



# HIGH MACH

Serving the World's Premier Flight Simulation Test Complex



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Arnold AFB, Tenn.

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## AEDC engineers continue to explore grid generation software

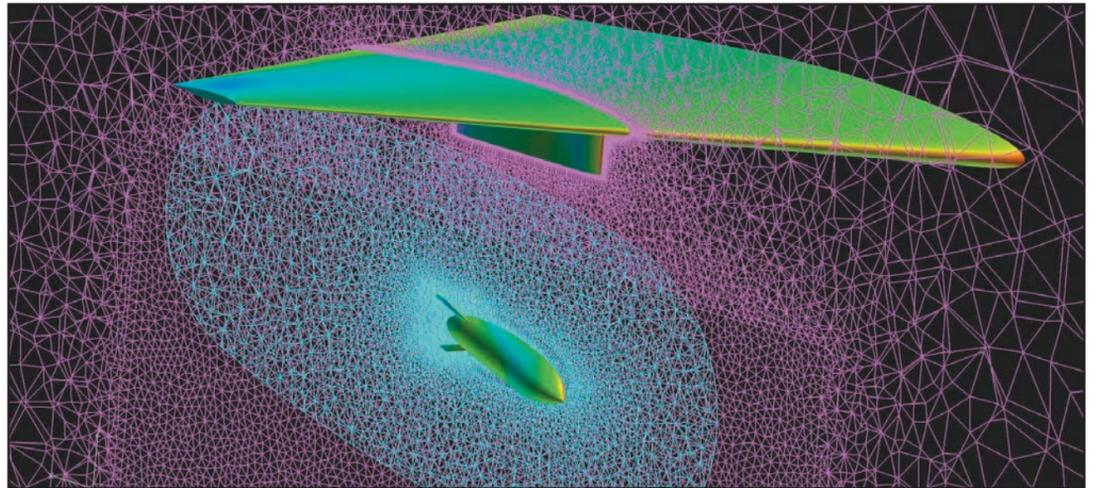
By Deidre Ortiz  
ATA Public Affairs

A major component of the testing environment at AEDC is the ability to perform computational fluid dynamics, or CFD, for a wide variety of flight conditions and physical environments.

James Masters, an AEDC engineer, explained that when using CFD, analysts must first properly define the region of interest so that the physics can be properly captured.

"This is done by generating a computational mesh that fills the region and is usually accomplished through tools, such as the software package Pointwise," he said.

The Pointwise staff has been working with AEDC engineers to incorporate a capability known as overset meshing into their software. With overset meshing, multiple meshes can be used in a single



Above is an example of the overset meshing that can be generated with Pointwise. Overset meshing is used when multiple meshes are needed to better capture complex shapes like those of modern aircraft and test facilities at AEDC. (Image provided)

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## ASTF marks 30 years since Initial Operational Capability



Night photograph of the Aeropropulsion System Test Facility exhaust side. (Photo by Rick Goodfriend)

By Raquel March  
ATA Public Affairs

The 30<sup>th</sup> anniversary of the Aeropropulsion System Test Facility achieving initial operational capability was Sept. 26 with the conclusion of a Pratt & Whitney F100 engine test in the facility's C-1 test cell.

Upon conception of the large engine test facility in 1965, ASTF would provide propulsion testing for aircraft engines which were "becoming more complex, as illus-

trated by the J79 engine with variable compressor stators and exhaust nozzles, and the TF30 mixed-flow turbofan engine," wrote Dr. Jim Mitchell, then the AEDC Chief Scientist, in an 1984 article for the Complex's *High Mach* publication.

Mitchell also wrote about possible plans for ASTF interconnections with the Engine Test Facility on the air side and exhaust side.

"The facility is designed to accommodate these connections for two reasons," he said. "Some future tests in the ASTF, such

as for a large freejet nozzle for engine inlet testing, will require the added ETF airflow capacity. But the airflow will also go in the other direction, with the ASTF machinery supplying the existing T and J test cells as a backup for the aging ETF machinery. This has been our pattern at AEDC since the beginning; that is, tie together the various test facilities to get greater and more efficient test capability at minimum cost."

See ASTF, page 4

## Arnold Community Council announces annual dinner Oct. 22

By Raquel March  
ATA Public Affairs

There are still a few seats remaining for the Arnold Community Council Annual Dinner Oct. 22 at the Manchester-Coffee County Conference Center. The ACC is a community support group for AEDC.

The guest speaker is Randy Boyd, Tennessee Economic and Community Development Commissioner.

Boyd became commissioner of the TNECD in January 2015.

The department is responsible for recruiting business and industry to the state as well as Tennessee's overall economic growth. He serves on several corporate boards including the Radio Systems Corporation, a company that produces over 4,600 pet products; the EDP Bio Tech, a bio-science company conducting cancer and DNA research; and Boyd Sports LLC, owner of the Tennessee Smokies Baseball team.

The annual dinner is the ACC's only fundraiser and the

money raised is used to support and promote AEDC.

Each year the community council sponsors and collects donations for the Veterans Picnic; makes a donation to the AEDC Children's Christmas Party, provides gifts for the Complex's annual military award winners; donates to Honor Flight and sponsors receptions for visiting dignitaries.

