

## Cryostat. What's that?

# Success or failure can rest on a millisecond

By Philip Lorenz III  
Technical Writer

Space is a harsh and unforgiving environment, one that exposes satellites and space craft to powerful radiation, extreme temperatures and a host of other potentially destructive forces and phenomena.

This is why it is so important to rigorously test satellite, space vehicle and launch systems, materials and components before flight.

An essential aspect of ground testing is accuracy, and that is where Arnold Engineering Development Center's Precision Measurement Equipment Laboratory (PMEL) comes into the picture.

"Part of our job at the PMEL is to calibrate cryogenic sensors for testing in our space chambers, rocket motor test cells and other facilities using cryogenics," said Dave Compton, director of Arnold's PMEL. "We have a cryostat for that purpose and a unique one at that."

So, what is a cryostat and how does it contribute to the mission?

According to Compton, a cryostat is a vessel, similar in construction to a vacuum flask or thermos, used to maintain

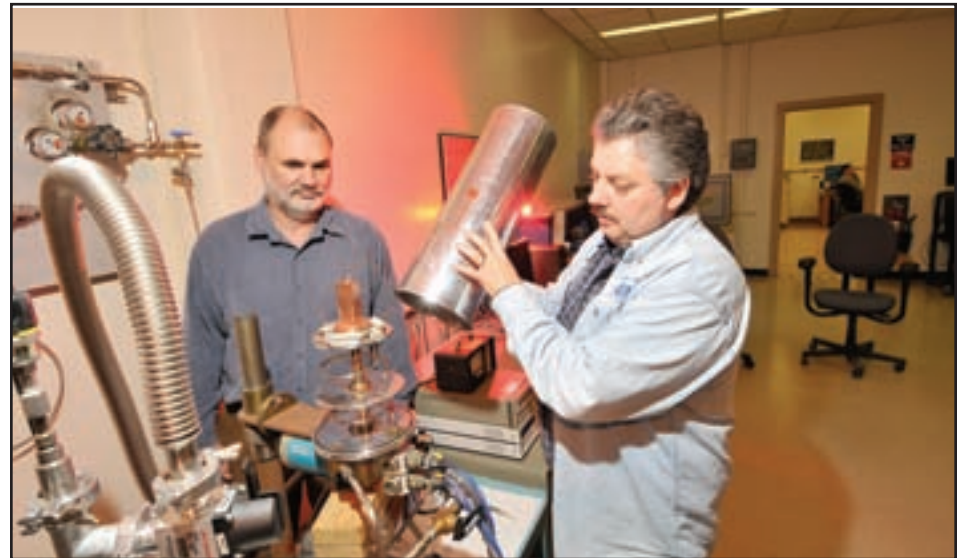
extremely cold temperatures.

At AEDC, cryostats are used to subject sensors that measure temperatures in the cryogenic range to precise temperature loads for calibration.

These sensors measure the temperature of fluids and gases that are used in hypersonic test cells, vacuum space chambers and rocket test cells to simulate conditions of space or in the case of rocket engine testing, fuel for launch.

Harry Clark, an ATA engineering specialist in the test IT Branch, recalled how PMEL used their cryostat to calibrate sensors for testing rocket engines with cryogenic fuels in the J-4 liquid propellant rocket test facility.

"In that case, the sensors were Resistance Temperature Devices (RTD) and they were used to measure the temperature of the propellants, liquid hydrogen and liquid oxygen (LOX)," he said. "Measurement accuracy of the temperature of these propellants was critical to the test program because the density of the propellants is very dependent upon the temperature and pressure of these fluids," he explained. "The density of the propellants factors directly into the calculation for the mass



Greg Holcomb, ATA balance calibration engineer, watches as Michael Sain, ATA instrument technician for PMEL, prepares to lower a metal sleeve over the cryostat to allow them to bring the temperature down to conditions similar to those found in space. Another cryogenic sensor that has been calibrated to National Institute of Standards and Technology standards is installed in the cryostat to make a proper comparison. (Photo by Rick Goodfriend)

flow rates of the propellants and the mass flow rates of the propellants are direct contributors to the measurement of the performance of the rocket engine. Inaccuracies in the measured temperature would

lead to inaccuracies in the reported engine performance, which could ultimately lead to payloads inserted into improper orbits."

See **Cryostat**, page 3

## PMI chapter honors ATA



(L-R) Louis Vanacore, director, Projects and Design Engineering; Sharon Carter, deputy director, Projects and Design Engineering; JonPaul Wallace, ATA project manager; David Milleville, branch manager, Project Management; and Tim Campbell, deputy branch manager, Project Management, display the Corporate Sponsor of the Year Award from the Nashville PMI Chapter. (Photo provided)

By Shawn Jacobs  
ATA Public Affairs

Aerospace Testing Alliance (ATA) is being honored for encouraging continuing education among its project managers. The Nashville chapter of the Project Management Institute (PMI) has named ATA its Corporate Sponsor of the Year for 2009.

PMI is widely recognized as one of the foremost organizations in the area of project management, providing monthly educational programs and allowing project managers from various disciplines to interface with each other.

"There are several components of the annual Corporate Sponsor of the Year Award, but member development is a big factor, and, over the course of 2009, ATA demonstrated they were committed to the professional development of its project managers," Chapter President Charles Lebo said.

In addition, the international PMI organization provides instruction and testing that result in certification as project management professionals.

"As an organization, we highly encourage our project managers to become certified project management professionals, and certification is through PMI," Louis Vanacore, ATA director of Projects and Design Engineering, said.

"You have to take a 35-hour course," according to Sharon Carter, deputy director of Projects and Design Engineering. "You have to prove to PMI that you have 4,500 hours of project manager experience, and you have to sit for a 200 question test."

"And we realize that those achieving PMP certification are probably going to be the core that will continue to advance within the Projects and Design Engineering organization," Vanacore said.

See **PMI**, page 7

## New publisher named

By Shawn Jacobs  
ATA Public Affairs

This issue of *High Mach* is the first by the newspaper's new publisher, *The Tullahoma News*.

The publisher sells advertising to pay for the cost of printing, distributing and mailing the newspaper.

"We're excited about this new opportunity to publish the AEDC newspaper, *High Mach*," *The Tullahoma News* Publisher Jeff Fishman said. "I understand the importance of AEDC to our country because of the testing done at the center and its unique

facilities. Arnold Air Force Base is also important to the economy of Middle Tennessee."

*High Mach* started in April 1954 and became a commercial publication in 1992.

*The Tullahoma News* is owned by Lakeway Publishers, Inc. and began printing in 1881.

"I see this [publishing *High Mach*] as just another way to promote AEDC and the people who work in its world-class facilities," Fishman said.

To purchase advertising space in *High Mach*, contact Sherry Poltsch at 455-4545.

## Global Hawk engine at AEDC



The Rolls-Royce AE3007H growth engine, the power plant for the RQ-4 Global Hawk unmanned aircraft system (UAS), is now being tested at AEDC under the eye of 717th Test Squadron Project Manager 2nd Lt. Jamie Gurganus and ATA Project Engineer Andrew Jackson. The engine has upgraded turbine hardware and an improved combustor that, if validated by this project, will enable the engine to have greater service life. (U.S. Air Force photo by Rick Goodfriend)

## March raises money for dedication plaque

Arnold's Company Grade Officers (CGO) donned weighted rucksacks and marched on April 8 to raise money for a memorial plaque.

Nineteen enlisted and officers participated in the March to Remember, carrying a total of 528 pounds for 6.4 miles, followed by 180 pushups.

"Thanks to everyone's support the CGO March to Remember was a huge success," said 2nd Lt. Jason Lackey. "We raised \$1,278

for the dedication plaque for the F-16 and, thanks to the Air Force Sergeant's Association, we will meet our goal of \$1,709."

To raise the money needed, the CGOC asked sponsors to pay \$2 per pound of weight carried, up to 35 pounds per Airman. Any additional money collected was converted into "push-ups."

The plaque will be in honor of Maj. Gen. Winfield S. Harpe, who died when the F-16 he was piloting crashed during a training

mission near Torrejon AFB outside Madrid, Spain, Dec. 5, 1988.

General Harpe, the most senior aviator to die while flying an F-16, commanded the 16th Air Force at the time of his death and was a Vietnam veteran.

The memorial plaque is scheduled to be installed in July in front of the F-16 on display here outside Gate 2. Of the six aircraft on display at Arnold, the F-16 is the only aircraft that has not been dedicated.



The March to Remember, which took place on April 8, raised \$1,709 to purchase a memorial plaque for the F-16 static display at Arnold's Gate 2. (Photo by Master Sgt. Patrick Lazarus)

### HIGH MACH

**Arnold Engineering Development Center**  
An Air Force Materiel Command Test Center

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Commander

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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.



"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

# Never, ever, leave your Wingman!

By Col. Michael Panarisi  
*AEDC Commander*



Panarisi

"Top Gun" fans remember this line all too well.

The scene was epic. "Maverick" and "Goose" had just returned from a mission, when reality struck and they realized that in their haste to score a "victory" they left their wingman vulnerable, and in the end they too fell victim to the "Jester."

In the locker room, they get a tongue lashing from their tactics instructor... "That was some of the best flying I've seen yet, right up to the time you got killed. Never, ever leave your wingman."

Luckily for Maverick and Goose, this was just a training mission, and luckily for us, this was just another Hollywood drama scene.

Unfortunately, it's becoming apparent that we have not taken this lesson to heart, and despite our focus on fostering a "Wingman" culture in the Air Force, the statistics are telling us we have much

more to do.

In fact, the Chief of Staff is asking us to "Stand Down" and develop ways to counter an alarming trend of non-combat and off-duty deaths this year.

The numbers are staggering!

Since 9/11, the USAF has lost 55 Airmen in combat. All tragic reminders of the price of war.

But even more tragic, we have lost 655 to non-combat events. Everything from wreckless driving to gun accidents. Also tragic, but made even more so by the fact that these are preventable.

2010 has started off as one of the worst ever. In just the first three months, we have lost 18 to off duty accidents, and suffered 17 active duty suicides. This just has to stop!

For aviators, the term "stand down" carries a dark, almost surreal overtone.

These are rare, but almost always follow a fatal accident.

We all know what it means. One of our own has paid the ultimate price, and we'll pick apart every aspect of the event in an effort to make sure it never happens again.

Now we'll all participate in a "stand down" and we need everyone, and yes, I mean EVERYONE, to weigh in on what has to change.

These tragedies are real losses - losses to families, colleagues, our team, and our mission.

I understand that our unique work force mix here can present a challenge.

Maybe you don't think it's "your place" to look across the "line" for a teammate

from another employer.

I'm telling you it is. In the military, we often see our service as a sacred duty. But we have an equally important mission... duty to each other.

For us, that's a bigger family than you'll find in most bases. Our military, DoD civilians, and ATA partners... we're all in this together.

In our "stand down" I need you to refocus on that.

For aviators, the "wingman" concept has been a part of our indoctrination since our first flight.

It pierces every aspect of our training, our missions, and our off-duty lives. Extending this mantra to the rest of the Air Force has met some resistance. Some see this as invasive.

Others dismiss the effort as "just another slogan." I've even heard it called "corny."

Trust me, there's nothing corny about handing a flag to a widow, a parent, or a child who has just lost a loved one.

At its core, the Wingman concept is about caring

enough to take on whatever discomfort we must to prevent a colleague from adding to this year's statistics.

It sure can be awkward wrestling the keys from a friend who has had too much to drink.

You want awkward? Try looking the guy's children in the eyes after you passed on the opportunity to intervene.

We're going to "stand down" as many times as it takes.

I'm asking all of you to give this very serious event your most serious consideration.

As I have said on many occasions, I put your lives at the top of every priority list.

We need to do the same for each other, and I'm confident that at the end of our event, we'll have some ideas on how to turn this around.

