



HIGH MACH

Serving the World's Premier Flight Simulation Test Center



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AEMTC membership ratifies new labor contract with ATA

By Shawn Jacobs
ATA Public Affairs

The Air Engineering Metal Trades Council (AEMTC), which represents a bargaining unit of 12 unions, voted May 24 to ratify a new three-year labor agreement with ATA.

The vote was 333 for and 90 against the agreement, which takes effect Oct. 1.

The new contract gives workers a 3 percent raise the first year, 2.9 percent the second year and 3 percent the final year. It runs through Sept. 30, 2013.

"I think the union and the company met in good faith, bargained hard and reached an agreement that both parties could live with," Tom Quatrini, manager of labor and employee relations for ATA, said.

"I congratulate the company and the union negotiating committees and the membership for ratifying the agreement. I also appreciate the work of the company's team, chaired by Human Resources Manager Mike Cunningham, and our Chief Negotiator, Steve Iapicco, from our corporate staff."

AEMTC President Jimmy Nance said he is glad all parties were able to reach agreement.

"We're thankful to have a good place to work that pays a good wage and has a good benefit package," Nance said. "We feel like we did the best we could

do under the circumstances with the budget cuts and the possibility of more in the future.

"We thought it was a good thing to get this business done early, and I believe that this is the earliest that the contract has been ratified – about four months early. I feel like it was a great effort on both sides, from the ATA management team and my committee."

ATA General Manager Dr. David Elrod expressed his appreciation to all who served on the negotiating committee.

"The work was tedious at times and had its special challenges," Dr. Elrod said. "In the end, this early agreement should help provide at least one measure of stability in a period that is fraught with many challenges."

The agreement with the AEMTC covers approximately 810 employees performing a variety of skilled operations, maintenance and fabrication.

Negotiators initially met for two weeks in April then separated for about a month. They returned to the table for two days and reached agreement May 14.

"I want to thank my committee, which includes 13 [union] stewards," Nance said. "I'm very pleased with our chief spokesman who came down from the Metal Trades Department, Jim Seidl; we actually had two chief spokesmen, Tom Schaffer and Jim Seidl."

Banquet slated for June 25 at Arnold Lakeside Center

Bates, Davis and Powell named AEDC Fellows

By Darbie Sizemore
High Mach Editor

AEDC will induct two new AEDC Fellows and one Lifetime Achievement Fellow June 25 at the annual Fellows banquet.

The new AEDC Fellows are Dr. Milt Davis Jr. and Dr. Stan Powell. They join 59 others selected for this honor since the program began in 1989.

The AEDC Lifetime Achievement Fellow recognizes individuals who have made significant and exceptionally valuable contributions to AEDC throughout their career. This year's honoree is William (Bill) Bates who will be the third Lifetime Achievement Fellow.

Dr. Ronald Sega, former astronaut and Air Force Undersecretary, will be the guest speaker for the event. Dr. Sega currently is the Woodward Professor of Systems Engineering at Colorado State University and is the vice president for energy, environment and applied research with Colorado State University Research Foundation. He also serves as special adviser to the Colorado State University president for energy and the environment.

William "Bill" Bates

Throughout his 33-year AEDC career, Bates provided outstanding service on the original calibration and operation of the von Kármán Gas Dynamics Facility (VKF), analysis of foreign technology data, the design and construction of the Aeropropulsion Systems Test Facility (ASTF) and the rebuild of the J-5 Solid Propellant Rocket Test Facility.

Dr. Milt Davis Jr.

Dr. Davis is an engineering specialist with Aerospace Testing Alliance (ATA). He will be recognized for his leadership contributions and sustained technical excellence and innovative application of gas turbine engine



Bates



Davis



Powell

modeling and simulation in support of Integrated Test and Evaluation

See FELLOWS, page 3

Night Ops begins



Summer night operations began Tuesday. By testing at off-peak times, AEDC is able to provide test customers the greatest level of electricity cost savings. Night operations are scheduled to continue through August. (Photo by David Housch)

AEDC heralds successful first flight of X-51A Waverider

By Philip Lorenz III
Technical Writer

AEDC employees' contributions played an important role, leading to the historic first flight of the X-51A Waverider.

Ed Mickle, AEDC's senior manager for aerodynamics test facility planning for the capabilities integration division, was the project engineer for the X-51's aerodynamic testing in 2006.

Mickle followed the flight test closely.

Regarding his involvement in supporting the program, he said, "It is pretty neat to be a part of leading-edge technology, things that I haven't done before. That's very interesting and poses challenging problems to the engineer in terms of how to test and how to acquire the data to ensure all objectives are well integrated and meet the customer's needs. So, that was a very exciting part of the test, being able to do that for the customer.

"We've tested a lot of missiles, of course, this is one of the few air-breathing programs, being that it is a scram jet, it's pretty unique."

A B-52 carried the unmanned X-51A to approximately 50,000 feet over the Pacific Ocean before releasing it. A solid rocket booster then ignited, accelerating the X-51 to



Carson McAfee, ATA outside machinist and foreman, makes a control surface change to the sub-scale model of the X-51 Waverider during a break in aerodynamic testing at AEDC's von Kármán Gas Dynamics Facility in 2006. (File photo)

Mach 5.

Onboard sensors transmitted data to ground systems before the missile was destroyed as planned and plunged into the Pacific.

There are no plans to recover it.

Mickle recalled what drove

the X-51 testing at AEDC in 2006.

"The customer was looking to verify the aerodynamic configuration and validate his computational results," Mickle said. "This [entry] was

See X-51A, page 4

"Superhero" team members save the day NFAC mechanic survives choking incident



Kent Griffin (third from left) was assisted by fellow mechanics Oscar Josen, Tom Wade and Todd Fuller when he choked during lunch at AEDC's NFAC at Moffett Field, Calif. (Photo by Jeff Law)

By Shawn Jacobs
ATA Public Affairs

Kent Griffin was eating lunch in his cubicle at AEDC's National Full-Scale Aerodynamic Complex at Moffett Field, Calif. on May 18 when a piece of pork tenderloin became lodged in his throat.

The situation could have proved fatal, but Griffin's fellow mechanics sprang into action and are credited with saving his life. NFAC Safety Engineer Jeff Law said Griffin first tried to dislodge the obstruction by forcefully coughing but was unable to do so. He then went to the next cubicle belonging to Todd Fuller

and showed signs of not being able to breathe and pointed to his throat. Fuller recognized Griffin's situation and without hesitation performed six-to-eight abdominal thrusts and requested help from Tom Wade, who was in his nearby cubicle.

See CHOKING, page 3

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.



Vision

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

Core Values

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



Core Values

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

Air Force safety officials launch Critical Days of Summer campaign for 2010

By Maj. Heidi Nelson
Air Force Safety Center
Ground Safety Division

Kirkland AFB, N.M. (AFNS) – S is for summer ... and safety too!

It's that time of year again! Spring is here in full force, summer is right around the corner and that can only mean one thing: time for Air Force safety officials to kick off the Critical Days of Summer safety campaign, May 28-Sept. 7.

As much as you would like to think that nothing could happen to you, the fact is, the real statistics are pretty grim...

Some risks are constant, but summer brings increased activity which brings increased risk.

Twenty-eight Airmen already have died in off-duty mishaps so far this year, and typically the Air Force loses about 19 over the summer.

Many others sadly take their own lives.

Now, does any of this mean Air Force leaders expect you to cower under your dining room table all summer? Of course not! Everyone knows that life itself comes with inherent risks.

Some of you may even be thinking, "This is a small number out of more than 330,000 Airmen ... that's not too bad!"

But how many of you would volunteer your best friend, or even yourself, as one of that "small number?"

The answer then is very simple: every Airman must set a personal goal of ZERO preventable mishaps for him or herself and everyone around him or her. To achieve this goal, every commander must provide guidance, policy and resources.

Every safety professional, from the Air Force Safety Center down to your unit safety representative, will work tirelessly to keep you educated and prepared to

safely enjoy your off-duty time this summer.

But here's the rub: we can only do so much educating. Nobody but you will be there to make the right decisions when the critical moments occur.

Your commander won't be sitting in the passenger seat when you've had a few too many to drink and are about to drive home.

The Air Force surgeon general won't be at your dorm to read the signs that one of your peers is feeling suicidal.

The director of the Safety Center won't be at the boat launch handing out life vests to you and your kids.

The only one who can make the decisions critical



to your survival is you.

Fortunately, the steps required to keep you and everyone around you safe are very simple: Think about the worst-case scenario and then decide whether you've done everything you could to eliminate or

at least minimize the risk. If you do that and decide you can't live with the consequences, chances are it's time for a new plan.

Everyone at the Safety Center wants each and every one of you around at the end of the 2010 Critical Days of Summer.

The choice is yours!

Mentorship: Our unwritten core responsibility

By Col. Don Bacon
3rd Air Force Deputy
Commander

Ramstein Air Base, Germany (AFNS) - The Air Force grows its military leaders from within. Air Force Chief of Staff Gen. Norton Schwartz started out as a lieutenant, and Chief Master Sgt. of the Air Force James Roy as an airman.

None of our leaders are hired directly from the corporate world into their current positions.

Thus, all Airmen need to embrace that mentoring other Airmen is one of our core responsibilities -- the future of our service de-

pends on it. Furthermore, Airmen will receive a great sense of satisfaction when they see the positive fruits of their investment in others.