The group also travels to Washington, D.C., each year

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Randy Boyd  
Tennessee Economic and Community Development Commissioner

## Revolutionary Change: Col. Todaro announces transition updates for TOS and BCITS contracts



AEDC Commander Col. Rodney Todaro

AEDC Commander, Col. Rodney Todaro provided an update on AEDC's Source Selection efforts to the entire workforce via email on Oct. 2 and 9. Additionally, messages and other information can be found online at [www.arnold.af.mil/transition](http://www.arnold.af.mil/transition).

### Oct. 2 Message

Team AEDC,

We have received the Government Accountability Office decision on the Test Operations and Sustainment protest. The GAO denied part of the protest and sustained part of the protest. That means the government has some work to do in certain aspects of the source selection. We don't know exactly how long this may take. I will keep you informed once a schedule is established.

The Base Communications and Information Technology

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## HIGH MACH

**Arnold Engineering Development Complex**  
An Air Force Test Center  
Test Complex

**Col. Rodney Todaro**  
Commander

**Jason Austin**  
Chief,  
Public Affairs



**Steve Pearson**  
General Manager,  
Aerospace Testing Alliance

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

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### Core Values

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



### 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

# Donations increase during 2015 Feds Feed Families campaign at AEDC

**By Peggy Proffitt**  
AEDC Personnel Division,  
Feds Feed Families

The Feds Feed Families Campaign is an Air Force wide program that personnel at Arnold Air Force Base have participated in for the past four years.

This year 633 pounds of non-perishable food, personal hygiene and baby items were collected and donated to three local Good Samaritan sites.

The program provides an opportunity for everyone at Arnold to give back to the surrounding communities. We coordinate with three local Good Samaritan agencies. These agencies are non-profit and serve the Tullahoma, Manchester and Decherd communities. There are so many families in our area in desperate need of assistance to provide even basic necessities to their children and families, and this program plays a vital role in providing food, school supplies, baby care items and personal hygiene items to those families.

In spite of the many challenges we have faced in the last year, we have been able to maintain the spirit of giving back to our community through the Feds Feed Families Cam-



**AEDC team members assist volunteers with the Good Samaritan of Tullahoma load boxes of food donated as part of the Complex's Feds Feed Families campaign. Feds Feed Families is an Air Force wide campaign, which AEDC team members have been participating in for the past four years to provide food and other necessities to families in the area who are in need of assistance. Pictured left to right are Shannon Allen, AEDC; Kathy Pelton, Good Samaritan Tullahoma; Pat Crosslin, Good Samaritan Tullahoma; and Peggy Proffitt and William Mallory, AEDC. (Photo by Deidre Ortiz)**

aign. The program normally runs June through August of each year. This year we were able to begin collecting items in early June and the program was extended until the first of October!

On Friday, Oct. 2, we met with Kathy Pelton, executive director of the Tullahoma Good Samaritan,

### CHANGE from page 1

Services protest decision is still expected on or before Oct. 14. More to come on that topic after the GAO decision is rendered. Technical and Management Advisory Services estimated award date is still to be determined.

ATA is under contract until March 30, 2016 for those efforts that are not de-scoped. If additional time is necessary after March, we can then exercise an option to extend performance of the ATA contract until Sept. 30, 2016.

As always, we need to continue to focus on the job at hand and remain agile as we move into a demanding and challenging future.

I am absolutely proud of everyone on our team. Stay safe.

Respectfully,

Col. Todaro

### Oct. 9 Message

Team AEDC,

On Oct. 2, I announced the Government Accountability Office decision regarding the Test Operations and Sustainment protest. In that email I re-

mind you we expected GAO to make a decision regarding the Base Communications and Information Technology Services protest no later than Oct. 14.

Late yesterday we received the BCITS GAO protest decision, and the GAO denied or dismissed all parts of the protest. This decision clears the way for the BCITS transition to begin on Nov. 1 and performance to begin on Feb. 1. In the coming weeks we will provide more information regarding the BCITS transition.

The contract with ATA has been extended until March 30. We will de-scope ATA requirements as performance begins on these new contracts. If additional time is necessary after March, we can extend performance of the ATA contract until Sept. 30, 2016.

These are challenging times for our entire workforce. I know you will continue to do what is right, be agile and accomplish our vital national mission.

Stay safe and stay focused.

Respectfully,

Col. Todaro

and Grace Thompson of the Decherd Good Samaritan and Patrick Jourdan, Arnold AFB Commissary manager to distribute the items so generously donated by caring people at Arnold. Fay Jones, pantry coordinator for the Manchester Good Samaritan was unable to attend, however, we were later able to deliver the donations for the Manchester office to them.

Those of us working in

the campaign would like to express our great appreciation to all those who gave donations to support this cause as well as to all the volunteers who helped make this year's campaign a success.

As the point of contact for the Feds Feed Families Campaign at Arnold AFB, I would like to recognize the team who helped to make the campaign a success this year. Kudos to Amanda Dotson, Shan-

non Allen, Elijah Minter, Melissa Minter, William Mallory, Jennifer Clark, Melissa Tate, Tech Sgt. Shara Jackson, 1st Lt. Carlin Lucente and Lalonie Saltzman. We also appreciate the assistance and cooperation of Patrick Jourdan for allowing us to gather, weigh and store the donations in his warehouse facility at the Commissary until we could distribute at the end of the campaign.

## Summit on Veterans Health

**Holistic Health for Veterans:  
Physical, Mental, and Spiritual**

**Friday, November  
13, 2015**

Holistic Health for Veterans – Physical, Mental, and Spiritual will discuss ways to improve the health and well-being of Veterans.

The Tennessee Department of Veterans Services Commissioner, **Many-Bears Grinder** will give a keynote address.

