The F-16 Fighting Falcon climbs out over Las Vegas in this U.S. Air Force file image. Engineers at Arnold recently began testing the engine used by most F-16s on a 50/50 mix of standard JP-8 jet fuel and a synthetic bio-fuel derived from the camelina plant.

"Fuels certification is a complex process, so being able to have a role in that early on, is important to me," he said.

"AEDC's doing the base line data that enables us to go forward and prove that those fuels are viable fleet-wide for the Air Force," Braun said. "We purposely picked the F-16 and F-100 because they are what we consider the most challenging and the most fleet representative engines across the Air Force. Our strategy is to have the engines tested and certified using AEDC's facilities, and then use that data to support any other actual flight testing that we conduct within the Air Force.

"AEDC has done a terrific job for us," Braun added. "I can't stress enough the data that we get from using Arnold's engine test cells just go far miles as as providing confidence to the aircraft community. That's why we work so hard at structuring those tests and maintaining our schedule. Any delays would have serious ripple effect through the entire fleet-wide certification process."

The longer term plan depends on testing like that done at AEDC, according to David Dickey, the lead systems engineer for propulsion in the Alternative Fuels Certification Office at Wright Patterson AFB, Ohio, and the AFCO program manager for AEDC's current synthetic fuels testing.

"The goal is to complete certifi- cation of the Air Force fleet for unrestricted use of the HRJ blend by the end of 2012," he said. "It is expected that the F-16, along with the rest of the Air Force fleet, will be certified on the basis of the verification and validation provided by all of the data gener- ated from the HRJ certification and analysis test and production test. Once certified, all aircraft, including the F-16, will be able to use the HRJ-blended fuel for unrestricted operations.

"The F-16 static display aircraft at Arnold AFB, Tenn., was dedicated June 26 to Maj. Gen. Westfield Scott Harpe, who died Dec. 5, 1998 in a crash in Madrid, Spain, during a training mission. Randy Harpe, son of General Harpe, reflects on his father's life during the dedication ceremony. (Photo by Joel Fortner)

Keeping cool during hot weather

With the help of the AEDC Fire Department, the youngsters at Camp Adventure got a chance to cool off last Friday. Summer in this area means hot days with high humidity. With temperatures in the mid-90s, there is no reason to honor the upper end of the thermometer. For the children, it is not so pleasant to get overheated and dehydrated. Remember to protect yourself when working or playing in extreme temperatures by drinking plenty of water or drinks designed to replenish electrolytes about every 20 minutes and avoiding alcoholic, carbonated and caffeinated drinks which speed dehydration. "Choose loose, lightweight, light-colored, breathable clothing. Use sunscreen to protect your exposed skin and wear a brimmed hat and sunglasses with ultraviolet protection. When working, be sure to take breaks in cool or shaded areas, especially if wearing clothing that limits air flow. Remember to pay attention to your body when you work in heat and learn the warning signs of heat stress, heat exhaustion and heat stroke. Be mindful of yourself and others and call for help when needed. See the editorial on page 2 for more information about protecting yourself during the hot summer months." (Photo by Rick Goodfriend)

By Joel Fortner

AEDC inactivates group, squadron structure

By Shawn Jacobs

AEDC Public Affairs

As part of a headquarters Air Force plan, AEDC inactivated its group and squadron structure June 25. The Air Force directed the change from wings, groups and squadrons to directorates, divisions and branches.

The event occurred on the 59th anniversary of the AEDC dedication by President Harry Truman, which is also June 25.

"The testing recently initiated at AEDC will be the first dedicated, unstaged engine tests conducted by the Air Force [on HRJ blended fuel] in a facility that can simulate altitude effects on the aircraft. The data produced will be very, very valuable in this program. In fact, we plan on using that data to justify and support upcoming flight tests of the F-22, the C-17 and that which possibly even the F-15," the Air Force's Alternative Fuels Certification Office director said. "These will also be the first engine tests conducted by the Air Force [on HRJ blended fuel] in a facility that can simulate altitude effects on the aircraft. The data produced will be very, very valuable in this program. In fact, we plan on using that data to justify and support upcoming flight tests of the F-22, the C-17 and that which possibly even the F-15."