To appreciate the impacts of being and having a mentor, consider how one mentor had a huge impact on a junior officer and how that investment eventually shaped the outcome of World War II, the Korean War, the birth of NATO and eight years of a presidency.

Dwight Eisenhower started World War II as a lieutenant colonel and within three and a half years was a five-star general, leading the Allied

war effort in Western Europe. He later became the first commander of NATO and then sworn in as president of the United States in 1952.

What most don't know is years earlier, he was not considered competitive enough to get into the Army's Command and General Staff College, which is where the Army sent majors with the most potential for senior leadership.

When Eisenhower was assigned to Panama, he served as the executive officer to Brig. Gen. Fox Conner.

The general saw potential in Eisenhower and

invested significant time mentoring him.

He had the young Eisenhower read Carl Von Clausewitz's "On War" three times and also had him study Plato, Tacitus, Nietzsche, Polybius, Xenophon and Vegetius.

He quizzed him on battles Napoleon and Caesar fought, as well as on the Greek and Roman wars. He also had him study the major campaigns of the Civil War, analyzing the strengths and weakness of the leaders and their decisions.

He taught him how to develop strategy, to adapt tactics to different terrain and to write effective and concise orders.

After Eisenhower was not initially selected to attend the Army's CGSC, General Conner arranged for him to be assigned to the recruiting command, where they still had quota slots available for CGSC.

With this, Eisenhower was selected to attend CGSC... and he aced the program as the top graduate of his class.

Following school, General Conner helped Eisenhower get a job

with Gen. John Pershing, which later led to working for Gen. Douglas MacArthur and Gen. George Marshall.

General Conner had a tremendous impact on one of America's most important leaders in the 20th century.

But don't let this story mislead you.

You don't have to be a commander or a superintendent to be a great mentor.

I remember when I was a second lieutenant, Capt. Rick Donalson took me under his wings and helped me get a great start in the Air Force.

What I didn't know was he was passed over for major and the Air Force was removing him from the service.

But yet, Captain Donalson was selfless with his time and had a great impact on my early career. I admire his example.

We all have a responsibility to prepare future leaders - the quality of our future Air Force leaders depends on it.

When we invest time in others we change the world for the better.



"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.

If you had a million dollars what would you spend it on?



Airman 1st Class Eric Ball

"A house somewhere in a warm climate and invest the rest of it."



Michael Walton

"Give half to Children's Foundation charity and spend the rest on my kids and me."



Jonathan Hill

"I would pay off my debts, give a little to charity, purchase a motorcycle and buy my wife a nice condo on the beach."

Action Line

Team AEDC

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

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

Col. Michael Panarisi
AEDC Commander

Smoking Policy

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

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

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

4. This letter supersedes previous letter dated 28 October 2006, subject as above.

7V space chamber upgrade project provides cutting-edge capabilities to test customer

By Philip Lorenz III
Technical Writer

Imagine driving down the interstate, trying to navigate heavy traffic and find an exit in an unfamiliar part of the country, while wearing slightly outdated prescription glasses. That gives someone a sense of the limitation AEDC engineers overcame recently with an upgrade to Arnold's 7V Space Chamber.

The 7V Space Chamber, a cutting-edge deep space test facility, was designed to evaluate and assess high performance interceptors and surveillance sensors at the conditions of space.

The U.S. wants to deploy a new generation of space-based staring array sensors in geo-stationary satellites.

These sensors are cameras that detect and locate infrared heat signatures, often from rocket motors but also from other intense heat sources, some of which are natural phenomena. This could include charged particles, solar radiation, outgassing (release of gas from materials used to build satellite components) and contamination from thrusters.

A specialized camera, the "TMS" or Target Monitoring System, calibrated to meet National Institute of Standards and Technology (NIST) specifications, is newly installed in 7V to allow test engineers to compare the view of simulated sources in space with a sensor under test.

Elijah Minter, the 650th Test Systems Squadron's investment program manager, said this system upgrade has already paid off for both AEDC and the command's test customers and their sponsors.

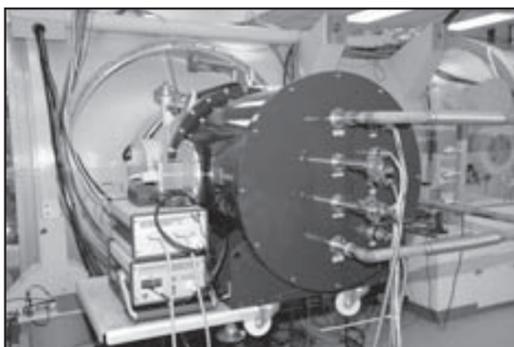
"The previous camera system capability in the 7V Chamber involved the Alignment Monitor System (AMS)," he said. "The AMS needed to be replaced – it was more than 16 years old and very antiquated. It suffered from limited spectral range, field-of-view coverage and spatial resolution. The AMS could not be integrated into the 7V Chamber facility control systems, and AMS data collection operations were highly inefficient.

"The TMS is an extremely versatile instrument that significantly expands the 7V Chamber target characterization capability," he added. "It provides the ability to characterize the 7V Chamber target systems in spectral bands that were not attainable previously and will greatly improve the efficiency of test operations, thereby reducing the cost for a complete 7V Chamber test entry.

"The TMS has already been used to support a customer test during which its unique capabilities have been extremely useful for understanding performance of one of the 7V Chamber target systems that was used in a different manner during the test event. During sensor testing in general, the better the test facility performance is understood, the better the quality of the data provided and the greater the confidence in the test results obtained."

Jim Burns, the 718th Test Squadron's lead for space chambers testing, said it is important to keep upgrades in perspective.

"7V was, and is a state-of-the-art test facility," Burns said. "For example, the AMS was state-of-the-art when built. In the last few years, the state-of-the-art moved, so we replaced the AMS with the TMS to maintain 7V as



7V's new Target Monitoring System provides an expanded field-of-view, increased spectral range and improved spatial resolution, saving the customer up to \$18,000 per test, according to Elijah Minter, the 650th Test Systems Squadron's investment program manager. (AEDC file photo)

a cutting-edge facility. It is part of the constant upgrade we do to keep all the capabilities in 7V current or ahead of the state-of-the-art."

The recent test Minter mentioned was conducted on a ground demonstration developmental model of a Ball Aerospace wide-field-view staring sensor.

"It [was] to be used nominally in a geo-stationary satellite," said Peter Thomas, an Aerospace Corp., test engineer with the project. "[It was a] wide-field-of-view missile detection staring [sensor] for observing a large portion of the Earth."

Thomas said the advantage of the Target Monitoring System is that it allows the customer to make a more rapid assessment between 7V's "ground truth" sources and the sensor under test.

"The advantage of the TMS is that you can make a near real time comparison," he said. "It's a lot quicker response and the TMS is AEDC's and our ground truth camera.

"So, we see something with the Ball ASIRT [Advanced Staring Infrared Testbed] sensor and then we can, a minute later, look at that same source or series of sources with the TMS and now we have a comparison. That allows Ball ASIRT or any other customer's sensor should it see artifacts or ghosts or other image anomalies, to then look at the TMS and say, is that real or is it an artifact of the sensor under test?"

Thomas explained that even with the TMS camera, the field of view is limited and the test team had to move the test sensor two additional times to capture the sources in space being viewed at three field positions.

"We did get a good mix of high quality data, field of view coverage and [it took] less time to conduct testing," he said. "AEDC's TMS is a very wide spectral range camera.

"That means that over a very deep range of infrared energies, wavelengths, that [7V's] camera can see all the way into the long wavelengths. So, although the Ball ASIRT is not a long wave camera, the TMS will allow better calibration of other, long wave length infrared (LWIR) sensors requiring the ability to detect warm things against other warm things."

Former astronaut, Undersecretary of Air Force to address crowd at Fellows Banquet

By Darbie Sizemore
High Mach Editor

Dr. Ronald Segal, former astronaut and Undersecretary of the Air Force, will deliver the keynote address at the 2010 Fellows Banquet.

The banquet will be held June 25 at the Arnold Lakeside Center.

Currently Dr. Segal is the Woodward Professor of Systems Engineering at Colorado State University and is the vice president for energy, environment and applied research with Colorado State University Research Foundation.

He also serves as special adviser to the Colorado State University president for energy and the environment.

From 2005-2007, as Undersecretary of the Air Force, Dr. Segal led the Air Force team that won the overall Presidential Award for Leadership in Federal Energy Management for 2006.

As a part of his duties as Undersecretary, Dr. Segal visited AEDC to share his perspective on the future of the center in the Air Force, the Department of Defense and the nation.

During that visit, he said he was impressed by AEDC on several levels.

"I had a great tour and the magnitude, not only in terms of the size of



Then Undersecretary of the Air Force Dr. Ronald Segal listens to a brief on the Arc Heaters during a visit to AEDC in 2006. (Photo by Rick Goodfriend)

some of the facilities, but also the number of them and the range of testing, is impressive," he said in a 2006 interview. "I was clearly aware of AEDC, but to actually be here and tour it was important and gave me a greater appreciation for what is available here. AEDC is clearly a national asset – one that is being used and will be even more important to us

going forward."

Prior to his AEDC visit, Dr. Segal toured the Hypervelocity Wind Tunnel 9 facility in White Oak, Md., during initial tests for the NASA Crew Exploration Vehicle (CEV).