I can't think of a better use of our time. Let's make the most of it.

You just don't know how much your efforts will be appreciated by the life you saved.

## Event retreats and what they mean to me

By SMSgt. Robert Smith  
*82nd Training Wing*

**Sheppard AFB, Texas (AFNS)** - I was reminded about how special an event retreat is and what it means to me recently.

I had the privilege of holding the position of senior military training leader for the largest technical training wing in the Air Force: Sheppard AFB. Every Tuesday, I am responsible for assembling a ceremony where approximately 200 Airmen attending tech training participate in a formal retreat ceremony.

This is actually a very big

production. Two separate formations of 145 Airmen, led by a military training leader and Airmen leaders, with approximately 40 Airmen in the wing's band performing the national anthem and 15 Airmen making up the color guard. A lot of training and preparation goes into ensuring this event is treated with the level of professionalism it deserves.

Recently I invited a group of Cub Scouts to view this ceremony. Beforehand, I explained the significance of retreat to the scouts, whose ages ranged from 8 to 10 years old.

According to Air Force

Manual 36-2203 Drill and Ceremonies, the retreat ceremony serves a twofold purpose. It signals the end of the official duty day and serves as a ceremony for paying respect to the flag.

I think, to people who serve in uniform, they can appreciate this. But to an 8-year-old, how can you paint the right picture of why it is important to respect the flag?

This is where it struck me. Retreat to me is saying, "I admire your courage Abraham Lincoln." It means, "I respect your sacrifice and leadership, Col. George 'Bud' Day." It

means, "I will do my best to teach, lead and take care of your son and daughter, mom and dad." It means, "I will strive to merit the respect of all whom I serve and serve with."

It means, "Thank you, dad, for serving and teaching me the importance of honor, respect, duty and service." It means, "I'm mad as hell about the events of Sept. 11 and I want to pull my weight to make sure it never happens again." It means, "Rosa Parks and Dr. Martin Luther King, you made a tremendous difference." It also means, "Honey, boys, you incur a

sacrifice too the sacrifice of having a husband and dad in the military. Thank you for your sacrifice, too."

In the many successes, liberties, freedoms and opportunities we have, we all stand on the shoulders of those who came before us. People who had the courage to give their last full measure of devotion because it was their duty. People who were courageous and did what was right and people whom we are surrounded by every day. We owe a lot to each of them.

On Sheppard AFB, we say "thank you" every Tuesday at 4:30 p.m.

### 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

**Question:** The front door to building 1103 has been broken for a couple of weeks now. This is the door that is connected to the handicap button. At this time anyone in a wheelchair needs assistance to get into the building. Was wondering when this is going to be fixed.

**Response:** Thank you for voicing your concern regarding the accessibility of the handicapped to your facility. The good news is the door was repaired within days of your call. It required 14 days from the time the door failure was

reported to complete the required repair. For someone that needs the access, this could seem like an extended amount of time. Your call has certainly brought attention to the time it takes to have a repair done and we will always strive to improve. If you or any other Arnold AFB employee has any questions about facility maintenance, please contact your Building Manager or call 454-4040. If you feel you are not getting appropriate service, please contact the Support Mission Controller at 454-7443. Thank you again for bringing this issue to our attention.



### If you could have a wild animal for a pet, what would it be and why?

"Since You Asked..." is a question and answer-type segment where AEDC personnel - military, DoD civilians and ATA contractor and subcontractor employees - are asked random questions about every day topics. The opinions displayed do not necessarily reflect the views of the Air Force, DoD or ATA.



**Carolyn Elrod**

"A tiger. They are pretty and they will protect me. I wouldn't worry about being by myself in this crazy world."



**Anthony Nelson**

"Tiger, so I could train it and replace Roy in Vegas."



**Justin Gilliam**

"A tiger because they hate cinnamon and they love pepper."



**Jarad Shetters**

"I would have a tiger because of its exotic beauty."

### 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.

# Arnold Police Department acquires cutting-edge crime-fighting tool

By Philip Lorenz III  
Technical Writer

People who watch TV shows like “NCIS” or “Law and Order: Special Victims Unit,” are accustomed to seeing the crime-fighting experts use the latest technology to analyze crime video evidence and process fingerprints and DNA samples.

The Arnold Police Department recently purchased a video forensic analysis system capable of processing and enhancing video and still photography criminal evidence.

Kendall Layne, ATA security systems administrator for the Arnold Police Force, said it is important to put the new crime-fighting asset into perspective.

“The average television viewer strictly relies on what they have seen in these so called TV crime shows, and unfortunately most of the advanced technology schemes the shows

tend to portray is unrealistic,” he said. “There is some truth to the techniques they use, but much like most TV entertainment, the factual must be ‘stretched’ some to make it more entertaining.

“On CSI or NCIS, they take a blurry video – barely any detail at all – and clean it up to crystal clear,” Layne continued. “You usually see the [“NCIS”] technicians, McGee and Abby; transform a raw photo or video perfectly in mere seconds. That is definitely not realistic. The best software and technicians in the world probably could not accomplish this. Now with that said, the goal is to be able to modify and clean the photo or video enough to make a good identification, not to make a crystal clear ‘pretty picture’ like is used on TV.”

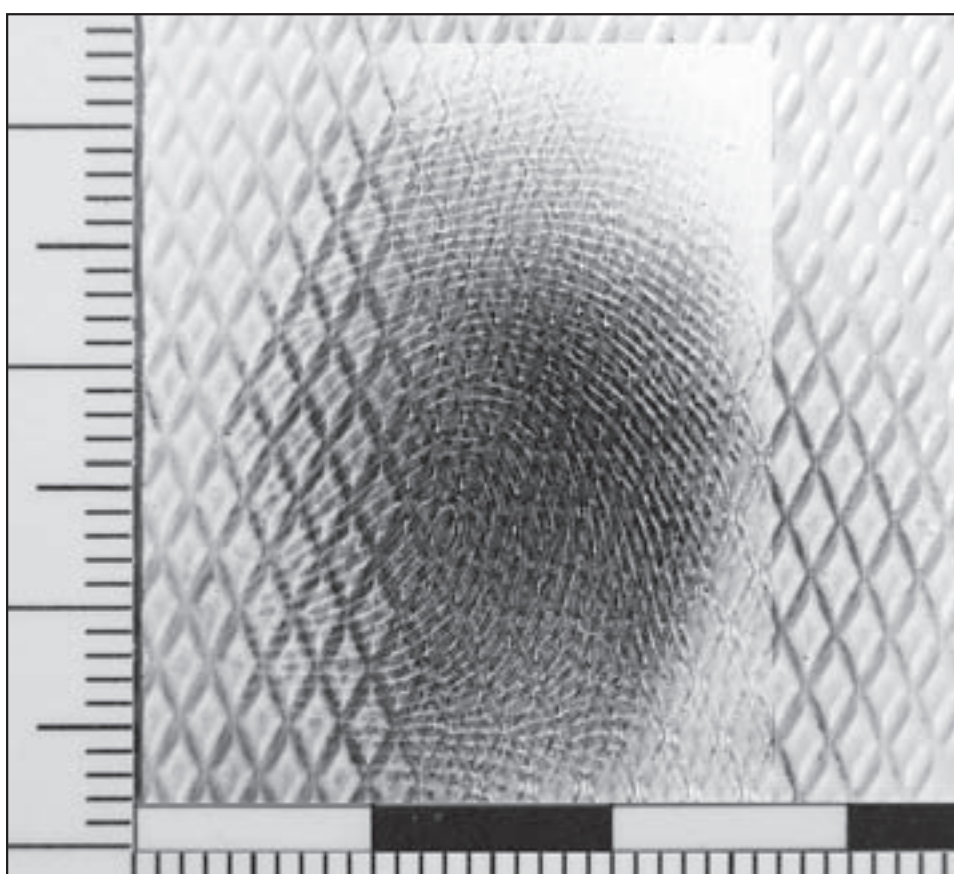
Layne is excited about the new system and said AEDC’s mutual aid partners in surrounding counties will all benefit from the

department’s latest asset. “This particular software and hardware package is one of the most advanced available and should serve Arnold and the community extremely well,” he said, adding, “By the way, “Law and Order” tends to be the most realistic of the TV crime shows.”

Steve Luttrell, Arnold Police Department’s detective, described how the new system works.

“Basically what it does is it takes a video of a crime scene – a robbery, homicide, even a theft – and we have a video we can’t directly make out some of the critical features of a person’s face, a car, a tag number or a description of the car. We can use this system to enhance that video, to clean it up and make the material legible, so we can determine who it is, what it is, what color it is, to have that evidence for the case.”

See Tool, page 7



The Ocean Systems (Dynamic Technologies, Inc.) ClearID forensic video analysis system uses the company’s patented software program ‘Pattern Remover’ to remove background clutter from a photograph of a suspect’s fingerprint on a paper towel. Pattern Remover is an automated process that allows the user to see the effects of their adjustment as those changes are made. The software works on both black and white as well as color images. (Photo courtesy of Dynamic Technologies, Inc.)

## Cryostat from page 1

Clark added, “With respect to the cryostat, the Precision Measurement Equipment Laboratory staff was always very exacting with their calibrations of the Resistance Temperature Devices for this test program and their data was used to qualify equipment used today on the Delta IV heavy lift launch vehicle. We always appreciated the work they did to assure the quality of the measurements we were making.”

Cryogenic sensors at the AEDC’s Aerodynamic and Propulsion Test Unit (APTU) measure the temperature of liquid oxygen in the facility. The liquid oxygen is added to the air downstream of a burner to replenish the oxygen content of the air that the burner has consumed as it burns butane to create the desired test conditions. The LOX is injected into this hot air stream so that the heated test medium closely matches the physical constituents of the air that the hypersonic vehicle must mix with its fuel to generate thrust.

Leldon Kelley, IT department instrumentation engineer, said the sensors indicate the relative ‘coldness’ of the oxygen, i.e., whether it is in a gaseous or liquid state at a certain location in the system.

“Due to the criticality of maintaining a liquid flow throughout the system, it is important to have a sensor that is known to be good,” he said. “The initial calibration is an important indicator that the Resistance Temperature Device [at APTU] meets manufacturer’s specs and will perform as required before it is installed in the system.

“Removal of a bad sensor requires several days of downtime during which the system has to be depressurized, allowed to warm up and a nitrogen purge established on the system,” he continued. “After installation, the system has to be re-cooled, or chilled down, prior to operation. PMEL’s calibration of the sensor can prevent a maintenance nightmare.”

Kelley said the lab’s role is crucial to efficient and financially sound operations at AEDC.

“We rely on the Precision Measurement Equipment Laboratory to ensure we do not put in a bad or deteriorating sensor at any time,” he said. “This could be done during the initial installation where PMEL has done an acceptance test on the Resistance Temperature Device, or later when we replace a failed unit with a spare we’ve been keeping on the shelf and we want PMEL to verify the spare’s integrity before we install it.”

To find out more about AEDC’s testing capabilities, visit [www.arnold.af.mil](http://www.arnold.af.mil).