Active duty armed forces members and Veterans are encouraged to attend.

**Free and open to the public. Military families, community members, and organizations that serve Veterans are also encouraged to attend.**

This event is brought to you by:



**What:** Holistic Health for Veterans – Physical, Mental, and Spiritual

**When:** November 13, 2015

**Time:** 8:00 a.m. - 3:00 p.m.

**Where:** The Avon Williams Campus of Tennessee State University, 330 10th Ave N, Nashville, TN 37203

**Contact**

**[cjone132@my.tnstate.edu](mailto:cjone132@my.tnstate.edu)  
to register**



## Smoking Policy

1. The following revised AEDC smoking policy is effective immediately. Smoking is permitted solely in designated areas identified by a plastic "smoke genie." This receptacle is for the sole purpose of cigarette butt disposal. If there is no receptacle, smoking is not permitted in that area. It is the responsibility of all smokers to clean up the area surrounding the receptacles for any cigarette butts on the ground. Smoking in government-owned vehicles is strictly prohibited. Personnel are allowed to smoke in their personal vehicles at any time. Smoking areas will be held to the absolute minimum and will be located in low traffic, low visibility areas away from points of building ingress/egress and air intakes. A map of all authorized smoking areas is available on the Team AEDC SharePoint site. Smoking near a facility in an area not designated on the map is prohibited and any smoking receptacles located in areas not shown on the map will be removed. All "smoking permitted" and "no smoking" signs will be removed unless specifically required by OSHA.

The fact a person smokes has no bearing on the number of breaks they may take. Breaks should be taken in accordance with the company/agency personnel policies that apply to all employees.

Smoking, including the use of electronic cigarettes and smokeless tobacco, is prohibited in any area, at times when official business is being conducted with government clients, test customers, outside visitors and dignitaries, and where official business is being conducted including conference rooms, auditorium settings, business meetings, or in any other area where Air Force regulations specifically prohibit use. Containers of tobacco waste product, including sealed containers, must not be left unattended or disposed of in trash receptacles. Users of smokeless tobacco must flush tobacco waste down the toilet. Due to the nature, appearance, and safety concerns of electronic cigarettes (also known as "e-cigs"), the use of said products will abide by the same rules for tobacco products stated above and governed by AFI 40-102, *Tobacco Use in the Air Force*.

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

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

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

## Action Line

**Team AEDC**

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

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

**Col. Rodney Todaro**  
AEDC Commander

# ATA and Jacobs support upcoming UTSI STEM activities



Participating with the University of Tennessee Space Institute STEMmobile opportunity left to right are University of Tennessee Space Institute Associate Executive Director James Simonton, Tennessee Tech University STEM Coordinator Scott Eddins, UTSI Program Manager for STEM Outreach Carole Thomas, Jacobs Technology Inc. Senior Vice President Ward Johnson, ATA Deputy General Manager Jeff Haars and AEDC Stem Coordinator Jere Matty. (UTSI Photo)

**By Deidre Ortiz**  
ATA Public Affairs

With a recent donation by ATA and Jacobs of \$2,000, the Milliard Oakley STEMmobile, owned and operated by Tennessee Tech University, will soon be coming to University of Tennessee Space Institute.

The STEMmobile is scheduled to be on site May 16-22, 2016, at UTSI as part of Science, Technology, Engineering and Mathematics Week for area students.

STEM Week is designed to present and engage in outreach activi-

ties with seventh grade students from the Local Workforce Investment Area which encompasses Franklin, Coffee, Moore, Bedford, Lincoln, Grundy and Warren counties. This joint effort is in collaboration with the AEDC Fox's Den and the Hands on Science Center of Tullahoma.

Jeff Haars, ATA deputy general manager, stated ATA fully supports the efforts of educators to engage students in STEM-related activities.

"Helping UTSI host Tennessee Tech's STEMmobile will expand the reach of these activi-

ties and involve local students who would not otherwise be able to participate," he said. "We are glad to invest in this worthwhile activity."

Ward Johnson, senior vice president of Jacobs Technology Inc., added that educating America's youth is important to the company.

"Jacobs is proud to sponsor local STEM programs and we do so across the country," he said. "Investing in our youth is critical to ensuring our continued success as a nation in the fields of science and technology."



STEMmobile at Oakley Science, Technology, Engineering and Mathematics Center (Photo provided)

During STEM Week at UTSI, students will have the opportunity to explore the STEMmobile, a 53-foot classroom on wheels stocked with educational equipment,

learning materials and supplies. The STEMmobile also houses a lending library of instructional materials available for the local educational community.

Further information about STEM Week will be available early next year. Those with questions about STEM Week or the UTSI STEM Program may call 393-7300.



## Project professionals certified in management

Five ATA team members recently received their Project Management Professionals® certification from the Project Management Institute®. Founded in 1969, PMI is a not-for-profit professional membership association for the project, program and portfolio management profession. To become a PMP, you are required to meet specific educational and work experience criteria and pass a four hour exam. Pictured with Information Technology and Systems Department Director Mark Rigney, top left; (clockwise, from top right) certified Project Management Professionals Bob Schwer, Aeropropulsion Systems Acquisition section manager; Karen Zarecor Instrumentation and Controls project manager and database administrator; Trent Loman, Instrumentation and Controls project manager and IT&S Core Process manager; Sabrina Williams, Instrumentation and Controls Project Executive section manager; and Kristen Deardorff, Instrumentation and Controls project manager and Test Data and Measurement Systems architect. (Photo by Jacqueline Cowan)

## Fitness Trail closes during deer hunting season

The AEDC Fitness Trail will be closed weekends through Jan. 10 during deer hunting season. In addition, the Fitness Trail will be closed all day on the following dates: Nov. 26-27, Dec. 25 and Jan. 1.