From 2001-2005, he served as the Director of Defense Research and Engineering, which is the chief technology officer

See **SEGA**, page 4

Fellow from page 1

Dr. Stan Powell

Dr. Powell, an ATA engineering specialist, will be recognized for his outstanding contributions in leadership, sustained technical excellence and innovative application of thermophysics and computational simulation to ground testing and weapons systems acquisition at

AEDC.

The Fellows program was established in 1989 and recognizes AEDC individuals who have made exceptionally distinguished and substantial contributions to the nation's aerospace ground testing capability at the center.

Candidates considered



Dr. Segal

for selection as either an AEDC Fellow or as an AEDC Lifetime Achievement Fellow are current or retired military, civilian and operating contractor and subcontractor personnel assigned or previously assigned to AEDC.

The invitation-only banquet will be held at the Arnold Lakeside Center.

ATA receives ISO re-certification

By Shawn Jacobs
ATA Public Affairs

ATA's management system has been re-certified by the International Organization for Standardization (ISO) for another three-year period. The ISO 9001:2008 re-certification audit was conducted May 4-7 by auditors of the external registrar Det Norske Veritas (DNV).

The two person audit revealed no nonconformances to the ISO quality standard for ATA's management system requirements. Additionally, this was the sixth consecutive audit – an entire certification period – in which no nonconformances were found.

Maintaining ISO 9001 certification is a contract requirement specified by the government. The audit was conducted (1) to assess maintenance of and compliance with the ATA management system (policies, procedures, etc.) established to meet the ISO requirements, and (2) to search for consistent evidence that the system is continually improving and meeting customer requirements.

The auditors cited employees' professional attitude, integrity and readiness to participate as a positive indication directly related to the outcome of the audit.

J.T. Northcutt, ATA quality manager, said each employee contributed significantly to this accomplishment. "I want to express my sincere thanks for our employees' commitment to our process-based management system, their professionalism and teamwork," Northcutt continued.

ISO is the world's largest developer and publisher of international standards. Based in Geneva, Switzerland, ISO is a network of the national standards institutes of 161 countries.

According to the ISO Web site, ISO 9001:2008 specifies requirements for a quality management system where an organization:

- Needs to demonstrate its ability to consistently provide product that meets customer and applicable statutory and regulatory requirements and,
- Aims to enhance customer satisfaction through the effective application of the system, including processes for continual improvement of the system and the assurance of conformity to customer and applicable statutory and regulatory requirements.

Choking from page 1

According to Law, Wade placed a 911 call to Moffett Field Emergency Services but noticed that Fuller was getting tired. Wade then handed the phone to fellow mechanic Oscar Josen and told him to request emergency services to respond to their location. Wade then applied three more abdominal thrusts and noticed that Griffin was showing signs of being able to talk and take small breaths. Wade instructed Griffin to relax so he could breathe easier and to sit down and wait for emergency services.

"Police arrived first and performed an initial assessment and updated emergency services on the situation," Law said. "Paramedics arrived moments later and checked all his vital signs." The Ames Health Unit doctor and nurse arrived later to complete a thorough assessment of Griffin. They cleared him to return to work without any restrictions. The doctor said the quick action by Fuller and Wade clearly prevented a more serious outcome.

Procedures and training put into place at NFAC expedited the arrival of emergency services, according to Law.

At a follow-up later in the day, Griffin, who's been employed at NFAC for 16 months, said his lower rib area was sore and bruised, but otherwise he felt fine.

"Todd and Tom should be given capes for being superheroes," Griffin said.

The mechanics' response – without hesitation and staying calm throughout the ordeal – is an indication of their training, professionalism and caring for their fellow employee's safety, according to Law.

"Following the training on emergency response procedures expedited the arrival of emergency services," Law said. "During the interview process, I noticed a high sense of pride and accomplishment by the three mechanics that they

had done a good job with positive results.

"This is typical for the entire NFAC staff; they are always looking out for their fellow employees and will intervene if they notice something is not safe or [is] out of the ordinary."

All four mechanics are Jacobs Technology, Inc. employees, involved with facility maintenance and wind tunnel operations. They work under the Aerospace Testing and Facilities Operation/Maintenance (ATOM) contract at NASA Ames Research Center at NFAC, the world's largest wind tunnel.

Fuller has two years of service at NFAC and Wade is a four-year veteran of the facility. Josen, who completed the call to emergency services, has also been at NFAC for four years.

Mechanics completed their first aid/cardiopulmonary resuscitation (CPR) training Sept. 30, a requirement for their job duties that include confined space entry and safety observers during circuit breaker racking, according to Law.

Fuller said he was always interested in being trained in first aid, but his previous job at a motorcycle shop did not require it.

"I feel good that I received the training and was able to perform the maneuver correctly and make a difference," Fuller said.

Wade had been trained in first aid/CPR with his previous company. He said Fuller performed the maneuver correctly and his actions most likely released the obstruction so Griffin could swallow it.

Wade had performed the same maneuver on his wife two years ago while she was choking on a chicken bone, with the same life-saving results.

Josen's initial first aid/CPR training dates back 15 years from his time in the military. He said his only experience in using his training was from drills.

JSF vertical lift fan expert speaks at AIAA meeting

By Philip Lorenz III
Technical Writer

On May 12, the Tennessee section of the American Institute of Aeronautics and Astronautics' guest speaker for the organization's Distinguished Lecture program provided those attending the meeting at AEDC with a unique opportunity.

"I invited Dr. [Paul] Bevilaqua to come and speak because I thought the propulsion system—his contribution to the F-35 JSF—tied in very well with AEDC and that his work would be of special interest to our Tennessee section of AIAA," said meeting organizer Dr. Joe Wehrmeyer, AIAA section council member and ATA instrumentation and diagnostics engineer.

Dr. Bevilaqua is the Lockheed Martin Advanced Development Program 'Skunk Works' program manager and engineer who was instrumental in conceiving and leading the development of the concept for the vertical lift fan for the Joint Strike Fighter F-35B. This is the short-takeoff/vertical-land (STOVL) version that the U.S. Marine Corps and the United Kingdom Royal Air Force and Royal Navy would use.

Before addressing the AIAA Tennessee Chapter members, Dr. Bevilaqua took time to provide some insight into what led to the work he has become well known for among aeronautical engineers and those associated with the JSF program.

HM: From what I understand, you've been to AEDC before in the early 1970s—when and in what capacity did that occur?

Paul Bevilaqua: I tested here during the 1970s while I was an Air Force officer assigned to Wright-Patterson AFB (WPAFB) and again in the 1980s when I worked at Rockwell International. I have also taken some courses at the University of Tennessee Space Institute and lectured at the UTSI Propulsion Short course. In the 1990s I organized the AIAA V/STOL Short Course which was offered through UTSI. It's quite an honor to be back here as an invited speaker.

HM: How did you come to be so involved with AEDC?

Paul Bevilaqua: When I graduated from college and was commissioned a second lieutenant, I was asked to indicate where I wanted to be assigned. I said that I would like to be assigned to Edwards AFB or Eglin AFB. So they split the difference and sent me to Wright-Patterson AFB. That actually turned out to be a lucky move for me because I was assigned to work with Hans von Ohain, who was the German scientist who invented the German jet engine.

He came to America after World War II as one of the Paperclip scientists. When I first met him in July 1971, he was the Chief Scientist of the Aerospace Research Laboratories at WPAFB. I was assigned to the Energy Conversion Laboratory within ARL, which had been established to work on Hans' own ideas. I had the opportunity to work very closely with him.

It was a great experience. Hans showed me how to turn a problem into an idea and how to plan an engineering research program to develop that idea. When you come out of school, you have really just learned how the chess pieces move, so to speak, but you don't really know how to play chess. Hans taught me how to play chess.

HM: What tests were you working on at AEDC when you were with Wright-Patterson AFB in the early 1970s?

Paul Bevilaqua: I came down to test one of Hans' ideas. It was during the Vietnam War. The Air Force was having trouble recovering downed pilots, because the helicopters flew too slowly and the pilots were often captured before they could be rescued. Hans had an idea for an airplane that used thrust augmenting ejectors to hover with a low downwash velocity. They would be able to dash in quickly and rescue the pilot before the Viet Cong could reach them.

The ejector testing was successful, and the concept was picked up by the Navy to develop a vertical take-

off and landing interceptor called the XFV-12A. It was intended for Admiral Elmo Zumwalt's concept for a sea control ship which would serve picket duty in front of the carrier battle group. Rockwell International got the development contract, so when the Vietnam War ended and my tour of duty at the labs was over I joined Rockwell to work on the XFV-12A. In the end, the Navy recognized that cruise missiles were the real threat and cancelled the picket ship program.

HM: Does the ejector concept have any other applications?

Paul Bevilaqua: It could be useful in developing a V/STOL transport airplane to perform the mission of some transport helicopters in Afghanistan. Helicopters are still very slow and vulnerable to ground threats.

HM: What was it like being at AEDC back in the 1970s and being here today?

Paul Bevilaqua: What I like about AEDC was the enthusiastic support you got from the people here. At some places I've tested, the first thing I was told when I arrived was that I shouldn't expect them to stay late or come in on the weekend for a couple of pizzas, just because the test was important to me. AEDC people become part of our team and provide what feels like a turnkey operation. We just come in and explain what we want to accomplish and they plan the test and run it for us. They understand our needs and are ready to go.

