

Dynamic pressure sensitive paint showcased at AEDC

By Deidre Ortiz
ATA Public Affairs

A test demonstrating Innovative Scientific Solution Incorporated's (ISSI) dynamic pressure sensitive paint (PSP) was recently conducted in the 16-foot transonic wind tunnel at AEDC.

The effort was funded by the Air Force through a Rapid Innovation Funding grant for Air-Delivered Weapon Certification Cost Reduction. The goal is to provide a capability that can improve computational fluid dynamics (CFD) modeling simulation of store separation in order to reduce the need for wind tunnel and flight test drop testing during the certification process.

ISSI researchers were joined by engineers from AEDC, Lockheed Martin and Euclidian

Optics for the program.

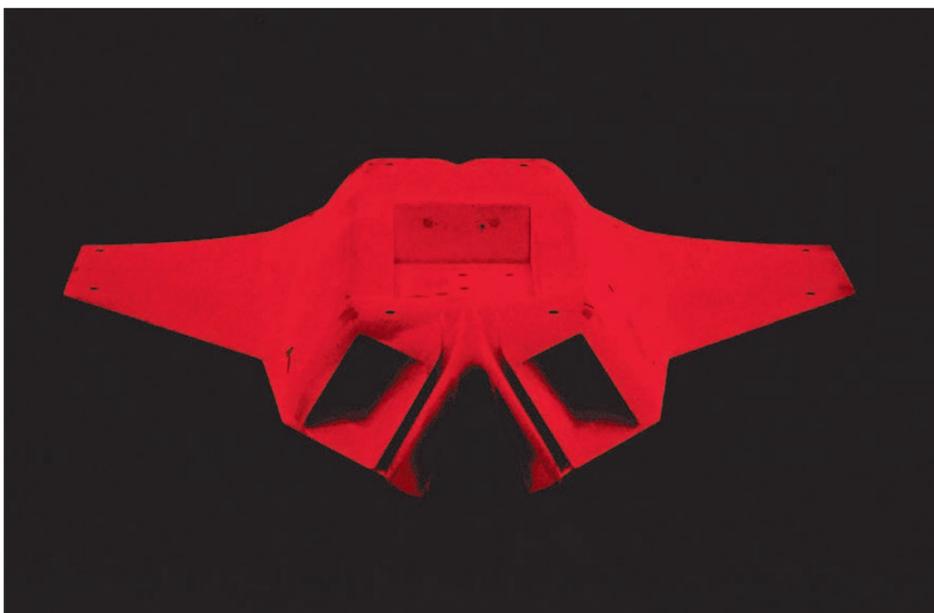
According to Jim Crafton, senior research scientist for ISSI, the concept of dynamic PSP, also known as fast PSP, has been around for about 15 years, but due to a few technical shortfalls it hasn't been implemented until recently.

"A lot of the hardware [finally] caught up, and the camera technology is better now than it was even five years ago," he explained.

Because of these advancements, Crafton stated ISSI thought it was time for fast PSP to progress from the development and research stage to the testing stage.

"We wanted to take this technology from an academic application and use it in a production facility that's capable

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Innovative Scientific Solution Incorporated recently conducted a test in the 16-foot transonic wind tunnel using dynamic pressure sensitive paint (PSP). The PSP was used a Lockheed Martin V7 model, pictured above. (AEDC Photo by Marvin Sellers)

AEDC Model Shop sparks the interest of Grundy Co. students

By Deidre Ortiz
ATA Public Affairs

A group of 18 welding students from Grundy County High School recently visited AEDC to take a tour of the Manufacturing and Construction Services facility, known on base as the Model Shop.

Walt Bishop, ATA Test Support Branch manager, introduced the students to several key Model Shop staff and explained that the shop is where the hardware for most of the AEDC test projects starts.

In touring the facility, the students had the opportunity to watch ATA craftsman Chester Stovall use a tungsten inert gas (TIG) welder to join pieces of metal together. Of Stovall's presentation, Grundy County student Gannon Byers exclaimed, "It was awesome!"

Though welding may look "cool," the group learned it takes a good amount of skill, and before starting at AEDC, all welders must pass a quality test. Then, after being hired, a welder's work is continually reviewed by trained technicians from the Non Destructive Examination Lab who use various technologies to assess the quality of their welds.



Grundy County High School welding class students watch as AEDC craftsman Chester Stovall works with a tungsten inert gas (TIG) welder. (AEDC Photo by Rick Goodfriend)

"To give an idea of the variety of the expertise we require here, there are over 10,000 different welding procedures required that ultimately support our testing," Bishop said.

"I was very impressed with the class. The Grundy County

welding program, currently headed up by Robin Dykes and Career and Technical Education (CTE) Director Gina Sons, is well respected beyond middle Tennessee and has produced some of the finest welding talent we have."

The students were encouraged to hone their skills and consider attending a technical college once they graduate.

"If they want to take their trade seriously they need to plan on attending a vocational school when they graduate from high school

and to continue learning the fundamentals," Bishop said. "In fact, they should be prepared for a career of education beyond the vocational school. What they learn now will only be a foundation for

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Ron Bandy (left), a supervisor in the AEDC Carpenter and Paint Shop, speaks with AEDC Historian Christopher Rumley about the history of the original AEDC Dedication Plaque. (AEDC Photo by Rick Goodfriend)

Original AEDC Dedication Plaque kept safe

By Raquel March
ATA Public Affairs

Ron Bandy, a supervisor in the AEDC Carpenter and Paint Shop happened to be in the right place at the right time to protect a part of AEDC history – the original AEDC Dedication Plaque.

The plaque inscription reads, "At this site on 25 June 1951, President Harry S. Truman dedicated Arnold Engineering Development Center to the memory of Gen. H.H. (Hap) Arnold, the father of the U.S. Air Force."

Bandy kept the plaque safe for approximately 25 years.

"Around 1989 or 1990 we were told to go to the warehouse dock one to remove the [Gen. Henry "Hap" Arnold] picture and plaque," Bandy said. "Thinking the plaque was too important to discard, I put it in the scaffold shed and forgot about it for about 10 years. [I was] going through the shed one day and there it was right where I left it."

Bandy moved the plaque two more times throughout the years until it was finally placed on a file cabinet as a

makeshift display where it was shown to ATA General Manager Steve Pearson.

Bandy said, "I then put it in the Carpenter Shop office on top of a filing cabinet and there it stayed until Mr. Pearson came to our Tool Box meeting on Oct. 15. Knowing he is an avid history buff, after the meeting I told him I had something to show him. The rest is now, as they say, history."