### COUNCIL from page 1

to promote AEDC. About 20-25 ACC members schedule appointments with the Tennessee Congressional delegation and key test and evaluation officials at the Pentagon to discuss issues facing AEDC.

Members of the council each pay for their trip expenses out-of-pocket.

If you are interested in attending the ACC's annual event, table sponsorships are \$700 for gold and \$350 for silver; individual seats are \$75 per person. Companies and organizations who sponsor at the gold level will receive 10 seats at the event at a reserved table with the sponsor name. If you are interested in attending the ACC's annual event, table sponsorships are \$700 for gold and \$350 for silver; individual seats are \$75 per person. Companies and organizations who sponsor at the gold level will receive 10 seats at the event at a reserved table with the sponsor name.

Silver sponsors will receive five reserved seats at the dinner, five ACC memberships for one year and recognition in the program, dinner slide show and on the ACC web site.

Individual attendees will get one seat in the general seating area along with a membership to ACC for one year.

All members are invited to ACC meetings held each month and other special events throughout the year.

To sponsor a table or individual seats at the ACC's annual dinner, email 2015dinner@arnoldcommunitycouncil.com or call Jim Jolliffe, (931) 545-9135; Harry Brittain, (931) 247-5417; or Claude Morse, (931) 247-5151.

The social begins at 5:30 p.m. with dinner at 6:30 p.m. and the official program at 7 p.m.

**ENGINEERS** from page 1

region to better capture complex shapes like those of modern aircraft and test facilities.

"It's also valuable in CFD analysis because it allows bodies to move relative to one another," Masters said.

As part of a recent contract extension with Air Force Material Command, the Pointwise team has completed tasks associated with an Air Force Small Business Innovation Research contract and is transitioning to a more extensive Commercial Readiness Program contract.

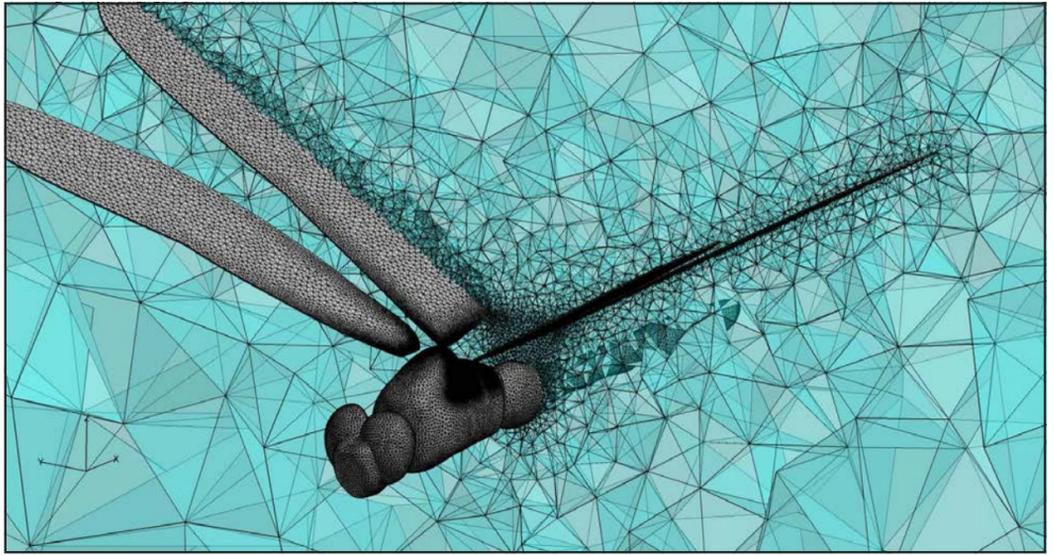
Nick Wyman, director of applied research for Pointwise stated, "This award validates our previous efforts in overset grid generation and assembly and will allow us to support the U.S. Air Force's need for a mission-ready simulation and modeling

tool. The software developed during this project will provide analysis engineers with automated tools leading to significant reduction in overset mesh generation workload."

The Pointwise software, and its predecessor Gridgen, have been used extensively at AEDC for many years.

According to Masters, there are many aerospace-related applications that exist which require surfaces to move within a given region.

"This can include bodies moving relative to each other as [what] happens during a store separation event, or surfaces actually changing shape, which happens with ablation and aeroelasticity," he said. "It also happens during design optimization, where many small perturbations to a given shape are required. Al-



This dragonfly image is an example of a computational mesh generated with Pointwise software, used by AEDC engineer to perform computational fluid dynamics, or CFD, for a wide variety of flight conditions and physical environments. (Image provided)

though there are many ways to handle surface motion, for certain applications, especially store separation, overset techniques are by far the most mature and efficient."

Masters added there are currently many ways to do overset meshing but most are cumbersome and often involve outdated software packages.

"The work being done

by Pointwise using CRP funding will bring a modern approach to overset meshing where the interacting meshes can be easily visualized and problems can be quickly diag-

nosed and remedied. This has the potential to greatly improve the efficiency of setting up a CFD case involving multiple bodies and save considerable engineering man-hours."