HM: Why did you go into aerospace engineering?

Paul Bevilaqua: Actually, I wanted to be a rocket scientist. But by the time I graduated from college, the Apollo program was over and I was actually pretty lucky to have a job waiting for me in the Air Force, especially a job working with Hans von Ohain. I really enjoy the problem solving and being on the cutting edge of new science and technology.

HM: What was your greatest challenge in developing the lift fan for the JSF program?

Paul Bevilaqua: As an aerodynamicist working for an airframer, maybe



Dr. Paul Bevilaqua is the Lockheed Martin Advanced Development Program 'Skunk Works' program manager and engineer who was instrumental in conceiving and leading the development of the concept for the vertical lift fan for the JSF F-35B. He was the guest speaker at a recent AIAA meeting. (Photo by Rick Goodfriend)

it was winning over the engine companies. NASA had a program going on to develop technologies for a supersonic V/STOL successor to the Harrier, and the engine companies had their own engine concepts. But I had help. Paul Shumpert, the lead V/STOL propulsion engineer in the Skunk Works, used the engine company's own engine decks to show them how much power could be extracted from their then new advanced tactical fighter engines. They knew him and he was well respected, so each engine company formed a team to support us. Their endorsements were critical in obtaining government support. Our concept was initially viewed as the riskiest approach, but the demonstrations performed by Pratt & Whitney and Rolls-Royce made us the low risk alternative by the end of the competition.

HM: What is your goal with this presentation today on the invention of the Joint Strike Fighter?

Paul Bevilaqua: Well, I would like to show the

people here the importance of the work they are doing and get them excited about the chance to be a part of something really new.

HM: Is your talk entirely technical, or will you tell us some stories about the people who were involved. Is there one you won't have time to tell?

Paul Bevilaqua: Some of the most surprising members of our team were the Russian engineers from Yakalov. We went to Russia in 1995 to invite them to join our team because McDonnell Douglas had been advertising that they had all the V/STOL experience in the world. However, the Russians had also flown several V/STOL airplanes. The Yak-36 was actually similar to the Boeing concept and the Yak-141 was similar to our concept, in some respects.

Before we went, I talked to some of my college friends who had already been to Russia to discuss their experience developing nuclear fusion for power plants. I wanted to know what to expect when doing business in Russia. I was told they

were great gift givers and that I should be sure to bring some gifts. They would love anything American. They also told me to be sure and tell them to open the gifts, because it was considered impolite to accept a gift and then immediately open it. So I went to the mall and got some coffee table books with pictures of America from the air, some Texas Instruments calculators, and so on. I wrapped them up in some left over wrapping paper from the closet and packed them in my suitcase.

To celebrate the signing of our contract, we invited them to a banquet at our hotel. After dinner and much toasting, they presented us with some gifts and I handed out the gifts that I had brought. I told them to open the gifts, but noticed that one of the Russians hadn't opened his present and had tears in his eyes. So I asked the MiG pilot that we had hired as a translator why he was upset. I thought I may have mispronounced something in my tourist Russian

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X-51A from page 1

conducted for stability and control at hypersonic velocities. We ran pretty much the full gamut of aerodynamic attitudes required by the customer on this test which included both angle-of-attack and angle-of-sideslip testing."

"They were looking at key points in the mission profile and points above; they were trying to map the envelope of what could be expected on this vehicle as it flew at Mach 6. We were really focused on providing high quality data for the customer to conduct vehicle performance evaluations and compare with some of their computations."

Mickle recalls that his

team had their share of hurdles to overcome during the test.

"One of the challenges was we had a lot of model changes to accomplish on this test program, and that was critical in getting the model out of the flow, going in and changing the parts on the model and pushing it back up," he said. "That worked out really well. If you've got more than 50 model changes and miss the time in aggregate, then your test program can balloon out on you."

Looking back on the experience, Mickle added, "The customer was really pleased with the way the test came out in terms of

meeting his schedule date and the quality of the data that we provided them with."

The X-51 is being developed by the Air Force, Defense Advanced Research Projects Agency (DARPA), Pratt & Whitney Rocketdyne and Boeing.

Engineers expect a great deal will be learned about hypersonic flight during the nearly 300 seconds under scramjet power.

The longest-ever previous scramjet test lasted only about 10 seconds, said Charlie Brink, X-51A program manager with the Air Force Research Laboratory at Wright-Patterson AFB.

Sega from page 3

for the Department of Defense.

He retired from the Air Force Reserves in 2005 as a major general in the position of reserve assistant to the chairman of the Joint Chiefs of Staff after 31 years in the Air Force, having served in various assignments at Air Force Space Command and as a

pilot.

A former astronaut, he flew aboard space shuttles *Discovery* (1994) and *Atlantis* (1996).

Since 1992, Dr. Sega has also been a faculty member of the College of Engineering and Applied Science at Colorado State University at Colorado Springs, serving as dean

from 1996-2001.

Dr. Sega has a bachelor's degree in math and physics from the U.S. Air Force Academy in Colorado Springs and a master's degree in physics from Ohio State University.

He also has a doctorate in electrical engineering from the University of Colorado.

India's Dr. G. K. Suryanarayana pays first visit to AEDC

By Philip Lorenz III
Technical Writer

A senior scientist of India's National Aerospace Laboratories (NAL) paid his first visit to AEDC last month to exchange information with his hosts and discuss potential future collaboration between the two organizations.

Dr. G. K. Suryanarayana has been with NAL in Bangalore, India, since 1983.

The organization he represents is the aerodynamic testing agency for all the major aerospace programs in India. Customers such as India's Space Research Organization and the Ministry of Defense bring testing to NAL, which is the aerospace component of India's Council of Scientific and Industrial Research.

HM: Why does your organization play such a central role in supporting India's aerospace programs?

Dr. Suryanarayana: The major aerospace programs in India require aerodynamic testing, and we have the biggest transonic [and] supersonic wind tunnel in India. So, naturally, they come to us and we have the required expertise to make the necessary measurements using the correct test techniques and processes for our users.

HM: Were you already familiar with AEDC?

Dr. Suryanarayana: Some of our models have been tested in AEDC, maybe in the late 1970s or 1980s. One of the models [that] has been tested at AEDC was a model of a combat aircraft.

HM: Earlier you mentioned a former boss and a senior colleague whom you described as a long-time mentor who after a 40-plus year career at NAL, is now a consultant there. What did he tell you about AEDC?

Dr. Suryanarayana: If you want to see a wind

tunnel complex, go to AEDC.

That was my colleague, Sundara Murthy, [who] was perhaps here a long [time] ago.

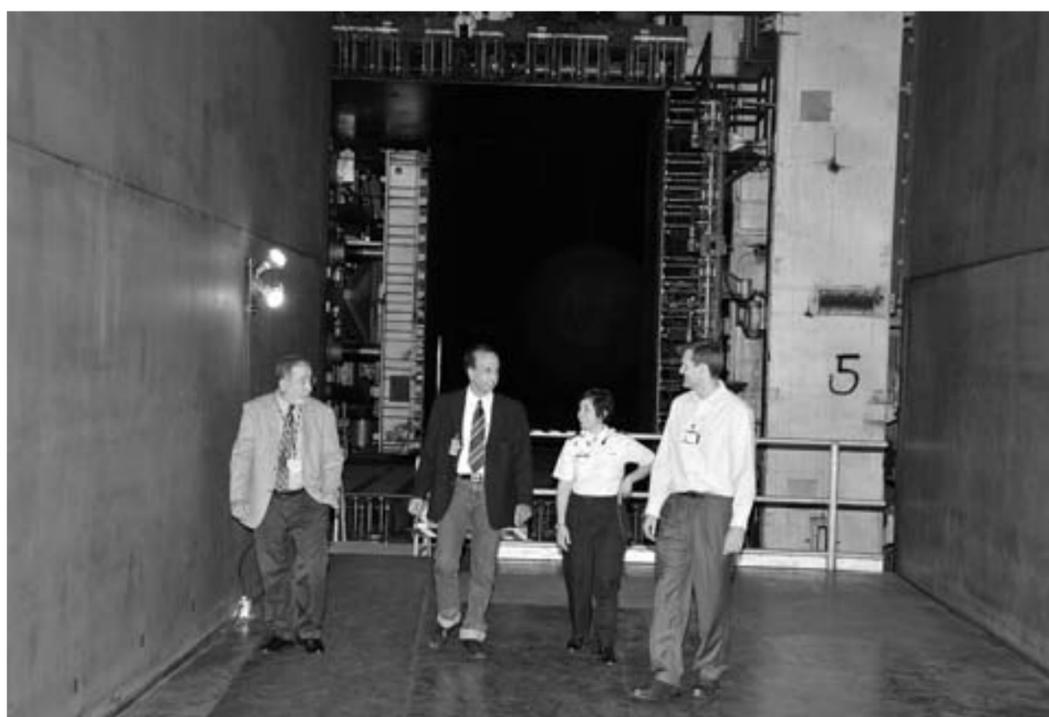
He might have come here [to AEDC] perhaps 25 years ago, probably in connection with Supersonic Tunnel Association International meetings that might have been held in AEDC at that point in time. But we all know AEDC and what kind of testing [is done here].