Bandy said he wanted the

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HIGH MACH

Arnold Engineering Development Complex
An Air Force Materiel Command Test Complex

Col. Raymond Toth
Commander

Jason Austin
Chief,
Public Affairs



Steve Pearson
General Manager,
Aerospace Testing Alliance

High Mach Staff:
Kathy Gattis, ATA Public Affairs Manager & Executive Editor
Raquel March, Editor

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- Service before self
- Excellence in all we do



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"ATA will be a trusted partner in delivering best value warfighter support and asset 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

Eagle Eyes promotes community involvement in security

By Michael Schnable
Office of Special Investigations

The Arnold Police defend the base, but everyone can help ensure we are safe and sound through the Air Force Office of Special Investigations (AFOSI) Eagle Eyes program.

Law enforcement officers rely on the eyes and ears of the entire community. If base employees notice anything out of the norm or suspicious, either on or off base, they should report it immediately to local law enforcement or base police, who are available 24 hours a day at 454-5662. Please ask for the on call AFOSI duty agent when contacting the base police.

If you prefer to remain anonymous, you can use the AFOSI anonymous tip line by visiting <https://www.tipsubmit.com/WebTips.aspx?AgencyID=1111> or download the TipSubmit Mobile application from your provider's marketplace - Select "Federal/Military" and then "Air Force Office of Special Investigations" or text "AFOSI" plus your tip information to 274637 (CRIMES). The AFOSI Tip Line provides service members and civilians a safe, discreet and anonymous option to report criminal

information, counterintelligence indicators or force-protection concerns.

What to Watch For: Surveillance

Overt surveillance may involve a person standing outside the gate jotting down notes or taking pictures. Some surveillance is more covert, such as a "broken down" car in a place where its occupants can observe base activities while waiting for "help."

In order to plan an attack, terrorists must acquire information about the base and its personnel. In the early stages this can be done by reading published information; searching the internet or surveillance; but at some point the terrorists will try to obtain undisclosed information; this is usually done through elicitation.

Elicitation

Elicitation may occur by phone, fax, e-mail, snail mail, or in person. A terrorist may call and pose as an Air Force member, asking to speak to a high-ranking Air Force official to find out if he/she is deployed or away from base. Someone may approach an Air Force member in uniform at an off base restaurant and, feigning curiosity, strike up a conversation: "Oh you work at Arnold. What do you do?...How many peo-

ple work in your office?... What kind of testing is going on?," etc.

Although these questions may seem harmless, this is how terrorists gather insider information necessary to carry out their plan. If people suspect that someone is trying to elicit information from them, they should not reveal anything and should report it.

Tests of security

This occurs when the terrorists attempt to measure the base's security reaction time and to assess its strengths or weaknesses. This may include someone driving at a high speed toward the gate to gauge the guards' reactions or it may involve a person hopping the fence and seeing how long he/she can elude the guards. At this stage, terrorists are interested in finding out the capability of the security they are up against, and how much they can get away with.

Acquiring supplies

Terrorists must also collect the necessary tools to carry out their mission. This may include purchasing or stealing weapons, ammunition, uniforms, military ID cards, or any other controlled items. Dry cleaners often call saying they have ID cards that were left in clothes; though this seems

harmless, this could provide terrorists access to the base so it is important for on base personnel to keep track of their ID cards and other controlled items.

Suspicious persons/vehicles out of place

It's also important to note suspicious people who "don't belong." After working in an office for a few weeks, people typically know who belongs in the office. They should not be afraid to ask to see an ID or orders. If they prefer not to take a direct approach, they can contact the Arnold Police to address the individual.

When reporting suspicious individuals, provide as much information as possible. This includes, but is not limited to, gender, clothing type and color, approximate height, and distinguishing marks or tattoos. When reporting suspicious vehicles, include color, make, model and most importantly a license plate number (even a partial plate number).

Dry run

This is the test run, when the terrorists rehearse their plan, map out routes, and determine the timing and flow of their attack. After the rehearsal, the terrorists deploy their assets and get into position. At

this point, they are putting on their masks and readying themselves to carry out their mission. This is the last opportunity to catch the terrorists before the attack occurs, so it is crucial to alert authorities immediately.

Deploying assets

This is a person's last chance to alert authorities before the terrorist act occurs. Look for people loading up vehicles with weaponry/explosives, etc., and/or parking that vehicle somewhere, or people in military uniforms (who don't look right) approaching an installation or getting into a vehicle, or people who seem out of place standing by at a certain location as if waiting for something to happen.

You and your family are encouraged to learn the categories of suspicious behavior and stay attuned to your surroundings. If you observe something suspicious please report it immediately. More information regarding the Eagle Eyes program is available at <http://www.osi.af.mil/eagleeyes/>. AFOSI Det 106 can be reached at 454-7820 during normal duty hours, or at any time, via the Arnold Police at 454-5662 or the Ops Center at 454-7754.

How did we lose this young Airman?

By Col. Donald Grannan
88th Communications Group Commander

WRIGHT-PATTERSON AIR FORCE

BASE, Ohio – She was an Airman Leadership School distinguished graduate, earned staff sergeant her first time testing, received all 5s on her Enlisted Performance Reports and took part in two deployments. Clearly she was a high-performing Airman. But, in her words, the Air Force had made it clear it didn't want her. Huh?

I have proudly served our Air Force all of my adult life, so I truly didn't understand. Although I wasn't in her chain of command, I've known this young woman throughout her career. I tried to reflect on this from a professional, albeit admittedly biased, point of view. What would make this superstar believe we didn't care if she stayed or not?

Was it a bad first impression? I remembered an incident as a new Airman at her first duty station. A senior NCO struck her car from behind in a minor fender-bender. Instead of admitting fault and moving on, he berated and intimidated this young Airman about the issue. Her first sergeant, who she went to for help, would not interject or discuss the issue with the senior NCO. I could have interjected as well, but I mistakenly believed it wasn't my place. It was. An Airman needed help, and no one gave it.

Was it a lack of encouragement? After she earned staff sergeant her first time eligible, she saw the results online on the Air Force Web. Then ... nothing until the following Monday when the first sergeant stopped by to congratulate her and said the commander was "really busy." When she was a distinguished graduate from Airman Leadership School, it was a highlight in her career. But other than her immediate supervisor, no one from her squadron chain of command was present. I know, because I was there.

Was it motivation? She was a veteran of two deployments, including one where she had a few days' notice to support a humanitarian operation. By chance I saw her and another Airman at a connecting airport as I was returning from a temporary duty assignment. I saw their apprehension and anxiety and made sure they understood to take care of each other, trust their training and focus on the mission. But I wondered if their own leadership had talked to them like this.

Did we at least send her out the door with a smile, to encourage others toward an Air Force career? No. Instead her superiors decided there would be no decoration for this outstanding Airman who achieved a lot in a short period of time and who was highly lauded by her supervisors.