**ASTF** from page 1

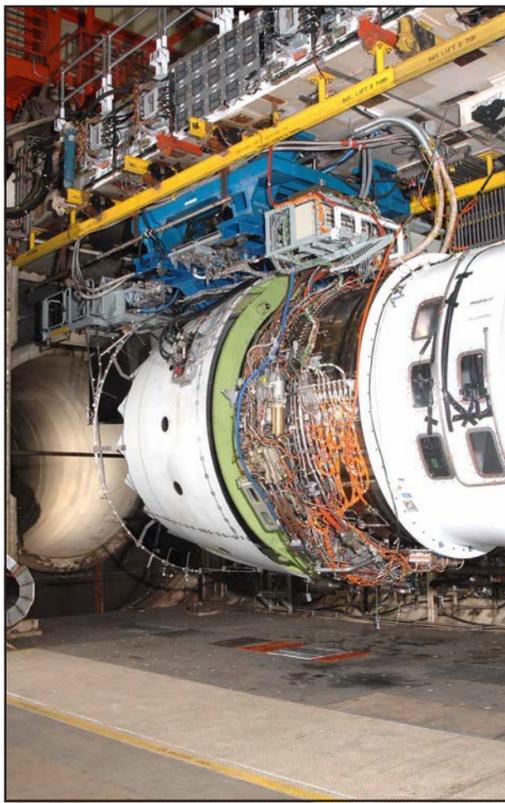
Due to upgrades throughout the years, today ASTF provides conditioned altitude test air for the ETF J and T cells as well as the C cells. The sea level test cells also receive test air from ASTF. Air supply tie-ins were completed to those facilities in 2007 eliminating the use of 1939 German equipment in the ETF Air Supply B-plant.

A ribbon cutting ceremony in 2012 marked the completion of one of nine project upgrades through the Advanced Large Military Engine Capability program. This project upgrade added "critical test cell cooling capability to the large turbine engine altitude test cells during near sea level testing conditions," said Rosemary Matty, retired and the ALMEC program manager in 2012.

The C cells are 28 feet in diameter and approxi-

mately 45 feet in length. Each cell is capable of testing up to Mach 2.3 and simulating altitudes of up to 75,000 feet. The cells can provide engine inlet temperatures of up to 350 degrees Fahrenheit and accommodate engines producing up to 100,000 pounds of thrust.

Since that initial test in 1985, ASTF has tested the Pratt & Whitney F119 engines for the F-22 and F135 engines for the F-35 aircraft. Commercial engine tests have consisted of turbofan engines such as the Rolls Royce Trent 900 and GE and Pratt & Whitney GP7200 for the Airbus A380, the Pratt & Whitney PW6000 for the Airbus A318, the Rolls Royce Trent 1000 for the Boeing 787, the XF7-10 for the Japanese Technical Research and Development Institute P-1 and Rolls Royce BR725 for the Gulfstream G650.



Rolls-Royce Trent 1000 engine prior to testing. The windows on the inlet are used to observe ice buildup on the fan and spinner. The test was conducted in the C-2 test cell in 2007. (Photo by David Housch)



The installation of new stainless steel ducting and valves with associated hardware underway in 2006 from ETF C-Airside Plant to the J/T/SL test cells as part of the Propulsion Consolidation and Streamlining Program. The PC&S Program Phase V, completed in 2007, enabled AEDC to shut down the 1950s-era ETF B-Airside Plant and provide the initial capability for concurrent turbine engine sea level and altitude testing. These upgrades eliminated the past conditions of handling the rust generated with the carbon steel ducting. (Photo by David Housch)

**ASTF Build Highlights and Milestones**

**November 1972** – A contract was awarded to the architectural-engineering joint venture firm of Daniel, Mann, Johnson and Mendenhall /Norman Engineering Co. for the design of the Aeropropulsion Systems Test Facility.

**April 1976** – The resource plan for construction of the ASTF was completed.

**September 1976** – President Gerald R. Ford signed into law the military construction bill that included \$437 million for construction of the ASTF.

**March 1977** – The first design packages for the ASTF were delivered to the Corps of Engineers, Mobile District, by DMJM/Norman.

**May 13, 1977** – Groundbreaking ceremonies were held at the construction site marking the official beginning of the construction project.

**August 4, 1977** – Bids were opened for the construction package.

**August 10, 1977** – The ASTF construction contract was awarded to a joint venture of Morrison-Knudsen Co. Inc., American Bridge Division of U.S. Steel, and Fischback and Moore, Inc.

**September 1977** – Site preparation for the ASTF construction began.

**Spring 1978** – Construction began.

**March 1980** – A ringer crane, with a lifting capacity of 1.2 million pounds, lifted one of the largest single components of the test facility, a cooling equipment section weighing 920,000 pounds, into place.

**May 1980** – The first of two ASTF test cells was put into place.

**October 1980** – The world's largest butterfly valve was installed. The valve, listed in the Guinness Book of World Records, is 32 feet in diameter and weighs 170 tons.

**November 1982** – Two electrical transformers were energized, marking the first major step to powering the facility.

**November 1982** – The final piece of ducting was hoisted into place.

**March 1984** – Installation and check of

the Variable Frequency Starting System is completed approximately five months ahead of schedule by Sverdrup personnel.

**April 1984** – One of the ASTF's 52,500-horsepower air supply compressors was started and accelerated to 3,600 revolutions per minute, a major step to achieving air-on capability.