HM: What specifically did you and your colleagues already know about AEDC?

Dr. Suryanarayana: After AEDC became fully operational in the mid-1950s and afterwards, a lot of tests were done at AEDC to calibrate wind tunnels, to determine what the guiding parameters were related to wind tunnel tests. It could be the model blockage, the quality of the test section in the flow, [or it] could be calibration of a standard model – all this data was made public. And reports were coming out from AEDC very frequently, three or four in a year. Test techniques, methods of measurement and data standardization, estimation of errors in measurement, all of these things have been validated at AEDC long ago. They've come to some kind of standardization and level of clarity. So, all over the world, there is some kind of tie back [to lessons learned on ground testing] that have been influenced by AEDC.

HM: You said it is not up to you to initiate a collaborative effort between AEDC and the NAL. What is your role?

Dr. Suryanarayana: I recently came to know that some proposals have been made at the embassy level and I'm very happy about it, but the fact is we don't know what [will or might come of those]; it hasn't come down to us yet. I'll bring it to the attention



With the test section of AEDC's 16-foot supersonic wind tunnel in the background, (from left) Tom Best, technical director of the plans and programs directorate; Dr. G. K. Suryanarayana, a senior scientist with India's National Aerospace Laboratories; Lt. Col. Vanessa Bond and Dr. Richard Roberts, 716th Test Squadron commander and test project manager respectively; walk into the variable nozzle of the facility during Dr. Suryanarayana's recent visit to the base to become more familiar with the complex and its capabilities. (Photo by Rick Goodfriend)

of my director. I will also speak to him and I think it's a good step forward; we should follow it up.

HM: What is your vision for a collaborative relationship between AEDC and NAL?

Dr. Suryanarayana: Well, the kinds of facilities you have are very unique in the world and certainly cooperation with AEDC is going to help us, there's no doubt about that. I'm looking at some kind of win-win situation. We must do certain things that [both] AEDC and we get some benefit [from]. We talk about technical aspects, particular test techniques or some development that we can do together and I think that's the way to go because together we are stronger.

We haven't formerly come to that level yet, but once we identify those areas that we can propose a project, we might [do so].

HM: What will you do with what you've learned about AEDC during this visit?

Dr. Suryanarayana:

[After] meeting with the experts from various facilities at AEDC, the intention is to tell my people and plan a collaborative program with AEDC for mutual benefit. My duty is to tell them what I have learned and how we can do better.

HM: Besides sharing what you've learned during this visit and making suggestions on those areas of research and development where NAL and AEDC might work together, what else would you do?

Dr. Suryanarayana: The next step is to put forward my understanding [of AEDC and its capabilities] to certain agencies, entities or groups and tell them that this is what they can do and let's do it. Let's take it forward in this fashion.

HM: What challenges do organizations like AEDC and NAL share in common?

Dr. Suryanarayana: Many of our experts have retired and we are bringing them back as consultants,

but the difficulty we have in common with you is [with] the younger generation. We find it hard to encourage them [readily] to come and take up aerospace [as a] vocation.

NAL was established by the Council of Scientific and Industrial Research, a highly technology-oriented institution concentrating on advanced topics in the aerospace and related disciplines, NAL employs a staff of approximately 1,300 with

about 350 full-fledged Research and Development professionals. NAL is equipped with facilities such as the Nilakantan Wind Tunnel Centre, a full-scale fatigue test facility, Computational Fluid Dynamics Division, Propulsion Division, Advanced Composites Division, Structural Technology Division, Center for Civil Aircraft Design and Development, etc. NAL also has an active group working on failure investigation.

Eight receive Automation Professional certification

By Shawn Jacobs
ATA Public Affairs

Eight ATA IT21 (Information Technology and Systems) design engineers passed the International Society of Automation (ISA) Certified Automation Professional (CAP) exam April 6.

The CAP program requires each applicant to have a four-year technical degree, five years of field automation experience, complete a seven-module study course and pass a comprehensive four-hour exam. ISA is a large and respected organization in the field of controls and data acquisition. The certification is part of the

ATA objective to raise technical excellence.

"We have key areas ... that we want our folks to be on the leading edge of technology, and it's part of our ongoing commitment to bring best industry practices to AEDC," IT Director Mark Rigney said. "This is a result of part of that initiative."

The ATA group — one manager, three group leads, one system architect and three senior design engineers — includes Mickey Gipson, Tom McCoy, Al Milhoan, Bill Shappley, Scott Sisk, Fred Wagnon, Larry Wilhite and Sabrina Williams.



ATA Design Engineers Mickey Gipson, Tom McCoy, Al Milhoan, Bill Shappley, Scott Sisk, Fred Wagnon, Larry Wilhite and Sabrina Williams recently passed the International Society of Automation (ISA) Certified Automation Professional (CAP) exam. Also pictured are Mark Rigney, center, director, Information Technology and Systems; and Debbie Bayer, deputy director, far right.

See CAP, page 9

Hurts so good? Not in this case...

By Col. Michael Panarisi
AEDC Commander

So you've busted through a couple plateaus, wore out three pairs of running shoes, and had to change the batteries in your fancy new heart rate monitor.

By now you are wondering "What's next?"

Well, plenty. If you've been following along, and your aerobic engine is running better than ever; maybe it's time to add a few horsepower. In this edition, let's look at strength training, and how different techniques offer different outcomes.

As I mentioned earlier this year, before you consider a specific training regimen, you have to identify what you are trying to change in your performance or physique. In so many aspects of our lives, we set "goals" or "objectives," but in fitness training, often we just say "improve my fitness" or something relatively unfocused.

We can't fall into that trap ... if we aim at nothing, we'll hit it every time.

If you want to build muscle mass to "look better at the beach" you'll need a completely different regimen than if you want to win the upcoming Mach 10 Triathlon. For the USAF fitness test, you need a balance between strength and endurance, but unfortunately, there just isn't a great way to build both simultaneously.

So if "strength" is your weakness, a relatively

new technique might be the change you need.

To understand why we need different regimens, let's review the physiological changes we can induce with exercise.

We can improve the signals going to the muscles, firing more fibers and getting more of them to "pull" at the same time. We can increase the size of the fibers. Or we can increase the blood flow, resulting in better oxygen delivery and waste removal.

While any challenge to the muscle will affect all three, we need specific routines to maximize results in one particular area. Unfortunately, the vast majority of the techniques we see are derived from "body building" where size is the goal.

For strength training, getting all the fibers involved is the key. Sophisticates call this "recruitment."

We have two basic types of muscle fibers ... "slow twitch" and "fast twitch" and they work very differently. For optimum strength, we need to get both sets working together. For most of us, the "fast twitch" dominates, and the typical "three sets of 10 reps" training routines amplify this. If we want to get the slow twitch fibers in the game, we have to give them time. We're looking to maximize "time under tension," not time in the gym.

For this result, we need a very different routine. As many of us learned from Ken Mierke, the "long, slow and hard" method

works very well. Instead of multiple reps, where the fast twitch fibers engage, rest and recover, this technique exhausts the fast twitch fibers in the first few seconds, and then puts the slow twitch fibers front and center.

In this technique, we replace "reps" with a single, slow, constant application of force.

But it's not a classic "isometric" technique where you press against an immovable resistance load (like a wall!); instead, we keep the muscle in motion, but very slowly. I think of it as "just above friction" level, and we keep going for just under a minute.

For a classic bench press application, you will still "press" the weight up and

down, but in a minute, you might only get through three or four cycles. The load you will need to challenge the fibers will be MUCH higher than you can handle for "three sets of 10," so a spotter is an absolute must.

It will take some experimentation to find the right load. If you can keep the weight moving for more than a minute, you'll need to add some.

Under 40 seconds? A little too heavy.

You'll notice one difference right away ... your "perceived exertion" will be very high, but hang in there, in a minute you'll be done. That's right. One cycle is all you need. Then you move to the next exercise.

The real benefit of this technique is the "aches" so many of us suffer the next day become a distant memory.

Those aches are NOT an indicator of a "good workout," but rather an accumulation of tissue damage sometimes called "micro-tears." The rapid force applications and reversals associated with repetitive routines are the culprit.

In a "three sets of 10" technique, there's a tendency to move the weights quickly, and it's the acceleration/deceleration at each end that overloads the muscle fibers. Ken described it this way ... a 25-pound weight placed slowly on your foot will feel very different compared to a 3-pound weight dropped from 12 inches above your foot. We're going for the 25 pounder in this technique. This very different (and admittedly counter-intuitive!) technique will stress your patience, but hang in there!

Want proof?

Before you try it, do the "one minute push up" test. Ask Ron (our crack fitness center manager and resident exercise physiologist) to take you through the technique. Give this regimen six weeks at three times a week, and test again. The results will speak for themselves. Plus, all that time you'll save you can apply towards shopping for a newer and fancier heart rate monitor!

And you'll really appreciate how much you won't hurt in the process.

In this case, not hurting is good!



For the USAF fitness test, you need a balance between strength and endurance, but unfortunately, there just isn't a great way to build both simultaneously. (Photo provided)

AEDC's new baler reduces cost, time and improves recycling capability



By Philip Lorenz III
Technical Writer

AEDC's 704th Mission Support Group's Base Services recently acquired a new major asset – a state-of-the-art baler that will process approximately 2,000 pounds of recyclable materials, including paper, cardboard, plastic bottles and aluminum cans, every 20 minutes.

