

ATA announces management changes at AEDC

By Kathy Gattis
Aerospace Testing Alliance

ATA General Manager, Dr. David Elrod, is leaving AEDC to become senior vice president of business development at Jacobs Technology in Tullahoma effective May 25.

The new ATA general manager will be Steve Pearson who has served as deputy general manager since June of 2009 and the new deputy general manager will be Philip Stich, who currently is director of the ATA Integrated Test and Evaluation Department.

"I want to express my sincere appreciation for David's dedication to the joint success at AEDC over the past 11 plus years as GM," Jacobs Technology President, Rogers Starr said. "We have been fortunate to have David lead and deliver on our commitments and the numerous improvements and changes in AEDC operations. At the same time, I know that Steve and Philip will continue to strive for the excellent performance the team has delivered for many years and help us face the challenges which lie ahead."

In a note to the ATA work force Elrod said, "My transition out of the GM role will conclude over 33 years of working



Elrod



Pearson



Stich

at AEDC. I have been deeply blessed by having the opportunity to work with you and the honor of getting to represent you over the past several years. For that I am grateful beyond words. There comes a time in the life of every organization when a change in leadership just makes sense. Such a time is upon us now."

Elrod also serves as a senior vice president for Jacobs Technology.

Elrod was appointed general manager when ATA became the major contractor at AEDC in 2003. Prior to that, in 2000, he was appointed to general manager of Sverdrup's AEDC Group and deputy

general manager in 1997.

Before joining Sverdrup in 1995, Elrod was manager of the Applied Technology Program for Micro Craft Technology at AEDC where he was responsible for the planning, advocacy and execution of the Aerodynamics Technology Program.

"I came here as a part-time graduate research assistant on assignment to AEDC from the University of Tennessee Space Institute. Over the years, I had opportunity to work with technology, test and investment jobs and enjoyed and learned from every single assignment," Elrod said.

Steve Pearson began his career in the

1970s as a turbine engine project engineer at the base. In 1985, he transferred to the Sverdrup Technology Group in Tullahoma and served in engineering, marketing and management positions for aerospace and automotive test facilities. His experience includes development of Sverdrup's automotive and aerospace business in North America, Australia and South Korea.

From 1988-1998, Pearson served as program manager for the master planning, design construction support and commissioning of Chrysler's Scientific Test Facilities in Michigan. From 1999 to 2002 he was program manager for the construction of the Department of Energy's National Ignition Facility (NIF) at Lawrence Livermore National Laboratory.

In 2003, Pearson returned to AEDC to become the first director of ATA Resource Provisioning and later became the director of ATA Projects and Design Engineering Department.

"His prior experience outside of AEDC, his broad roles as a site manager for Department of Energy and deputy general

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Storms knock out power at some facilities

By Shawn Jacobs
Aerospace Testing Alliance

Power was restored to most of Arnold AFB during the afternoon of May 1 after strong storms downed trees and power lines April 27.

Facilities returned to the electrical distribution grid included Arnold Lakeside Center, Family Housing, Wingo Inn and the Primary Pumping Station. At last report, efforts were still under way to restore electricity to the Gossick Leadership Center, Crockett Cove, FamCamp and all the lake area along Northshore Road, according to Paul Thornton, ATA supervisor of Power Control. He said the goal was to restore power to those areas no later than May 5.

"A lot of people had a big role in this effort but John Williams and Tom Payne, our two linemen – the only two we've got – were key to the return to service," Thornton said. "They organized the job and laid it out to maximize productivity and minimize the repair times. Their first priority was to ensure that they could do the work safely. Two other electricians, Jason Lusk and James Melton, were also out there helping our linemen with this effort."

Thornton said six or seven utility poles were down on Pumping Station Road, with 10-to-15 that had to be straightened up, cross arms fixed and wire replaced on them. He said a lot of people were involved in the effort including the Security Police who blocked the road and made it safe for the crews to work and people like Dave Simmons, deputy director of Facilities Operations and Maintenance (O&M), and



Tom Payne (in bucket), John Williams (operating the line truck) and James Melton (on the ground), all from Power Control, and James Mears (operating the bull dozer) from Roads and Grounds work on restoring electricity to the base following the April 27 storm. (Photo provided)

the Maintenance Operations Control Center (MOCC), who helped expedite the delivery of material and equipment.

"We got the call about 6 p.m. Wednesday that the storm had hit and we came in," Thornton said. "Williams and Payne responded in some rough weather conditions. We were able to get everything in the system safe. It had gotten too dangerous to work, so our first priority was to ensure that nobody would be in danger. We were able to come in on Thursday night and put generators on all the lifts stations and keep the sewage plumbing going."

He said his crew worked from about 6 a.m. until dark Thursday through Saturday,

until the majority of power was restored around 1:40 p.m. Sunday.

"The other electricians helped us get that done, including installation of generators," Thornton said. "It was well organized, and again I can't give the two linemen enough credit. They were the backbone of the whole project."

"Bart Jones [director of Facilities O&M] and Dave Simmons met with me and Mike Barlow, the ATA utilities asset owner. Bart and Dave emphasized the fact that they wanted us to work toward a goal of getting power restored by Sunday, but they wanted us to do it safely. We emphasized that to the guys and they did just that. They exceeded

all expectations to be honest with you."

Barlow said the storm caused the worst line damage he has seen at AEDC.

"Our electrical dispatchers, operators and engineers responded well during the storm and the loss of Circuit 28," Barlow said. "Paul Thornton and our linemen immediately began planning the repairs and locating needed material. Repairs were in full swing early on Thursday morning and power was restored to the portion of Circuit 28 within the industrial area that morning. Our two linemen ... did an outstanding job completing repairs along South Hap Arnold

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TTU President Dr. Robert Bell greets AEDC employees John and Michelle Sutton prior to the alumni luncheon May 4 at the Arnold Lakeside Center. John, a Tech graduate, is director of AEDC's Contracting Division. (Photo by Shawn Jacobs)

Alumni break reunion record

By Shawn Jacobs
Aerospace Testing Alliance

Local Tennessee Technological University (TTU) alumni narrowly broke their own attendance record during a luncheon at Arnold AFB's Arnold Lakeside Center May 4.

The number of alumni in attendance was 172, marking the largest alumni gathering outside the university campus. The previous record of 171 was set May 14, 2009, also at Arnold AFB.

Graduates from as long ago as 1952 and as recent as this year were present for the event.

The alumni gathering served as a celebration of the longstanding relationship between AEDC and TTU. More than 250 alumni work at AEDC and many more are retired or live in the surrounding area, according to Sharon Carter, ATA deputy director of Projects and Design

Special edition of High Mach coming out June 17

AEDC is celebrating its 60th anniversary with a special glossy magazine issue of *High Mach* titled "60 Years of Progress."

The publication is filled with pictures of AEDC's facilities, programs that were tested and the people who have used their knowledge and talents to ensure that U.S. airpower is the best in the world.

If you subscribe to *High Mach* through the mail, you will automatically receive a copy of the magazine, which will be published June 17. If not, you need to reserve your copy now.

Call (931) 454-5655 or e-mail Arnold.HighMach@arnold.af.mil to reserve a copy by June 7.

Also, do not forget to visit www.arnold.af.mil for many other 60th anniversary stories and features.

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HIGH MACH

Arnold Engineering Development Center
An Air Force Materiel Command Test Center

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Commander

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Director,
Public Affairs



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High Mach is published by *The Tullahoma News*, a private firm in no way connected with the U.S. Air Force, Arnold Engineering Development Center (AEDC) or Aerospace Testing Alliance (ATA), under exclusive written contract with ATA, center support contractor, at Air Force Materiel Command's AEDC, Arnold AFB, Tenn., 37389.

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The *High Mach* office is located at 100 Kindel Drive, Suite B212, Arnold AFB, Tenn. 37389-2212. Editorial content is edited and prepared by AEDC support contractor ATA. Deadline for copy is Wednesday at close of business the week before publication.

This commercial enterprise newspaper is an allowable ATA contractor publication for personnel at AEDC.

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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

Going after some green on the highways

By Col. Michael Panarisi
AEDC Commander

Since my arrival, I've been pushing for all of us to do our part and find ways to execute our mission more efficiently, and energy consumption is a big factor in the cost of our operations.

"Energy" isn't limited to our electric bill (nearly \$30 million last year!). Here at AEDC, we have to look at every aspect of our operation and look for ways to conserve.

It's tempting to go after the "biggies" and try to get that new plant equipment or radically alter a process knowing "it will pay for itself" in energy savings.

Those are important efforts, but they do not relieve us of the obligation to identify and correct the thousands of "little things" that add up to big savings year after year.

So I'm "all in" on this as well, and we've been look-

ing for options that not only reinforce the message, but return dollars at the same time. We found a good one.

For those used to seeing the "Command Vehicle" (aka the big red Expedition), I'm camouflaged now. The motor pool asked me to try out a new hybrid car that we've acquired through our GSA lease program, and I was all over it.

For techies like me, it's cool to learn about this somewhat new technology, and help dispel the mythology that often accompanies challenges to the old way of doing business.

For those charged with helping find ways to be good shepherds of our environment, hybrid vehicles offer some real potential.

You don't have to cling to a particular political persuasion to agree that using less fuel is a good thing; and with gas prices constantly on the rise, less consumption will keep our dollars where they need to



Panarisi

be: focused on the mission.

So I'm excited to be part of this "experiment," and we're tracking this one very closely to help us understand how a technology insertion along these lines will benefit our conservation campaign.

In this case, it's not just a matter of increased fuel economy.

So far, the numbers are very encouraging, and we are optimistic that we can cut the fuel cost by about two thirds, but we're taking into account a "total cost of ownership" on this to make sure we haven't grabbed the

wrong tool for the job.

This is where our test acumen will come in very handy. The task of collecting the right kind of data and actually understanding what it means as part of a "system" is right in our wheel house. I have no doubt we'll make very well-informed decisions on how or if to expand the use of these kinds of vehicles.

How's it going so far? Very interesting. The car generates a wealth of information, including detailed reports on every trip, including time, distance, fuel used and average fuel economy for the trip, the tank and the life of the vehicle.

Like all vehicles, use is a huge factor, and "your mileage may vary" is an understatement to say the least. Driving habits play a big part as well, and this car will punish leadfoots. But with a little tweaking, I've been able to get the average just above 35 mpg, and I

know "Big Red" never saw the north side of 17 mpg.