Why? Because she had once failed a physical fitness test, immediately re-took it, and passed. She had tried to 'wing it,' failed the run and learned a lesson.

This young, healthy Airman, who weighs a buck-twenty-five, did not have a fitness or standards problem. She had a leadership problem. No one in her squadron leadership knew about or was present to witness her exceptional duty performance, her distinguished graduate accomplishment, her two deployments or early promotion. But they sure knew about the one time she stumbled.

In the end we took an exceptional, highly motivated volunteer and did we mold her? No way. Did we encourage her? Not a chance. Did we create a new leader? No. We created someone who cares about our nation but is disillusioned and frustrated about what our Air Force finds important and unimportant. We lost an enormous opportunity, and we can't afford to repeat that mistake.

Today, more than ever, as our ranks continue to decline, we must retain the best and most highly motivated Airmen. To do that, we have to lead them, be in the fight with them

and focus on what's truly important and not become hyper-focused on marginal or anecdotal issues.

How many more situations like this are out there? If you're in a leadership position, are you part of this problem? Do you know the people under you? Are you in the fight, witnessing their capabilities, encouraging and motivating them, or do you only know about them when they stumble? If you think command or leadership positions are just another assignment, you're part of the problem.

Ask yourself, when was the last time a troop brought you a problem? If that's not happening, it's because they don't believe you can, or will, help them. So get busy proving to them they can count on you, and you'll be surprised how well you can count on them.

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 two ways: via the AEDC intranet home page 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. Raymond Toth
AEDC Commander

Q: Is there a reason Gate 2 cannot be opened at 6:15 [a.m.] so those of us asked to work extended hours can get to work at 6:30 [a.m.] (on time) without having to drive to Gate 1? It opens at 6:30 [a.m.] anyway and the guards are already there at 6:15 [a.m.].

A: Thank you for your question.

The purpose of Gate #2 is to provide a dedicated entry point for commercial traffic. We enjoy the convenience of using this gate for non-commercial traffic during the majority of the time it is open, however, changing access hours would adversely affect the operations of this entry point.

Arnold police have set duty schedules which include a required guard mount (pre-work inspection and distribution of information.) Once the guard mount is completed, officers proceed to their posts. On average, officers arrive at Gate 2 between 6:15 a.m. and 6:25 a.m. and have several tasks they must perform prior to opening the gate. If the officers complete their required functions prior to 6:30 a.m., they will open the gate for traffic.

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, smoking is not permitted 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. 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://papro.arnold.af.mil/PORTAL/images/Smoking_area_map.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.

Smoking, including the use of electronic cigarettes and smokeless tobacco, is prohibited in any area, at times when official business is being conducted with government clients, test customers, outside visitors and dignitaries, and where official business is being conducted including conference rooms, auditorium settings, business meetings, or in any other area where Air Force regulations specifically prohibit use. 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. Due to the nature, appearance, and safety concerns of electronic cigarettes (also known as "e-cigs"), the use of said products will abide by the same rules for tobacco products stated above and governed by AFI 40-102, *Tobacco Use in the Air Force*.

2. Supervisors at every level will ensure this policy is followed. Disciplinary action is appropriate for repeated violations.

3. Updates to this policy will be made in the future to further align with Air Force guidelines.

4. This policy remains effective until rescinded. (This policy is dated December 20, 2013)

Lt. Col. Teresa Suh retires after 20 years of AF service



Lt. Col. Teresa Suh (right), formerly the Director of Operations with the AEDC Test Operations Division (TST), accepts a U.S. Air Force Certificate of Retirement from retiring official Col. Timothy West, the AEDC TST director, at a retirement ceremony in her honor on Oct. 31 at AEDC. Suh was assigned to AEDC from May 31, 2012 through Oct. 31, 2014. (AEDC Photo by Jacqueline Cowan)

Liston and Schmisser receive a Tullahoma welcome



Tullahoma Mayor Lane Curlee and the Tullahoma Board of Aldermen welcomed Glenn Liston (left), the Chief of the new Air Force Research Laboratory High Speed Experimentation Branch (RQH), and Dr. John Schmisser, the professor of Aerospace Engineering at the University of Tennessee Space Institute and H.H. Arnold Chair, to Tullahoma during a reception at the Tullahoma City Council Chambers on Oct. 27. The RQH is located at AEDC. Liston and Schmisser are new residents to the area. (Photo by Chris Barstad)

Employee and Community Activities Committee announces members for 2015

By Raquel March
ATA Public Affairs

The ATA Employee & Community Activities Committee (E&CAC) is available to support its workforce and community with newly elected officers for fiscal year 2015.

The committee, which consists of 18 members, provides a means for ATA personnel to demonstrate an interest and concern for the general welfare of all ATA employees and the surrounding communities.

The 2015 officers are: Tony Medley, president; Christy Brunner, vice president; Kim Vanzant, secretary; and Kristi Farris, treasurer.

Committee chairpersons include: Janet Gammon, Angel Tree committee; Mary Beth Barlow, Athletic committee; Phyllis Lafferty, Social committee; Carol Smith, Civic committee; and Andrea Stephens, Education committee.

The members are nominated and elected by their peers from Tullahoma, Manchester and Winchester areas. These three general areas support multiple areas to include Bedford, Cannon, Coffee, Franklin, Grundy, Lincoln, Moore, Rutherford and Warren counties.



Shown here are the 2015 members of the ATA Employee and Community Activities Committee (E&CAC). Pictured on the front row, left to right are Mitch Turrentine, Chris Bird, Brandi Harmon, Ted Boswell, Tony Medley (president) and Scott McPherson. Back row left to right: Andrea Stephens (Education chairperson), Natasha Young, Christy Brunner (vice president), Carrie Barham, Phyllis Lafferty (Social chairperson), Kristi Farris (treasurer), Mary Beth Barlow (Athletic chairperson), Carol Smith (Civic chairperson). Members not pictured include Kim Vanzant (secretary), Janet Gammon (Angel Tree chairperson), Scott Marshall and Summer Shields. (AEDC Photo by Jacqueline Cowan)

The committee establishes subcommittees to coordinate activities and requests received in the categories of social, civic, athletic, education and Angel Tree program. The subcommittee chairpersons are primarily responsible for evaluating donation or activity requests and presenting the information to the committee at monthly meetings. Each member agrees to serve a three-year term.

PLAQUE from page 1 plaque to be accessible where everyone could view it and enjoy it.

AEDC Historian Christopher Rumley has taken possession of the plaque for safe keeping. According to Rumley the plaque may have been removed for aesthetics.