According to Robbie Evans, the base services lead at Arnold's recycling center, the previous baler was manually operated and outdated.

"The baler we had was 12 years old and was inadequate for today's times," he said. "It did [baled] about 1,500 pounds every 45 minutes.

"This new one will dramatically increase our productivity," he continued. "It [also] has a misting system which is going to be able to cut down on the dust and particles in the building."

The new baler, an SST series made by International Baler, has Computer Numerical Controls, which includes a touch-screen monitor that allows the operator to program the machine to vary the bale size. A shredding feature has also been added that will increase the capabilities of the recycling shop.

"[Additionally] it's got a shutoff [sensor] in case one of the bales is not removed in time," Evans said. "It's got an auto feed table, low oil, high temp and jam sensors."

According to Rick Ferreebbee the baler is a force multiplier for AEDC's Resource Recovery and Recycling Program (RRRP).

The program involves picking up recyclables from 225-plus buildings on AEDC's approximately 40,000 acres, including the Tennessee National Guard firing range, Gossick Leadership Center, Crockett's Cove, FamCamp and base housing.

Evans, the lead for the team tasked with the hands-on aspect of the RRRP, said safety is always the first consideration during all aspects of their work.

On an average day, Evans said he and his crew collect 31 pounds of plastic (type 1 and 2), 1,800 pounds of cardboard and 500 pounds of office (mixed) paper from 62 large containers distributed around the buildings on base.

The current recycling program, the part managed by



Top, Vick Hobarter, top right, with International Baler, watches as Jay Thurmond, right, and Wyatt James, left, with Recycling Equipment Inc., (REI, Inc.), help to install the conveyor for a newly acquired SST series baler made by International Baler at AEDC's recycling center. Above, Robbie Evans, 704th Mission Support Group's Base Services' lead for AEDC's recycling center, points to the touch-screen monitor on the Resource Recovery and Recycling Program's recently acquired baler. (Photos by Rick Goodfriend)

Services, collects and recycles 62 tons of paper, 202 tons of cardboard, 400 pounds of aluminum cans, 162 LaserJet cartridges, 2,170 toner cartridges and four tons of plastic annually, according to Jan Dent, 704th Mission Support Group's acting deputy director of services.

She added that the responsibility for recycling still begins with anyone who puts trash into a container anywhere on base, especially where recycling bins are located. There are designated receptacles for every type of recyclable.

Evans said 200 paper bins and 128 cardboard bins are distributed and readily available in the base's 225-plus buildings. He is aware that some flexibility is necessary since the needs of the occupants can change, depending on the shift they work and the amount of recyclables generated.

Bin drop off and pick up can be arranged at any time by calling the recycling staff at 454-6068.

AEDC to be in program on Discovery Channel Sunday

By Darbie Sizemore
High Mach Editor

In December, a crew filming for the Discovery Channel's *How Stuff Works*, was at AEDC to discuss ethanol.

The program, *How Whiskey Made America*, airs Sunday at 8 p.m. on the Discovery Channel.

While here, the crew toured and filmed the fuel farm and some alcohol-based experiments demonstrated by ATA chemist Bill Lock.

One of the things Lock showed the crew was the volatility of alcohol by showing its usefulness as a propellant. "I evaporated it in a large flask," Lock said. "Then I put in an ignition source and, as the vapors whoosh out of the bottle, it demonstrated why the Nazis in World War II were using alcohol in their V2 rockets."

Although Lock was using lab grade alcohol, the Germans were using drinking alcohol made out of potatoes as their fuel.

Locks' second demonstration showed how British sailors would ensure they were being paid a fair wage. The sailors were on many occasions paid their wages in rum and they often conducted a simple test to ensure they were not being given rum diluted with too much water. "The sailors would mix equal parts rum and gunpowder and light it on fire," Lock said. "If the alcohol content was sufficient, then when it burned off, it would ignite the gun powder. If their rum was too watered down, the alcohol would burn off but not ignite the gunpowder."

The program description says that whiskey is the drink that is guaranteed to make you think. "That's because there's a lot more to white lightning than just grain and water. You may not know that whiskey paved our roads, gave us television and even put a man on the moon. From saving the whales to inspiring the soda industry, discover how whiskey changed the world."

Education fair set for July 15; all AEDC employees invited

The Education and Training Office is hosting an education fair from 10 a.m.-2 p.m. July 15 at the Arnold Lakeside Center.

The fair is open to all AEDC personnel, including DoD and ATA employees.

Several local colleges and universities in Tennessee and Alabama, as well as others throughout the United States, have been invited to provide employees and their family members an opportunity to career plan and possibly enroll for a new school year.

The following schools have confirmed attendance, but many others are still pending: American Sentinel University; Columbia Southern University; Electronic Computer Program Institute; Embry-Riddle Aeronautical University; Grantham University; Motlow State Community College; Southern New Hampshire University; St. Leo University; Tennessee State University; Tennessee Technological University; Tennessee Technology Center at Shelbyville; Thomas Edison State College; Trevecca Nazarene University; Troops to Teachers; TUI University (Touro); University of Alabama, Huntsville; University of Phoenix; University of Tennessee Space Institute; and Walden University.

In addition to learning about degree programs from schools in the local area, employees and their family members will have an opportunity to see what college courses and programs are being offered, plus personally talk with school representatives.

For more information regarding the education fair, contact the Education and Training Office at 454-4313.

Helping Nashville flood victims recover



Kathy Swanson removes debris from one residence in Nashville.



Air Force Contracting personnel recently helped two Nashville homeowners clean up after the May 3 flood. Seth King, John Sutton and Bill Lamb, above, tore out sheetrock, insulation and bathroom and kitchen fixtures, at one residence. At a second location, the team gutted a garage that had been transformed into a recording studio. (Photos provided)

CAP from page 5

"It does indeed play a role in what we do all the time," Wilhite, section manager for IT21's data acquisition and controls group, said. "This group mentors the people in our design organization. We can use what we learned to teach others through this program, and hopefully all of our team will benefit."

Wilhite said automation control is a big part of the mission at AEDC.

"Automation involves collecting information from sensors – temperatures, pressures – processing the information, and manipulating devices – valves and motors – to automate a process, sort of

like the cruise control on your car," he said. "In our case, the process is setting the conditions for our test articles. We automatically manipulate several valves to set pressures and temperatures in front and behind our test articles."

According to Rigney, the certification brings an additional level of qualification and expertise that, when coupled with ATA's existing design and implementation processes, helps assure that any control systems that are installed or updated at AEDC meet or exceed industry standards.

"All of the automated processes that are involved in setting or controlling

the conditions in the test cell environment for tests conducted here at AEDC are implemented by IT controls," Rigney said. "Most of those are PLC (programmable logic controller) -based systems, the type of instrumentation and equipment used in industrial automation."

After studying since November, all eight passed the exam on the first try at a Nashville testing center. According to ISA, the average pass rate is two out of three.

"We all got to work together because we studied for two or three months and met every other week for an hour to

take these on-line quizzes, so it's been a good team-building experience as well," Wilhite said. "It's not easy at all; it's on the same level as the Professional Engineering exam."

Of the 16 CAPs in Tennessee, 10 are now at AEDC. Bob Lindeman and Dennis Rose previously obtained certification, and Lindeman actually helped to establish the CAP program, according to Wilhite.

"I just want to say 'thanks and congratulations' to this team for accomplishing a really difficult task that continues to bring excellence to AEDC," Rigney said.

Bevilaqua from page 8

that had upset him.

He said "Well, you wrapped it with a 'Flags of the World' gift wrap, and he saw the new Russian flag on it, just like any other country. He wants to take the paper home and frame it and put it on his wall."

Dr. Bevilaqua has spent much of his career developing V/STOL aircraft. He joined Lockheed Martin as Chief Aeronautical Scientist of the Lockheed Advanced Aeronautics Company, and became Chief Engineer of Advanced Development Projects in the Lockheed Martin Skunk Works.

During this time, he played a leading role in creating the Joint Strike Fighter Program. He was instrumental in conceiving and leading the development of the concept for the vertical lift fan for the Joint Strike Fighter F-35B. This made it possible to build a stealthy, supersonic V/STOL aircraft, and led the engineering team that demonstrated the feasibility

of building variants of this aircraft for the Air Force, Marines and Royal Navy.

Prior to joining Lockheed Martin, Dr. Bevilaqua was manager of Advanced Programs at Rockwell International's Navy aircraft plant.

He began his career as a captain in the U.S. Air Force and Deputy Director of the Energy Conversion Laboratory at Wright Patterson AFB. He has a Bachelor of Science degree in Aerospace Engineering from the University of Notre Dame, Ind., and master's and doctorate degrees in aeronautics and astronautics from Purdue University, in West Lafayette, Ind.

He is a member of the National Academy of Engineering and a Fellow of the AIAA, and is the recipient of a U.S. Air Force Scientific Achievement Award, AIAA and SAE Aircraft Design Awards, AIAA and AHS V/STOL Awards, and Lockheed Martin AeroStar and Nova Awards.

June blood drive starts Monday

The American Red Cross blood drive takes place starting Monday.

Employees may donate at any location during work hours, subject to supervisory approval.

While all blood types are needed, there is greater need for Type O.