## Commander signs new charter



From left to right, Nicholas Fredrick, ATA turbine engine analysis engineer and International Test and Evaluation Association (ITEA) chapter president; Dr. Ramesh Gulati, ATA reliability engineer and Society of Maintenance and Reliability Professionals (SMRP) member; Tom Best, technical director of AEDC’s Plans and Programs Directorate; Dr. Edward Kraft, AEDC’s technical adviser; Dr. Joe Sheeley, ATA senior engineer, chair of the local AIAA chapter and outgoing AAPS president; Dr. David Elrod, ATA general manager; Early McKnight, Jacobs Technology senior mechanical engineer and chair of the local American Society of Mechanical Engineers (ASME) chapter; Kevin Uehlein, program manager in ATA’s investments and designs department and vice chair of ASME Highland Rim local section; and John McInturff, Tennessee Society of Professional Engineers (TSPE) president-elect, watch Col. Michael Panaris, AEDC commander, sign the revised Arnold Association of Professional Societies (AAPS) charter. The revised charter adds the Society of Maintenance and Reliability Professionals (SMRP) as a member organization along with the original members: TSPE, ITEA, American Institute of Aeronautics and Astronautics, International Society of Automation, Air Force Association and ASME. The revised charter, which was signed on April 12, also establishes an AAPS initiative to promote science, technology, engineering and mathematics (STEM) careers in the region’s K-12 schools. After signing, the election of the next AAPS president, Bob Lindeman, was announced. (Photo by Philip Lorenz III)

## Medical Aid Station entrance complete



The newly remodeled Medical Aid Station parking lot was completed Wednesday. The sidewalk and walkway were repaired to comply with Americans with Disabilities Act guidelines and a new canopy was installed over the walkway. The slope of the old walkway was too steep, and there were cracks and unlevel ground. The new walkway provides a safer route to the front door, and the canopy allows for less rainwater to gather on the walkway and keeps inclement weather away from the doors, where elderly patients have more difficulty. The entire project took about five months. (Photo by Rick Goodfriend)

## Awards breakfast is April 30; RSVP by April 26

The first quarter awards breakfast will be held from 7:30-9:30 a.m. April 30 at the ALC. Deadline for RSVP is April 26.

The cost is \$8 for members and \$9 for nonmembers.

The menu includes bacon and egg pizza, scrambled eggs, sausage, bacon, flour tortillas (for wraps), pancakes and syrup, coffee, orange juice and grape juice.

Registration is via the cash collection points of contact listed below or by using the electronic website: <https://intranet.arnold.af.mil/rsvp/events>.

Electronic registration is highly encouraged.

To pay by cash, please see 2nd Lt. Jamie Gurganus (ETF, 454-6272); 2nd Lt. Will Parker (1099, 454-5493); Jackey Gates (A&E, 454-4823); 2nd Lt. Char-Meeka Scroggins (PWT, 454-5623); 2nd Lt. Rachael Clark (1103, 454-4779) or Christy Trussell (A&E, 454-4139).

Come out and support your fellow AEDC employees.

## JSF engineer to speak at AIAA meeting on May 12

The Tennessee Section of the American Institute of Aeronautics and Astronautics (AIAA) will host a luncheon meeting at the Arnold Lakeside Center May 12.

The speaker, Dr. Paul Bevilaqua of Lockheed Martin, will present “Inventing the Joint Strike Fighter.”

Dr. Bevilaqua invented the lift fan propulsion system that makes the stealthy, supersonic vertical takeoff and landing (VTOL) version of that aircraft possible.

An Italian buffet will begin at 11 a.m. (\$7.95 ALC members, \$8.95 non-members, payable at the door) and the talk will begin at 11:30 a.m.

Please RSVP to Joe Wehrmeyer (454-4345, [joseph.wehrmeyer@arnold.af.mil](mailto:joseph.wehrmeyer@arnold.af.mil)) by May 10.



Bevilaqua



Do your part – Please recycle this paper after reading!

# Empowerment, competence, acceptance and joy



Photos by Rick Goodfriend



**Special Olympics**

More than 300 athletes from five counties participated in the events of the 2010 Special Olympics 32nd Summer Games for Tennessee Area 13.

Tullahoma's Dustin Bell served as the torch bearer and Franklin County's Jonathan Gilliam started the events off as the flag bearer. The AEDC Color Guard topped off the opening ceremony and AEDC Vice Commander Col. Eugene Mittuch led the Pledge of Allegiance.

Five athletes will compete in the National Summer Games in Lincoln, Neb., and two coaches were selected to go as well.

There were 356 people, 53 from AEDC, who volunteered their time to ensure a successful event.

The counties represented were Bedford, Coffee, Franklin, Lincoln and Moore.



# Game Time! Crushing the USAF Fitness Test

By Col. Michael Panarisi  
AEDC Commander

Most of our “deep dives” over the past few months centered on training, so if you’ve been following along, it’s a good bet that your overall fitness, strength and endurance are improving.

If you’ve joined me in the “Fight’s On” campaign, you might even weigh a little less than you did when we started in November. So what do we do with all that newfound capability?

At some point, it comes down to execution, and in this edition, I’ll offer my “prescription” for maximizing your performance on a tactical execution event, i.e., a “test.”

Just so I don’t lose all but 50 of you, trust me, the methods to my madness apply to a wide variety of performance-oriented events. If you are working up to a local 10K, the Mach 10 Triathlon (currently scheduled for June 5, visit [www.mach10.org](http://www.mach10.org) for details!), or just want to see the fruits of your efforts, these ideas will help you get the most out of your hard work and help keep you out of the ER.

Phase “0” (T-30 Days) Taper! If you are training hard (remember the holy trilogy? Train Hard, Race Harder, Rest HARDEST!), it’s time to back off. Even if you are consistently including “recovery days/time” in your workouts, nothing beats all out rest.

So, plan ahead, and keep your toughest workout about a month away from the big day. Then slow down every week prior, to the point where when you are only executing “recovery” events the week before the test.

For the USAF fitness test, I’m in total rest mode for three full days prior and making a good night’s rest the priority. You may have already seen the benefits of “Rest HARDEST” without knowing it. Did you ever miss some workouts due to a minor injury or illness? The “fresh legs” feeling you had when you got back into your routine is the clue.

The older you get, the more important this final recovery becomes. Trust me, I know all about that!

Phase 1 – Prep. This is where Sun Tzu is your friend. “Know thyself and know thy enemies, and, in a thousand battles, you shall not perish.” Game day is NOT the time to either discover “what works for you” or experiment with a new regimen. After copious trial and error, I know a few things about myself ... I can’t max perform when I’m starving, and I tend to peak around nine in the morning.

I’m just not a roll out of bed and crank kind of guy.

Many of you who think you are might find out otherwise with a little experimentation, but the bottom line is, during your training phases, find out what really works for you and do it. One more thought about timing ... the temps REALLY make a difference.

Anything over about 70 degrees will cost you precious seconds on the run. I don’t like to shiver any more than the next guy, but your best runs will likely fall into the 50-60 degree range.

You’ll get over the shivers half way through the first lap, and from then on, the dense air and extra cooling will shave seconds off every lap.

If you are like me (scary

thought, I know!), I eat a light, carb-biased breakfast about two hours prior to show time. And I’m in the “super hydrate mode.” I’m trusting the kidneys to get rid of whatever I don’t need by the time I get to the track. I chug a pint with breakfast, and a few sips every half hour or so until I get to the event.

Phase 2 – Warm Up. This is HUGE. You just can’t throw your shoes on and go if you are looking for max performance.

For the PFT, you have to warm up your chest, shoulders, arms, and abs too. So here’s my routine: quick drink (a couple swigs); 10 easy minutes on the elliptical (gets arms and legs going!); 10 slow, deliberate reps of bench press (just the bar, no weights); and 10 slow mini crunches. Topped off with initial running stretches (lower back, quads, hams, calves).

After the push up and crunch events, it’s time to REALLY get the legs and lungs ready. Repeat hams, quads and back stretch. Then deep calf raises (over a stair works well), just before the run warm up. I use what runners call “farlicks” (I still have no clue what that means!).

This technique gradually increases your effort level over short distances until you exceed the expected “race pace” and then backs down. I use about 15 second “licks.” Brisk walk on the first one, followed by alternating runs/walks of equal time, increasing the intensity to about 80 percent full sprint (well beyond what you can hold for 1.5 miles).

As the pace picks up, I focus on proper stride execution, foot placement,

and deliberate, controlled breathing. Along the way, listen to your body. If anything feels tight or achy, you aren’t ready ... either get some more stretch time in or seriously consider taking the test in a couple of days. This may be your body telling you that you didn’t rest/recover long enough, and nothing in the regs is intended to invite an injury.

If things are going well, it takes me about 15 “licks” to work up and back down. This will cover nearly a mile of prep work for the 1.5 mile run. I can hear you already! “All that work will just tire me out for the run!”

Remember, the time to figure that out is in training, so budget some training days to experiment. But as long as you stay in the “aerobic” mode, this short warm up puts money in the bank. If you’ve ever felt tight in the first lap, this will eliminate that problem.

Remember, properly trained (and fed!) muscles store about 30 minutes of glycogen, so even 20 minutes of mid-tempo running won’t drain those tanks, and you only need 10-15 minutes for the test. Topped off with final stretches, and if I’ve done this right, I’m headed for the men’s room for one last tinkle.

Phase 3: Execution. For the push ups and crunches, a one minute event doesn’t leave you with much time to muck it up, but one word of caution.

Don’t go full bore on the first few reps. Accelerate your way into max cadence, and aim to peak between the 30 and 45 second point. Too much too fast will cost you with lactic acid build up, and you will suffer in the final 15 seconds.

The run presents a similar trap, with much higher risks. Blasting off the line is inviting an injury, and, if you are in “sprint” mode in the first lap, your last lap will be just awful. Runners use a term called “negative splits,” meaning each interval should be faster, not slower!

On a quarter mile track, this is easy ... your prep tests will tell you about what your capability is. It’s OK to consider a “stretch goal” for this event, but literally only 15-30 seconds faster than your prep runs. Build yourself a lap schedule to get to your goal by accelerating every lap.

For me, a 9:00 goal puts my first lap in the 1:40-1:45 range, with the last lap in the 1:20s. It just doesn’t work done in reverse!

I know it sounds totally counter intuitive, but the only way to prove it to yourself is in training tests. You’ll find it takes enormous self restraint to hold back in the first couple laps, but if you do, by lap three you’ll

be thanking me.

I’ve turned in 1:50 final laps with initial laps in the 1:20s. Don’t repeat my mistakes! I’ve got my money on the “negative splits.”

Phase 4: Cool Down. You can’t just fall to the ground when you cross the finish line. I walk a full quarter mile and hit one more round of stretches before the showers. Just do it! And no training for two full days afterwards.

“Maxing out” the PFT hinges on execution. As former Defense Secretary Rumsfeld said “you go to war with the military you have, not necessarily the one you want” so training is critical.

But to really crush this test, you have to execute some practice tests during training to learn just how you respond to different scenarios.

Perfect your “race day regimen” during training, recover religiously, and execute on the big day. You might be surprised just how “hard” you can “race.”



Photo illustration

**Tool from page 3**

Luttrell said the word is already getting around to surrounding communities about the system.

“We have a constant need from Tullahoma, Manchester and other communities in this area – they always need videos enhanced,” he said.

Luttrell said the new forensic video analysis system will compliment AEDC’s existing surveillance system well.

“The system we have

here now is definitely high speed, but it just records raw video from multiple cameras, 24-hours-a-day and seven-days-a-week.”

Jason Kennedy, an investigator with the Tullahoma Police Department, said before the Arnold Police Department acquired the forensic video analysis system, they had to take their photographic evidence to be processed and enhanced by the technicians at the Tennessee

Bureau of Investigation lab in Nashville.

“Right now, it takes a day. One of us has to take it to Nashville and it could take up to a month or even more to get it back because they’re doing this for other departments throughout the state of Tennessee,” Kennedy said. “This [new forensic video analysis system at AEDC] will be a great tool for our department and other surrounding agencies.”

**Relay for Life starts tonight in Manchester**

The American Cancer Society Relay For Life is being held at the Coffee County Fairgrounds in Manchester starting at 6 p.m. tonight.

The event will continue through the night and will end at 6 a.m. tomorrow.

This year there are three teams comprised of people who are affiliated with the base. All teams are looking for members interested in joining the team or making a donation toward the cause.

Team members do not have to work on base; friends and family members are encouraged to participate.

Team and team captains are as follows: Big Cheese and the Banditos - Team Captain Greg McCreary; Chair Force - Team Captain Jack Ambridge; and Coins 4 A Cure - Team Captains Heather Fair and Kristi Deaton.