"I went over to Warehouse-1 to see if there was still anything up on the building to commemorate the spot of the 1951 dedication," Rumley said. "There is a large plaque on the wall and some photos of the dedication ceremony. I guess the original plaque was getting old and rusty so they replaced it with a newer one. The old plaque is now in my possession in the archives and will be placed on display in building 100 [the A&E building] for all to see."

Arnold Community Council announces 2015 officers



The Arnold Community Council (ACC), a community group that supports the AEDC mission, recently announced their 2015 ACC officers. Pictured here with Tennessee Governor Bill Haslam (third from left) at the recent ACC Dinner, is (left-right) Claude Morse, secretary; Jim Herron, vice president; Jim Jolliffe, president; and Pruda Ross, treasurer. (AEDC Photo by Rick Goodfriend)

Thanksgiving Holiday Memories



Kim Arnold
General Clerk
Finance and Contract
Management Branch
7 months of service

Memories I plan to make this Thanksgiving... Seventeen years ago on Thanksgiving my family and I spent the holiday at the Birmingham Children's hospital because my niece had cancer. Fortunately, my niece is now fine but this event helped to remind us how important family is. So this year, like every year, we plan to make time for family bonding. Cooking dinner, eating together, and of course, some are watching football together. Per tradition,

we always gather in the living room after dinner, draw names for Christmas, put up our Christmas trees/decorations and just enjoy our time together by laughing and talking. We will also take the time to catch up on each other's lives because throughout the year, we don't get a lot of time to sit down and spend time together. My sister-in-law, daughter and I also like to read the sales paper so we can make a plan for after-Thanksgiving shopping.



Phyllis Lafferty
Secretary
Aeropropulsion Plant Assets
Branch
8 years of service

Most memorable Thanksgiving... Actually it was last year. My husband's children came

for the whole weekend for the first time in 25 years! We spent the entire weekend doing fun things - eating, Rock City, talking until the wee hours of the morning, Opryland and a special musical night with Stephen Salyers in downtown Nashville.



Peter Macaluso
Air Force Project
Manager
Propulsion Wind Tunnel
Test Branch

5 years of service My most memorable Thanksgiving... Moving from the kids' table to the adult table.



Jay Rogers
Controls Engineer
ATA Information Technology
and Systems Department
5 months of service

When my family was in Yokota Air Base, we lived in base housing which had eight families all sharing the same lot. Every year for Thanksgiving the whole lot would come out and hold a potluck dinner party. Since many of us came from different parts of the world, the food was unique and (for the most part) tasty! Along with the staples of turkey and the like, we had dishes such as lumpia, meat stuffing and shepherd's pie. The best part was that all the kids would get together after eating in an open area nearby and play soccer.

My most memorable Thanksgiving...



Gail Clayborne
Software Engineer
Test Support Branch
27 years of service
My most memorable Thanksgiving...

My Thanksgiving holiday is like that of most of my co-workers: food, family and fun. From the time that I was a little girl until a few years ago, my family spent the day at my grandmother's house. Upon entering the door of my grandmother's house, she would greet us with a big hug. I still see her in her little apron. She, of course, had prepared most of the meal by herself which always included a birthday cake to celebrate my mother's birthday. As a child until my early teens,

I remember competing with my cousins in football, tag, hide-n-seek or whatever we all agreed to play. Later after having children of my own, I remember watching them from the kitchen window with their cousins outside doing the same thing. My grandmother has been gone 4 1/2 years now, but Thanksgiving at her house was full of love and laughter.



Bud Stovall
Planner
Test Support Branch
25 years of service

Memories I plan to make this Thanksgiving... Thanksgiving is a group effort at our house. I fry the turkey, my wife does the sides and desserts and my mother-in-law brings the dressing. Since my girls have moved away it is special to have them home again. But I have come to realize that Thanksgiving is less about the food and more about the company.



Jeff Tate
Technical Specialist
Test Support Branch
35 years of service

Most memorable Thanksgiving... I have many fond memories of

Thanksgiving Holidays spent together with family - watching football, hunting, and stuffing my belly. But, it is at this time of year that I can't help but go back and remember a Thanksgiving Holiday weekend in the 80s that I was working as a boilermaker at J5 replacing exhaust diffuser panels. Another crew was working in J4 to remove rocket fuel that had fallen to the bottom of the cell after a misfire. In the J5 exhaust duct I heard what sounded like a rush of air moving down the duct and assumed that somehow, someone had opened a valve isolating my crew from ETF Plant that was

air on at the time. As I rushed to evacuate the duct and J5 test building, I saw a plume of white smoke pouring out of the 6-foot diameter opening at J4 and realized that something there had gone wrong. I was among several craft folks that help set up a crane and personnel basket for the first futile attempts to rescue anyone left alive down in the 250-foot deep hole. After a short while it became obvious that no one could survive the high heat that existed in the J4 exhaust chamber. Several people died in the incident. Today, memories of this and other incidents from my years here at AEDC shape my daily life.



DON'T FORGET TO FEED THE BIN!



ATA award fee announced

By Raquel March
ATA Public Affairs

The Air Force announced this week an award fee rating of 94 for the Arnold Engineering Development Complex's (AEDC) operating contractor, Aerospace Testing Alliance (ATA), for the period April 1, 2014, through Sept. 30, 2014.

In a note to the ATA workforce, General Manager Steve Pearson said, "All of you should be proud of not only the score but all the work you performed for AEDC's customers either directly or indirectly. It takes every one of us to deliver the mission and it was clear the Air Force was very appreciative of the efforts."

The current services contract with ATA for the operation, maintenance, information management and support of AEDC will expire Sept. 30, 2015.

Pearson said the company will continue to share the award fee money with employees in accordance with its policies.

The AEDC test and support contract was awarded to ATA on June 30, 2003.

ATA is a joint venture of Jacobs Engineering, PAE – a provider of integrated global mission services, and GP Strategies Corporation.

For more information about AEDC, visit the Complex's website at www.arnold.af.mil.

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what they will use five years from now."

From the look on the students' faces during their tour, it's quite possible that they'll be returning to AEDC in the next few years when looking for a career.

Bishop stated he hopes this is the case, as more welders will be needed soon.

"The average age of a welder in the United States is 63. What this means is that in five to 10 years the demand for welders will be increasing and we really need to support and encourage the local CTE programs and their students. The future is bright for the students who are not only skilled but are also not afraid to work.

"We hope that this tour helped to inspire some of the students to make a serious career out of welding and to give them some insight into what they can do if they are ambitious and are willing to plan on a career of learning new technologies."

AEDC currently has about 47 welders at the Model Shop and more than 100 others across the Complex.

"The role of the Model Shop is to provide manufacturing and construction services to AEDC," Bishop said. "This could be anything from fabricating and installing test and plant hardware, completing large maintenance efforts or manufacturing test articles."