Type O is used in trauma cases where there is no time to cross-match blood types and it is the most common type of blood transfused

to newborns. Every two seconds someone in the United States needs blood components, but sadly only 5 percent of the population that is able to give actually donate.

Locally, patients need 800 pints a day. AEDC personnel can support fellow workers, neighbors and local communities by donating blood.

The hours and locations are listed above.

Donation Schedule

- Monday – ETF
- Tuesday – PWT
- Wednesday – A&E
- Thursday – VKF
- Friday – Main Cafeteria

Donation times are 10 a.m. - 3 p.m. each day except Monday. The donation time on Monday is 10:30 a.m. - 3:30 p.m.

Please note the time change is for Monday only.

If you have any further questions, please call Emily at the Dispensary, 454-4559 or 454-5385.

To be eligible to donate you must be healthy, at least 17 years old, weigh at least 110 pounds, and not have given whole blood in the past 56 days or a double red cell in the last 112 days.

There is no upper age limit.

You may not give blood if you have received any notification asking you not to donate.

Please bring ID or your donor card.

Milestones

40 YEARS

Milton Davis Jr., ATA
Clayton Seals, ATA

30 YEARS

Kenneth Acuff, ATA
Charles Anderson, ATA
Joe Dean, ATA
James Elliott Jr., ATA
Hugh Massengill Jr., ATA
Randy Nicholson, ATA
Jeffery Waldo, AF

25 YEARS

Joseph Carter, ATA
Alan Hale, ATA
Suzanne Oliver, ATA
Jeffrey Rogers, ATA
Jimmy Sheppard, ATA
James Simmons, ATA

20 YEARS

Stephen Arnold, ATA
Lance Baxter, AF

15 YEARS

Robert Petersen, ATA

10 YEARS

Christopher Davison, ATA
Brandi Harmon, ATA
Roger B. Newton, AF
Wayne Whittington, ATA

5 YEARS

Lawrence Christian, ATA



Davis



Seals

Kathy Duncan, ATA
Nicholas Fredrick, ATA
Christopher Gipson, ATA
James Hall, ATA
Anthony Harrison, ATA
John Krause, ATA
Robert Newall, ATA
Michael Shrum, ATA
Daryl VanCise, ATA

INBOUND MILITARY

SSgt Jennifer Stokes, AF

RETIREMENTS

Becky K. Lamb, ATA, 17 years

NEW HIRES

Dana Alexander, ATA
Stephen Cole, ATA

Ashley Colvin, ATA
Darrell Day, AF
Robert Nelson, AF

PROMOTIONS

Michael Blankowski, ATA
Darrell Booher, ATA
Larry Swan, ATA
John Thomison, ATA
Michael Tucker, ATA

GRADUATE/ DEGREES

Derek Meeks, ATA, Masters
Melissa Miller, ATA, Masters
Chad Overcast, ATA, Masters

Arnold Golf Course 454-7076

Range Rat Program kicked 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 and 6th place \$25 gift certificate; 5th and 4th place \$50 gift certificate; 3rd place \$75 gift certificate; 2nd place \$125 gift certificate and grand prize \$250 gift certificate.

Junior Golf Academy Session 1 starts June 7. The Junior Golf Academy helps juniors experience a game of a lifetime featuring instruction in all phases of the game of golf. The Academy also stresses the importance of honesty, integrity, etiquette, history and excitement that is the game of golf. Instruction includes full swing, short swing, putting and chipping, rules and etiquette. Each session is limited to a maximum of 10 students. Entry fee is \$149 per session if needing clubs or \$99 if using their own clubs. Session 1 will be June 7-11 from 8:30-10 a.m. each day. Session 2 is scheduled for July 12-16.

Member/Guest Two Person Scramble will be held June 26-27 with 8 a.m. shotgun start. Entry fee is \$125 per team and includes green fees, cart, food and prizes. Sign up in the Pro Shop by June 23.

Mulligan's Grill is open seven days a week from 7 a.m. - 2 p.m. Try the "Good Morning Breakfast" special Monday through 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 June 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.

Upcoming events:
Tullahoma City Medal Play Championship, July 24-25
Club Championship,

Aug. 21-22

Arnold Lakeside Center 454-3350

Services welcomes back **Books Are Fun** for a book fair from 9:30 a.m. – 3 p.m. June 8 in the A&E Building's Arnold Room, room A123. Discounted selections include paperbacks, best sellers, educational, reference, cookbooks, children's items, gift selections and more. Save up to 70 percent off retail prices.

Mid-year **Mini Texas Hold 'Em Member Tournament** will be held June 12, 19 and 26 beginning at 6:30 p.m. each night. Members First Plus members age 18 and older may play for free to determine the top three winners each night. First place winners will receive \$40 in Services Bucks and a Services chair with carry bag. Second place winners will receive \$20 in Services Bucks and a Services glass mug. Third place winners will receive \$10 in Services Bucks and a Services shot glass. No sign up required. Tables will be created by random draw of the players present at starting time. Players must be present at 6:30 p.m. to draw tables. No players accepted after 6:30 p.m.

Wednesday Lunch is available for dine in or carry out from 11 a.m. to 1 p.m. Call ahead to 454-5555 to place orders. No delivery available. For better service, you may call on any day and preorder. In addition to the Hap's Pizza menu, chef salad is available for \$4.50 which comes with ham, turkey, cheese and boiled eggs. Add grilled or fried chicken for \$2 more. Call to see what the Surprise Wednesday Special will be. The special could include items such as homemade chicken salad or lasagna.

Movie nights are every Thursday with a movie start time of 6 p.m. and dinner available from the Express or Pizza menus from 5-9 p.m. The schedule for June is: **June 10 – "The Bounty Hunter,"** rated PG-13 starring Jennifer Aniston and Gerard Butler. A bounty hunter learns that his next target is his ex-wife, a reporter working on a murder cover-up. Soon after their reunion, the always at odds duo find themselves on a run for their lives adventure. **June 17 – "How to Train Your Dragon,"** rated PG starring voices of Gerard Butler and Craig Ferguson. A hapless young Viking who aspires to hunt dragons becomes the unlikely friend of a young dragon himself, and learns there may be more to the creatures than he assumed. **June 24 – "Clash of the Titans,"** rated PG-13 starring Sam Worthington and Liam Neeson. The mortal son of the god Zeus embarks on a perilous journey to stop the underworld and its minions from spreading their evil to Earth as well as the heavens.

Friday night dining room specials available from 5-9 p.m. **June 4:** peel your own shrimp \$12.95 members, \$13.95 nonmembers. First Friday Jam night will be 6-10 p.m. **June 11:** pork schnitzel, potato cakes, peas & onions, \$13.95 for members, \$14.95 for nonmembers. **June 18:** shrimp scampi with fettucine Alfredo \$12.95 members,

\$13.95 nonmembers. **June 25:** prime rib for Two \$33 members, \$34 non members. 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: **June 5: Lawn Party:** grilling on the back patio, barbecue ribs and barbecue pork \$11.95 members, \$12.95 nonmembers. **June 12:** chicken fried steak \$9.95 members, \$10.95 nonmembers. **June 19:** baked snapper \$11.95 members, \$12.95 nonmembers. **June 26:** tuna steak or tilapia \$12.95 members, \$13.95 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.

Air Force Services is conducting the **Annual Club Membership Scholarship Program**. Current Members First Plus individuals and their family members who have been accepted by or enrolled in an accredited college or university for entry during the fall of 2010 term as a part time or full-time student are eligible to apply for scholarships. Grandchildren are eligible if they are a dependent of the club member. Student enrollment status may involve either undergraduate or graduate curricula. Applicant must provide a copy of their college or university acceptance letter. Twenty-five \$1,000 scholarships will be awarded. To enter, write and submit a 500 words or less essay on the following topic: "What does it mean to be a part of the Air Force Family". Essays exceeding 500 words (excluding title) will be disqualified. Essays must be typed in MS Word 12-point Arial or Times New Roman font, single-spaced, with double-spacing between paragraphs. One-inch top and bottom margin and 1.25 inch left and right margin submitted on CD. The application package must include CD containing essay with participant's name, date and word count, entry form (included in the brochure or online at aflubs.net) and current college/university acceptance letter or official transcripts. Essays not meeting the above parameters will be disqualified. Submit entries to 704th Services Marketing, 100 Kindel Drive Suite C303, Arnold AFB TN 37389-3321 by July 1. Final scholarship awards for school year 2010-11 will be announced by Sept. 17. All nominees will be advised of scholarship selection or non-selection. Only one essay per eligible person.

Family Member/Youth Programs (FamY) 454-3277

Camp Adventure continues through 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 through Friday at the Youth Center (building

704th Services Division hours of operation:

Arnold Lakeside Center – Special function luncheons available. Call 454-3350 for arrangements. Catering/Management offices Tuesday-Friday 10 a.m.-3 p.m.; Lunch: limited menu Wednesdays, 11 a.m. – 1 p.m., call 454-5555 to place orders; Dinner: Arnold Express Menu or Hap's Pizza only Thursday 5-9 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 p.m.

Family Member/Youth Programs – Tuesday through Friday 10 a.m. – 6 p.m., Saturday 12-5 p.m., First Friday Movie Night 5-8 p.m.; Camp Adventure runs 1 June through 6 August 7:30 a.m. – 4:30 p.m. Monday through Friday, During Camp Adventure Open Rec is open Monday through Friday 4:30 – 6 p.m. only.