This test supports the fuels certification effort of this field office, said Lt. Col. Anthony Bruno, F-16 Fighting Falcon Systems program manager for the first phase of the test. Testing will simulate the overall engine conditions experienced in the full flight envelope and include igniter light-off, thrust transients, augmentor lights and sequencing along with screech and rumble monitoring.

Military aircraft engines operate with afterburners to enhance thrust, but these can create large unsteady pressure oscillations termed screech and rumble, which can damage the afterburner structure.

LIEUTENANT BRUNO, who was also the project manager on engine test line 590/5 synthetic fuel and JP-8 testing on military jet engines at AEDC, said he is excited about the test underway.

"In my opinion, this is going to be the future of the Air Force -- alternative fuels -- so being able to have a role in that early on, is important to me," he said.

"AEDC's doing the baseline data that enables us to go forward and prove that those fuels are viable fleet-wide for the Air Force," Braun said. "We purposely picked the F-16 and F-100 because they are what we consider the most challenging and the most fleet representative engines across the Air Force. Our strategy is to have the engines tested and certified using AEDC's facilities, and then use that data to support any other actual flight testing that we conduct within the Air Force."

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Reflections on Freedom

On July 4, 2010, par number 234 “is the booker’s way of letting us know for those who are keeping very busy, that this is a celebrated AEDC’s 59th birthday.”

At the moment, a moment that we are in the beginning of two entities express. We’ll never know for sure, but it’s hard to imagine that the founding of the nation was “the experiment to achieve great nation status” and serve as the beacon, for no reason, the guarantee of the freedoms they held to be dear.

In fact, only a “great nation” could serve us both and this July 4 reminds us of just how important this role has become in an increasingly complex world and how vitally important our work here is to keeping the dream alive for all our friends.

This year, like any in our recent past, we find ourselves as a nation still in war.

While our national economy slowly recovers from the worst post-war economy and we are just beginning to see the dawn of our economic sun and enjoy the fruits of our labors, our military and their families are on the rise as well as friends and allies for thousands de...
STAT facility underway

Record amount of material disposed of on ‘shred day’

By Andrea Stephens

More than 33 tons of material were disposed of at AEDC’s largest in AEDC’s largest bulk shredded of material to date.

As part of ongoing recycling efforts, and in support of Information Protection Program requirements, AEDC hosted its third shredding event to properly dispose of sensitive materials, to include paper, CD/DVDs, VHS tapes, slides, movies, film photography, and CD-ROMS.

Due to the costs associated with base destruction capability, contracting shredded services is considered most effective solution for AEDC’s destruction needs, said AEDC Director of Support Services Phillip Shapton.

Eagan said effective management of the University contract this fiscal year was the reason for additional disposal services could be requested.

Previously, labor dollars were required to remove media labels, deliver media to the central computer, decide proper disposition, complete degaussing operations and certification labeling, move degauss material to the warehouse, then load into the shredder and finally pay for delivery to a local recycling company.

“The bottom line is we are removing unused materials and we are making this a more environmentally safe way and saving the taxpayers precious dollars,” he explained.

See SHRED, page 9

Education fair July 15 at ALC

The Education and Training Office is hosting an education fair from 10 a.m. to 3 p.m. July 15 on the main flightline.

This system will also emulate man-made threats to perform system test and evaluation. This will further demonstrate the environmental conditions existing at various orbits and self-induced testing of space hardware for the Department of Defense, the National Reconnaissance Office and others in the national security community. Much more familiar in the acquisition business in the US is the acquisition of information. This includes the controlled unclassified information that could affect our nation, our customers, and our workforce. The statistics show a significant increase in the volume of identity theft.

"Identity theft is becoming one of the fastest growing crimes in the United States," said Information Protection Branch chief Thomas Egan.

“It’s easy to say why AEDC is committed to protecting the controlled unclassified information that could affect our nation, our customers, and our workforce. The statistics show a significant increase in the volume of identity theft.

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A passion for chess unites them

By Philip Lorenz III
ATA Public Affairs

“Chess is a logical sport,” said Holden Covington, the 13-year-old son of Britt Covington, a mechanical engineer at Arnold Engineering Development Center (AEDC). “It seems interesting and fun and a challenge,” Holden recalled. “I’d say my skills are improving and I do feel like I should continue to play.”