On a recent trip across the base, (combined time in the industrial area and a run out to UTSI) the car reported only 0.19 gallons of fuel used. I've had the car three weeks now, and haven't put a drop in the tank. Granted, I don't really rack up the miles, but I'm thinking we can go three or four months before we hit the pumps, and that's pretty cool.

In the end, I hope this will go beyond the short term intended purpose and help anyone interested better understand how this solution might fit in their own decision matrix, particularly if your daily commute exceeds 15 or 20 miles each way.

So, keep on the lookout for our "Hybrid Report Card." We'll keep you posted every step of the way, and if we've done this right, the "Green" will be ours.

Perception of lost time isn't worth the risk

By Dan Hawkins
AEDC Police Department

When I left work last Friday, there was only a small amount of traffic on base. But as I approached the main gate, I realized I was going to be in a minor traffic jam.

A car was stopped at the gate in the outbound lane and I knew a base visitor was in the process of turning in his visitor badge. The car stopped, crept forward ever so slowly and stopped again. When the elderly hand finally emerged, I watched a gentleman slowly and carefully deposit two black badges in the badge box.

I noticed the elderly lady intently watching his every move and immediately realized what I was seeing. This couple had most likely been to the commissary and now

was on their way home. From the apparent age, I surmised they might have held the "veteran" title as long as I have been alive.

As they slowly started forward, I noticed the stoplight turn green and doubted we would make it through before it changed again. I could tell some of the other drivers behind me were growing impatient, but the light stayed green long enough for us all to get through. As we slowly accelerated, I briefly considered passing the couple, but decided there was enough traffic to warrant my patience until we reached I-24.

As we drove, I contemplated the couple inside the vehicle. Was the lack of speed strictly a result of diminished capability for driving or were they simply not in a hurry? I thought for a minute about

what it would be like to be their age with any children long gone and no set schedule.

I wondered how infrequently this couple gets to change their daily routine by making a simple trip we would all take for granted. A trip to the commissary today, a trip to the doctor next week – little bits of activity to punctuate their otherwise sedate lifestyle.

Perhaps they were just savoring the moment. I'm sure they understand any one of these trips could prove to be their last drive.

We all have a date with destiny. At some point age or fate will take over and they will realize they have already had their last drive – or at least their last drive together. I think they understood that and were in no particular hurry for it to end.

After getting on I-24, I

made my way around the couple and headed off to meet my family, run a list of errands and get ready for an all-too-short weekend.

I went very little distance before I saw the signs of other people who had already had their last drive: crosses.

Each cross placed by the road denotes the life of one person who has completed their last drive. I first spotted crosses on the right, but I knew they were also in the median and on the other side of the interstate. I knew I would pass more on each side road I traveled before I finally made it home.

I wondered if any of the people represented by those crosses ever considered the possibility they could be making their last drive.

As I am sure is the case with most parents, I am always most troubled by the small crosses. The small ones represent children – lives ended before they fully began.

All of this thinking led me inevitably to thoughts of my cousin Sherry who took her last drive in 1978. Seat belt usage wasn't mandatory back then and wasn't very common among people I knew.

Strictly in terms of damage to the vehicle, it would have been classified as a very minor accident. She was 21.

Unlike the couple at the gate, most of us don't think about the possibility of taking our last drive. We take it for granted we will get home, get back to work tomorrow, get to the soccer game tomorrow night and continue to go where we need to go for the foreseeable future.

Sadly, this isn't always the case, and there are many factors that can change a routine drive into a last drive. One of these

factors is impatience.

In my first paragraph, I alluded to the impatience of the other vehicle operators. Their actions prompted this writing.

I will back up for a minute and briefly explain what some of these drivers were doing in response to this couple.

While still at the gate, I glanced in my mirror and noticed a red truck. The driver had no intention of being patient with anyone. He cut abruptly into the outside lane and went around us.

By this time, the elderly couple had been creeping forward enough that they were getting up to speed, but the red truck quickly whipped in front of them and caused them to stop again.

As I mentioned, we all made it through the light anyway, but the red truck was proudly in front of the old couple instead of a few cars behind me.

As we continued down Wattendorf, a vehicle a few cars behind me kept jutting out into traffic to see if he could pass. He was riding the bumper of the vehicle in front of him and doing everything he could to project his true feelings to the masses.

It's funny, but if you're the fifth car in a slow line, the problem isn't the first vehicle, it's the first four. When we made it to I-24, I checked to make sure it was safe to pass, put on my signal and eased over into the fast lane.

Just as I did, the vehicle that had displayed such impatience on Wattendorf came off of the acceleration lane and whipped around the cars in front of him and nearly rear-ended me. The traffic ultimately thinned out and no accidents resulted from the

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Since You Know

Next issue's question:

In what city was the operation now known as APTU originally located?

Last issue's answer:

The first troops to move into Camp Forrest in the 1940s were 1,000 men of the **Tennessee National Guard 181st Field Artillery Regiment.**

Last issue's winners:

Arthur Finger

Thomas Carpenter

Terry Rayfield

Smoking Policy

- The following revised AEDC smoking policy is effective immediately. Smoking is permitted solely in designated areas identified by a plastic "smoke genie." This receptacle is for the sole purpose of cigarette butt disposal. If there is no receptacle, you cannot smoke in that area. It is the responsibility of all smokers to clean up the area surrounding the receptacles for any cigarette butts on the ground. Smoking in government-owned vehicles is strictly prohibited. Personnel are allowed to smoke in their personal vehicles at any time. In case of inclement or cold weather, employees are encouraged to use their personal vehicles if a sheltered designated smoking area is not available nearby. Smoking areas will be held to the absolute minimum and will be located in low traffic, low visibility areas away from points of building ingress/egress and air intakes. A map of all authorized smoking areas is available on the AEDC web portal at [https://lpapro.arnold.af.mil/PORTALimages/Smoking area map. pdf](https://lpapro.arnold.af.mil/PORTALimages/Smoking%20area%20map.pdf). Smoking near a facility in an area not designated on the map is prohibited and any smoking receptacles located in areas not shown on the map will be removed. All "smoking permitted" and "no smoking" signs will be removed unless specifically required by OSHA.
- The fact a person smokes has no bearing on the number of breaks they may take. Breaks should be taken in accordance with the company/agency personnel policies that apply to all employees.
- Regarding use of smokeless tobacco, containers of tobacco waste product, including sealed containers, must not be left unattended or disposed of in trash receptacles. Users of smokeless tobacco must flush tobacco waste down the toilet. Smokeless is strictly prohibited in conference room meetings and other areas, e.g. PMEL, where Air Force regulations specifically prohibit.
- Supervisors at every level will ensure this policy is followed. Disciplinary action is appropriate for repeated violations.
- Updates to this policy will be made in the future to further align with Air Force guidelines.
- This letter supersedes previous letter dated 28 October 2006, subject as above.

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Engineering, a TTU alumna and organizer of the event.

"I believe that TTU is a great institution and most alumni have many very fond memories of their days at Tech," she said. "They love the idea of coming out to support such a great institution."

TTU President Dr. Robert Bell, who brought the crowd up-to-date on the latest developments at TTU, said he loves to visit AEDC.

"We've got such a great relationship with Arnold, with UTSI [University of Tennessee Space Institute], with the Tullahoma area in general," Dr. Bell said. "It's just a phenomenal alumni base for us and a great support system for Tech, so it's always fun to come down here and see all this excitement and these great folks."

"We're very proud of the relationship with AEDC and

have placed a lot of alumni here. They're very loyal and very supportive of Tech and many of them serve on our advisory board, so we try to keep a great relationship going here."

TTU graduate John Sutton, director of AEDC's Contracting Division, helped represent the Air Force at the luncheon. Sutton started his AEDC career in 1979 as a cooperative education student and accepted a full-time position as a contract specialist after graduating in 1980.

"The importance of AEDC's mission demands we attract and retain the highest qualified engineers and business professionals," he said. "TTU delivers with graduates who are well-trained and make a difference from day one."

Steve Carter, an ATA Test and Measurement IT system architect,

received a Bachelor of Science degree in electrical engineering from TTU in 1985 and is now a member of the TTU Electrical and Computer Engineering Industrial Advisory Board.

"There are numerous ways the mutual support between TTU and AEDC is evident," Carter said. "AEDC has sponsored four Senior Capstone Design Projects during the previous two years. This program enables the development of new AEDC capabilities and the exploration of newer technologies at a low cost to the government. The students gain first-hand experience that is relevant to potential employers."

TTU is a major supplier of graduates with engineering degrees to AEDC. Of 479 ATA engineers and engineering managers, 173 have degrees from TTU, according to ATA Human

Resources.

Even though most TTU alumni at AEDC are engineers, other employees have degrees in business, education, mathematics, physics, chemistry, computer science, interdisciplinary studies, biology, health science, marketing, accounting and sociology, according to Sharon Carter.

Dr. David H. Huddleston, interim dean of the TTU College of Engineering, said engineers from the university have been instrumental in fulfilling the AEDC mission since early in the history of the test facility.

"As one of the major high-tech facilities in Tennessee, AEDC's relationship with the TTU College of Engineering is extremely important to our college," Dr. Huddleston said. "Cooperative education and employment opportunities for

students, access to facility tours for student groups, input through advisory boards and collaboration on research opportunities are just a few of the vital contributions made to our college through our strong affiliation with AEDC."

Tracey Duncan is director of Alumni Relations at TTU.

"Because one of the main priorities of the alumni office is to stay connected with all TTU alumni, events in conjunction with our large employers are a dream," Duncan said. "We love being able to come on site and let our alumni know what is going on with their alma mater and thank them in general for staying in touch. We also feel like we have a 'win-win' situation in that AEDC provides jobs for our graduates, and our graduates get to come to work for a great employer. This relationship is an ideal one."

Tunnel 9 visits

Above, White Oak Technical Director John Lafferty, left, describes the operation of AEDC's Tunnel 9 facility in White Oak, Md., and the data obtained for the Hypersonic Technology Vehicle-2 return to flight program to Gen. Donald Hoffman, commander of the Air Force Materiel Command, while touring the Tunnel 9 facility April 8. Below, AEDC commander Col. Michael Panarisi, right, and Dan Marren, left, director of AEDC's Tunnel 9 facility in White Oak, Md., answer questions posed by Senate Armed Services Committee staff member Dr. Robie I. Samanta Roy. (Photos provided)

**ELROD from page 1**

manager for ATA and Effort T, coupled with firsthand experience leading two enterprise-spanning departments within ATA give him an exceptionally broad and deep base that will serve him well as ATA's next general manager," Elrod said.

