to a Morse code message sent from his computer-linked radio to another "ham" in Sweden. A few of Shappley's QSL cards, below, represent the reach of his hobby. A QSL card is used to confirm communication between radio, TV or shortwave stations or amateur operators. Shappley has been sending and receiving the cards since earning his ham radio operator's license in 2004. (Photo at left provided; photo below by Philip Lorenz III)

him to give it a look. That was all it took, and within a few months he was licensed and on the air."

Frazier pointed out that ham radio is more than just a hobby.

"It is not uncommon for a disaster to take out the total communications infrastructure in an area, and it can take days or weeks to get it back," he explained. "Many amateur radio operators are trained, knowledgeable [and] experienced communications experts and are organized so that they can rapidly deploy to an area and support the local or federal emergency teams by providing vital communications in the early stages."

Shappley said he is ready to help when and if the need arises to put his ham radio skills and equipment to use in case of an emergency.