Dr. Swanson also has a passion for chess. He explained, “I started playing chess in elementary school and played my parents quite a few times,” said Swanson, who came to AEDC in 2009. “Then I looked a few years of not playing chess, during high school. And then recently, maybe about a year and a half or two years ago, I started playing again, played the computer a lot and played a couple of friends from church, a couple of friends from university.”

Swanson drew a parallel between his favorite hobby and his professional talents. “We have an entire career path available based on chess planning and there’s a lot of that in chess,” he explained. “[With my job], I develop certain capabilities; increase technical readiness levels.”

Holden prefers to play chess with “real” opponents. “I don’t really play chess on the computer,” he acknowledged. Swanson told him that his son has benefited from playing chess at the ALC. “Holden has really enjoyed playing chess with Dr. Swanson,” he said. Forst Taylor has taught Holden a great deal about chess already. “I am [also] motivated that my son learns chess because I believe it develops strategic thought and because I believe it is a preferred substitute for video games. People generally have a passion for chess, but an addiction to video games. I view it as productive and one, to some degree, as counterproductive.”

Joel Kennerly, an AFA project engineer at AEDC, is probably the most experienced chess player of the others in the club at the ALC, according to Swanson. Kennerly reacted to Swanson’s praise, saying, “Karlie participated in our chess club also, and she is one of the best players I’ve ever played against.”

A retired AEDC engineer, Kennerly has been a “life” member of the United States Chess Federation (USCF) for approximately 40 years. He has actively participated in the USCF tournaments for about half of those years and he currently has a class “A” rating.

Kneile said he has enjoyed playing chess with the small group at the ALC and was particularly impressed with Holden’s grasp of the game, considering the young man’s age. “It seemed interesting that in chess,” he explained. “[It’s] the competition,” he acknowledged. “(After) I think it helps your decision making. I have been playing chess since 1994, and I’ve been a member of the United States Chess Federation since 2000.”

He also credited Swanson, son of one of his frequent opponents, with being very interested in learning to play chess. “I think he does play chess against a computer, but I think the best instruction came from another source.”

“I learned the most about chess from Maurice Ashley’s instructional CD of ‘The Modern Chess Openings’.” He also has the chess player’s bible – “Modern Chess Openings.”

Kneile’s advice to his opponents or other fans of chess is straightforward. “I would say that the keys to playing a good chess game are first, to control the center of the board,” he explained. “Second, develop your pieces and, third, pay attention to your opponent’s moves.”

Benji Spratlin, son of Elaine Possanka, AEDC’s acting intelligence officer, signs the log on a second geocache he and his mother found in the Short Springs Natural Area in Tullahoma. (Photo provided)

With more than 2,700 members, including contractor, active-duty Air Force and civil service employees at AEDC, it isn’t surprising that some people never meet or get to know each other. Sometimes, it takes a shared interest to bring people together who would otherwise be strangers.

Three years ago, she Conter, an AFA engineer in the Aerothermal Measurement Laboratory at AEDC, decided to try his hand at geocaching after he stumbled upon something about it online. He had been looking up how to use his Global Positioning System (GPS) device.

“I got into it because I like to hike and backpack, and like the map work that comes with such trips, and then liked mixing the GPS girses into the bike,” he said. “Then it was fun to hunt for some of the local geocaches.”

Michael Glennon, Communication Branch direc- tor, said he got into geocaching through the Boy Scouts to support a merit badge for a 2010 project. “Geocaching is an electronic treasure hunt, using modern technologies of the GPS,” he explained. “You have locations based on latitude and longitude. You enter into a handheld GPS. From there you find your way to the item.”

“When you arrive, there are clues you must fol- low to find the item,” he continued. “Normally they’re hidden so it’s not a matter of going out in the public. Small tubes, as small as one inch, have been made to hold larger caches in ammo boxes.”

The most recent fan of geocaching at AEDC is Elaine Possanka, AEDC’s acting chief intelligence officer.

“I read an article about it [geocaching] in the Dolly News and I said to myself that sounds like fun,” she said, recalling how she found an automated GPS and geek geocaching.