"Obviously this is a big loss for the center but a big gain for Jacobs," Pearson said. "We will miss David. He is well respected by the Air Force and the ATA employees. David is a good friend and a good guy to work for. I admire the way he conducts himself. When I think about the ATA core values of integrity, honesty, fairness... those ideals are an extension of the way David conducts himself every day. He's had to make some tough decisions and he's always done it with those values."

"I'm honored to be chosen to fill the position of general manager for an organization like ATA," Pearson said. "I'll have some very big shoes to fill when David leaves, but I know that having Phil to assist me is a real plus."

When talking about the appointment of Philip Stich as deputy general manager, Elrod said Stich's broad range of

experience will be very valuable.

"Philip's blend of test experience, investment program management and service as a general manager for a diverse test contract supporting NASA and his unique connectivity to the NASA aerospace community equip him well to succeed Steve as ATA's deputy general manager."

Stich has 30 years of experience directly relevant to AEDC's core mission. He worked as a test engineer, project manager and branch manager in AEDC's wind tunnel operations. He also managed the only USAF Military Construction Program executed at AEDC in decades.

He left AEDC and served as general manager of the Sverdrup contract, executing NASA Ames Test and Evaluation operations in California.

Stich has been the ATA director of Integrated Test and Evaluation since 2003.

"I have truly enjoyed my role in the IT&E Department," Stich said. "We have an outstanding team of folks performing critical test and technology missions. I'm looking forward to the new challenges as ATA DGM. We will surely miss Dr. Elrod. He is a great leader."

FPCON raised to Bravo

U.S. Northern Command has set the FPCON level to Bravo for all DOD installations in its area of responsibility, which primarily consists of the lower 48 states, the District of Columbia, Hawaii and Alaska.

FPCON levels are Normal, Alpha, Bravo, Charlie and Delta, with Delta being the most serious. Before the change, AEDC was at FPCON Alpha.

The FPCON system is one tool in a broader anti-terrorism program which the command may use to prevent, deter, detect, defend, defeat and, if necessary, mitigate the effects of terrorist plans and operations in order to preserve the mission capability and the employees.

AEDC police say the change is a precaution.

"It's not just us; everyone

DOD-wide is under Bravo. It's just general awareness for everyone DOD-wide," said AEDC antiterrorism specialist Michael Mann.

The change in FPCON level means some people entering AEDC will be subject to additional security measures.

"Probably the biggest thing is we've increased our random antiterrorism measures," Mann said.

Retirees will still be allowed on base for access to the Commissary. Scheduled tours are also expected to continue, and contractor and subcontractor work also should continue as normal, Mann said.

Currently, there is no timetable for lowering the FPCON level and it can only be lowered from its current level by U.S. Northern Command.

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Drive. Their experience and dedication was obvious."

Simmons agreed with Barlow's assessment.

"I was impressed by their dedication and hard work," he said. "There was always someone in the bucket working on the lines. Breaks and lunch were taken between turns in the bucket repairing lines. It really made you proud to have these guys on our team."

Barlow said the damage was extensive, and the cable and conductors on Circuit 28 needed to supply power to the Primary Pumping Station are very large and heavy. Their size made the repairs even more challenging. He said the linemen and those helping them with the repairs are the "best in the business," and Thornton made sure they had what they needed to get the job done.

"Paul was the hub of the repair

efforts and deserves a lot of credit," Barlow said. "I was very pleased we were able to get power back to the Primary Pumping Station and MFH [Military Family Housing] by Sunday afternoon. The response was outstanding and just another example of what folks at AEDC can do when called upon."

While work was in process, the family housing occupants were without power and the conveniences that most people have become accustomed to, according to Simmons.

"We really appreciate the patience and the support of the family housing occupants," Simmons said. "There were many encouraging comments for the efforts of the crews. This praise motivated our crews even more to get power up and running. To improve conditions for these folks, we installed a new 600 kilowatt generator at the Wingo

Inn that provided family housing residents temporary amenities until their power was restored."

There was also a great supporting cast that contributed to the return to services effort, according to Simmons. Tim Bagley and Bryan Cockfield provided engineering support for the repairs and developed a Verification Readiness Review (VRR) to systematically ensure that nothing had been left out that might cause an impact once the switch was flipped to turn the power back on.

The Roads and Grounds crew also responded, clearing the fallen trees that caused the line damage.

Their work also involved clearing "leaners" that were weakened by the storm and were at risk of falling on power lines again.

Chris Jones, Roads and Grounds supervisor, said his crews responded the night of the

storm and made an assessment of the damage.

"That night we worked a plan with Bart Jones to prioritize our most critical areas," Chris Jones said. "We worked with Security and Fire to reopen Highway 127 for the traffic commuting back and forth to Winchester. We worked a long night and came back in the next morning and continued our efforts to lessen the effect on the AEDC work force."

"Our crew worked safely and watched out for each other. We counted at least 80 trees that we've cut and pushed to date."

Thornton thanked Roads and Grounds for their assistance in removing trees and clearing the roads.

"Chris Jones brought in his road crew," he said. "They had the equipment to move all of it. The only thing I asked Chris to do was stay ahead of us, and Chris got his folks in here and they

worked long hours the same as the linemen did."

Jones said, "We still have work to do, especially inside the industrial area, and we hope to get the cleanup complete over the next several days."

Simmons said he couldn't say enough about the dedicated efforts and hard work of the crews.

"They were motivated by the knowledge that families, especially those with children, were being impacted and inconvenienced," he said. "You can't help but have a sense of pride [about] the skill and professionalism of our entire work force. We also had tremendous support from Air Force leadership, and we sincerely appreciated that. They were there to remove obstacles to ensure the success of the effort. It makes you very proud to be a part of this special AEDC team."

AEDC Space and Missile Ground Test Complex: 60 years of pioneering work defending the nation

By Philip Lorenz III
Aerospace Testing Alliance



When V-2 rockets first rained down on England in 1944, the ballistic missile officially became the newest threat to the nations of the world. The V-2s, although initially not very accurate, provided a wakeup call to the U.S. and their allies.

After the end of World War II, American scientists made a disturbing discovery when they surveyed the Germany's sophisticated flight simulation test facilities, including where the V-2 rocket had been developed and tested.

General of the Air Force Henry "Hap" Arnold made it his mission to never let the U.S. fall behind in technology. Arnold Engineering Development Center (AEDC) was dedicated in memory of General Arnold to provide superior test capabilities. As the space race with the former Soviet Union began, AEDC began developing capabilities to ground test missiles, space vehicles and associated components. This led to the development of the facilities now known as the Space and Missile Ground Test Complex (SMTC) at AEDC.

SMTC is responsible for ground testing space and missile weapon systems over a wide range of operating conditions. The SMTC provides hypersonic, rocket propulsion and space environmental test and evaluation services and coordinates testing in more than 15 facilities that support the development of defensive ballistic and tactical missile interceptors as well as weapons systems such as theater defense, cruise missile, high-speed aircraft and launch vehicles.

Rocket motor test facilities

Over AEDC's 60 years, the upper-stage motors powering Peacekeeper, Minuteman, Trident and Titan were but a few of the motors tested in the center's facilities. From ballistic missiles to the lunar lander to rockets for positioning commercial satellites into orbit, AEDC has played a role in their development and ensuring they work as designed.

James Brooks, program manager for the J-6 Rocket Test Facility, said AEDC has unique capabilities for testing high performance rocket propulsion systems, thrust vector control and those requiring altitude start and restart, stage separation and spin testing.

The earliest documented solid-fueled rocket motor testing took place in 1958 in AEDC's T-3 test cell in the Engine Test Facility (ETF). Before it was converted in 1989 to conduct small turbine engine testing, T-3 had been a rocket workhorse, conducting 2,423 firings.

During the 1960s, rocket motor testing

also took place in turbine test cells J-2, T-1 and T-4.

In 1961, AEDC's first vertically-oriented Rocket Motor Test Facility J-3 came into service, fulfilling the need to provide the capability to test liquid-powered rocket motors.

AEDC's Rocket Development Test Cell J-4, also a vertical test cell designed for testing large rocket engines, came into service in 1964 to support the Apollo program.

The facility provided unmatched testing of liquid propellant rocket engines and solid-propellant rocket motors. J-4 was used to test a variety of engines over the years. The most recent were the test firings conducted on the RL-10B-2 between Sept. 8 and Oct. 3, 2001, in support of the Evolved Expendable Launch Vehicle (EELV). The EELV, in turn, led to the development of the Delta IV and Atlas V, the two primary launch systems for U.S. military satellites.

After it became operational in 1963, the Rocket Development Test Cell J-5 was used to test more than 500 motors for such systems as Minuteman, Surveyor, Poseidon, Trident and Peacekeeper before an explosion of a Peacekeeper third stage motor took the facility out of service in 1985. The blast occurred during the 502nd test firing in the cell; no one was hurt or injured. The facility was rebuilt in 1986 and used until 1994, with 90 tests conducted during that time.

AEDC's J-6 facility went into service in 1994 to provide expanded ground test capabilities for solid-propellant rocket motors at simulated altitudes up to 100,000 feet above sea level. These tests support development efforts by the DOD and commercial aerospace industry.

Currently, it is the only active rocket testing facility at AEDC.

According to Brooks, thrust, chamber pressure, temperature, strain and acceleration data are recorded during the firing.

"This facility is the largest of its kind in the world and provides the only altitude test capability for medium to large rocket propulsion systems in the United States," he said.

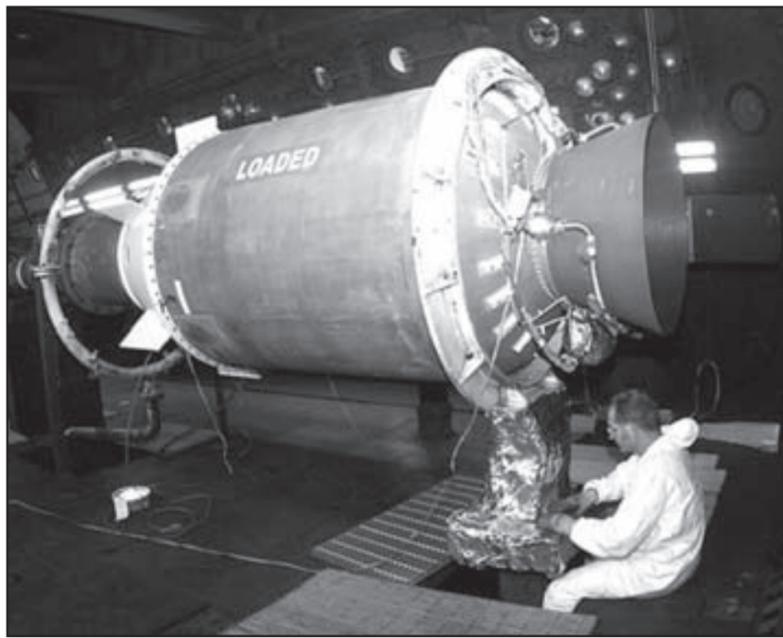
Hypervelocity Ballistic Range

The work done in the Hypervelocity Ballistic Ranges can be described as "lethality and materials testing."