**PMI from page 1**

According to Lebo, ATA has made a commitment to project management development and PMI by frequently having representatives at the chapter’s monthly luncheons and other chapter events.

“Taking a different tack from previous years where

For more information, contact Dee Wolfe at 454-4313 or by e-mail at [dee.wolfe@arnold.af.mil](mailto:dee.wolfe@arnold.af.mil) or Shawn Wolfe at 454-6500 or by e-mail at [shawn.wolfe@arnold.af.mil](mailto:shawn.wolfe@arnold.af.mil).

sponsor dollars were a big measure, and, given the drive to attend any Nashville events, the PMI Nashville board felt it was important to recognize the contribution of ATA and the dedication of the ATA colleagues,” Lebo said.

**There are no shortcuts for being safe**

Regardless of your job, some basic safe work practices should be observed by everyone in the workplace. The objective of the safety program is to prevent injuries and to allow you to perform your job efficiently and safely. It takes effort to support the safety program by reporting all unsafe conditions or practices to your supervisor or on a Safety Observation Report (Form GC-1710), but it is all about your

safety and the safety of others. And it’s definitely worth the effort! The vast majority of work related injuries are the result of workers performing unsafe acts. When we take shortcuts, violate safety regulations, or simply don’t take safety seriously, injuries will most likely occur. Each of us has the responsibility and obligation to comply with all safety regulations to ensure the safety of ourselves and our co-workers.

Often, there's a

"recommended safe way" of doing a task and a way that seems quicker but is more hazardous. Many people use the more dangerous shortcut to save time.

However, timed studies show that the time invested in doing a task safely is quite insignificant, especially when compared to the costs of injuries or possible death that could result from the extra hazards involved in the shortcut.

# AEDC Rocks!



In later February, students from Tullahoma's Bel-Aire School visited AEDC as a part of the Commander's new educational outreach initiative, Spark. Spark is designed to introduce elementary school children to the work conducted at the center. The children participated and toured facilities during their visit. The students wrote letters to Col. Panarisi and the PA staff expressing their gratitude for their visit.

Raquel March, ATA senior public affairs specialist, explains to the students the purpose of the test they would be conducting as a part of their visit. (Photos by Andrea Stephens)

Dear Colonel Panarisi,  
 Thanks you for inviting me to visit AEDC. I enjoyed the trip. I enjoyed the time we went in the wind tunnel and got to sit at the square table. It was fun. I love the AEDC.  
 Your fan,  
 Hannah

Dear Colonel Panarisi  
 thank you for inviting me to visit AEDC. I enjoyed the trip. It was my first time going there. It's a big place too, and I can't wait to take my Grandpa there.  
 Love,  
 Grace



Darbie Sizemore, ATA senior public affairs specialist, holds the "test article" as the students attached it to the string that will be used to measure the distance the article traveled.

Fed 2, 2010  
 Dear AEDC staf,  
 Thank you for taking us to AEDC. I had so much fun. It was like science only better. I liked the part when we went in the windtunnel. Thank you so so so much for taking us.  
 Your friend,  
 Haylie

Dear Colonel Panarisi,  
 Thank you for inviting me to visit AEDC. I enjoyed the trip. The wind tunnel was the best part. It was cool and fun.  
 Your friend,  
 Timmy



Dear Colonel Panarisi,  
 Thank you for inviting us to AEDC. I enjoyed the trip. It was really fun. I wish that I can come back. My favrite part was seeing the wind tunnel. I wish I can work at AEDC just like you.  
 Love,  
 Cassie



Above, the third graders prepare their "test articles" for a test to determine if the landing gear has any effect on the article's speed. Below, a test article with landing gear attached is tested.



A Bel-Aire third grader participates in an experiment during a recent visit to AEDC.

Dear Mrs. Sizemore,  
 Thank you Mrs Sizemore for the tour on 2/23/10. It was great. Again thank you. Can we visit again please? You Rock AEDC!  
 Love,  
 Sydney Liano

# Tim McNeese finds AEDC a place where family matters

By Philip Lorenz III  
Technical Writer

By the time Tim McNeese was 23 years old, he was working as a journeyman electrician in Nashville, a world away from his rural roots in Normandy.

Married for a little more than a year, McNeese, who had wanted to work at AEDC since he was 17, finally joined the center's work force in February 1984. He started there as an electrical intern, taking a cut in pay and seniority to become the third generation of his family to work at Arnold.

"My father and grandfather both worked on construction here when they first started building AEDC, when it first started coming out of the ground," recalled McNeese who is an electrical systems operator. "I had always heard all my life, 'Go to AEDC, it's the best job in the state.'"

McNeese said the initial sacrifices were worth it and that working at AEDC has been like having an extended family, with someone always available to help when personal or professional challenges arise.

Not only was he awed by the size and complexity of the buildings, motors and electrical infrastructure on base, McNeese initially thought he had tackled more than he would be able to handle.

"I was as lost as last year's Easter eggs," he said. "I was used to working on electrical motors that were less than 200 horsepower."

His first assignment was in the Aeropropulsion Sys-



Curtis McNeese and his son, Tim, enjoy some time on the water fishing with family members recently on Tim's Ford Reservoir. Like his father before him, Curtis worked in construction at AEDC when the complex was being built. (Photo provided)

tems Test Facility air supply building.

"The first two motors you walk up to are 52,000 horsepower apiece," McNeese said. "I had seen buildings that size. I was in awe. I didn't think I'd ever get my 90 days in."

McNeese said his family is what brought him back to the area and continues to be an anchor in good times and bad.

"We're a very close-knit family, born and raised in this area," he said, commenting that their church's congregation all knows where the 'McNeese pew' is located.

When an engine test is being conducted in AEDC's engine test cells, the noise

is unmistakable. However, what goes on behind the scenes is what has McNeese's attention.

"The run has already started when we come in – we're on second shift," he said. "Day shift does all the pre ops as far as making sure all the cooling water and lubrication oil system and everything else is ready to get started. So, all of that is done and usually the machines have already come online."

"I run the exhaust system whenever testing is going on," he continued. "My job is to make sure the fuel pressure stays where it needs to for the test cell, cooling water in the spray chambers; we have got to

keep it at a certain temperature because the exhaust off that engine can get tremendously hot and melt everything down. And to make sure the exhaust machines stay online and stay at the right temperatures and I have to maintain a certain pressure."

"I'm also qualified at the airside station and primary work station and also here at the B airside as operator and leading man," he continued, explaining that where he sits at the control station determines what he will monitor and adjust for that shift.

"At the primary station, that's where you set the conditions for the test cell, what they want – the pressure and temperature coming in plus the pressures they want leaving [the

test cell]."

McNeese, who is also one of the "go-to" people when a crane operator is needed on base, feels fortunate his son Justin, an uncle and a brother all work at the same place.

Justin said he began his career at Arnold as a co-op student and became a full-time employee for General Physics as a non-destructive testing technician at AEDC in 2005.

"We X-ray pipe welds and branch welds – check for stress fractures on piping," Justin said, adding, "It's a privilege to work here and always good to hang with my family."

McNeese referred to his coworkers several times as being like family to him.



Tim's grandfather, John McNeese, can be seen here with his ARO (Arnold Research Organization) badge in 1957, when AEDC was still under construction. (Photo provided)

See Family, page 11



Family from page 10



Tim McNeese took some time recently to show his son Justin some changes at the B-Plant control room. (Photo by Philip Lorenz III)

After his house burned down a few months ago and almost before he could fully react, word had already gotten around to his coworkers on base.

“It was very devastating,” McNeese recalled. “We were at church at the time it caught on fire. My wife was home sick and she called me as I was leaving the building. And the next day when I called my supervisor and told him I wouldn’t be in, well, it was already all over the base. People were already calling my cell phone, wanting to know what they could do to help.”

His coworkers on second shift share his point of view.

“It’s like everybody’s

family after you’ve known them two or three years, especially for 20 years,” said Darrell Booher, an ATA base operations electrical lead.

“You get to where you can rely and depend on them, you don’t have to think twice about it and know they’re going to do their job and do it right, correctly. So, it’s family.”

Jim Waggoner, another coworker, is hoping his son, who is currently deployed overseas, will be able to join AEDC’s work force after completing his time in service.

“Looks like that’s going to be 20 years from now,” he said. “He’s an instrument technician for air traffic control equipment.”

## Shelter-In-Place knowledge could save your life

What would you do if you were at work and there was an explosion near your building? What would you do if you received a package in the mail that you considered suspicious?

What if base alarms sounded indicating an accidental HAZMAT release? What protective actions could you take?

Shelter-In-Place (SIP) may be the only option.

Most incidents requiring SIP actions will likely involve accidental releases of industrial materials such as toxic industrial or agricultural chemicals. They may also involve releases of biological or radiologi-

cal material. Some may be the result of malicious acts such as terrorism. These incidents will likely occur with little or no warning and require individuals and groups to quickly implement protective actions based upon their assessment of the situation or directions from emergency response personnel.

SIP creates a barrier between yourself and the potentially contaminated air outside. SIP actions can provide short-term (one-to-two hours in most cases) protection to the occupants and are most effective when building occupants plan and practice their actions in

advance. Most are simple, low or no-cost actions. Sheltering in-place is not the solution for every situation. However, it may be the only practical method to provide protection. Other types of sheltering used on the installation are storm shelters for tornadoes and active shooter. Actions for these vary and should not be confused with SIP.

If you are outdoors, you should:

- Seek shelter indoors immediately in the nearest undamaged building.

- If appropriate shelter is not available, move away from the hazard in upwind direction.

- Listen for official instructions and follow directions.

If you are indoors, you should:

- Seek shelter immediately, preferably on an upper floor and in an interior room of a building.

- Time permitting, turn off ventilation and heating systems, close windows vents, and turn off exhaust fans.

- Place wetted towels to block the bottoms of each door in the room.

- Use plastic sheeting and tape to seal windows and vents to improve protection.

*compiled by Philip Lorenz III*

### F-15 takes off...



An F-15 Eagle from the 3rd Wing at Elmendorf AFB, Alaska, takes off April 7, 2010, for a live-fire training mission over an Alaskan gunnery range. (U.S. Air Force photo/Staff Sgt. Brian Ferguson)

## FAA boss rides with Thunderbirds

By Master Sgt. Pam Anderson  
USAF Air Demonstration Squadron PA

Nellis AFB, Nev. (AFNS) - The head of the Federal Aviation Administration was given the opportunity to see the other side of flight safety when he flew with the U.S. Air Force Thunderbirds.

Randy Babbitt, who is responsible for the safety of more than 30,000 aircraft and has accumulated more than 14,000 flying hours, got his first ride in a fighter jet.

"There are not enough words to describe it," he said. "I have a new appreciation for the fighter aircraft's capabilities and the people who work with them."

The U.S. military makes up a large percentage of the daily flights FAA representatives monitor. Babbitt's familiarization flight with the demonstration team gave him a more in-depth look at the safety preparations that go into a Thunderbird performance and the amount of interaction that occurs between the Air Force and the FAA.

"Everything we do, from the beginning to the end of a flight, must be coordinated with the local authorities, so it's important for (Babbitt) to see how we interact with the civil and commercial air industry," said Lt. Col. Derek Routt, USAFADS operations officer and Thunderbirds No. 7, who flew Babbitt in the red, white and blue F-16D Fighting Falcon.

During his flight, Babbitt experienced every maneuver flown during a Thunder-



Before his familiarization flight at Nellis AFB, Nev., Randy Babbitt (left), the administrator of the Federal Aviation Administration, receives a preflight briefing from Thunderbirds No. 7 pilot Lt. Col. Derek Routt. (Photo by Master Sgt. Pam Anderson)

bird air show performance. He also earned the coveted 9-G pin after experiencing 9G's.