“It was something that I’d fall in the beginning with my son, who is a first grader, to try and get him out into the woods and get him excited about the outdoors, because he is of the video game generation, and he likes high-tech things,” she said. “He learned to walk in the woods seemed pretty dull to him. But treasure hunting was cool, that was what pirates did and holding the GPS was cool, too.”

She said a phone call requesting her presence at a meeting of the Elk River District Boy Scouts in the Middle Tennessee Council came next.

“The Boy Scouts got involved in it for the centen- nary year and this district in this area was looking for somebody who could help with that committee and....
As we explored in the last message, flexibility is an integral part of our overall fitness. Most workout routines actually reduce our flexibility over time, so we need to include stretching routines to counter tighten we’ll experience as our workouts get more demanding. But before we look at a specific stretch let’s review the rules.

Rule #1 – never make your muscles fight the stretch… this means the most effective stretch routines start with positions that allow the muscle to relax as you stretch, instead of using the muscle for support during the stretch.

Rule #2 – a partner makes a BIG difference. If you are trying to relax for a stretch, having a partner do all the work for you makes the relax part much easier. If you aren’t expending energy, or trying to balance yourself during the stretch, you’ll make progress much faster.

Are you ready to stretch? Not yet. Not just two rules.

Rule #3 – an effective stretch takes at least 30 seconds, maybe up to a minute.

And Rule #4 – stretch muscles much more easily than fresh ones, so adding a stretch routine to the end of your workout really takes advantage of the time you spend in the gym.

Armed with the rules, let’s hit what is likely the most troublesome muscle on your body – the hamstring.

The hamstrings are so involved in so many functions tightness in this area manifests itself in a whole range of maladies. The problem is just that you don’t think about it in day to day activities. But as we mentioned previously, the “bend over and touch your toes” will do just that, but it violates Rule #1 as your hamstrings are actually engaged as you bend over.

Fortunately, there are lots of moves out there to stretch this group, and most are very low risk and easy to perform.

The basic premise of any hamstring stretch is to apply gentle, constant pressure to the heel to increase the pressure on the discs in your back.

For many, the first indicator is in injury in the form of a “pulled hamstring” when you least expect it.

But before we look at a specific stretch let’s review the pros work their magic, and you’ll get “loose” much more quickly, and most importantly, “pain free.”

Most workout routines actually reduce our flexibility over time, so we need to include stretching routines to counter tighten we’ll experience as our workouts get more demanding. (Photo provided)

Geocaching from page 4

I had experience in it, so volunteered,” she said, adding that it was Stuart Conboy who nominated her to lead the geocaching committee at the council meeting. “I didn’t know this at first, but Mrs. Conboy was pretty cool about it. I really didn’t know him until we worked on that committee together. Michael, I knew he was here, but I didn’t know him, but his son and Stu’s son are in Boy Scouts.”

Posnak said there is a special BSA Council geocaching patch that Boy Scouts can earn this year, and a brand new geocaching merit badge, and her son, Benji definitely interested in going from Cub Scouts to Boy Scouts. “That experience with geocaching, certainly gets him hooked on the outdoors,” she said. “The geocaching community is also one that values the leave no trace principles and environmental awareness. They have cache-in and cache-out events where you go to the cache, you pick up trash all along the way and on the way out. Besides the thrill of the hunt, is that it has taken me to places in the area that I didn’t know existed,” she added.

“Places in Shilohville and Franklin County that I didn’t know were this close to home. The main point of that is probably Falls Mill in Belvidere. It was amazing – Benji and I spent the whole day there, the mill owner showed Benji how to open the sluice and make the mill stop and start. He showed us all the equipment, it was fantastic. You can’t lose.”

Eclipse Peasants, left, AEDC’s acting intelligence officer, her son Benji Spratlin and her father, Gerry Posnak, pose for a photo at Camp Boxwell in Lebanon, Tenn. Benji is holding the geocache and her father is holding the global positioning systeming and the list of all caches hidden in Cubworld on the scout reservation. (Photo provided)
Col. James Jolliffe, director of AEDC’s Test Division, passed the 718th Test Squadron guidon to Lt. Col. Gregg Leisman during a change of command ceremony June 21.