Range G, the workhorse of the facilities, propels a sub-scale model of projectiles down a 1,000-foot long track at speeds up to 23,000 feet per second. Testers are also able to recover model fragments after impact. Specialized photography using laser illumination provides still and video imagery of the projectile models in flight. The facility is the only range in the country capable of providing unequalled "soft launched" capability to minimize g-loading and launch high fidelity missile simulations at hypervelocity speeds.

G-loading refers to the acceleration forces acting upon an object, like a projectile.

The hyperballistic ranges also include



AEDC Outside Machinist J.R. Durham prepares a Minuteman Stage 3 motor before testing in J-6 in 2003. Operators fired the randomly selected motor at a simulated altitude of 100,000 feet to qualify the motor's production lot. (AEDC file photo)

Range I, and S-1 and S-3 facilities. Range S-1 is a two-stage lab gun with four bore sizes available for use; .3-inch, .5-inch, .625-inch and 0.75-inch. It is similar to, but smaller than Range G. Range I is also similar to, but smaller than, Range G.

Range S-3, a 7-inch, single stage gun, was originally used for bird-strike impact testing of aircraft canopies. Most recently, S-3 was used to conduct impact testing on space shuttle block foam in support of the Return to Flight mission following the *Columbia* disaster.

Larry Campbell, the operations lead for Range G, said when he first came to work at AEDC, testers at the facility were firing models of Intercontinental Ballistic Missile (ICBM) projectile materials down the range.

In 1977, a track was installed inside the larger gun.

"The track allowed you to guide the model through erosive fields, not just ablation," he said. "They were working on erosive environments, rain, dust and snow, for those same kinds of materials, basically ICBM nose tip materials."

Testing in the range has included work done on the gun barrels and ammunition of the Air Force's A-10 Warthog and testing in support of NASA's Apollo capsule.

Campbell is particularly proud of his team's accomplishment in 2001, when a scale model of a conceptual missile powered by a scramjet was launched down the facility's two-stage light gas gun through its 130-foot long gun barrel.

This was the first-ever successful free flight demonstration at AEDC of a hypersonic projectile powered by a scramjet engine burning hydrocarbon fuel.

Space Chambers (7V, 10V, 12V and Mark 1)

Space test assets in this area include capabilities for evaluating infrared (IR) and visible sensor performance, mission simulation and other hardware-in-the-loop activities. This support includes testing and research for space systems in a thermal/vacuum environment from component level to full-scale, flight-qualified hardware. Additionally, for

component scale hardware, testing to simulate full spectrum space environments is available and includes contamination, solar, atomic oxygen, outgassing, radiation and other effects.

Jim Burns, AEDC's Space Chambers lead, said the first space chamber went into operation in 1961 when 7V was accepted for service. The 7-foot diameter, 30-foot long space chamber has been reconfigured over its lifetime to support a variety of test programs, with support in recent years to the Missile Defense Agency (MDA) and Air Force Space and Missile Systems Center.

Jere Matty, AEDC deputy director of the SMTC, said 7V is still the most advanced and capable facility available at Arnold for testing Unmanned Aerial Vehicle sensor pods.

Construction on AEDC's Mark 1 Test Facility was underway by February 1965.

This facility is a space environment simulation test chamber for full-scale space systems testing. At 42-foot-diameter by 82-foot-high, the facility exposes test articles to conditions that replicate the extreme vacuum and temperatures of space.

Mark 1 was essential for testing the Global Positioning Satellite in 1977 and the Block II GPS also spent four months of testing in the facility. In 2000, The GOES-M Weather Satellite underwent pre-launch qualification testing in the facility. It has also been used to conduct faring separation testing.

Burns, who came to AEDC 10 years ago, said he is impressed by the work accomplished by his predecessors.

"Those guys anticipated a lot of what we've got now [in the way of technological capabilities]," he said. "We have reports and correspondence from these old files where they were laying out the requirements for some of the chambers that we've wanted to do for years. And these are things that we're still just now trying to figure out how to do."

The one area that has Burns and his colleagues especially excited about is a new

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facility under construction, the Space Threat Assessment Testbed (STAT).

STAT is a ground-test capability that will evaluate full-scale space systems and subsystems against realistic threats in realistic environments while simulating various orbits.

It will provide the ability to evaluate space protection Key Performance Parameters for space hardware, ground control equipment and software prior to launch.

STAT will submit test articles to solar, proton, electron, atomic oxygen and hostile threats. STAT will also supply a means to “train like you fight” by interactively connecting with satellite operations centers to conduct realistic exercises and to develop tactics, techniques and procedures.

Arc Heaters

AEDC’s High-Enthalpy Arc-Heated facilities provide aerothermal ground test simulations of hypersonic flight over a wide range of velocities and pressure altitudes in support of materials and structures development by the DOD and the commercial aerospace industry.

The facilities are the sole DOD arc facilities in operation and provide high-enthalpy test conditions that duplicate aeroheating environments at velocities from 5,000 to 20,000 feet per second.

The combination of high-enthalpy test gas and high plenum pressure makes possible heat flux simulations representative of flight at speeds in excess of Mach 20 at high dynamic pressures (i.e. low altitude flight simulation).

Dennis Horn, an AEDC Fellow and long-time consultant on the facilities, said aerothermal testing began shortly after a commercial 5-megawatt arc heater was purchased and installed in the Propulsion Wind Tunnel in 1964.

Originally intended to conduct survivability testing for nozzle throats of a wind tunnel, the arc

heater’s capabilities soon caught the attention of Air Force Systems Command (AFSC). They wanted to find a way to conduct testing on ICBM nose tip materials to ensure they would survive and with enough accuracy to hit targets.

Horn said the next step later in the 1960s was development of the Dust Erosion Tunnel (DET) incorporating an upgraded version of the 5-megawatt Huels arc heater.

“They (AFSC) were concerned that if the Soviets launched a nuclear strike, would our ICBMs be able to survive a launch through dust clouds created by the impact of incoming missiles,” Horn said.

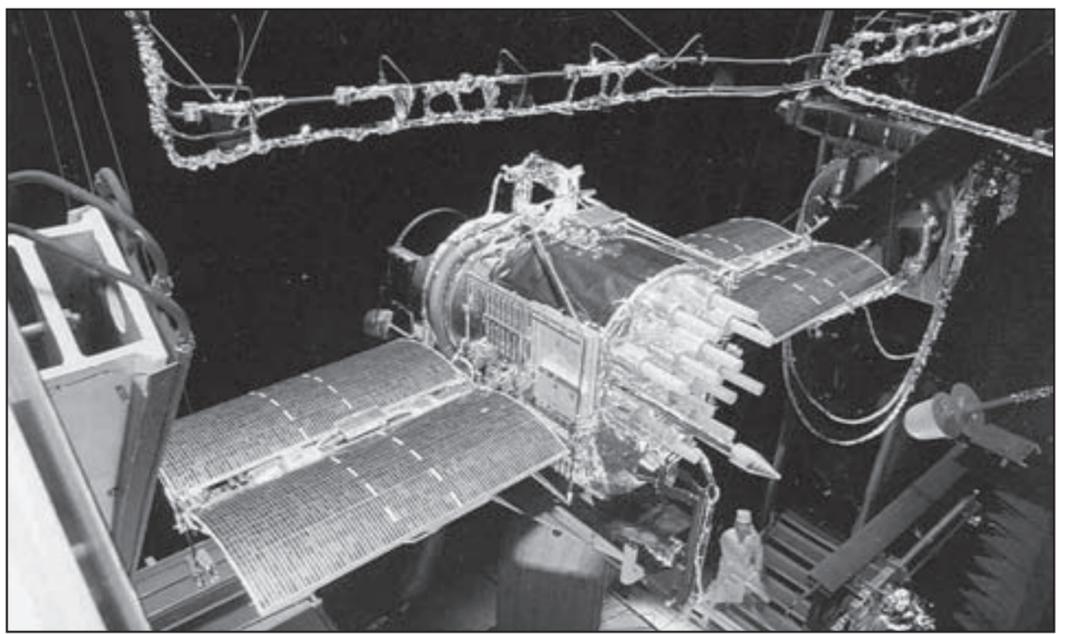
Today, AEDC’s arc-heated test facilities include two high-pressure segmented arc heaters (H1 and H3) and one Huels arcs-heated tunnel (H2). The facilities utilize a high-voltage, direct current electric arc discharge to heat air to temperatures up to over 13,000 degrees Fahrenheit.

These facilities have been used to conduct aerothermal testing for the Army, Navy, Air Force, NASA and commercial customers.

“Arc heaters simulate the aeroheating (friction heating) on flight vehicles when they fly within the atmosphere at many times the speed of sound,” explained Mark Smith, a senior ATA project engineer in the arc facilities. “We do a lot of re-entry work here, as well as testing for surface-to-air interceptor missiles, target vehicles and some tactical missile materials evaluations.”

“Thermal protection materials technology is a key enabling technology for hypersonic vehicles. If you can’t wring those materials out in ground testing you never really get to the point where you have an affordable and low risk flight test program.

“In addition, the DOD fields aging missile systems that will continue to operate for decades, for example the strategic systems for



A full-scale GPS was tested in the Mark I Space Simulation Chamber at AEDC in 1977. The tests checked reliability of the satellite’s systems prior to its launch in 1978. (AEDC file photo)

the Navy and the Air Force which have a mandate for another 20 to 30 years of operation. To validate performance of critical materials to do the job that they were designed to do, you have to periodically bring them back in and retest them.

“Similarly, replacement materials are needed on occasion to meet the specifications of the original materials, and those require qualification at the same aerothermal test conditions as the originals. The viability of aging systems such as our strategic systems is an important reason for the existence of these facilities.

“We’ve done [testing on materials for] NASA’s Crew Exploration Vehicle and the Mars Science Lab. We also have performed leading-edge testing on candidate materials for hypersonic air-breathers like the X-43, with NASA’s Hyper-X program, and Defense Advanced Research Agency’s (DARPA)/Air Force Research Laboratory’s Falcon. We’ve done several large test entries for NASA programs in H-2.”