"To show him our Air Force and to share our story with someone at his level was amazing," Colonel Routt said. "We have a common bond when it comes to commitment to safety, and I am honored that I was able to share this experience with Mr. Babbitt."

In addition to safety, FAA officials and the Thunderbirds also share the same goal of keeping the spirit of aviation alive.

"The Thunderbirds inspire so many young men and women," Babbitt said. "Through them, we hope to motivate the next generation of aviators."

## Joint training at 12,500 feet



Above, Navy SEALs jump from the ramp of a C-17 Globemaster III over Fort Pickett Maneuver Training Center, Va. The jump was part of a joint training exercise with 517th Airlift Squadron members from Elmendorf AFB, Alaska. At right, Tech. Sgt. Marc Nelson prepares to open the rear doors of the C-17 Globemaster III before the SEALs jump from 12,500 feet over the landing zone.



(Photos by Staff Sgt. Brian Ferguson)

## General Schwartz delivers first Super Herc



Air Force Chief of Staff Gen. Norton Schwartz delivered this new C-130J Super Hercules April 16, 2010, to Dyess Air Force Base, Texas. This was the first of 28 C-130Js to be delivered to the 317th Airlift Group. (Photo Staff Sgt. Desiree Palacios)

by Janie Santos  
Defense Media Activity-San Antonio

**Dyess AFB, Texas (AFNS)** - The Air Force's top military leader flew and delivered a new C-130J Super Hercules April 16 from Little Rock AFB, Ark. to Texas.

Opening a new era in tactical airlift for Dyess AFB, Air Force Chief of Staff Gen. Norton Schwartz spoke to a crowded hangar of distinguished visitors and service-members about the airlifter and the Airmen who will operate it.

"We must bring the best that we possibly can to the joint fight; we are doing this by modernizing our inventories," General Schwartz said. "The delivery of this C-130J is a step toward modernizing our airlift inventories and we will continue to make progress. But that alone will not guarantee success; our people who permit us to use these machines to best effect are our number one asset."

He presented a ceremonial key to the aircraft's crew chief, Staff Sgt. Ryan Flores, who was Air Mobility Command's crew chief of the year.

"The aircrews from the 317th Airlift Group are deployed in support of ongoing operations around the world, and are serving as reliable and trusted teammates to our joint and coalition partners," the general said.

The general said that the men and women of the 317th have been deployed more than 2,200 continuous days, with missions in Haiti, Iraq, Afghanistan and the United States. Dyess aircrews also accumulated more than 17,000 flying hours last year, an amazing accomplishment.

The group commander responsible for executing that demanding schedule said the delivery of the C-130J is the beginning of a new capability for the group and the continuation of a long history of Abilene airlift. C-130s have been flying here since 1961.

"Today marks the day where the capability of the 317th Airlift Group, Air Mobility Command and the U.S. Air Force has significantly increased," said Col. Dan Dagher, commander of the 317th AG, "and starts another 49 years of C-130 presence in Abilene."

Colonel Dagher said the base would receive 27 more aircraft and, by 2013, ultimately becoming the largest C-130J base in the world. Currently, a unit in England has 24 C-130Js.

The chairman of the Abilene Military Affairs Committee, Dr. Jim Webster, said the delivery of the new airlifter was a welcome upgrade, noting that the busiest C-130 unit in the Air Force had the oldest model.

Named the "Pride of Abilene," the first new Dyess airlifter reflects the unique relationship between the base and the community around it.

Texas Congressman Randy Neugebauer, who participated in the delivery of the aircraft from Little Rock, also spoke at the arrival ceremony and highlighted the exemplary relationship the community has with the base. He noted that the AMC award that honors community support was renamed the "Abilene Trophy" after the city won it so many times.

The new Dyess C-130J rolled off the production line only two months ago at the Lockheed Martin plant in Marietta, Ga. C-130Js entered the Air Force in 1999 and incorporate state-of-the-art technology to reduce manpower requirements, lower operating and support costs and provide life-cycle cost savings over earlier C-130 models. Compared to older C-130s, the J model climbs faster and higher, flies farther at a higher cruise speed and takes off and lands in a shorter distance.

## Winds of Energy

The biggest and newest (left) of two types wind turbines at F.E. Warren AFB, Wyo. faces the wind coming across the high plains and push against the clouds that later dropped light snow on the base and surrounding city of Cheyenne on April 6. The larger wind turbine was completed and on-line early in 2009 and is rated at 2 mega watts



goes directly into the base power grid. The other two smaller wind turbines produces a combined output of 1.3MW.

From most points on the base the wind turbines can be seen. At its base the blades make a low whoosh sound.

(Photo by Lance Cheung)

## Joint service drill competition held at Lincoln Memorial



A panel of judges from the five U.S. military branches views a performance by the U.S. Air Force Honor Guard Drill Team during the 3rd Annual Joint Service Drill Team Exhibition April 10, at the Lincoln Memorial in Washington, D.C. The event featured drill team performances from all five military branches. (U.S. Photo by Staff Sgt. Dan DeCook)

## Barksdale Airmen restore B-17G for 8th Air Force museum



This B-17G static display honors Maj. Gen. Lewis E. Lyle at the 8th Air Force Museum April 5, at Barksdale AFB, La. Barksdale AFB Airmen, volunteers and contractors are in the process of restoring the B-17 and painting it to resemble one that was flown by General Lyle on a bombing mission during World War II. (Photo by Staff Sgt. John Gordinier)

**Arnold Golf Course**  
454-7076

**Mulligan's Grill is open seven days a week from 7 a.m.-2 p.m.** Try the "Good Morning Breakfast" special Monday-Friday. This includes two eggs, choice of bacon or sausage, hash browns and one biscuit and gravy for \$4.50. Breakfast is served until 10:30 a.m. Lunch specials for May are: **Monday:** Reuben sandwich; **Tuesday:** Cranberry walnut chicken salad croissant; **Wednesday:** Turkey club panini; **Thursday:** Grilled chicken wrap; **Friday:** Club sandwich. All specials are served with fries and fountain drink for \$6. Try the soup of the day with a sandwich. Mulligan's Grill meals are a great value and include unlimited drink refills. Call ahead for advance or to go orders at 454-7076. Remember to show your Members First Plus membership card for a 10 percent discount on purchases of \$4 or more.

**Unlimited golf** every Tuesday and Thursday for \$10 per person. Normal cart fees apply.

Check out the **Pro Shop Memorial Day merchandise specials.** New merchandise has arrived to include Ping men's and women's shirts for \$29.95, men's and women's rain suits for \$89.95 and new Tres Bien windshirts with zip-off sleeves for \$29.95.

**Range Rat Program** kicks off June 1 and goes through July 31. During this time, the first 25 customers making a minimum \$25.50 e-key purchase of range balls will receive a Range Rat T-shirt and their name entered into the grand prize drawings. Anyone who finds a green money ball in your range basket instantly wins two free range tokens for 24 balls each and your name is entered into the grand prize drawings. Compete in the skills test competitions and win cash prizes. Putting Contest - June 4, 12:30 p.m.; Chipping Contest - June 25, 12:30 p.m.; Closest to Pin - July 2, 12:30 p.m.; Bunker Shot - July 9, 12:30 p.m.; Long Drive Contest - July 23, 12:30 p.m.; Big Break Contest - July 30, 12:30 p.m. Customers who purchase a range key, money ball winners and winners in the skills challenges are eligible for the grand prize drawings: 7th place - \$25 gift certificate; 6th place \$25 gift certificate; 5th place \$50 gift certificate; 4th place \$50 gift certificate; 3rd place \$75 gift certificate; 2nd place \$125 gift certificate and Grand Prize \$250 gift certificate.

**Arnold Lakeside Center**  
454-3350

**Arnold Lakeside Center now serves Bean's Creek wines by the glass or by the bottle. Come see the new selection.**

Sign up now for three months of free club membership. All personnel who join any Air Force club between now and May 30 will automatically receive three months free dues, a free cash back rewards program, and a chance to win \$5 - \$100 instantly upon application. "We want all personnel to consider club membership and understand the benefits of club membership, and our "Three For Free" club membership campaign gives them the opportunity to try their club free for the first three months," said Fred McKenney, chief of the Air Force Food and Beverage Division. "During the period everyone interested in Air Force Club membership should look for the membership promotional materials in their local club and other Services activities," said McKenney. "Pick up an application, fill it out, and experience the benefits of membership." The membership card provides numerous benefits. The Military Free Cash rewards program is an outstanding benefit to members. When you use your club membership card in any on-base Services activity, you earn 2 percent cash back on every eligible purchase including AAFES (to include gas) and Commissary. Additionally you earn 1 percent cash back on eligible purchases everywhere else including all off base purchases. In addition to being able to redeem points for cash back and gift cards, you now can also redeem for travel, to include airline tickets, hotel, and car rental - super flexibility - and it is all free, as a benefit of club membership! Air Force Clubs offers members numerous free and inexpensive activities including discounts on every meal to in-

## Camp Adventure returns June 1-Aug. 6



Camp Adventure returns June 1-Aug. 6. Camp Adventure is a day camp for children who have completed kindergarten through age 12. The camp is sponsored by 704th Services and run by skilled professionals through the University of Northern Iowa.

Activities are held Monday - Friday at the Youth Center, building 3055 from 7:30 a.m.-4:30 p.m. Children may attend any or all weeks but attendance information should be completed at time of registration. Each week is set to a theme and activities are planned to coincide with that theme including field trips to local attractions.

Morning and afternoon snacks and beverages will be provided. Parents must supply their child with a daily sack lunch to include beverage (no carbonated beverage of any kind). Ensure that lunches are clearly marked with child's name. Cold items can be accommodated in the central refrigerator; however, meals will not be

able to be heated.

Outdoor and swimming activities are planned throughout the week (weather permitting). Each child should bring daily to camp an extra pair of clothing, swimsuit, towel and sunscreen, if needed. Closed toe shoes must be worn at all times during camp.

Camp starts at 7:30 a.m. and ends at 4:30 p.m. Children will not be accepted before 7:15 a.m. (no exceptions). Children may be signed into open recreation after 4:30 p.m. but must be picked up before 6 p.m. Families picking their child up after 6 p.m. will be charged a late fee of \$1 per minute. No grace period allowed.

Weekly fees are based on total household income and determined using DoD Childcare Fee Policies. Fees include snacks and field trip costs. Payment in advance for the first and last week of camp is required at time of enrollment. Weekly payments are due on the third day of the week. A late payment fee of \$20 will be

applied to payment after the third day of the week. Fees for 2010 are as follows

Category	Income	Weekly Rate
I	\$0-28,000	\$50
II	\$28,001-34,000	\$65
III	\$34,001-44,000	\$75
IV	\$44,001-55,000	\$85
V	\$55,001-70,000	\$95
VI	\$70,001 +	\$110

Required documentation must be completed to enroll each child in the program and includes completed application form, Air Force Form 1181 - Youth Registration, Air Force Form 1055 - Medication Permission Slip (if applicable), copy of leave and earnings statement or W2 (if not provided the highest category will be used to calculate weekly rate).

To start your child or children on this extraordinary adventure, read over the weekly themes and choose when you want them to attend. Complete the application form and initial ONLY the weeks you are interested in your child attending. Payment in advance for the first and last week of camp enrollment is required at time of registration. A two-week written notice is required to withdraw your child or children from camp without charge for the weeks indicated on your initial registration form. A full refund will be made if written notice is given in sufficient time. You may select as many weeks as you want on one application but a different application is required for each child attending.

Fill out the Camp Adventure Application and return it, along with the other required documentation and weekly fees, to the Youth Center no later than two weeks prior to start date.

For questions or more information, please call 454-3277.