As director of the newly named Space and Missile Ground Test Complex, Colonel Leisman replaced Lt. Col. James Colebank, and will direct all space and missile ground testing to include solid rocket and hypersonic propulsion, space simulation and threats, advanced sensors, hypervelocity lethality entry material evaluation, and signature collection and analysis.

In his previous assignment, Colonel Leisman served as the National Reconnaissance Office (NRO) Senior Field Representative to the Operationally Responsive Space Office.

He served as the lead for multiple classified activities that were reviewed quarterly by the Assistant Undersecretary of the Air Force for Space and the Deputy Director of the NRO. During 2010 he was deployed to Afghanistan and was the NRO command representative to the 82nd Airborne, a special operations task force, and other warfighting units.

Colonel Leisman earned his commission as a distinguished graduate in astronautical engineering from the U.S. Air Force Academy in 1994. After graduation, he became the chief of operations for GPS satellite processing at Cape Canaveral, Fla. He earned a master’s degree in space systems management from the Florida Institute of Technology and also holds a master’s degree in astronautical engineering from the Air Force Institute of Technology. A Test Pilot School graduate, Colonel Leisman has served in multiple flight test engineering roles with the C-17, CV-22 and parachutes.

He has more than 650 HALO jumps and 360 hours of flight test time in 41 different aircraft.

**By Philip Lorenz III**

**ATA Public Affairs**

If the victim is unconscious or confused do not offer them water. The most important thing to do is cool them off and get them medical attention immediately. While the summer months are a time where people are encouraged to have fun and be outside, we have to make sure that we are doing it in a safe way. Drink plenty of fluids, make sure you are taking a break from outdoor activities, and wear sunscreen.

If you have any questions, please feel free to contact the Medical Aid Station at 454-5351; we will be able to answer any questions you might have.

Have a safe and enjoyable summer.
Unauthorized intrusion activities related to AEDC’s facilities is not only prohibited by law, but is also contrary to the professional ethic that underpins the scientific community. The practice of science, whether in nuclear and turbine engines. There are mathematical techniques that allow you to do these calculations and come up with numbers that are actually highly representative of the flow field of interest. It’s in some sense a code is analogous to a high-dimensional space of AEDC’s facilities. Computers are basically very big computer with a large memory and fast arithmetic. Scientists can run the solutions of the large problems that are developed. Dr. Jones said. But that CFD can be wider than just the wind tunnels, according to Tracy Donegan, a section chief in the Computational Sciences Branch, which is involved in computational efforts and application of computational fluid dynamics. “It could be expanded learning beyond just air and space in the primary areas is air, but then you get into more complex calculations where you start computing chemistry and combustion efficiencies - turbine engines and so forth - which make simulations much more complicated.”

Many recent CFD enhancements actually involve a computer code and its interconnection, according to Dr. Greg Power, 30th technical fellow for computational fluid dynamics. “Our goal is to have production capabilities ready to support the wind tunnels and to support the weather in general,” he said. “We get those tools from a lot of different places.”

AEDC uses available computer technology and software that we have available can’t handle the class of problems that we’re solving, so we’ll scale up and run the large scale of data that is available. Dr. Power said. “We have to develop our own capabilities, more than not, in concert with other folks within AEDC, with the Air Force Materiel Command. Our approach is to augment it such that we have a more effective program, which often can serve the customer’s need.” On the Air Force side of the equation, Dr. Terrence Debnam is an aerospace engineer/program manager for the modeling and simulation capability with the Test Technology Branch. He agreed the future is bright for CFD advancement at AEDC.

The above CFD image shows the surface pressure contours for the standard check model. (Image provided)

Tullahoma Kiwanis Club is celebrating Fourth of July with an air show and terminal dedication

The Tullahoma Kiwanis Club is inviting the public to celebrate the Fourth of July air show and fireworks display tonight at the Tullahoma Regional Airport.

The air show will open with a skydiver from “Tennessee Skydiving” jump in with the Amurrays Skydive team. The skydive will be the headliner of the Tullahoma Regional Airport July celebration. The free air show will feature numerous demonstrations by the Test Technology Branch.

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Former Sverdrup executive, Lew Rittenhouse, dies

Lewis (Lew) Eugene Rittenhouse, 82, of Tallahassee passed away June 16.