APTU

Originally built by the Navy for its Ordnance Aerophysics Laboratory in Dangerfield, Texas, the Air Force moved the Aerodynamic and

Propulsion Test Unit (APTU) to AEDC in 1971.

APTU, brought on-line in 1973, tested several programs, including the Navy Integral Rocket Ramjet surface-to-surface missile, MIG-21 fuel tank lethality and Marquardt Advanced Strategic Air Launched Missile.

A blow down, free-jet test facility, APTU is now capable of duplicating flight speeds up to Mach 8 and altitudes of 110,000 feet. These conditions are needed to support the emerging high-speed/hypersonic air-breathing propulsion systems being developed. But that hasn’t always been the case.

APTU originally used a system that heated ceramic pebbles and then pushed air through them to heat it and generate the required test conditions. The downside of this clean-air heating source was it limited testing to Mach 3.

In 1980, an erratic flow control valve caused excessive air flow through the heater and forced the ceramic pebbles to exit the heater violently. The ensuing damage put the facility out of commission for two years.

By 1982, a newly designed Vitiated Air Heater (VAH) had been installed to replace the damaged heater, giving APTU a performance boost

to Mach 4. The first run of the VAH was conducted in June of that year.

For the next 25 years, APTU supported numerous programs seeking to push the technology envelope, accelerate their development and reduce the risk of acquisition and fielding. Programs included the Navy Standard Missile, Advanced Strategic Air Launched Missile and Air Force Ducted Rocket.

Several major upgrades have been made to the facility since it first brought the VAH online. By September 2007, a new Combustion Air Heater (CAH) had replaced the VAH. The CAH increased APTU’s capability to its current levels while providing greater facility reliability.

On June 24, 2009, engineers at APTU ran their first scramjet propulsion test. The test for the DARPA’s Falcon Combined-cycle Engine Technology (FaCET) demonstrator used the recently acquired CAH, Mach 3, 4 and 6 nozzles and JP-7 fuel heater. FaCET was the first-ever test of a near-flight scale hypersonic engine at AEDC.

The CAH set the stage for the most ambitious upgrade project APTU had undergone to date. The Hypersonic Propulsion Test

Capability (HPTC) upgrade is progressing through its design and will provide APTU with a real-time varying Mach capability. An OSD-funded multi-year project, HPTC will ultimately give research, development and acquisition programs across all three services the ability to “fly-the-mission” from ramjet light-off to scramjet cruise repeatedly on the ground.

Space and Missile Ground Test Complex: The future

Peter Montgomery, Deputy Branch Manager of Space and Missiles, says the future of ground testing in the space and missiles’ facilities is promising.

“I say that because the need is clearly there – in terms of our warfighters,” he said. “I think it’s clear that we rely more and more today on our space assets. Being able to test those systems, make sure those systems are there and stay there, and that they’re available is critical for those folks. It is important in the commercial world as well, you can see the growing interest in commercial space, significantly in the last few years. And yes, with all those different needs that are out there, all of our facilities line up very well with those and so I do see the future being bright.”

AEDC receives StormReady community signs



AEDC was recently recognized as a StormReady community by the National Weather Service (NWS). The StormReady status is given to communities that are prepared for severe weather, educate their people and develop a good working relationship with the NWS. Pictured from left are AEDC Fire and Emergency Management Program Manager Neil Felver, ATA Emergency Management Lead Daryl Justice, ATA Emergency Manager Brad Walker, ATA Support Services Director Pat Eagan, NWS Nashville warning coordination meteorologist Tom Johnstone, AEDC Mission Support Division Chief Col. Robert Bender, AEDC Fire Chief Daryle Lopes, AEDC Civil Engineer Bill Wendle and AEDC Operations Chief Mark Grantham. (Photo by Patrick Ary)

TIME from page 2

impatient drivers, but I wondered how much time they felt they lost.

There is a big difference between the perceived loss of time versus actual time lost.

I bet if you could ask the guy who nearly caused an accident on I-24 how much time he lost because of the old couple, he would probably indicate at least five or 10 minutes. But if you stop and step through it logically, you can tell the actual time period was very short.

If you go back to when the gentleman first stopped at the gate, you will remember the light was red, but everyone made it through when it turned green. Any time "lost" at the gate would have been spent sitting at the red light.

With this in mind, the only actual delay the elderly gentleman could

have caused would have been the amount of time between him and the car in front of him.

The Wattendorf traffic was fairly heavy, so speeds were not that high to begin with and the distance between the two vehicles diminished as we made our way down the road. If one would have begun counting when the lead vehicle passed a fixed object and stopped counting when the older driver passed, the difference would have been no more than 10 or 15 seconds.

My hope is that anyone who reads this message keeps this perspective in the back of their mind and practices a little patience in heavy traffic.

Allowing a few extra seconds could make all of the difference in the world. Perhaps we should all take time to stop and count the crosses.



AS AN AIR FORCE CIVILIAN, WHERE CAN I FIND HELP?

We all face challenges, but we don't have to face them alone.

IF YOU NEED HELP WITH...

TRY THESE AGENCIES & THEIR RESOURCES

Health & wellness planning	AFMC Wellness Support Center	www.afmcwellness.com
Health screenings & education	Civilian Health Promotion Services	(931) 454-6440
Work, personal or family issues	Employee Assistance Program	(800) 222-0364
Mental health & substance abuse	Centerstone	(931) 461-1300
Unplanned pregnancy	Crisis Pregnancy Assistance Center	(931) 728-6440
Suicide prevention	National Suicide Prevention Lifeline	(800) 273-8255
Sexual assault & victim advocacy	Sexual Assault Response Coordinator	(931) 581-7494
Crime victim advocacy	Victim Witness Assistance Program	(931) 454-4657

Job Shadow Day 2011



This year's AEDC Job Shadow Day on April 20 brought 37 area high school students to AEDC to learn more about the work done there. Students took a tour of base facilities such as Propulsion Wind Tunnel 16T, above, and then spent the remainder of the day with a parent or mentor, learning more about their specific areas of expertise. Pictured at top right, Murfreesboro resident Larry Oakes and daughter Abby run a spectral scan on a precision ultraviolet source at the Precision Maintenance Equipment Lab. Above right, Mike Williams, left, and Franklin County High School student Michael Williams. Bottom photo, J.T. Northcutt and Tullahoma High School student Logan Millsaps. Below, Chris Garner and daughter Brittany, a South Middle School student. (Photos by Rick Goodfriend)





IN FOCUS:

Health and Wellness

Track nearing completion



A worker for Competition Athletic Surfaces Inc. sprays Plexitrac binder, a water-based resin, over a layer of rubber granules that's being installed on the new running track next to the Administration & Engineering Building. When the work is complete, there will be half an inch of rubberized surface on the track. A ribbon cutting is expected to take place later this month. (Photo by Patrick Ary)

Commander's Fit Tip: In need of repair? Take a look at your mechanics

By Col. Michael Panarisi
AEDC Commander

If you are on a mission to take your game to the next level, whether it be strength, endurance, speed or all of the above, one of the biggest obstacles you face is the dreaded "setback."

More often than not, when we dig a little deeper, we tend to focus on effort, intensity, regularity, discipline ... all things that we think we can control in our regimens. While the road to success is paved with paying close attention to these factors, injuries represent the potholes we need to avoid along the way.

Unless we put some emphasis on HOW we execute the movements – how we load the muscles, joints, and connective tissues – sooner or later we find out the hard way that "working smarter" would have been a better plan than "working harder."

In nearly all of our exercise routines, we use "motion" as the mechanism to induce a favorable adaptation in our tissues. We lift a weight, pull on a cable, pedal a crank and run. All of these activities involve what real engineers would recognize as "disturbing a body at rest" and reversing the direction of a "body in motion."

The forces we impart on the equipment, or our own body, naturally follow our old friend "F=Ma," reminding us that we can't escape physics while we try to change something in our bodies. Often, we will think very carefully about the F and the M ... we'll lay out how many reps to accomplish, how many sets to execute or how many laps to endure.

But those aren't the factors that will come back to bite us. It's that innocent little "a" out there,

and we rarely pay any attention to it. Focus on the "a" (that's "acceleration" for all the EEs out there!) and you'll recognize that the "how" is even more important than the "how hard" and "how much" to take on in your routine. Some very simple guidelines and some real coaching will get you on track.

The first step is common to many of our attempts to change behavior: admit you have a problem! Have you ever really sought out training on the proper techniques, or are you a classic "monkey see, monkey do" gym rat?

I don't think I'm going too far out on a limb when I say that almost nobody I see at the gym has received tailored training in what they are about to attempt. If you were to hire a personal trainer, I can almost guarantee they would change almost everything you are doing.

The mechanics of proper weight training are just not intuitive, and yet we think we can teach ourselves, or at least, just watch someone else and mimic their motions.

When we get hurt, we blame it on "overdoing it" rather than looking into the methods we used to get us there. It's obvious at the gym and on the plus side, the injuries there are more self-critiquing. If you pull a muscle or strain a ligament, you can usually pinpoint what you were doing and stop doing it. But what about repetitive motion injuries? These are much harder to troubleshoot and take much longer to manifest into real issues.

Usually, the main signal that something's wrong, (i.e. PAIN) comes long after the real damage

See FIT TIP, page 11

On-Site massage helps AEDC employees deal with stress and pain

By Shawn Jacobs
Aerospace Testing Alliance

Have you ever wanted to step away from your cubicle or work area for about 15 minutes and let the stress just melt away through a massage?

Chair massages have been available for AEDC employees since 1995, and their popularity continues to grow, according to Susie Alexander, licensed massage therapist and founder of Tullahoma On-Site Bodywork and Massage.

"We're in [the Carroll Building every Thursday] and the A&E Building is every other Tuesday," Alexander said. Then we go to 1099 every other Tuesday; then we do the VKF, the Maintenance Building and Security Building and the Warehouse, too. This allows folks who don't have time to come into the office to be able to experience massage."

The chair massages cost em-

ployees \$15 for 15 minutes or can also be purchased in half hour increments.

"Evidently it's helped them to have a better quality of life," Alexander said. "We have many folks who come in who may have carpal tunnel syndrome or neck issues, headaches [or] low back pain.

"All of those we can help with someone sitting on a chair, fully clothed. We try to make the environment relaxing. We play music so it'll be very calming. Most everyone who comes in is in pain."