**Week 1: June 1-4 Zooprise Party Parade**

Lions and tigers and bears! Oh my! Come see what's new at our crazy and wild Camp Adventure zoo. A menagerie of animals, some great and some small, await your arrival at the greatest zoo of them all. There will be animal antics, exotic exhibits and show stopping surprises! From primates at play to reptiles that slither away! Come one, come all and join in the fun as we march in our Camp Adventure Zooprise Party Parade! Field Trip: Thursday: Grassmere Zoo, Nashville; Note: CLOSED Monday for Memorial Day Holiday (May 31)

**Week 2: June 7-11 Viking Sails & Dragon Tales**

Join Camp Adventure on the high seas as a Viking hero-in-training! The blast of a Viking bugle marks the start of our hilarious and heroic sea-faring saga and scary sea dragon drama! You will master silly ship-building skills and learn to speak dragonese with ease. Better grab your dragon basket and sneaky shoes, your challenge is to capture, tame, and train a fire-breathing beast. The hero of our story needs a faithful serpent sidekick! Which dragon will you choose: a Monstrous Nightmare or a Common Garden Green? Field Trips: Thursday: Skate World, Estill Springs

**Week 3: June 14-18 Space Raiders & Cosmic Invaders**

Shuttle to the stars or moonwalk to Mars on a space odyssey that's out-of-this world! Speed on sunbeams to star-tacular scenes! Plunge into deep space on a perplexing planetary chase. Zoom to the moon and take a spin 'round the solar system. Young astronauts get ready, get set and go to Camp Adventure's race through outer space as Space Raiders and Cosmic Invaders! Field Trip: Thursday: Adventure Science Center, Nashville

**Week 4: June 21-25 Rangers, Robots & Toybox Treasures**

The Round-Up Gang is back in town! Join Woody and Jessie in a rootin'-tootin' rodeo roundup. Blast off with Buzz and his buddies and have a rock 'em, sock 'em swell time! Dig into the depths of your toybox and unearth some toybox treasures. Have a bouncy ball and become a super-duper hula-hooper as we count down and play with the top ten toys of all time! Field Trip: Thursday: Bowling Lane, Tullahoma

**Week 5: June 28- July 2 "Fin"tastic Ocean Jamboree**

Go Fish! Fall hook, line, and sinker for Camp Adventure's incredible, ultimate undersea journey! Surf the sea and join a jellyfish jamboree! Cruise to a coral castle, explore the ocean blue, and make finny, funny friends with Nemo, too! Join in the Crazy Clownfish Capers, follow the current, and plunge into "Fin"tastic Fishy Fun! Field Trip: Thursday: Tennessee Aquarium, Chattanooga; NOTE: Friday: Family Barbeque at ALC swim area.

Upcoming: Missoula Children's Theatre Auditions July 5, 4 pm, Manchester Performing Arts Center

**Week 6: July 6-9 Leaping Through the Looking Glass**

Get ready to clang and clatter with the Mad Hatter as we tumble down the tunnel and follow White Rabbit's trail to Alice's amazing underland wonderland! Try growing a garden with talking flowers or help the Queen of Hearts find her stolen sweet tarts! Let's put on our winning grins and get ready for a wonderful week that starts with a crazy chat from the Cheshire Cat and ends with a royal extravaganza of crumpets and trumpets at Queen Alice's palace! Field Trip: Tuesday & Thursday: Swim Plex, Manchester; NOTE: CLOSED Monday for 4th of July Holiday (July 5)

**Week 7: July 12-16 Wild Things & Warm Fuzzies**

Let the wild, wacky rumpus start! Join Max and our Camp Adventure crew as we journey to the Four Corners

of the Earth and the land where the Wild Things are! Learn monster manners and mysterious magic tricks that will tame the wild things, and make you king or queen of them all! Go on a monster hunt, play Monster Mingle and "Monster, May I." Make your own Monster Morse Code and learn that even monsters want to be friends. Field Trip: Thursday: Cumberland Caverns, McMinnville

**Week 8: July 19-23 Super Sports Spectacular**

On your mark, get set, go! Camp Adventure is off to a super start as we kick off an all-star sport spectacular. Join the skate team, leap beyond your wildest dreams and prepare skating strategies as we gear up for the World Cup this year. We'll be hitting the ice just in time to star in sensational sports of all sorts. Everyone's a winner this week so get in shape to celebrate! Field Trip: Thursday: Ice Complex, Huntsville, Ala.

**Week 9: July 26-30 Amazon Jungle Rumble**

Tiptoe through a sun-kissed mist and join Camp Adventure's trek through the tropical rainforest. Peer through feathery ferns on the forest floor and talk with toucans galore. Play leapfrog and dart through the trees in a terrific rain forest breeze. Swing on the vines, and have a terrific tropical time. Come with us and soar into Camp Adventure's colorful canopy of rainforest creatures. Field Trip: Thursday: Point Mallard, Decatur, Ala.

**Week 10: Aug 2-6 An Invitation to a World Celebration**

Pack your passport and prepare for an international adventure. Travel "south of the border" for a fantastic fiesta, escape on the Eurotrail, and go on safari in the Kalahari. Join our culture club and explore the folklore of exotic destinations. This week we're headed to far away places on an Invitation to a World Celebration. Field Trip: Tuesday: MTSU Mineral Gem & Fossil Museum Thursday: Swim Plex, Winchester

## Outdoor Rec. extends sign up deadline for Lost Sea trip

Outdoor Recreation is planning a trip to The Lost Sea Adventure May 15. Sign up deadline has been extended to April 30 for this all day trip to Sweetwater, Tenn. This event is a tour of the largest underground lake in America. Two tours will be done. The adventure begins with a guided tour of the caverns. This involves a 3/4 mile round-trip walk on wide sloping pathways. While touring the caverns and underground lake guides will tell of the cavern's exciting and colorful history. They will also explain the fascinating geological development of the immense cavern rooms and rare formations. At the bottom of the cave board a glass-bottom boat for an exciting trip on the Lost Sea. The lake, covering more than four acres, is recognized by the U.S. Department of the interior as a Registered National Natural Landmark. This is due to the natural

phenomenon of the lake as well as the abundance of a large collection of rare anothodites, more commonly known as "Cave Flowers" The lake is located 140 feet below the ground level, so coming up can be a hike. The tour lasts approximately one hour and 15 minutes and the temperature remains a pleasant 58 degrees. Along with the boat ride and cavern tour, the flashlight tour delves into an undeveloped section of the cave. This portion lasts approximately one hour and 35 minutes. Be sure to bring a flashlight and money for meals. The trip departs from Outdoor Rec. at 8 a.m. and will end at 6 p.m. Cost is \$40 per person (\$25 for ages 12 and under). There will be a cancellation fee of \$10 if cancelled after May 7. There must be a minimum of 20 participants to take this trip. Maximum capacity is 26. Call 454-6084 to sign up or for more details.



**Arnold Lakeside Center to honor mothers with Mother's Day buffet**

Arnold Lakeside Center will offer a special Mother's Day buffet May 9 from 10:30 a.m.-1:30 p.m. Reservations are required and must be made by May 3. Cost is \$17.95 for members, \$19.95 for nonmembers and \$9.95 for children ages 3-12. The menu includes baked ham, turkey and dressing, smoked salmon, garlic mashed potatoes, assorted vegetables, salads, breads, desserts, tea and coffee. Bring your mom and the ALC staff will deliver a rose and a balloon from you to your table. Call 454-3350 for reservations.



Horizon is a 704th Services Division publication designed to inform our customers of events and specials in 704th Services Division activities. All program dates, times and prices are subject to change. 704th Services Division mailing address is at 100 Kindel Drive, Suite C321, Arnold AFB, Tenn. 37389-3321

Services information written and provided by Tanya Haggard

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# 704<sup>th</sup> Services Division Phone Numbers

**Area code 931 DSN 340**  
 Services Chief – 454-7779  
 Services Deputy – 454-5915  
 Community Services Flight Chief – 454-4062  
 Complex Manager – 454-3367  
 Arnold Lakeside Center (ALC) – 454-3350  
 Arnold Lakeside Center catering – 454-3350

Hap's Pizza – 454-5555  
 Membership Information 454-3367  
 Fitness Center (FC) – 454-6440  
 Outdoor Recreation (ODR) – 454-6084  
 FamCamp – 454-4520 or 454-6084  
 Marina – 454-6084 or 454-3838  
 Recycling – 454-6068  
 Family Child Care – 454-3277

Family Member/Youth Programs – 454-3277  
 Human Resources – 454-5481  
 Marketing & Sponsorship – 454-3128  
 Barber Shop – 454-6987  
 Wingo Inn – 454-3051  
 Golf Course (GC) – 455-5870 or 454-7076