A native of Glen Park, Ind., he was born July 17, 1928, to Merlin A. and Ethyl Sherwood Rittenhouse.

After graduating from Lew Wallace High School in 1946, Rittenhouse enlisted in the Navy and served from 1946-1950 and then from 1950-1952 in the inactive reserve.

He attended Valparaiso University and graduated with a Bachelor of Science degree in aeronautical engineering from Purdue University in 1956. He later earned a Master of Science degree in space engineering from the University of Tennessee Space Institute in 1969. Retiring in December 1964 after 28 years of service with Sverdrup-Arnold Research Organization (ARO) as the Aeronautics Systems Test Facility (ASTF) branch chief. He also served as the vice president of European Operations for ARO and was manager of the ARO office, deputy director of Engine Test Facility (ETF), branch manager of the test laboratory applications branch and supervisor of the aerodynamics section of the Propulsion Wind Tunnel (PWT) facility.

After his early retirement, he continued to provide consulting engineering in Minneapolis and Huntsville, Ala.

Rittenhouse was the author of 36 AIDC technical reports on aerodynamic testing, gas dynamics and Magneto-Hydrodynamics (MHD) and published articles in professional journals, as well as numerous presentations at professional and technical seminars and symposia.

He was an associate fellow of the American Institute of Aeronautics and Astronautics as well as regional and Tennessee section medallion for veterans' graves in private cemeteries

Washington (AFNS) – Secretary of Veterans Affairs Eric Shinseki announced June 29 that the Department of Veterans Affairs is offering bronze medallions to attach to existing, privately purchased headstones or markers, signifying one’s deceased status as a veteran.

“Eligible veterans buried in a national or state veterans cemetery, or those without a government grave marker, VA is pleased to offer this option that highlights their service and sacrifices for our country,” said Secretary Shinseki.

The new item can be furnished instead of a traditional government headstone or marker for veterans whose deaths occurred on or after Nov. 1, 1990, and whose grave in a national or state veterans cemetery is marked with a folded burial flag adorned with the word “Veteran” at the top and the branch of service at the bottom.

Veterans buried in a national or state veterans cemetery will receive a government headstone or marker of the standard design authorized at that cemetery. The medallion is available in three sizes: 5 inches, 3 inches and 1 ½ inches in width. Each bronze medallion features the image of a folded flag and inscribed with the word “Veteran” at the top and the branch of service at the bottom.

Nest of kin will receive the medallion, along with a kit that will allow the family or the staff of a private cemetery to attach the medallion to a headstone, grave marker, mausoleum or columbarium niche cover.

More information about VA burial benefits, headstones, markers and medallions can be found at http://www.cem.va.gov/ce/loc/hm_hm.asp.

Information on VA burial benefits, headstones, markers and medallions can be obtained from VA officials or by calling VA regional offices toll-free at 1-800-827-1000.
Mission Support Division hours of operation:

Arnold Lakeside Center – Special function lunches available. Call 454-2062 for arrangement. Also serve both lunch and dinner 8 a.m. – 9 p.m. 7 days a week. Monday-Thursday 8 a.m.-9 p.m.; Friday 8 a.m.-8:30 p.m.; Saturday 8 a.m.-6:30 p.m.; Sunday 11 a.m.-6:30 p.m. Phone number is 454-9041.

Family Member/Youth Programs – Tuesday through Friday from 12 noon – 4:30 p.m. Phone number is 454-7076.

Family Recreational Programs/Activities – Monday through Friday 8 a.m.-9 p.m. and Saturday & Sunday 9 a.m.-6 p.m. Phone number is 454-7076.

Senior Activities – Normally noon – 4:30 p.m. on weekdays and 9 a.m.-12 noon on Saturdays. Phone number is 454-7076.

Food Service – Monday through Friday 7 a.m.-8:30 p.m.; Saturday and Sunday 7 a.m.-9 p.m. Phone number is 454-7076.

Softball, baseball, and soccer games will be scheduled on an unscheduled basis.

散热背包

Archolf Golf Course – Open 7 days a week.