**September 1984** – AEDC received an operational F100 engine on loan from the Aeronautical Systems Division, Wright-Patterson AFB, Ohio. The engine was to be used to verify that ASTF can safely conduct testing.

**September 1984** – The first phase of the Test Instrumentation System, the prime engine parameter system, was delivered to AEDC by Grumman Data Systems. The TIS will acquire, condition, process, record and display engine data from the facility's test cells.

**October 2, 1984** – The ASTF was dedicated.

**January 1985** – The first full-scale activation test was successfully conducted with an engine simulator in test cell C-1.

**April 1985** – An F100 turbofan engine was successfully run in C-1 for more than an hour at a simulated flight condition of 16,000 feet altitude and 0.8 Mach number.

**June 1985** – The Automatic Test Control System, that will automatically control the setting of engine altitude test conditions in the ASTF, was delivered by Science Applications International Corporation.

**July 1985** – The first F100 engine test using 50 of the 500 TIS data channels was successfully conducted.

**September 1985** – The first test of the ATCS providing air supply leg stabilization was conducted with an engine simulator in test cell C-2.

**September 26, 1985** – An F100 test using the TIS and ATCS was successfully conducted signaling the ASTF for Initial Operational Capability.

# Catch that sneeze please

By AEDC Safety, Health and Environmental

With winter and flu season fast approaching, we each need to do our part to avoid exposure to the disease. Prevention starts with an understanding how the flu is spread. That makes coughing or sneezing a prime culprit in spreading the flu.

When the inside of your nose gets a tickle, a message is sent to your brain's "sneeze center" which sends a message to the

muscles that work together to create the sneeze. These include the abdominal and chest muscles, diaphragm, muscles that control your vocal cords, those in the back of your throat, and your eye-lid muscles: It's impossible to keep your eyes open when you sneeze.

The sneeze center makes all these muscles work in just the right order, to send that irritating particle out of your nose - at speeds up to 100 mph.

So how far does a

sneeze travel?

Since they are very small in size, sneeze droplets soon reach terminal velocity and start drifting in air (just like a cloud). Hence, they can travel any distances depending on air current. When they encounter some substance (maybe a coworker) they settle down to transfer the infection.

These tips can help you avoid coughs, colds, and flu:

• **Practice good respiratory hygiene:** Covering

your mouth and nose by coughing or sneezing into a tissue, not into your hand or into the air. If you don't have a tissue handy, your upper sleeve will do.

• **Keep your hands clean:** Wash your hands with antibacterial soap and warm water for 15-20 seconds several times a day. Use alcohol-based hand wipes or gel sanitizers if soap isn't available.

• **Don't touch:** The most common way to catch the flu is to touch your own eyes, nose or mouth with germey hands. So keep your hands clean

and away from your face.

• **Eat, drink and be healthy:** Eat a well-balanced diet; drink plenty of fluids, especially water. Increase your vitamin C intake.

• **Don't stress out:** Get plenty of sleep and exercise regularly. We are more prone to becoming ill when stressed out. Get some fresh air or a change of scenery during work breaks for a calming effect.

• **Learn to recognize flu symptoms:** These include a high fever, head and muscle aches, extreme fatigue, sore

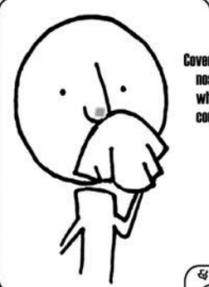
throat, dry cough, runny/stuffy nose and stomach symptoms.

• **Don't share:** Keep your distance if you are sick or around someone else who is sick. If you get the flu, don't come to work where there's a good chance you'll spread it to coworkers. Stay in bed for a couple of days.

• **Get a flu shot:** Check with your health care provider or pharmacist. Many pharmacies offer the vaccine without an appointment. Most insurance policies cover most or all of the cost.

**Stop the spread of germs that make you and others sick!**

## Cover your Cough



Cover your mouth and nose with a tissue when you cough or sneeze



or

cough or sneeze into your upper sleeve or forearm sleeve not your hands

Put your used tissue in the waste basket

## Clean your Hands

after coughing or sneezing



Wash hands with soap and warm water



or

clean with an alcohol-based hand cleaner.




## Flu season has arrived!

Getting a flu shot is the best way to help prevent influenza, and early immunization is key to protecting yourself and your family members. Here, AFMC Vice Commander Maj. Gen. Warren Berry receives his flu vaccine from Senior Airman. Stewart Holliday of the 88th Medical Group on Sept. 29. TRICARE continues to provide shots for all active duty members, military retirees and military family members. Non-Tricare DoD civilians are encouraged to get the flu immunization using their Federal Employee Health Benefits Program. (U.S. Air Force photo)

# AFMC promotes Depression Awareness Month

By Air Force Materiel Command Health and Wellness Team

and feeling down is how severe the symptoms are and how long they last.

## WRIGHT-PATERSON AIR FORCE BASE, Ohio

During the month of October, Air Force Materiel Command will promote Depression Awareness. As part of its Mental Fitness Campaign, AFMC will inform the workforce about the signs and symptoms of depression, offer anonymous behavioral health screenings, and promote mental fitness assistance programs and services. According to the National Institute of Mental Health, depression is highly treatable when an individual receives competent care.

“The campaign’s goal is to reduce the stigma associated with seeking help for depression and other mental health issues,” said Greg Chadwick, AFMC Health and Wellness Coordinator. This question and answer guide explains depression and the importance of seeking professional consultation.