## May 2010

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
<p><b>Camp Adventure begins June 1. Applications due now. Call 454-3277 for details.</b></p> <p><b>Fitness Center Ping Pong Ladder Tournament begins June 7. Sign up by June 1, 454-6440.</b></p> <p><b>Golf Course Range Rat Program begins June 1. Ask about prizes, contests and specials. 454-7076</b></p> <p><b>Sign up for Outdoor Rec Gatlinburg Trip by April 30, 454-6084.</b></p>						<p><b>1</b></p> <p>FamY and ODR New Hours Begin, see article for details                      ALC All You Can Eat Catfish, \$10.95 members, \$11.95 non members, 5-9 p.m.</p>
<p><b>2</b></p>	<p><b>3</b></p> <p>ALC Club Scholarship Program begins, entries due by 1 July to Services Marketing, A&amp;E Rm C303, 454-3128                      FC Cycle Pump Class - Zesty cycling 11 a.m.                      FC Yoga 11 a.m.                      FC Intramural Softball Women's League 5 p.m</p>	<p><b>4</b></p> <p>GC Unlimited golf \$10 every Tuesday &amp; Thursday                      ALC AEDC Woman's Club Luncheon 9:30 a.m.                      FC Cycle Pump Class - Endurance Cycling 11 a.m.                      FC Karate 3 p.m.                      FC Zumba 4:15 p.m.                      FC Intramural Softball Open League 5 p.m.</p>	<p><b>5</b></p> <p>ALC Hap's Pizza 11 a.m. - 1 p.m., also available Chef Salad or Surprise Special, call ahead 454-5555                      FC Pilates 11 a.m.                      FC Intramural Softball Women's League 5 p.m.</p>	<p><b>6</b></p> <p>GC Unlimited golf \$10 every Tuesday &amp; Thursday                      GC Thurs Night Dog Fight                      FC Cycle Pump Class - Yellow shirt cycling 11 a.m.                      FC Karate 3 p.m.                      FC Zumba 4:15 p.m.                      ALC Dinner &amp; Movie Night "Dear John" PG-13 dinner 5-9 p.m.                      NEW TIME: movie 6 p.m.                      FC Intramural Softball Open League 5 p.m.                      ALC Spring Chess Club, 5:30-8:30 p.m., in The Landing</p>	<p><b>7</b></p> <p>FamY Youth Bake Sale at Commissary, 9a.m.-1p.m.                      FC Piloga 11 a.m.                      ALC Prime Rib for Two, \$33 member, \$34 non member 5-9 p.m.                      ALC First Friday Jam Night, 6-10 p.m.                      FamY Movie Night, 6-9 p.m., age 9 and up, free popcorn and \$1 pizza by the slice, 454-3277</p>	<p><b>8</b></p> <p>FamY Youth Bake Sale at Commissary, 9a.m.-1p.m.                      ODR Paintball 9:30 a.m. \$20 includes lunch, ages 10 and up, 454-6084                      ALC Express and Pizza menu to go only, 5-9 p.m.</p>
<p><b>9</b></p> <p>ALC Mother's Day Buffet, 10:30 a.m.-1:30 p.m., \$17.95 members, \$19.95 non member, ages 3-12 \$9.95, reservations required by May 3, 454-3350</p>	<p><b>10</b></p> <p>FC Cycle Pump Class - Zesty cycling 11 a.m.                      FC Yoga 11 a.m.                      FC Intramural Softball Women's League 5 p.m.</p>	<p><b>11</b></p> <p>GC Unlimited golf \$10 every Tuesday &amp; Thursday                      FC Cycle Pump Class - Endurance Cycling 11 a.m.                      FC Karate 3 p.m.                      FC Zumba 4:15 p.m.                      FC Intramural Softball Open League 5 p.m.</p>	<p><b>12</b></p> <p>FC Armed Forces Run, 7:30 a.m., two laps around trail, sign up 454-6440                      ALC Hap's Pizza, 11 a.m.-1 p.m., also available Chef Salad or Surprise Special, call ahead 454-5555                      FC Pilates 11 a.m.                      FC Intramural Softball Women's League 5 p.m.</p>	<p><b>13</b></p> <p>GC Unlimited golf \$10 every Tuesday &amp; Thursday                      FC Cycle Pump Class - Yellow shirt cycling 11 a.m.                      FC Karate 3 p.m.                      FC Zumba 4:15 p.m.                      ALC Dinner &amp; Movie Night "Percy Jackson and the Olympians: The Lightning Thief" PG dinner 5-9 p.m.                      NEW TIME: movie 6 p.m.                      ALC Spring Chess Club, 5:30-8:30 p.m., in The Landing                      FC Intramural Softball Open League 5 p.m.</p>	<p><b>14</b></p> <p>ALC Chicken Marsala, \$9.95 members, \$10.95 non members, 5-9 p.m.                      FC Piloga 11 a.m.</p>	<p><b>15</b></p> <p>GC Two Person Triple Play Tournament                      ODR Lost Sea Adventure Trip, 8 a.m.-6 p.m., \$40, sign up extended to April 30, 454-6084                      ODR Fishing Basic Skills 101 Clinic, 1 p.m., \$5, sign up by May 7, 454-6084                      ALC Stuffed Pork Loin, \$10.95 members, \$11.95 non members, 5-9 p.m.</p>
<p><b>16</b></p>	<p><b>17</b></p> <p>FC Cycle Pump Class - Zesty cycling 11 a.m.                      FC Yoga 11 a.m.                      FC Intramural Softball Women's League 5 p.m</p>	<p><b>18</b></p> <p>GC Unlimited golf \$10 every Tuesday &amp; Thursday                      FC Cycle Pump Class - Endurance Cycling 11 a.m.                      FC Karate 3 p.m.                      FC Zumba 4:15 p.m.                      FC Intramural Softball Open League 5 p.m.</p>	<p><b>19</b></p> <p>FC Pilates 11 a.m.                      FC Bike to Lunch, 11 a.m., ride to ALC for lunch, pay as you go, sign up 454-6440                      ALC Hap's Pizza, 11 a.m.-1 p.m., also available Chef Salad or Surprise Special, call ahead 454-5555                      FC Intramural Softball Women's League 5 p.m.</p>	<p><b>20</b></p> <p>GC Unlimited golf \$10 every Tuesday &amp; Thursday                      FC Cycle Pump Class - Yellow shirt cycling 11 a.m.                      FC Karate 3 p.m.                      FC Zumba 4:15 p.m.                      ALC Dinner &amp; Movie Night "Valentine's Day" PG-13 dinner 5-9 p.m. NEW TIME: movie 6 p.m.                      FamY 4-H Meeting, 5-6 p.m.                      FC Intramural Softball Open League 5 p.m.                      ALC Spring Chess Club, 5:30-8:30 p.m., in The Landing</p>	<p><b>21</b></p> <p>FC Piloga 11 a.m.                      ALC London Broil or Stuffed Chicken Breast, \$11.95 members, \$12.95 non members, 5-9 p.m.</p>	<p><b>22</b></p> <p>ALC Express and Pizza menu to go only, 5-9 p.m.</p>
<p><b>23</b></p>	<p><b>24</b></p> <p>FC Cycle Pump Class - Zesty cycling 11 a.m.                      FC Yoga 11 a.m.                      FC Intramural Softball Women's League 5 p.m.</p>	<p><b>25</b></p> <p>GC Unlimited golf \$10 every Tuesday &amp; Thursday                      FC Cycle Pump Class - Endurance Cycling 11 a.m.                      FC Karate 3 p.m.                      FC Zumba 4:15 p.m.                      FC Intramural Softball Open League 5 p.m.</p>	<p><b>26</b></p> <p>ALC Hap's Pizza, 11 a.m. - 1 p.m., also available Chef Salad or Surprise Special, call ahead 454-5555                      FC Pilates 11 a.m.                      FC Intramural Softball Women's League 5 p.m.</p>	<p><b>27</b></p> <p>GC Unlimited golf \$10 every Tuesday &amp; Thursday                      FC Cycle Pump Class - Yellow shirt cycling 11 a.m.                      FC Karate 3 p.m.                      FC Zumba 4:15 p.m.                      ALC Dinner &amp; Movie Night "Invictus" PG-13 dinner 5-9 p.m. movie 6:30 p.m.                      FC Intramural Softball Open League 5 p.m.                      ALC Spring Chess Club, 5:30-8:30 p.m., in The Landing</p>	<p><b>28</b></p> <p>FC Piloga 11 a.m.                      ALC Steak &amp; Shrimp, \$17.95 member, \$18.95 non members, 5-9 p.m.</p>	<p><b>29</b></p> <p>ODR Beach Volleyball Tournament, Rec beach, 10 a.m., \$25 team entry, sign up by May 20, 454-6084                      ALC Pizza &amp; Spaghetti, \$9.95 members, \$10.95 non members, 5-9 p.m.</p>
<p><b>30</b></p>	<p><b>31</b></p> <p>FC Open 8 a.m.-4 p.m., no classes due to holiday</p>					

## 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 5-9 p.m., dinner or Arnold Express Menus and Hap's Pizza Friday and Saturday 5-9 p.m.; Main Bar: Thursday 4:30-8:30 p.m., Friday and Saturday 4:30-9 p.m.; Social Hour Friday 4-6 p.m., **Movie Night Thursday 6:30 p.m. NEW TIME of 6 p.m. beginning May 6.**

**Family Member/Youth Programs** – Youth Open Rec. Tuesday and Thursday 4-7 p.m., Wednesday 1-6 p.m., Friday 4-9 p.m., Saturday 12-5 p.m. **NEW HOURS begin May 1: Tuesday-Friday 10 a.m. – 6 p.m., Saturday 12-5 p.m., First Friday Movie Night 5-8 p.m.; Camp Adventure runs June 1-Aug. 6 7:30 a.m.-4:30 p.m. Monday -Friday, During Camp Adventure Open Rec. is open Monday-Friday 4:30-6 p.m. only.**

**Outdoor Rec.** – Main Office, Check In and Auto Shop Tuesday-Saturday 10 a.m.-5 p.m.; Marina by appointment only; **NEW HOURS begin May 1: Main Office, Check In, Marina and Auto Shop Tuesday through Sunday 8 a.m.-6 p.m., FamCamp Store Tuesday-Friday 3-5 p.m., Saturday and Sunday 8-11 a.m., 2-5 p.m., Lifeguards begin Memorial Day weekend GLC beach daily 10 a.m.-6 p.m., ALC beach Saturday and Sunday 10 a.m.-6 p.m.**

**Fitness Center** – Monday-Friday 5 a.m.-9 p.m.; Saturday 8 a.m.-4 p.m.; Sunday 12-5 p.m.

**Arnold Golf Course** – Pro Shop and Driving Range daily 7 a.m.- dusk, Mulligan's Grill: daily 7 a.m.-2 p.m.

**Recycling** – Monday-Friday 7 a.m.-4 p.m.

**Wingo Inn** – Monday-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.-2 p.m.; Thursday 8 a.m.-noon

The 704th Services insert to the High Mach is designed to inform our customers of events and specials in 704th Services activities. All program dates, times and prices are subject to change. 704th Services is an exclusive area available to all AEDC personnel, active duty, retired military, National Guard, Reserve military and others as approved by the commander. 704th Services activities include Wingo Inn (lodging), Arnold Lakeside Center, Outdoor Rec (Marina, FamCamp), Family Member/Youth Programs, Golf Course and Fitness Center.

Those mentioned above are eligible to use any 704th Services activity during regular operating hours unless it is specified as a "members only" event. Membership is a personal choice. However, only members are entitled to discounts and other benefits associated with membership.

## BX/Commissary customer eligibility

AEDC government civilian and AEDC contractor employees have access to the following limited items at the base exchange (BX): consumable items including toiletries and over-the-counter pharmaceuticals, food items such as candy, chips, little meal items, hot dogs and soft drinks. Alcohol and cigarettes are not included as consumable items. However, only active duty and retired uniformed services personnel and their dependents are eligible to use the base commissary next to the BX. The commissary hours of operation: Tuesday, Wednesday and Friday 9 a.m.-5:30 p.m., Thursday 9 a.m.-6:30 p.m. and Saturday 8 a.m.-4:30 p.m. The BX hours of operation: Tuesday through Friday 9 a.m.-5:30 p.m., and Saturday 8 a.m.-4:30 p.m. For more information contact Janie Warren, BX manager, at (931) 454-7153 or Jeff Lillard, Commissary manager, at (931) 454-3545.

### AAFES Dividends

Dividends generated from the Army and Air Force Exchange Service (AAFES) overall earnings are a major contributor to 704th Services nonappropriated fund (NAF) construction and renovation projects as well as equipment purchases. 704th Services would like to thank all AAFES customers for their support. Dividends received for March 2010 totaled \$5,167.01.



**Briefs from H1**

**Arnold Lakeside Center 454-3350**

clude special functions, an annual \$25,000 scholarship program, Football Frenzy, Air Force Hoops, and other member's only programs. Your Club is a great place for entertainment and meeting new friends in a fun and safe environment. Join now; the first three months are free on us!

**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 pre-order. 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 the Surprise Wednesday Special will be. The special could include items such as homemade chicken salad or lasagna.

**Spring Chess Club** continues through May 27 for all ages (under age 13 will need parent present). Play format is open to all skill levels and is not structured. Players are required to observe all rules of sportsman-like conduct during play and towards all players regardless of skill level. Play will be in The Landing from 5:30-8:30 p.m. Express and Pizza menus will be available until 8 p.m.

**Movie nights** are every Thursday with a new movie start time of 6 p.m. with dinner available from the Express or Pizza menus from 5-9 p.m. The schedule for May is: **May 6** - "Dear John," rated PG-13 starring Channing Tatum and Amanda Seyfried. The story of John Tyree, a young soldier home on leave, and Savannah Curtis, the idealistic college student he falls in love with and their relationship throughout his deployments through a continuous stream of love letters. **May 13** - "Percy Jackson and the Olympians: The Lightning Thief," rated PG starring Logan Leman and Brandon Jackson. Percy Jackson is having problems in high school when the gods of Mount Olympus seem to have walked out of the pages of his Greek mythology tests and into his life. **May 20** - "Valentine's Day," rated PG-13 starring Julia Roberts and Bradley Cooper. Intertwining couples and singles in Los Angeles break-up and make-up based on the pressures and expectations of Valentine's Day. **May 27** - "Invictus," rated PG-13 starring Matt Damon and Morgan Freeman. The true story of how Nelson Mandela joined forces with the captain of South Africa's rugby team to help unite their country.

**Friday night dining room specials available from 5-9 p.m.** **May 7:** Prime Rib for Two \$33 members, \$34 nonmembers. First Friday Jam night returns 6-10 p.m. **May 14:** Chicken Marsala, \$9.95 for members, \$10.95 for nonmembers. **May 21:** London Broil or Stuffed Chicken Breast \$11.95 members, \$12.95 nonmembers. **May 28:** Steak & Shrimp (7 oz. ribeye with 4 jumbo breaded shrimp) \$17.95 members, \$18.95 nonmembers. Please call for reservations to ensure special is available. All specials and times are subject to change without notice. Please call ahead to ensure availability and openings.