Restaurant – Lunch 11 a.m.-2 p.m. and Dinner 5 p.m.-9 p.m.; Monday-Thursday; 11 a.m.-2 p.m. and 5 p.m.-9 p.m. Friday-Sunday. Phone number is 454-7076.

The Fitness Center State staff welcomes any individual interested in participating in a development effort to develop a world-class fitness center. To complete your fitness evaluation, please contact the Program Office at the Fitness Center. A tentative date for the opening of the Fitness Center will be held the first week of August, 2009.

Karate class is held 3:30 p.m. Mondays and Thursdays.

For more information call 454-7076.

Range Base Program continues throughout the week.

During this time, the first 72 players on site will be given a 25% discount. Players who bring in a raffle card for a gift card is given a 20% discount and for those who bring in a map of a target, a 15% discount is given. Payment is required at time of purchase. All additional players will purchase range fees $50 for advanced green fees and $70 for others. Price includes 1 round of practice rounds during the week, 1 round of practice is a free round, the fee is $12 extra at $12 per day. Range operation is in accordance with local and state laws. Deadline for sign up is 1 day before each tryout. For more information call 454-7076.

Mulligan Golf at Ar-

old Golf Course under a major ren-

ovation:

This project includes new course layout, new tees every 100 yards across the course and include an order station and pickup and drop-off area. Once renovation is finished, a digital scoring system will be installed, a golf cart will be used and will be built into the course for easy access to salads, cold drinks, ice cream and Pro Shop sales and more. A highlight of the course will be the addition of Starbucks cof-

To place an order for a special meal, call 454-7076.

Zachary Gordon and Steve Zahn. Greg Helford deu-

The design of the new golf course is

social landowners. The new golf course is

begins near the “Devil’s Church”, a group of large limestone formations located near the Paradise Springs Natural Park. The church is the largest underground shelter in the world and is the only one that is visible from the surface. The church’s form is based on a conical shape, and the ceiling consists of a series of arches supported by columns.

The trip will depart 8 a.m. on the 10 a.m. scenic tour fol-

owed by the spelunking tour at 1 p.m. Arrival back to Outdoor Rec. around 6 p.m. Cost is $41 and is open to all ages.

Deadline to sign up is 1 day before each tryout. For more information call 454-7076.

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The Xtra-Ordinary Moon Pies were victorious in the 25th anniversary running of the Golden Baton Relay Race. The Moon Pies (Col. Eugene Mittuch, Capt. Alex Haasman, 1st Lt. Marc Honrath and Joel Fortner) completed the race in 35:02, a time that was 44 seconds quicker than last year’s first place team. The “best name” award went to the “Fugazed Dingle-Dobbers” (Josh Jones, Tech. Sgt. John Mankston, Airman 1st Class Eric Ball and Doug Yurich). The “We Got It Pead On” won the award for the best costume (Lt. Col. John Glover, Leslie Tuttle, Capt. Aaron Finley and Maj. Matt Loughrey).
Anyone with claustrophobia, knee or back injuries are not recommended for this trip. Remember to bring money for food and drinks along with a change of clothes because spelunking will get you muddy. Call 454-4004 to sign up and for more information.

Upcoming Events:

Indoor Rock Climbing Adventure, Urban Rocks Gym in Chattanooga, Aug. 7, 8 a.m. – 6 p.m., age 14 and up, $38

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

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

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

Reservations for Wingo Inn can be made 120 days in advance. Room rates start at $39 per night. Please call 454-5051 for reservations.

Gossick Leadership Center

The Gossick Leadership Center (GLC) is now part of the Mission Support Division. Events such as meetings, conferences, luncheons, dinners, etc., may be booked through the Services Conference Center Manager (CCM) up to one year in advance. Requests must be made in writing by email to arnold.glc@arnold.af.mil. All event coordinators are required to sign an agreement. Official unit functions are authorized at no charge and are defined as bona fide official meetings or training held as part of the normal duty day. Unofficial and private functions may be held for authorized users at a fee. Community members may host events with the approval of the Mission Support Director for a fee. Outside food and beverages are not allowed.

First consideration must be given to Arnold Lakeside Center. In the event they cannot accommodate, an outside source may be utilized with CCM approval.

For more information contact the CCM at 931-454-3024.