### How does depression differ from feeling sad?

Everyone occasionally feels sad or down, but these feelings usually pass within a few days. The NIMH reports that someone with depression experiences extreme sadness or despair for at least two weeks or longer. Depression can have enormous depth and staying power, and it can weaken one’s joy and interest in activities of daily living. The difference between depression

### What are the signs and symptoms of depression?

People with depression do not experience all of the same symptoms. The physical and psychological signs and symptoms of depression may include:

- Feeling sad or “empty”
- Losing interest in favorite activities
- Feeling hopeless, worthless or helpless
- Not being able to sleep, or sleeping too much
- Having difficulty concentrating, remembering details and making decisions
- Experiencing fatigue and decreased energy
- Overeating, or not wanting to eat at all
- Having thoughts of suicide, or attempting suicide

If you are feeling depressed and hopeless,



and these feelings are interfering with activities of daily living, you may be interested in a mental health screening. An anonymous and confidential depression online screening is offered on our website at [AFMCwellness.com](http://AFMCwellness.com). Screening results are educational, not diagnostic, but are

provided so participants may find out quickly if a professional consultation would be helpful.

### Where can I go for help?

Professional counseling services are available for the AFMC workforce and their families.

Active-duty personnel can contact their lo-

cal mental health clinic for services. Military OneSource is another option for military members and their families.

For more information, call (800) 342-9647 or visit [militaryonesource.mil](http://militaryonesource.mil).

Civilian employees may contact the Employee Assistance Program for free, confidential

counseling services at (800) 222-0364 or visit the EAP website at [FOH4You.com](http://FOH4You.com).

For more information about depression education materials, visit [AFMCwellness.com](http://AFMCwellness.com) or contact your local Civilian Health Promotion Services team.

See the “Find Help?” infobox.



AS AN AEDC EMPLOYEE, 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	
<b>ALL EMPLOYEES</b>		
Suicide prevention	National Suicide Prevention Lifeline	(800) 273-8255
	American Association of Poison Control Centers	(800) 222-1222
Mental health & substance abuse	Centerstone	(931) 461-1300
Unplanned pregnancy	Crisis Pregnancy Assistance Center	(931) 728-6440
Health and Safety Education	American Red Cross	(615) 893-4272
<b>MILITARY</b>		
Virtual extension of installation services	Military One Source	<a href="http://www.militaryonesource.com">www.militaryonesource.com</a>
Health & wellness planning	AFMC Wellness Support Center	<a href="http://www.afmcwellness.com">www.afmcwellness.com</a>
	Health and Wellness Center	(931) 454-6440
Sexual assault & victim advocacy	Sexual Assault Response Coordinator	(931) 581-7494
Finances & work-life balance	Airman and Family Readiness Center	(931) 454-4574
<b>DOD CIVILIAN</b>		
Health & wellness planning	AFMC Wellness Support Center	<a href="http://www.afmcwellness.com">www.afmcwellness.com</a>
	Civilian Health Promotion Services	(931) 454-6440
Work, personal or family issues	Employee Assistance Program	(800) 222-0364 <a href="http://www.foh4you.com">www.foh4you.com</a>
Sexual assault & victim advocacy	Sexual Assault Response Coordinator	(931) 581-7494
Crime victim advocacy	Victim Witness Assistance Program	(931) 454-4567
<b>ATA EMPLOYEES</b>		
Work, personal or family issues	Employee Assistance Program	(866) 828-6049 <a href="http://www.liveandworkwell.com">www.liveandworkwell.com</a>



## Arnold AFB Base Commissary

# WILL BE OPEN

## Veterans' Day

# November 11



# AFMC wingmen continue to take action

By Air Force Materiel Command Public Affairs

**WRIGHT-PATERSON AIR FORCE BASE, Ohio** – Air Force Materiel Command's culture of respect and resiliency is still going strong, and Airmen across the command continue to prove their dedication to that culture through their actions as wingmen.

"In AFMC, and across the Air Force, we accomplish our mission as a dedicated team committed to our core values and to each other," said Jennifer Treat, AFMC Community Support Coordinator. "Every Air Force officer, enlisted member and civilian is

an Airman. The term wingman stems from a time-honored tradition within our Air Force flying community that essentially says a wingman will always stay with and protect the lead pilot, watching his or her back. It is a promise, a pledge, a commitment between Airmen. We're proud to have so many true wingmen in our command who look out for the welfare of their colleagues and community."

In one example of successful wingman intervention, an employee displayed increasing distress over a period of three days and mentioned to a co-worker that she was considering suicide. The co-worker called the Employee Assistance

Program and escorted the employee to meet a counselor. The concerned behavior of the wingman prevented a potentially tragic outcome.

In another situation, a deputy flight commander received a call from one of his Airmen who was on leave and also enrolled in the ADAPT program. The Airman was clearly under the influence, so the wingman drove to the Airman's house and found him in a vehicle with nine empty beer cans. The wingman took the Airman to the emergency room, mental health and ADAPT, where the Airman received in-patient care for addiction. By creating a rapport with his Airmen that made them comfort-

able in reaching out for help, the deputy flight commander was able to stay engaged, prevent the Airman from driving under the influence and limit the severity of the Airman's relapse.

In a third example, a male active duty dependent texted his friend, another dependent, with threats of suicide. The friend immediately notified her active duty sponsor, who notified security forces. When they were unable to reach the male dependent, security forces traced the signals from his cell phone and contacted police in his location -- 60 miles away. Local emergency services got in touch with the male dependent and his parent and took the

dependent to get help. Thanks to the vigilance and resourcefulness of the friend and security forces, the male dependent received the care he needed.