**Saturday availability and specials:** **May 1:** All You Can Eat Catfish, \$10.95 members, \$11.95 nonmembers. **May 8:** Express and Pizza menu to go only. Call 454-5555. **May 15:** Stuffed Pork Loin \$10.95 members, \$11.95 nonmembers. **May 22:** Express and Pizza menus to go only. Call 454-5555. **May 29:** Pizza & Spaghetti \$9.95 members, \$10.95 nonmembers. 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.

The next session of **Dance Classes** will begin June 2. The session includes seven weeks of instruction on Wednesday nights culminating with a dinner dance event July 21. Instruction is scheduled 6:30-7:30 p.m. with supervised practice 7:30-8:30 p.m. Cost for the all inclusive class (seven weeks of instruction and dinner dance event) is \$58 per person for members and \$60 for nonmembers. Full payment is required in advance to participate in the class and refunds or prorated fees are not applicable for missed classes. The class is taught by Denny Lennon and/or Amanda Robinson with Chattanooga Dance Sport. Call to sign up for classes and remember to wear comfortable clothing and shoes. The next session will begin Aug. 11.

**Family Member/ Youth Programs (FamY) 454-3277**

**Air Force Space Camp 2010** applications being accepted. The camp will be conducted July 25-30 at the U.S. Space and Rocket Center in Huntsville, Ala. Forty-eight scholarships are available for youth ages 12-18. Interested youth must complete the application and apply through the Youth Center. Applicants may not have attended previous space camps.

This program is open to family members of active duty Air Force, other branches of the military assigned to or living on Arnold AFB, Air Force retired military, Air Force civilian and contractor employees, Air National Guard and Air Force Reserve members. Airline or private vehicle travel costs to Huntsville are the responsibility of the attendee. Lodging, meals and activity costs are funded at no cost to the participant. All applications must be fully completed and returned to the Youth Center by April 26. Call for complete details on how to apply.

**Youth Bake Sale** at the Commissary parking lot May 7-8 from 9 a.m.-1 p.m. Donations of baked goods can be dropped off at the Youth Center the week of May 3-6 between 10 a.m.-4:30 p.m. or the day of the event. This is a fundraiser to help offset costs of new supplies, books, games, field trips and T-shirts for the Youth Program.

**Youth Movie Night** set for May 7 from 6-9 p.m. Ages 9 and up are invited to the Open Rec. Center to watch a movie. There will be free popcorn and pizza by the slice for \$1. Juice and water will also be provided free of charge.

Join the Youth Center for **4-H Club meeting** May 20 from 5-6 p.m. 4-H Club is designed for youth in the 4th grade through 18 years of age.

**4-H, Operation: Military Kid (OMK) and Joint Family Support Assistance Program (JFSAP) One Week Residence Camp** to be held in Crossville at the Clyde York 4-H Center May 31 through June 4. Youth, grades 6-8 as of Jan. 1, are invited to apply and must be a legal dependent of an armed services member (any branch) in the deployment cycle (includes those who are currently deploying, have been deployed or who will be deployed in the near future). The camp includes activities such as swimming, crafts, ropes course, woodworking, etc. and participants will have a chance to meet other youth from across Tennessee. Cost is \$20 per camper and covers the cost of camp, T-shirt and various incidentals. Transportation will be provided from the Coffee County 4-H Extension Office. Applications are available at the Youth Center and must be returned along with registration fee (made payable to TN National Guard Family Program). Camp will fill up quickly so register early. Applicants are accepted on a first come, first served basis.

**Missoula Children's Theatre** returns July 5-10 with their production of Treasure Island. Auditions will be held at 4:30 p.m.

July 5 at the Manchester Performing Arts Center (MPAC) for children who have pre-registered. Children eligible to preregister are those who have completed first grade through those still in 12th grade. Participation is open to all AEDC families and the local surrounding communities. Preregistration is \$15 (\$10 for additional children in the same household) and begins June 1 ending July 2. Late registration or cancellation fee of \$5 will be applied after July 2. Once each age group is filled to capacity no additional children may sign up. A total of 60 cast members and 4 assistant directors will be filled. Auditions will consist of two hours in which every child must participate to be considered for a part in the play. Two additional hours may be required for some cast members. Youth Programs' staff will be at the MPAC June 4 and 25 from 11 a.m.-3 p.m. to register those from the community. The performance will be held at 3 p.m. July 10 with \$8 admission for adults and \$5 for children.

**Fitness Center 454-6440**

**Open League and Women's League Softball** will begin the end of April. Women's League starts April 26 with games on Mondays and Wednesdays. Open League will begin April 27 with games on Tuesdays and Thursdays. Three games are played each night beginning at 5 p.m.

**Armed Forces Run** to begin 7:30 a.m. May 12. This will be a 3.5 mile run with an official start time and running clock. It is two laps around the Fitness Center trail. The first 30 to sign up will receive T-shirts and the fastest overall time will receive a prize.

**Bike to Lunch** May 19 beginning at 11 a.m. Meet at the Fitness Center then ride to Arnold Lakeside Center for lunch. Choose from Hap's Pizza menu, chef salad (\$4.50), chef salad with chicken (\$6.50) or the special of the day. Order and pay as you go. Once lunch is finished the ride will continue back to the Fitness Center. Incentives will be given to the first twenty to commit and sign up.

**Random Fitness Initiative** continues. Twice a month the Fitness Center staff will roam the base during lunch and award people for showing self initiative for working out on base at a location other than the Fitness Center. Those selected will receive a prize.

**Ping Pong Ladder Tournament coming June 7.** Singles and Doubles matches are scheduled by players Monday through Friday. Sign up for this event by June 1. Prizes

will be given to the top three winners.

**The Fitness Center will be open 8 a.m. - 4 p.m. for Memorial Day. No classes will be held.**

**Outdoor Rec (ODR) 454-6084**

**Paintball set for May 8.** 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.

**Fishing Basic Skills 101 Clinic** is set for May 15 beginning at 1 p.m. at the Outdoor Rec. building. The event is for ages 8 and older with a cost of \$5 per person. Adults who bring more than two children will pay \$3 per child after paying full price for the first two. Sign up deadline is May 7 and a late registration fee of \$5 will be applied after that date. There must be a minimum of 10 participants to hold the clinic. Maximum clinic size is twenty-five. Bring poles if you have them. Some poles will be provided. This clinic will get you ready and show you the aspects of fishing, which, if you do properly, could have you catching fish all day. Learn the proper ways to cast, reel in a fish, tie knots, know the best weather for fishing and how to recognize the best places to fish. There may be a competition at the end to see how you learned the skills. The winner will receive a prize.

**Beach Volleyball Tournament** is coming May 29 to the GLC beach. Start off your summer with some fun outdoor volleyball. Competition gets underway at 10 a.m. and lunch will include hot dogs, chips, sodas and water. Teams of four consisting of ages twelve and older must enter by May 20. Entry fee is \$25 per team. Late registration fee of \$10 will be applied after May 20. There must be eight teams signed up and limited to no more than thirty-two. The tournament will be single elimination. Each team will play a two game match against another team as a warm up before they begin the tournament. The winning team will receive a trophy.

Would you be interested in a "**Good Time in Gatlinburg**" **June trip package**? The trip would possibly involve whitewater rafting on the Pigeon River, a zip line tour of the Smokies and a dinner show at the Dixie Stampede. The following package options are being offered. **Package 1:** one night, two days (June 5-6) with zip line and Dixie Stampede for \$245. Depart from ODR at 5 a.m. June 5, ride the zip line at 1 p.m. EST then Dixie Stampede dinner and show at 8:30 p.m. EST. Return to ODR approximately 4 p.m. June 6.

Another alternate to this package is departing at noon June 4 with Dixie Stampede at 8:30 p.m. EST then zip line at 1 p.m. EST June 5 and return to ODR approximately 8:30 p.m. **Package 2:** one night two days (June 5-6) with whitewater rafting and Dixie Stampede for \$215. Depart from ODR 5 a.m. June 5, rafting at noon EST then Dixie Stampede at 8:30 p.m. EST. Return to ODR approximately 4 p.m. June 6. An alternate to this package is depart at noon June 4 with Dixie Stampede at 8:30 p.m. EST. Raft at 11 a.m. EST June 5 and return to ODR approximately 5:30 p.m. **Package 3:** one night, two days (June 5-6) with rafting, Dixie Stampede and zip line for \$280. Depart from ODR at 5 a.m. June 5 then raft at noon EST and Dixie Stampede at 8:30 p.m. EST. Zip line at 11 a.m. EST then return to ODR approximately 5:30 p.m. All packages are set activities and there is no omitting of unwanted activities. If you are interested in any of these options, call 454-6084.

**Reservations for pavilion usage** by authorized personnel must be made through the Outdoor Recreation Program. This includes the two pavilions at Gossick Leadership Center Beach, the Arnold Lakeside Beach and two in the Crockett Cove area. Rental fee is \$25 per day and a \$50 refundable cleaning deposit is required. Reservations may be made up to 30 days in advance at Outdoor Rec (building 3055, previously known as Community Activities Center) or by calling 454-6084.

**Reservation Policy:** FamCamp and Crockett Cove reservations may be made 45 days in advance for active duty military and reserve components and 30 days in advance for all other eligible patrons. Marina reservations may be made 15 days in advance for active duty and reserve components and 10 days for all other eligible patrons. Reservations are made through Outdoor Rec, 454-6084.

**Corn Hole** is now available for rent for office functions and private events. Each set rents for \$10 per day or \$15 for two days. Four sets are available to accommodate larger groups. Rental reservations may be made through Outdoor Recreation or by calling 454-6084.

The **Auto Shop** is a great place for do-it-yourself minor work and repairs. There is one stall available with a lift, air compressor, parts washer and a variety of tools. There is a fee of \$2 per hour. Staff can repair, mount, balance and rotate tires, by appointment. A repair using a plug is \$5 or a mushroom patch is \$10. The charge for

mounting is \$3 per tire and for balancing is \$2 per tire. Tire rotation includes balancing for four tires and is \$16 for cars and vans and \$20 for trucks.

**Wingo Inn 454-3051**

**Reservations for Wingo Inn** can be made 120 days in advance. Room rates start at \$39 per night. Please call 454-3051 for reservations.

**Gossick Leadership Center 454-3024**

**The Gossick Leadership Center (GLC)** is now part of the Services Division. Events such as meetings, conferences, luncheons, dinners, etc. may be booked through the Services Conference Center Manager (CCM) up to one year in advance. Requests must be made in writing by email to [arnold.glc@arnold.af.mil](mailto:arnold.glc@arnold.af.mil). All event coordinators are required to sign an agreement. Official unit functions are authorized at no charge and are defined as bona fide official meetings or training held as part of the normal duty day. Unofficial and private functions may be held for authorized users at a fee. Community members may host events with the approval of the Services Director for a fee. Outside food and beverages are not allowed. First consideration must be given to Arnold Lakeside Center. In the event they cannot accommodate, an outside source may be utilized with CCM approval. For more information contact the CCM at 931-454-3024 or the Community Services Flight Chief at 931-454-4062.

**AEDC Woman's Club 455-5676**

The AEDC Woman's Club will meet May 4 at Arnold Lakeside Center. Social time will begin at 9:30 a.m. and the meeting will start at 10 a.m. "It's Bingo Time!" This is an Air Force tradition to thank all our members for their hard work throughout the year. There will be more prizes than normal and their value is increased. Members of the AEDC Woman's Club have a greater chance to win wonderful prizes. Guests are welcome to play, but are ineligible to win a prize. Wait till you see the GRAND PRIZE!!! We have Longaberger baskets, crystal, and more. Come join our last program with a friend, yell BINGO and win a prize. Make your reservation by calling 455-5676.

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