Suzanne Singleton, an ATA engineering technician and regular client of Alexander, said she originally learned of massage therapy being offered at the base through a co-worker and has been helped by the procedure.

"I use massage therapy for relief from stress, to help relax and from pain in the neck and lower back," Singleton said. "I see Susie for a chair massage on Thursdays. I also go to her office in Tullahoma



Susie Alexander, licensed massage therapist and founder of Tullahoma On-Site Bodywork and Massage, administers a chair massage to Suzanne Singleton, and ATA engineering technician, March 10 in the Carroll Building. Alexander and her staff provide the service at AEDC each week. (Photo by Rick Goodfriend)

at least once a month for an hour massage."

Alexander said more base employees could benefit from massage therapy, but getting the

word out is sometimes challenging. Nonetheless, awareness of massage therapy is growing,

"There was definitely a stigma in the past, and part of my per-

sonal goal is to educate people about what massage therapy can do for you, and that it's not about

See MESSAGE, page 11



FIT TIP from page 10

is done. The more repetitive the motion, the higher the risk of inducing long term damage.

What's the worst offender? Running.

Most of us have injured ourselves running, and the more you run, the more often you run into trouble. What's surprising is that it just doesn't occur to us that we can trace our injuries back to poor mechanics, and instead, we blame pace, shoes, surface, or my personal favorite "bad knees."

But the science behind the mechanics of running is rock solid ... and unfortunately, almost entirely unknown. For many, running is thought of as a "natural" skill, so we conclude that we have some innate ability to do it correctly. We seek out advice on weight training, largely because we think that is not a natural activity.

But the truth is, running is not a natural activity for adults. Why? Because we put very unnatural devices on our feet: shoes! And for nearly all of our lives, we masked the built-in feedback mechanisms that would have told us all along that we were taking our limbs and feet to places they were never intended to go. We just find out too late.

I'm not advocating that we all ditch our shoes and

start over. While there is a growing advocacy for "barefoot running" and minimalist shoes, these are not answers for the masses. In fact, even a hardcore aficionado like yours truly still clings to his trusty artificial soles. Just too many things to step on out there for my comfort level.

But I learned the hard way that going longer, faster, and with less pain is all about the mechanics, and lucky for me, I ran into a coach who took me through a real transformation. You can, and must, do the same, if you want to avoid the injuries that are absolutely attributable to how we have learned to run with big cushy pillows strapped to our feet.

I do not condone a self-taught mechanism for undoing years of what is now an ingrained pattern. When you take on the mission of correcting your mechanics, the first thing you would learn is that landing on your heels is the biggest of many bad attributes we have adopted as a shoe-wearing population.

But you can't just pull off your shoes or think differently about your stride and fix this. You have to get real coaching, and just like the process for learning any new skill (believe me, running is a skill!), you

need to learn some drills, practice and apply some real discipline. This is why we hired the pros when we conducted our clinic last year, and why we trained our very own Sports and Fitness Director (the incomparable Ron Stephens) to take you through the process.

But before you get started, there are a few things you can do that will make the transition much easier.

Getting off your heels means the loads have to go somewhere else, and that somewhere else is your Achilles tendons and your calves.

So before you even think about trying a new running style, take the time to get your lower legs ready.

Again, you need Ron's help, but expect to execute a focused regimen of calf raises and stability moves as your initial prep phase, and accept that this phase will take about a month, and you'll do more "leg work" in that month than ever before. Money in the bank!

Then, find and refine some alternative aerobic activities: stationary bikes, ellipticals, spinning, swimming, anything that you can use to build or maintain your aerobic fitness while you stop running. That's right, stop running. While you learn the technique,

you have to stop running.

This makes timing important for the military members; the month before your PT test is the WRONG time to do this. In fact, the week after your PT test is probably the best time. But if you have three months to go, no problem. Just know you will be very slow the first month.

And finally, you have to COMMIT. This isn't something you can just half-heartedly try. Plan on this taking around three months to get back to the speed and distance you were achieving before.

Push this, and you'll just hurt yourself in a different way and abandon a proven – albeit not yet widely accepted – method to end the tyranny of pain and injury that will sooner or later take running out of your portfolio.

Need a little convincing? Fire up your favorite Internet search gadget and find a little footage of a competitive running event, preferably on the order of a mile or longer.

Now that you know what to look for, you'll immediately recognize that none of the pros land on their heels. Instead, they execute a high cadence, short, flat stride that eliminates the decelerations of the heel strike.

Eliminating that nega-



An Internet search for a competitive running event will show you none of the pros land on their heels. They execute a stride that eliminates the decelerations of the heel strike.

tive "a" got them where they are. You can do the same, but I can't stress this enough, DO NOT try to teach this to yourself. It's just too "unnatural" in the beginning, and the success rates are very low.

Dedicate yourself to ending years of bad mechanics, find and use a

coach trained in how to take you through this, and you will gain a lifetime of benefit. Just be patient ... this will pay you back big time. Stick with your old habits, and you will "pay" some other way.

You just can't escape F=Ma! So go see Ron, and get started!

MASSAGE from page 10

that stigma," she said. "My personal clientele – I'm probably 50/50 in female and male in my office. Here, it's probably 75/25, mostly women. We do have several men who come, so I think that stigma is going away some."

Alexander said massage is about more than just about relaxation and stress relief.

"We've had several who've been post-surgery of some sort, and we've been able to help them have a better quality of life," she said. "And even if someone hasn't started to hurt yet, massage therapy is a great opportunity to show them

where maybe they're holding tension. So many people don't realize where they're

holding tension. You know, maybe they're sitting wrong or maybe sitting at their desk and it's not quite right."

She also suggested that massage therapy can be used as incentives or rewards for good performance at work.

"I think this is a great opportunity for managers or directors to give this as a gift

to a person [in their office] who maybe had done well – give a free massage for their hard work," Alexander said. "I feel that would be an opportunity for them to learn what it could do for them."

"I personally receive massage every other week ... from someone else, so it's very easy for me to practice what I preach because I

truly believe in what I do," she said. "You may have the same stress factors, but you're going to handle them very differently."

Suzanne Singleton does not require any more convincing about the value of massage therapy.

"It helps to relieve the pain and discomfort I have," she said.

And she recommends it to "everyone who is in pain or needs some relaxation. Susie is very knowledgeable in her field and she has really helped me."

For more information or to schedule an appointment for a chair massage at AEDC, call Susan Brewer at the CORE/ATA Dispensary at 454-4567.

Food safety in an emergency

Flood, fire, national disaster, or the loss of power from high winds, snow, or ice could jeopardize the safety of your food. Knowing what to do before and after an emergency can help you reduce your risk of illness. By following these guidelines, you can also minimize the amount of food that may be lost due to spoilage.

Power outages can occur at any time of the year and it may take from a few hours to several days for electricity to be restored to residential areas. Without electricity or a cold source, food stored in refrigerators and freezers can become unsafe. Bacteria in food grow rapidly at temperatures between 40 and 140 °F, and if these foods are consumed, people can become very sick.

(Information table at right provided by the U.S. Department of Health and Human Services.)

Food Categories	Specific Foods	Still contains ice crystals and feels as cold as if refrigerated	Thawed and held above 40 °F for over 2 hours
MEAT, POULTRY, SEAFOOD	Beef, veal, lamb, pork, and ground meats	Refreeze	Discard
	Poultry and ground poultry	Refreeze	Discard
	Variety meats (liver, kidney, heart, chitterlings)	Refreeze	Discard
	Casseroles, stews, soups	Refreeze	Discard
	Fish, shellfish, breaded seafood products	Refreeze. However, there will be some texture and flavor loss.	Discard
DAIRY	Milk	Refreeze. May lose some texture.	Discard
	Eggs (out of shell) and egg products	Refreeze	Discard
	Ice cream, frozen yogurt	Discard	Discard
	Cheese (soft and semi-soft)	Refreeze. May lose some texture.	Discard
	Hard cheeses	Refreeze	Refreeze
	Shredded cheeses	Refreeze	Discard
	Casseroles containing milk, cream, eggs, soft cheeses	Refreeze	Discard
	Cheesecake	Refreeze	Discard
FRUITS	Juices	Refreeze	Refreeze. Discard if mold, yeasty smell, or sliminess develops.
	Home or commercially packaged	Refreeze. Will change texture and flavor.	Refreeze. Discard if mold, yeasty smell, or sliminess develops.
VEGETABLES	Juices	Refreeze	Discard after held above 40 °F for 6 hours.
	Home or commercially packaged or blanched	Refreeze. May suffer texture and flavor loss.	Discard after held above 40 °F for 6 hours.
BREADS, PASTRIES	Breads, rolls, muffins, cakes (without custard fillings)	Refreeze	Refreeze
	Cakes, pies, pastries with custard or cheese filling	Refreeze	Discard
	Pie crusts, commercial and homemade bread dough	Refreeze. Some quality loss may occur.	Refreeze. Quality loss is considerable.
OTHER	Casseroles – pasta, rice based	Refreeze	Discard
	Flour, cornmeal, nuts	Refreeze	Refreeze
	Breakfast items – waffles, pancakes, bagels	Refreeze	Refreeze
	Frozen meal, entree, specialty items (pizza, sausage and biscuit, meat pie, convenience foods)	Refreeze	Discard

Change in store for this year's career fair at ALC

By Shawn Jacobs
Aerospace Testing Alliance

The third annual AEDC education fair at the Arnold Lakeside Center (ALC) will include a new wrinkle this year.

The event, which will be held from 10 a.m.-2 p.m. July 15, will be opened up to the public.

Jeannie McFaddin, chief of work force development in Arnold's Education Office, said the public is being invited this year due to popular demand.

"We are inviting the public to attend and we are also working with the high schools in Manchester, McMinnville, Tullahoma and Winchester to get the word out to the high school students as well," McFaddin said. "We got a lot of comments at [last year's] fair that this would be perfect for the community to come together and come up and talk to the representatives with the schools and get their degree programs and find out what's available. We're also going to try to work with the schools and catch them before the summer starts so that students can actually come and talk to the [colleges and universities.]"

Recruiting and admissions representatives are expected from 25-30 different schools, according to Dee Wolfe, AEDC education training specialist.

They will include all levels of degrees, and the number of institutions invited has been limited

only due to the capacity of the ALC.

The exact roster of schools attending has not yet been finalized.

"Some [of the schools] are strictly focused on online learning," Wolfe said. "Some are combined learning; some are strictly in-residence. We have schools from all over Tennessee, Alabama and Florida. A lot of online schools are based throughout the country and they send representatives. We've got a lot of East Coast schools, which are not too far away, and we also have schools that send brochures and door prizes if they can't attend."