He added AEDC welders must also be dedicated and will-



ATA Test Support Manager Walt Bishop (center) and Maintenance and Reliability Engineering Branch Manager David Hurst (far left) present GCHS Career and Technical Education Director Gina Sons (second from left), Welding Instructor Robin Dykes (far right) and students with a \$2,500 donation for the school's welding class. (AEDC Photo by Rick Goodfriend)

ing to do tough jobs.

"[Our welders] are not only expected to produce acceptable welds but most are very proficient at welding in large ducting in awkward positions dealing with dissimilar metals and perform some welds so small a microscope and laser are required. Many times they weld in confined spaces, in baskets suspended by cranes while contending with weather or standing in the sun in the heat of summer wearing all of their leather gear and Personal Protective Equipment."

Having skilled welders is vital in producing the various parts needed for the testing performed at the Complex.

"The potential impact of a

welder lacking the necessary skills could be catastrophic here," Bishop said. "Equipment worth hundreds of millions of dollars and most importantly the lives of many of our employees absolutely depend on our welders having the skills to produce structurally sound welds. Skilled and talented welding craftsmen are an absolute necessity."

As a way to contribute to the success of GCHS's welding students, ATA recently provided the school with a \$2,500 donation.

Sons stated the donation from ATA will be of great benefit to the school's welding program.

"The money was a tremendous help in supplying the welding program with consumables," she said. "Thank you so much

for helping us as we financially struggle through this year."

She also thanked Walt Bishop for his help in organizing the tour of the Model Shop, encouraging other local schools to take the opportunity to visit the facility.

"I was very impressed with the tour. It was very informative and employees were receptive of questions and very knowledgeable. When students can actually tour a facility in a CTE program area and talk with employees, they become more interested in planning their careers in specific areas. I would highly recommend touring this facility by all CTE welding programs in all surrounding counties."

PAINT from page 1

of looking at real problems," he said.

Though ISSI has completed other fast PSP tests before, Crafton stated there's a major difference in the data obtained by using a "big boy" facility like AEDC's 16T rather than a smaller wind tunnel.

And AEDC is no stranger to PSP testing. PSP is a technique often used in the Complex's wind tunnels to acquire full surface pressure data on test models.

"AEDC has developed a 'production PSP capability' for the wind tunnels that leads the world in capability," stated Marvin Sellers, PSP lead engineer. "We can provide steady-state surface pressure and pressure-integrated loads from PSP to customers immediately after acquisition. This capability is required to make real-time decisions about wind tunnel test results of flight vehicles."

The number of tests using PSP has increased significantly in the last two years as acceptance of the technique has grown.

Crafton mentioned this experience was also a reason ISSI chose 16T as the site to perform the test and commended Sellers on his assistance during testing.

"Fast PSP is the next step of development for a capability customers have been asking about for years," Sellers said.

Dynamic surface pressure measurements provide information to vehicle designers that are missing in the conventional PSP. The current method of acquiring this data is with special transducers that measure the pressure fluctuations. These transducers are very expensive, are limited to a few to several hundred points and require special wind tunnel models.

"If the dynamic pressure data can be acquired with PSP on a conventional wind tunnel model, information can be acquired on the complete model surface and significant savings can be achieved

for the test customer," Sellers said.

The fast PSP used in the recent 16T test is like traditional PSP in that it can be used to produce high spatial resolution measurements of surface pressure.

"The PSP is excited by light at a specific wavelength and gives off light at another wavelength with an amount inversely proportional to the surface pressure," Sellers said. "What this means is, areas of high pressure will be dimmer than areas of low pressure."

The major difference between the two is found in the physical properties of the paint binder.

For conventional PSP, oxygen molecules must permeate into the binder layer for oxygen quenching (reduction in light output) of the PSP molecules. The

process of oxygen permeation in a polymer binder layer produces slow response times. On the other hand, the molecule in a porous PSP is exposed so that the oxygen molecules quench the PSP faster. A large effective surface area due to the porous surface improves luminescence intensity; therefore, a higher signal to noise ratio can be achieved.

ISSI had to develop a new power supply for the light emitting diodes (LEDs) AEDC uses for the conventional PSP data acquisition system. The new units enabled the light to stay on, and constant, for several seconds to excite the PSP.

ISSI also purchased two high speed cameras for use in recording the emitted light fluctuations (a result of pressure fluctuations)

on the model surface. The cameras recorded data at rates of 2,000 to 4,000 images per second. AEDC developed new data acquisition software to control the cameras and acquire and store the images. New image processing software has also been developed by Euclidean Optics, Inc. to provide processed data. The large amount of infor-

mation acquired does not permit real-time processing at this time but future improvements will speed up the process.

The dynamic PSP data was acquired on a Lockheed Martin V7 weapons bay model, a 1980s Advanced Tactical Fighter concept, to measure the acoustic pressure levels in the bay. The model was

instrumented with several dynamic pressure transducers to provide a comparison with the PSP. Lockheed will use the dynamic PSP data to validate and improve CFD code for weapons bay simulations. Initial data comparisons of the dynamic PSP and pressure transducers indicate very good agreement between the two measurements.

Air Force completes historic fuel conversion

By Master Sgt. Brad West
Air Force Petroleum Agency

WASHINGTON (AFNS) – The Air Force officials took an important step in fiscal responsibility and supply chain efficiency with the conversion of the final stateside installation from Jet Propellant 8 (JP-8) fuel to the more common and commercially available Jet A fuel, Oct. 29 at Wright Patterson Air Force Base, Ohio.

The transition to Jet A completed a process where the Air Force, in partnership with the Defense Logistics Agency, converted 130 stateside Air Force fuels locations in less than five years, approximately 18 months ahead of the estimated 2016 conversion completion date.

“The fuel conversion at Wright Patterson AFB marks the end of a journey and the beginning of a new era of financial stewardship for the Air Force fuels community,” said Col. Linda Hurry, the 635th Supply Chain Operations Wing commander at Scott AFB, Illinois.

The Air Force Petroleum Agency (AFPET) became operationally aligned under the 635th SCOW as of Oct. 3 as part of the Future Air Force Organization initiative.

The Jet A conversion process began in 2009 as an AFSO21 cost savings initiative that incorporated Defense Acquisition Reform policy and the Energy Independence and Security Act of 2007 guidance.

“Education and open

dialogue have been key to the Jet A conversion,” Hurry said. “It is a true testament to our Air Force logistics leadership team and our fuels professionals, who realized the benefits associated with this conversion and accelerated the process.”

“Over the past 10 years refineries were becoming hesitant to produce JP-8 fuel, as it required segregated handling and transportation. Suppliers desire to produce the commercial grade Jet A fuel, which is a fungible product and readily available,” said Col. Carmen Goyette, the commander of the Air Force Petroleum Agency.