Outdoor Rec – Main Office, Check In, Marina and Auto Shop Tuesday through Sunday 8 a.m. – 6 p.m., FamCamp Store Tuesday through 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 through Friday 7 a.m. – 4 p.m.

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

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

3055, previously known as Community Activities Center) 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. 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 call 454-3277.

The weekly themes are listed below:

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

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

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

Week 5: June 28-July 2
"Fin"tastic Ocean Jam-boree

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

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

Week 8: July 19-23
Super Sports Spectacular

Week 9: July 26-30
Amazon Jungle Rumble

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

Youth Movie Night will be June 4 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.

The annual **Youth Fishing Derby** has been expanded to include adults and is now labeled a **Fishing Classic**. Ages 4 and older are invited to participate. Each child under age 18 must be accompanied by an adult. The event will be held June 19 at the Rec Beach area with check in from 7:30-8 a.m. Fishing

will be conducted from 8 a.m. – 12 p.m. At that time scores will be tallied, lunch will be served, and awards will be presented. The event should conclude by 1 p.m. Entry fee is \$10 per person and \$20 per boat. Fishing from the shore is allowed. Sign up deadline is June 12. A late registration fee of \$15 will be added after that date. A cancellation fee of \$10 will be applied if cancelled after June 16. Participants should bring applicable fishing license, rods and reels and bait. Those fishing from boats must return to the boat dock in time to have their fish measured at noon. Each contestant will be allowed four entries to be measured for length. Trophies will be presented to first, second and third in each age group (4-8, 9-12, 13-17, 18 & up). A trophy for biggest fish caught will also be presented. Honesty and fair play are essential to the success and competition in any event and must be followed at all times. All decisions made by the tournament director shall be final. Call 454-5003 for more information and to register.

Join the Youth Center for **4-H Club meeting** June 24 from 5-6 p.m. 4-H Club is designed for youth in the 4th grade through 18 years of age.

Missoula Children's Theatre presents 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 preregistered.

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 four 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.

Rehearsals continue throughout the week culminating with a performance to 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** is now in full swing. Women's League games are Mondays and Wednesdays. Open League games are Tuesdays and Thursdays. Three games are played each night beginning at 5 p.m.

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 starts 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 host the **25th Annual Golden Baton Relay Race** on June 23 beginning at 8 a.m. The race is held in front of the A&E Building and each team runner must complete two laps around the A&E Circle before passing the baton to the next runner. Teams must consist of four runners with a combined total age of at least 120 and one timekeeper. Teams may select appropriate and tasteful ways to distinguish themselves and may bring their own baton or use batons provided by the Fitness Center. The first six teams to sign up will receive event T-shirts. Prizes will also be given for the most clever team name, best team costumes and overall team speed. Call 454-6440 to sign up or for more details.

Outdoor Rec (ODR) 454-6084

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

Outdoor Recreation is conducting a **basic skills fishing clinic** June 17 beginning at 2 p.m. 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 June 11 and a late registration fee of \$5 will be applied after that date. There must be a mini-

See **SERVICES**, page 13

Services from page 12

mum of 10 participants to hold the clinic. Maximum clinic size is 25.

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.

Fishing Classic is a Family Member/Youth and Outdoor Rec event set for June 19 at the Rec Beach from 7:30 a.m. – 1 p.m. for ages 4 and older.

Entry fee is \$10 per person and \$20 per boat.

Trophies will be presented to first, second and third in each age group (4-8, 9-12, 13-17, 18 & up) plus trophy for biggest fish.

See the complete article in Family Member/Youth Programs. Call 454-5003 for more information and to register.

Beach Volleyball Tournament is back June 26 at the GLC beach. Start off your summer with some fun outdoor volleyball. Competition gets underway at 10 a.m.

Lunch will include hot dogs, chips, sodas and water.

Teams of four consisting of ages 12 and older must enter by June 21.

Entry fee is \$30 per team. Late registration fee of \$10 will be applied after

June 21.

There must be eight teams signed up and limited to no more than 32.

The tournament will be single elimination.

Each team will play a two game match against another team as a warm up before beginning the tournament. The winning team will receive a trophy.

Swimming Lessons set for June 21-25. There will be two age groups for the swimming lessons.

Age 6 months to 4 years old will be the Parent-Tot group. The other will be age 4 and up. Classes are held Monday through Friday at the Gossick Leadership Center beach.

The first class will be 10-10:50 a.m. and the second class will be 11-11:50 a.m.

Cost is \$15 for Members First Plus members and \$17 for nonmembers. Deadline to sign up is June 18. There will be a \$5 late registration fee after that date.

Upcoming Events:
Cumberland Caverns Spelunking and Scenic Adventure, July 24, 8 a.m.-5:30 p.m., age 10 and up, \$41

Indoor Rock Climbing Adventure, Urban Rocks Gym in Chattanooga, Aug. 7, 8 a.m.-5 p.m., age 14 and up, \$38

Ocoee Rafting Trip, Aug. 14, 6:30 a.m.-6 p.m., age 12 and up, \$65

Ocoee Rafting Trip, Sept. 18, 6:30 a.m.-6 p.m., age 12 and up, \$65

Blue Man Group, Tennessee Performing Arts Center, Nov. 20, 5 p.m. – 12:30 a.m., age 10 and up, \$85

Wingo Inn
454-3277

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 e-mail to 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.

U.S., French remember America's first combat pilots

By Capt. Tony Wickman
U.S. Air Forces in Europe PA

Paris (AFNS) - U.S. and French civilian and military leaders paid their respects to America's first combat pilots during a ceremony at a memorial outside of Paris.

Gen. Roger Brady, the U.S. Air Forces in Europe commander, U.S. Ambassador to France Charles Rivkin, French Lt. Gen. Paul Fouillard, the Strategic Air Forces commander, several local elected officials and nearly 200 guests gathered at the Lafayette Escadrille Memorial's central Arc de Triomphe to pay tribute to the 68 American pilots who died in service to the Allies during World War I.

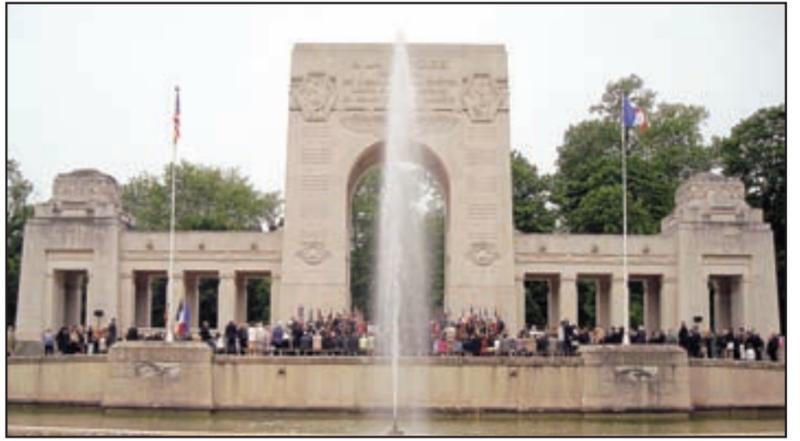
"This is sacred ground for the U.S. Air Force and French air force and this was an opportunity for us

to remember those who sacrificed for the cause of freedom," General Brady said. "This was also a chance for us to renew our relationship with the French air force, which is one of the stronger relationships we have and cherish. The history speaks for itself, but this is the beginning of military aviation, and certainly the beginning for the U.S. Air Force. It has been a pleasure to be here with our French Allies and renew that relationship."

The event opened with a four-ship flyover of Mirage 2000N jets from the 2/4 Lafayette Strike Squadron from Luxeuil Air Base, France; a two-ship flyover of F-16 Fighting Falcons from the 52nd Fighter Wing from Spangdahlem Air Base, Germany; and a flyover of a vintage N3N biplane flown by a retired French air force pilot.

The guest speakers, which included the mayor of Marnes-la-Coquette, General Brady, General Fouillard, Ambassador Rivkin and Patrick Strzoda, the prefect of Hauts-de-Seine, spoke of the Lafayette Escadrille's heroic deeds and paid homage to the American and French servicemembers currently supporting military operations around the world. Following the speeches, the dignitaries placed wreaths on the memorial and the USAF Honor Guard fired a three-volley salute. The French air force and the USAF bands provided musical support for the event.

After the ceremony, all attendees were afforded the opportunity to visit the underground crypt beneath the monument to see the 70 sarcophagi honoring the Lafayette Escadrille



A crowd gathers to see a ceremony at the Lafayette Escadrille Memorial outside of Paris honoring American and French pilots who died during World War I. (Photo by Capt. Tony Wickman)

airmen, as well as see 13 stained glass windows depicting various battles.

One of the special guests of honor was the great-nephew of one of the interned American servicemen, Maj. Raoul Lufbery, who said coming to the memorial fulfilled a

lifelong dream.

"It was something I wanted to do all of my life," said Raoul Lufbery III, bearing the name of his great-uncle, from International Falls, Minn. "This is something I'll be able to take back home and share with the rest

of the Lufbery family. This is an honor for the family and we are proud to be associated with the (Lafayette Escadrille)."

Entombed with the American pilots are two French officers who commanded the unit before the U.S. entered the war.