Twelve institutions were represented at the first fair two years ago, and almost double that amount showed up last year when only AEDC employees, their spouses and dependents were invited.

"I've been in education 20-something years and we've always conducted education fairs, and when I arrived here they had never to my knowledge had one so that started really the first one," McFaddin said. "And then since Dee's arrived, we've just expanded it almost to the maximum capacity."

Lunch will be available for purchase from the ALC.

"For the ATA contractors, it's really great because during their lunch they can take that time to come over and still be able to attend," McFaddin said. ATA employees should coordinate attendance with



While attending last year's AEDC education fair, Suzanne Luthi, head of ATA's tuition assistance program, speaks with a representative from Waldorf College and picks up information to pass along to employees unable to attend the event. This year's career fair will be open to the public. (Photo by Rick Goodfriend)

their supervisor.

She said AEDC takes pride in allowing its employees to further their education.

"Absolutely, the engineers, the scientists and even the administrative and support functions, this opens it up to everybody and to their family

members, spouses and their children," McFaddin said.

"Education is the future, and we have to do what we can do to help educate our work force," Wolfe said.

For more information, call Dee Wolfe at 454-4313 or e-mail her at dee.wolfe@arnold.af.mil.

Arnold Golf Course
454-7076

Check us out on Facebook!

A **Two-Person Triple Play Tournament** has been set for May 14 beginning with an 8 a.m. shotgun start. This 27-hole tournament will be scramble for the first nine, best ball for the second nine and alternate shot for the third nine. Handicaps will be used to determine which tee you play from. Flighted into A and B flights. Entry fee is \$80 per team and includes breakfast buffet at 7 a.m. Green fee and cart fee are extra. Sign up by May 11.

Arnold Lakeside Center
454-3350

Arnold Lakeside Center will celebrate mothers May 8 with a special **Mother's Day Brunch**. Seating times are available every 30 minutes 10 a.m.-1 p.m. with the event ending at 1:30 p.m. Cost is \$24.95 for members, \$26.95 for nonmembers and \$11.95 for ages 12 and under. Menu includes bacon, sausage patty, scrambled eggs, French toast, turkey breast, pit ham, corn on the cob, broccoli, fried okra, green beans, mashed potatoes, baby carrots, macaroni and cheese, pasta salad, spinach salad, bread stuffing, brown and white gravy, pecan pie, carrot cake and rolls. Reservations are required by May 4 by calling 454-3350.

"The family that gets up on stage together, stays together." Isn't that how the old cliché goes? If not, it should as the Arnold Lakeside Center hosts the annual **"UGT" You Got Talent Family and Teen Talent Contest**.

The Arnold Lakeside Center invites moms, dads, brothers and sisters to sing, dance and perform together May 24 in the family-oriented event. Contestants can enter in one of eight categories: Children (ages 6-8 inclusive), Preteen (ages 9-12 inclusive) Group Act, Preteen (ages 9-12 inclusive) Solo/Individual Act, Teen (ages 13-18 inclusive) Solo/Individual Act (Vocal), Teen (ages 13-18 inclusive) Solo/Individual Act (Instrumental), Teen (ages 13-18 inclusive) Solo/Individual (Performance/Specialty), Teen (ages 13-18 inclusive) Group Act, Family (parent and youth, husband and wife). Participants must be of the same immediate family. DVDs of installation winners will be submitted for the Air Force-level contest.

"We invite everyone to enjoy an evening of entertainment while cheering for their co-workers and neighbors," said Melissa Hester, Arnold Lakeside Center programmer. Dinner will be available during the show from the Express or Pizza menus. A rehearsal will be held May 23 beginning at 6 p.m. Those interested can call the Arnold Lakeside Center at 454-3303 for more information and to sign up.

2011 Club Membership Scholarship Program is

now underway. Members First Plus members and their family members who have been accepted by or enrolled in an accredited college or university for entry during the fall term as part-time or full-time are eligible to enter. There will be 25 \$1,000 scholarships awarded during this program. To enter you must write a 500-word essay on an assigned topic (TBA) and submit to Services Marketing, A&E Room C303, by July 1. Along with the essay, complete the entry form and provide current college/university acceptance letter for new students or official transcripts for those already enrolled. Winners will be announced Sept. 16. For more information visit www.afclubs.net.

Wednesday Lunch is available to dine in or carry out 11 a.m.-1 p.m. Call ahead to 454-5555 to place orders. No delivery available. For better service, you may call on any day and preorder. Regular menu items available during lunch include specialty burgers, chicken tenders, salads and stuffed breadsticks. Call to see what other specials are available each week or check Sharepoint.

Texas Hold 'Em Mini Tournament will run now through May 26 in The Landing bar beginning at 6 p.m. each night. Players must be members age 18 or older. There is no entry fee but players must be present at time tables are drawn. Prizes will be awarded each week for first, second and third place finishers. Dinner is available from the Express or Pizza menus.

Chess Club is back meeting in the Four Seasons Room now through June 9 from 5-8 p.m. All ages are welcome and there is no cost to play. Dinner is available from the Express or Pizza menus.

Second Friday Karaoke will be May 13 from 6-10 p.m. All ages are welcome from 6-8 p.m. but 8-10 p.m. is reserved for adults only. Dining room special from 4-9 p.m. will be prime rib for two; cost is \$34.95 for members and \$36.95 for nonmembers.

Movie nights are every Thursday with movie start time of 6 p.m. and dinner available from the Express or Pizza menus 5-8 p.m. The schedule for May is: **May 12** – "Gnomeo and Juliet," rated G starring voices of James McAvoy and Emily Blunt. Garden gnomes have as many obstacles to overcome as their quasi namesakes when they are caught up in a feud between neighbors. **May 19** – "I am Number Four," rated PG-13 starring Alex Pettyfer and Timothy Olyphant. John is an extraordinary teen, masking his true identity and passing as a typical high school student to elude a deadly enemy seeking to destroy him. Three like him have already been killed. **May 26** – "Big Mommas Like Father, Like Son," rated PG-13 starring Martin Lawrence and Brandon T. Jackson. FBI agent Malcolm Turner returns as deep-cover alter-ego Big Momma. Turner's stepson, Trent, also undercover as hefty coed Charmaine, is along as they try to solve a murder at an all-girls performing arts school.

Friday night dining room specials available

from 4-9 p.m. May 6: Shrimp alfredo, \$9.95 member, \$10.95 nonmember. First Friday Jam is 6-10 p.m. **May 13:** Prime rib for two, \$34.95 member, \$36.95 nonmember. Second Friday Karaoke 6-10 p.m. **May 20:** Onion & feta crusted New York strip, \$13.95 members, \$14.95 nonmember. **May 27:** Bacon-wrapped stuffed chicken, \$10.95 member, \$11.95 nonmember. Last Friday Trivia 6 p.m. All specials and times are subject to change without notice. Please call ahead to ensure availability and openings.

Saturday availability and specials: May 7: Lynchburg ribeye, \$13.95 member, \$14.95 nonmember. **May 14 & 21:** Closed for special event. **May 28:** Buffalo wings (dozen), \$7.50 member, \$8.50 nonmember. The dining room is open on Saturdays from 5-9 p.m. unless otherwise specified. All specials and times are subject to change without notice. Please call ahead to ensure availability and openings.

Join us on a **Day Trip to the Chattanooga Aquarium** May 21. We will leave from the ALC at 8:30 a.m. and return between 5-6 p.m. Cost is \$40 for adults, \$30 for children age 3-12 and free for under age 3 and includes transportation, admission to the aquarium, IMAX movie "Ultimate Wave Tahiti 3D" and box lunch (if lunch is needed for under age 3 cost will be \$8). Sign up in advance by May 17.

Trivia Contest returns 6 p.m. May 27. Teams can have up to four people. No cell phones are permitted during the event. Anyone using a phone while a question is underway will be disqualified. A tutorial will be given at 6 p.m. to all participants prior to the start of the game. Six rounds of questions will be administered consisting of three questions in each round. Each round is worth 10 points. The teams with the most points at the end will win prizes. Ties will be broken by a trivia play-off.

Fight Night at the ALC May 28 in The Landing! Come to watch **UFC 130: Edgar vs. Maynard** beginning at 8 p.m. Dinner special for the night is buffalo wings by the dozen for \$7.50 members and \$8.50 nonmembers.

Family Member/Youth Programs (FamY)
454-3227

Fit Factor/Fit Family Kick-off event May 6-7 at the Commissary parking lot 10 a.m.-3 p.m. Join us for a fun-filled day and a healthy sack lunch. Fit Factor encourages physical activity and healthy eating habits for youth. Fit Family shows the importance of healthy lifestyle choices and encourages families to be active together. These programs are more than just logging points and earning incentives, it's about stimulating interest in physical activity, making time for each other, spending quality time together and setting goals with each other. Get Up, Get Out and Get Fit!

Youth Movie Night will be May 6 from 5-7 p.m. Ages 9 and up are invited

to the Open Rec Center to watch a movie. There will be free popcorn, juice and water.

Join Youth Programs at the Fitness Center May 13-14 for **Lock-In, Max-Out – Take the AF Challenge for Teens** along with neighbor teens from Robins Air Force Base and Fort Campbell Army Base. Ages 13-18 will spend the night in the Fitness Center and learn about a healthy lifestyle with challenging activities and healthy meals. The Fitness Center staff will provide a regiment of activities and provide information on workout routines. Chef David Owens, author of "Brocklee and the Little Chef," will demonstrate how to prepare a healthy meal and each participant will get hands-on in this process. Chef Owens will also provide an autographed copy of his book to all teens which includes recipes kids can do at home. Be sure to bring your sleeping bag and a change of clothes if you want. A box breakfast will be provided the following morning. Call 454-3277 to sign up by May 11.