Because of its interchangeability and availability, the switch to a commercial specification product will expand the

industrial base and should eventually mean lower overall aviation fuel costs for military customers, Goyette said.

Air Force bases will now receive Jet A blended with the same additives required in JP-8. Jet A with additives, has been assigned the NATO code F-24.

“Department of Defense aircraft have received Jet A at commercial airports for years and we have researched extensively, in concert with the Air Force Research Laboratory, to ensure commercial Jet A would not impact the Air Force mission,” Goyette said. “Translation of the program intent to our NATO partners was key to the continued success of joint exercise and tenant programs.”

Jet A (F-24) performs essentially the same as JP-8 (F-34), with the same additives, and saves everyone money, Goyette said.

The conversion allows not only the Air Force, but the Department of Defense as a whole to take advantage of a much larger commercial fuels supply chain and promises a 2 cent per gallon initial cost savings.

Two cents a gallon will yield a significant savings as the DOD spent \$6.95 billion on JP-8 in 2013. The Air Force purchases more than one billion gallons of fuel annually within the CONUS, therefore the transition will save the Air Force an estimated \$25.5 million in annual fuel costs and will help eliminate excess infra-

structure, provide energy security and create operational flexibility for the Department of Defense.

The transition from military specification jet fuel to a commercially available jet fuel increases the agility of the Services and the Defense Logistics Agency (DLA) in their efforts to meet the warfighter requirements while simultaneously yielding multi-million dollar annual savings.

“As a result of their efforts the AF Petroleum Agency was selected for the 2013 Defense Standardization Program Team Achievement Award,” Hurry said. “This is the second consecutive year that AFPET has been recognized for exceptional Defense Standardization Program achievement.”

Native American legacy of honor, dedication

By Tech. Sgt. Joshua Strang
Air Education and Training Command Public Affair

JOINT BASE SAN ANTONIO - RANDOLPH, Texas (AFNS) -- During November, the nation pays homage to the contributions of Native Americans throughout history.

On Aug. 3, 1990, President George H. W. Bush approved a joint resolution designating November as National American Indian Heritage Month, thereafter commonly referred to as Native American Heritage Month. Although the resolution was passed 24 years ago, Native Americans have a legacy of military service that spans the nation's history.

Many tribes were involved in the War of 1812, and they fought for both sides as auxiliary troops in the Civil War. Native Americans have served in

every major American conflict and continue to serve in operations around the globe.

Although many have served, finding their direct impact to the Air Force as a demographic is difficult according to Gary Boyd, the Air Education and Training Command Historian.

“Native Americans were not segregated, as were other groups, with regard to military aviation,” Boyd said. “They were blended into units making it difficult to track their true impact. It is a substantial history nonetheless.”

One such Native American had a lasting impact on Air Force history.

Maj. Gen. Clarence Leonard Tinker was named commander of the 7th Air Force in Hawaii after the Japanese attack on Pearl Harbor. In January 1942, he was promoted to major general making him the first Native American in the U.S. Army to attain that

rank. Tinker died in June of that year while leading a force of Liberator bombers on a raid to Wake Island. He was the first American general to die in World War II. On Oct. 14, 1942, the Oklahoma City Air Depot was named Tinker Field in his honor. The installation officially became Tinker Air Force Base on Jan. 13, 1948.

Native Americans have served in uniform for more than two centuries. According to Defense Department statistics, they have the highest per-capita commitment of any ethnic population to serve in the armed forces. Some feel that it is a tradition and part of their heritage to serve in uniform. One Air Force veteran's lineage of service extends over 100 years.

“My great-great-grandfather was the last Comanche chief, Quanah Parker. I don't know much about my great-grandpa but I know he served in World War I,”

said Christine Fink, a former Air Force photojournalist. “My grandpa, Clifford Clark, was in the Navy ... It wasn't until a few years ago I found out he was a Seabee, which I am very excited about because I was able to photograph Seabees in Africa.”

Fink commented that there is great honor in her tribe for people who have served in uniform.

“I definitely am proud to be a veteran as a Comanche,” Fink said. “My tribe takes real pride in those who have served. They have a memorial of all their veterans and a bigger memorial for the Comanche code talkers.”

Brought to popular attention by the 2002 movie “Windtalkers,” were Native American Soldiers and Marines who used their knowledge of native languages as a basis to transmit coded messages. Although the movie focuses primarily on Navajo code

talkers, according to the National Museum of the American Indian, many other tribes were represented in both world wars to include the Cherokee, Cheyenne, Hopi, Meskwaki and Comanche tribes.

“Most people have heard of the Navajo code talkers, but I feel like the Comanches have a very interesting story as well,” Fink noted. “One of them was my great uncle.”

According to the Comanche National Museum and Cultural Center, 17 Comanche code talkers enlisted in the U.S. Army in World War II. Fourteen were sent to fight in the European Theater and of those, 13 Comanche code talkers landed on the beach on D-Day. Although several were wounded in battle, all Comanche code talkers survived the war.

While code talkers are some of the more recognized Native Americans, many have served in other

roles during military service; some of whom have made the ultimate sacrifice.

To date, 28 Native Americans have received the Medal of Honor with the most recent being Army Pfc. Charles George. He received this honor during the Korean War. A portion of his medical citation reads, “While in the process of leaving the trenches, an enemy soldier hurled a grenade into their midst. Pfc. George shouted a warning to one comrade, pushed the other soldier out of danger, and, with full knowledge of the consequences, unhesitatingly threw himself upon the grenade, absorbing the full blast of the explosion.”

The sacrifice of Native Americans in the face of ultimate danger is a testament to their fighting spirit and devotion to their comrades. They leave a legacy of military service filled with honor, commitment and service.

Time change prompts motorist and pedestrian awareness

By Arnold
Police Department

We are beginning to lose extra minutes of daylight each day and AEDC has many workers who arrive while it's still dark. Pedestrians in dark parking lots, cross walks, and other areas are difficult to see – especially when they're wearing dark clothing or weather conditions limit visibility.

Since every area isn't brightly lit, it's up to both drivers and pedestrians to exercise caution. Intersections, pedestrian crossings, remote parking areas, and walkways are particular areas of concern.

Studies of pedestrian and vehicle accidents give us a bit of insight:

- During normal daytime driving conditions, it takes a driver

between 1.5 and 1.75 seconds to detect a pedestrian and react by braking or steering. At night, particularly in heavy fog or rain or on slick roadways, that time is significantly increased.

- Even in the best of conditions, pedestrians may perceive that a driver has seen them and is taking evasive action when that is not the case.

- More accidents

occur when a pedestrian is approaching from the driver side of the vehicle than from the passenger side of the vehicle.

- It's safer if the driver and pedestrian make direct eye contact or otherwise signal each other to indicate it's safe to proceed. Poor visibility makes this difficult.

Other tips for driving in the dark:

- Make sure your

headlights are properly aimed.

- Don't overdrive your headlights. You should be able to stop inside the illuminated area.
- Dim your instrument panel and dash lights.

- Regularly check your lights to make sure no bulbs are out.

- Don't stare at oncoming headlights or bright signs. Focus your

eyes on the side of the road when approaching a vehicle with bright lights.

- Keep the windshield, inside and out, clean to help reduce glare.

If there is any doubt, turn your headlights on. Lights will not help you see better in early twilight, but they'll make it easier for other drivers to see you. Being seen is as important as seeing.

ISR aircraft hones in on strategic agility

By Staff Sgt.
Torri Ingalsbe
Air Force Public Affairs

WASHINGTON (AFNS) – Intelligence, surveillance and reconnaissance capabilities have been in high demand from combatant commanders. In order to meet this new operational demand, Air Force officials answered the call back in 2008 by rapidly acquiring and deploying the MC-12W Liberty.

“The Liberty program set new acquisition, training and deployment benchmarks for the Air Force,” said Lt. Gen. Bob Otto, the Air Force deputy chief of staff for ISR. “It enabled the deployment of a full combat squadron of aircraft to the war zone in less than 10 months and the fielding of three full combat squadrons to theater operations in less than a year.”

The MC-12W Liberty is a highly modified Hawker-Beechcraft King Air 350 aircraft, specially fitted to collect intelligence information critical to the success of ground forces in Iraq and Afghanistan. In 2008 the nation was deeply embroiled in both conflicts with 33 combat air



Airmen from the 361st Expeditionary Reconnaissance Squadron prepare an MC-12W Liberty for operations Aug. 25, 2010, on Kandahar Airfield, Afghan. The MC-12W provides full-motion video and signals intelligence to assist battlefield commanders. (U.S. Air Force photo/Staff Sgt. Eric Harris)

patrols (CAPS) and 203,314 hours of full motion video to support 150,000 Soldiers and Marines. The joint force needed more assistance and intelligence. The MC-12W became the fastest delivering weapon system since the P-51 Mustang in World War II, with only eight months from contract to combat.

As America currently transitions security responsibilities in Afghanistan, the Air Force is divesting the MC-12 to the Army and Air Force Special Operations Command so it can invest in

capabilities suited for highly contested operations. Even so, the MC-12 will be regarded as an extraordinarily successful program.

During the 400,000 combat hours flown, the MC-12W Liberty aided in the kill or capture of more than 8,000 terrorists, discovered more than 650 weapons caches, helped divert convoys around improvised explosive devices, provided over watch for large numbers of coalition forces, and saved coalition lives.

Recently, a portion of

the MC-12W fleet has transferred from Air Force to Army control. This seamless transfer allowed for no mission interruption in Afghanistan operations.

“Airmen and Soldiers became integrated aircrews in (fiscal year 2014) and never skipped a beat,” Otto said. “The Soldiers helped us meet the strong demand for MC-12 sorties; they performed superbly – we could not have done it without them.”

The relationship will continue through next year, officials said, only the Army

will own the aircraft and Air Force crews will augment Army personnel. The Air Force will provide the processing, exploitation and dissemination of MC-12W information in fiscal 2015, in support of Army missions. In fiscal 2016, Army personnel will take on the whole mission.

“Conditions are always changing on the battlefield and approximately 45 percent of MC-12 sorties are dynamically retasked in flight as priorities shift in the battlespace,” Otto said. “The

superb inter-service cooperation between Soldiers and Airmen allows this aircraft to continue providing combatant commanders with the flexibility and agility needed in ISR capabilities.”

The transfer of MC-12s to the Army and Special Operations is part of the strategic shift envisioned in the Quadrennial Defense Review (QDR). The QDR directs a shift from Counterinsurgency (COIN) focus to more balance with ability to prevail/defeat adversaries in a high-end highly contested fight.

AEDC
2014



5K Run / 1.5 M Walk

November 21, 2014 - 2:30 p.m.

at Arnold Engineering Development Complex
in front of the A&E building

Open to Military, DoD Civilians, All Contractors
and Off-base Participants

Registration deadline - Nov. 20

fee - \$20 (includes T-shirt)

To register call 2nd Lt. Stuart Coston, 454-3032

signup sheet:

\\52anzw-hc-001v\aedc\Public\TurkeyTrot2014

Proceeds will benefit local charities.

Awards and Door Prizes will be given away!

Kelly receives People's Choice Award



John Kelly (right) receives the William M. Dunne People's Choice Award from AEDC Commander Col. Raymond Toth. (AEDC Photo by Rick Goodfriend)

By Raquel March
ATA Public Affairs

John Kelly, an aerospace engineer with the Aeropropulsion Ground Test Branch, recently received the William M. Dunne People's Choice Award for the third quarter of 2014.

Kelly, who is a Murfreesboro resident, was recognized for his excellent leadership contributions in support of the Pratt & Whitney F119 engine test and the F135 engine accelerated mission test.

Col. Timothy West, the AEDC Test Operations

Division director, cited in the award nomination that Kelly relieved test constraints with the implementation of a workshare program and solved manpower issues.

His abilities were also recognized in the management of the upgrades performed on the turbine engine sea level test cell (SL2) on a tight deadline and completed a successful test of the F135 engine under budget.

Kelly was also acknowledged for his mentorship and improved accuracy of field test parameters.

Parmentier receives AEDC Technical Achievement Award



1st Lt. Michael Parmentier

By Raquel March
ATA Public Affairs

First Lt. Michael Parmentier, a project manager with the AEDC Space and Missile Test Branch, recently received the AEDC

Technical Achievement Award for the third quarter of 2014.

Parmentier, who is a native of Cedar Rapids, Iowa, was recognized for his outstanding leadership of a test measurement team.

Col. Timothy West, the Test Operations Division director, stated in the award nomination that Parmentier rapidly accelerated the test schedule to overcome inclement weather delays and prevented more than five days of lost test time for the customer in space and missile testing.

The award nomination cited that he also provided unparalleled technical support and data collection for the customer.