America's Armed Forces Kids Run is May 21 with check in at 8:30 a.m. at the Youth Programs building. As part of Armed Forces Day activities in May each year military dependants here in the United States, in Bahrain, Greece, Puerto Rico, Germany, Japan, Iceland, England and Italy will participate in America's Kids Run. The annual event began in 1986 as Junior Bloomsday, the child's answer to the annual Bloomsday race that so captivates the Inland Northwest in early May each year. Mike Erwert, whose own boys were too young for Bloomsday in 1986, noticed that despite their ambitions, most children just couldn't manage the 7.46 mile Bloomsday course. So he decided a run for children would capture the excitement of the annual Bloomsday run; thus Junior Bloomsday was born – an event for children ages 5-13. The younger kids would run half a mile, with the 7- and 8-year-olds running one mile, and the older kids running two miles. Over the years 120,000 children have earned their own T-shirt by completing the annual spring run. After 16 years of success, Junior Bloomsday realized a name change was in order to capture the national and international interest it was receiving by military bases; thus America's Kids Run reflected its growth beyond Spokane's borders. Erwert explains, "It is time to move forward with a name that truly identifies the wonderful event Spokane has authored." The run has been recognized nationally in National Geographic World, National Road Runners Management, Runner World, USA Today and voted Best Children's Run by Runner World May 2003. To register for this fun run go www.americaskidsrun.org or call for more information.

Camp Adventure is a 10-week summer day camp for ages 5-12 sponsored by the Services Community Flight and run by skilled professionals through the University of Northern Iowa. Activities are held 7:30 a.m.-4:30 p.m. Monday through Friday.

The camp will run May 31 to August 5. Children may attend any or all of the 10 weeks; however, we ask that attendance information be completed at time of registration.

Each week is set to a theme, and activities and field trips are planned to coincide with that theme. Only a.m. and p.m. snacks will be provided. Parents must supply their child with a sack lunch daily. Please do not send carbonated beverages of any kind to camp. Please ensure that lunches are clearly marked with your child's name. Cold items can be accommodated in our central refrigerator; however, we will not be able to heat any meals. Please keep this in mind when determining your child's lunch.

Outdoor and swimming activities are planned throughout the week (weather permitting). To be sure no one is left out of these exhilarating activities, each child should bring an extra pair of clothing and a swimsuit daily to camp. Closed toe shoes must be worn at all times during camp activities and on field trips. Camp starts at 7:30 a.m. and ends at 4:30 p.m. Children will not be accepted before 7:15 a.m. – no exceptions. At 4:30 p.m. children that are not picked up will be transitioned to Open Recreation. Families picking their child up after 6 p.m. will be charged a late fee of \$1 per minute. No grace period allowed.

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

Category	Total Income	Weekly Rate
I	\$0-29,400	\$55
II	\$29,401-35,700	\$65
III	\$35,701-46,200	\$75
IV	\$46,201-57,750	\$91
V	\$57,751-73,500	\$106
VI	\$73,501-85,000	\$122
VII	\$85,001-100,000	\$131
VIII	\$100,001-125,000	\$134
IX	\$125,001 +	\$137

The following documentation must be completed to enroll each of your children in the program: application form, AF Form 1181; Youth Registration, AF Form 1055; Medication Permission Slip (if applicable), copy of your leave and earnings statement or W2 (note: if information is not provided, the highest category (IX) will be used to calculate weekly rate).

To start your child on this extraordinary adventure, contact Youth Programs for applications. The first and last week's fees are due at time of enrollment to hold your child's slot. A two-week written notice of cancellation must be provided or fees will be forfeited. Fill out the Summer Camp Adventure Application and return it, along with the other required documentation and weekly fees, to Youth Programs no later than two weeks prior to start of camp. You may select as many weeks as you

want on one application but a different application is required for each child attending.

Weekly Themes and Field Trips are as follows:

Week 1: May 31-June 3 Malt Shop Madness (note: closed May 30)

Field Trip: Thursday: Valley Home Strawberry Farm, Wartrace

Week 2: June 6-10 Incredible Interstellar Mars Space Race

Field Trip: Hands-On Science Center – Tuesday ages 5-8; Thursday ages 9-12

Week 3: June 13-17 Super Cool Penguins and Polar Bears

Field Trip: Tullahoma Lanes – Tuesday ages 5-8; Thursday ages 9-12

Week 4: June 20-24 African Savannah Safari Surprise

Thursday: Petting Zoo Comes to Camp

Week 5: June 27-July 1 Star Spangled Spirit Spectacular

Thursday: Water display from our local Fire Department

Friday: Family Barbeque at ALC pavilion

Week 6: July 5-8 Slam Jammin' Sports Celebration (note: closed July 4)

Week 7: July 11-15 Hidden Jungle Journey

Tuesday: Chameleon Improvisation Workshop – learn to act without script

Thursday: Let's Make-Up Workshop – theater make-up techniques

Friday: Bring your Pet to Camp Day – Dog Grooming Class

NOTE: Missoula Children's Theatre auditions Monday 4 pm Manchester Performing Arts Center

Week 8: July 18-22 Wonka, Wishes & a Golden Ticket

Field Trips: Tuesday: GLC Swim area; Thursday: Oldham Theater, Winchester

Week 9: July 25-29 Undersea Exploration Celebration

Field Trip: Tuesday: SwimPlex, Winchester

Week 10: August 1-5 Magical Myths & Ancient Adventures

Field Trip: Tuesday: GLC Swim area

For more information contact Youth Programs at 454-3277.

Arnold Youth Programs will host **Missoula Children Theatre's production of "The Jungle Book"** July 11-16. Auditions are open to AEDC families and the local surrounding communities to perform a full production for the public at 2 p.m. July 16 at the Manchester Performing Arts Center. Preregistration is required and will begin June 1. Cost is \$20 per child (\$5 discount for additional children in the same family). Deadline to register is July 7. Once each age group is filled to capacity (total of 60 cast members and four assistant directors) no additional children may sign up. By preregistering, this will eliminate the possibility of children being turned away at the audition. Registered children will participate in an audition at 4:30 p.m. July 11. The audition process will take approximately two hours and some may be required to stay an additional two hours for rehearsal. Call 454-3277 to register. Payment is due at time of registration.

Services from page 13

Fitness Center 454-6440

The Fitness Center will kick off the **Health and Wellness Expo** May 25 with a 3 1/2 mile run at 11:15 a.m. The Expo will be from 11 a.m.–1 p.m. with exposure and education on different dimensions of wellness. While visiting the booths, get a card initialed. Once the card is complete it may be entered for a chance to win prizes.

Some time ago the Fitness Center acquired the workout room in the A&E Building, Room C203, which was since referred to as the **Fitness Center Annex**. As with the main Fitness Center facility, access to this annex facility is reserved for eligible users which include Active Duty, Guard and Reserve, DOD Civilians (APF & NAF), Retired Military and dependents. Prime contractors that

are “Members First Plus” members are also authorized access. A new cipher lock system has been installed and the door will remain closed at all times. Personnel wishing to use this facility will be issued a personal pin number not to be shared. To request a pin number, please email james.duncan2@arnold.af.mil. You may be required to visit the main Fitness Center to confirm eligibility. For more information, please contact the Fitness Center Staff at 454-6440.

Outdoor Rec (ODR) 454-6084

Paintball is set for May 14. 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.

Skydiving is back on June 18 at the Tullahoma airport at 10:15 a.m. Meet at ODR at 9:15 a.m. Cost

is \$215 per person. This trip is for ages 16 and older. Sign up by May 23. If interested in video or pictures of your jump you must request this at time of reservation. Additional charges will apply for this service.

Coming soon:
Swimming Lessons have been scheduled June 20-24 and July 11-15. Cost is \$15 per person and is for ages 6 months and older. The Parent-Tot Group (age 6 months to 4 years) will be held at 10 a.m. and ages 4 and up will meet at 11 a.m. Classes will be Monday through Friday for 50 minutes each at the ALC beach. Deadline to sign up is June 18 and July 9 respectively.

Wingo Inn 454-3051

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

Mission Support Division hours of operation:

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

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

Outdoor Rec – Main Office, Check In, Marina and Auto Shop Tuesday through Sunday 8 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 & Driving Range 7 a.m.–dusk, Driving Range open 24 hours with prepurchased key card. Mulligan’s Grill: 6:30 a.m.–2 p.m. Monday through Friday, 7 a.m.–2 p.m. Saturday and Sunday.

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

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

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

AIAA to host model airplane contest May 7

By Shawn Jacobs
Aerospace Testing Alliance

Children and adults of all ages are invited to test their “piloting” skills May 7 at a free-flight model airplane contest sponsored by the Tennessee Section of the American Institute of Aeronautics and Astronautics (AIAA).

The free event will be held from 9 a.m. to 3 p.m. in a field adjacent to 625 Old Shelbyville Highway (Highway 130) in Tullahoma. The entrance is on the left, 0.6 miles from the Wilson Avenue intersection.

Rubber band-powered Delta Dart model airplanes will be provided, according to Dr. Frank Steinle, a member of the local AIAA council and contest director.

“You wind them up and let them go,” Dr. Steinle,

an ATA senior engineer at AEDC, said. “They are at the mercy of the winds and the thermals and how you launch them.

“They’re being built by students at UTSI [University of Tennessee Space Institute], so they’ll be furnished so nobody has to bring anything. Because we’re furnishing the airplanes, nobody has an advantage over construction techniques or anything like that.”

First and second place trophies and third, fourth and fifth place ribbons will be awarded to the top finishers in three categories: spot landing (closest to marker), precision flight (best three flights for 10-second flight objective each, sum of lowest deviation) and maximum flight (best three flights for maximum time up to 25 seconds each, total time).

First, second and third place trophies will also be awarded for overall best, which will be judged by the lowest sum of the placements.

“You have to enter all three events to be eligible for that,” Dr. Steinle said. “You can fly as many flights as you want. We’ll take your best ones to use, so you can stay at it as long as you like or as little as you like.

“Our local section is putting on this event as part of promoting AIAA. This is the first contest we have hosted where the models will be furnished and there are no age groups.”

The event is open to the entire community. Contestants are invited to bring their own food and beverages.

More details are available at www.aiaa.org/portal/tennessee.

Milestones

35 YEARS

Greg Wannewetsch, ATA

30 YEARS

William Phillips, ATA
Alfred Jennings, ATA
Craig Russell, ATA
Brian Roebuck, ATA

25 YEARS

Ellen Neal, ATA

15 YEARS

Marshall Long, ATA
Jerry Noe, ATA
Gina Bragg, ATA

10 YEARS

William Lock, ATA
Kenneth Bloom, ATA

5 YEARS

Richard Crabtree, ATA
Nathan Campbell, ATA
Susan Davis, ATA
Daniel Warren, ATA

INBOUND MILITARY

Lt. Carl Tegtmeier, AF

OUTBOUND

MILITARY
Linda Gladwell, AF

RETIREMENTS

Cynthia Robertson, AF

NEW HIRES

Tammy Denton, AF
Allen Reed, AF
Pam Gipson, AF
Kimberly Humberd, NAF
Loretta Smith, TST