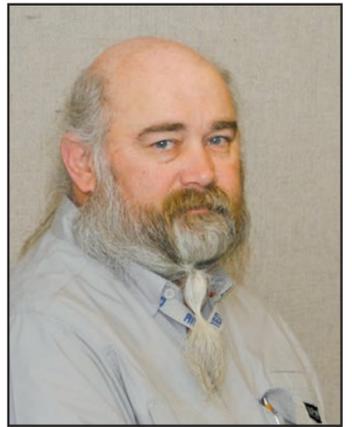
ATA announces quarterly award winners



Mark Downs
Craftsperson of the Quarter
Integrated Test and Evaluation
Department



Ronald Green
Craftsperson of the Quarter
Test Assets and Support
Department



Mitchell Kendrick
Craftsperson of the Quarter
Mission Support Department



John Thomison
Craftsperson of the Quarter
Test Assets and Support
Department



Derick Daniel
Technical Excellence in
Engineering of the Quarter
Integrated Test and Evaluation
Department



Barry McCann
Technical Excellence in
Engineering of the Quarter
Information Technology and
Systems Department



Stephen Salita
Technical Excellence in
Engineering of the Quarter
Information Technology and
Systems Department



Sidney Steely Jr.
Technical Excellence in
Engineering of the Quarter
Integrated Test and Evaluation
Department



Lola Jane Jacob
Administrative and Professional
Support Services of the Quarter
Integrated Test and Evaluation
Department



Elise Sherrell
Administrative and Professional
Support Services of the Quarter
Mission Support Department



Ginny Burns
Operations and System Engineer
of the Quarter
Information Technology and
Systems Department



Andrew Jackson
Operations and System Engineer
of the Quarter
Integrated Test and Evaluation
Department



Angelia Garrard
External Customer Service Excel-
lence of the Quarter
Mission Support Department



Marcheta Darnell
Internal Customer Service
Excellence of the Quarter
Test Assets and Support
Department



John Jenkins
Operations and System Engineer
of the Quarter
Integrated Test and Evaluation
Department

Photos are not available for:

- | | |
|---|---|
| Kip Luttrell
Craftsperson of the
Quarter
Mission Support De-
partment | James Thompson
Program Manager of
the Quarter
Integrated Test and
Evaluation Department |
| John McFadden
Administrative and
Professional Support
Services of the Quarter
Mission Support De-
partment | Lisa Waddell
Program Manager of
the Quarter
Test Assets and
Support Department |

AEDC Woman's Club prepares for Christmas

By Barbara McGuire
AEDC Woman's Club

The AEDC Woman's Club (WC) Dec. 2 meeting will focus on Christmas Boutiques and the holiday.

Many items will be available for purchase such as candles, dishes, decorations, pictures, table linens and arrangements. There will also be a bakery bazaar. Come prepared to see what is for sale and Christmas entertainment.

The table donations at the December meeting will be donated to The Wounded Warriors in memory of Mike McGuire and service members from all branches of our military. The Woman's Club leadership is asking that meeting participants bring an unwrapped gift for the Toys for Tots donation basket.

Anyone can attend the WC at the Arnold Lake-side Center to get to know

the wonderful WC ladies and be involved with programs. You do not need to have military connections or be involved with Arnold Air Force Base to visit and become a member.

For information about the WC, contact the membership chairman, at 455-3569.

The social hour of the meeting starts at 9:30 a.m. at the Lakeside Center, with the business meeting and program beginning at 10 a.m.

Reservations and cancellations for the Dec. 2 meeting must be made no later than noon, Nov. 25. You may make reservations or cancellations by calling 393-2552 or 931-636-4152.

Disclaimer: This is a private organization which is not part of the Department of Defense or any of its components and has no governmental status.



AEDC Woman's Club (WC) members preview items for the Christmas Boutique Sale that will be featured at the Dec. 2 meeting. Pictured left to right is Johanna West, wife of Col. Tim West, the AEDC Test Operations Division director; Julia Logan-Mayes; Terri Milam; Jennifer Lazenby; Theresa Toth, wife of AEDC Commander Col. Raymond Toth; and Suzette McCrorey. (Photo provided)

Air Force pilot develops plan to reduce jet fuel consumption



Lt. Col. Mark Lyons sits in a T-1A Jayhawk flight simulator Oct. 28, at Vance Air Force Base, Okla. As part of the Energy Analysis Task Force, Lyons is teaching student pilots how to fly in a more fuel-efficient manner in flight simulators. The overarching goal of this training is to create an energy-aware culture in the Air Force, specifically in the flying community. Lyons is a 5th Flying Training Squadron instructor pilot. (U.S. Air Force photo/Senior Airman Frank Casciotta)

By 2nd Lt. Tho Dang
71st Flying Training Wing
Public Affairs

VANCE AIR FORCE BASE, Okla. (AFNS) – The Air Force spends more than \$9 billion annually on energy. Aviation consumes 86 percent of that amount.

In support of the Air Force Energy Strategic Plan to foster an energy-aware culture and reduce aviation fuel consumption, an instructor pilot from the 5th Flying Training Squadron has introduced some innovative ideas to

make pilot training more energy efficient.

Lt. Col. Mark Lyons, a reservist and commercial pilot, is spearheading the effort to conserve jet fuel in the Air Force, starting with the Air Education and Training Command.

Lyons is a member of the Air Force Energy Analysis Task Force, which leverages reservists who are also commercial airline pilots. As a task force member, Lyons pairs his commercial experience and military background to identify, test and promote

best practices that can save fuel and money.

As part of a year-long trial, Lyons developed four training techniques to reduce fuel consumption in the T-1A Jayhawk, which were tested in T-1 simulators here with a small group of students from Joint Specialized Undergraduate Pilot Training classes 14-12 and 14-13.

One of these techniques is called the fuel-efficient descent or the optimized-profile descent.

“We are teaching our

student pilots to select the optimal point to begin their descent into an airfield,” Lyons said.

When the students select the correct point to begin their descent, they are able to pull the power back to idle and descend from the sky without using fuel.

So far, the new approach has reduced fuel usage by 35 percent during the descent phase of flight.

“Lt.Col. Lyons’ training initiatives go far beyond the fuel savings in the T-1 and are helping to instill a culture of energy efficiency in new Air Force pilots,” said Lt. Col.

Chip Bulger, the Energy Analysis Task Force director. “Fuel savings in the T-1 are valuable; however, the fuel efficiency mindset new pilots carry into aircraft such as the C-5 (Galaxy) and C-17 (Globe-master III) have limitless potential.”

The overarching goal of this training is to create an energy-aware culture in the Air Force, specifically in the flying community, Lyons said. By incorporating these practices early in training, students learn to be energy conscious at the beginning of their careers rather than having to

change habits later in life.

“Successful completion of the T-1 fuel efficiency small group try out at Vance Air Force Base sets the stage for permanent adoption in the 71st Flying Training Wing and more broadly across AETC,” Bulger said.

A pilot introduced to fuel-efficient flying prior to follow-on training can make significant contributions toward the Air Force’s goal to achieve a 10 percent fuel usage reduction.

(Second Lt. Isabel Crump contributed to this story)