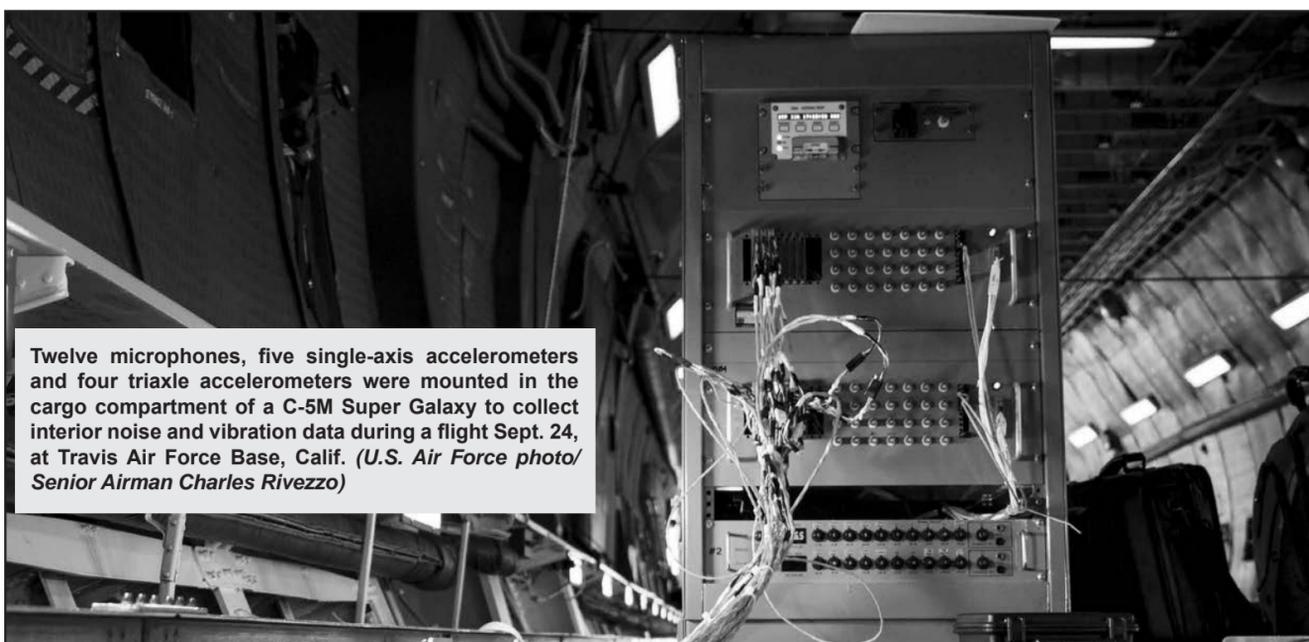
In yet another circumstance, while TDY two wingmen provided physical and emotional support to a classmate who had a serious allergic reaction to food. The wingmen first tried to assist with over the counter medication but as the reaction worsened they called 911 for directions to the emergency room, taking the classmate immediately. The doctor explained that without the medication the wingmen initially provided, the victim would have died within minutes. The

attentive and determined attitudes of the wingmen ensured medical treatment to avert the life-threatening event.

AFMC has been consciously building the concept of wingman intervention since 2013. The goals are to raise awareness of helping behaviors, increase the motivation to help, develop the skills and confidence to intervene safely and assist when necessary, and ensure the safety and well-being of self and others.

If you become aware of situations in which personnel have recognized at-risk behaviors and proactively intervened, please contact your local Community Support Coordinator.

## C-5M scoops up in-flight data for NASA



Twelve microphones, five single-axis accelerometers and four triaxle accelerometers were mounted in the cargo compartment of a C-5M Super Galaxy to collect interior noise and vibration data during a flight Sept. 24, at Travis Air Force Base, Calif. (U.S. Air Force photo/Senior Airman Charles Rivezzo)

to carry satellites, components of the International Space Station and the Hubble Space Telescope.

Unlike traditional C-5s, the C-5M-SCM's aft troop compartment was removed and special modifications were made to the rear loading doors, creating a larger cargo area that can accommodate and transport the Space Container Transportation System.

The need to record the vibratory environment of the cargo compartment primarily stems from just how tight the SCTS canister is placed into the airframe. On average, the clearance between the canister and the walls and ceiling of the aircraft is approximately 1 inch, leaving little wiggle room should the cargo shift within flight. On and off-loading from the aircraft is an operation that can take hours to complete as the canister is basically inched out of the cargo bay.

Currently, there is only one C-5M-SCM suitable for SCTS transportation as another one has recently departed to undergo the RERP upgrade and is not slated to return until late 2017.

fied cargo compartment.

Austin added that while the data gathering facet of this test has been deemed a success, the data is currently being analyzed to verify the aircraft's compliance.

One of only two C-5Cs, an aircraft specially modified to carry satellites and other large cargo, the aircraft recently returned here after being retrofitted with General Electric CF6-80C2 engines and modernized as part of the C-5M Reliability Enhancement and Re-Engining Program (RERP).

Because the new engines provide the C-5 with 22 percent greater takeoff thrust, potentially altering the vibrations generated within the cargo compartment, Air Force Space Command raised concerns that the aircraft be re-evaluated to verify the aircraft still met NASA requirements.

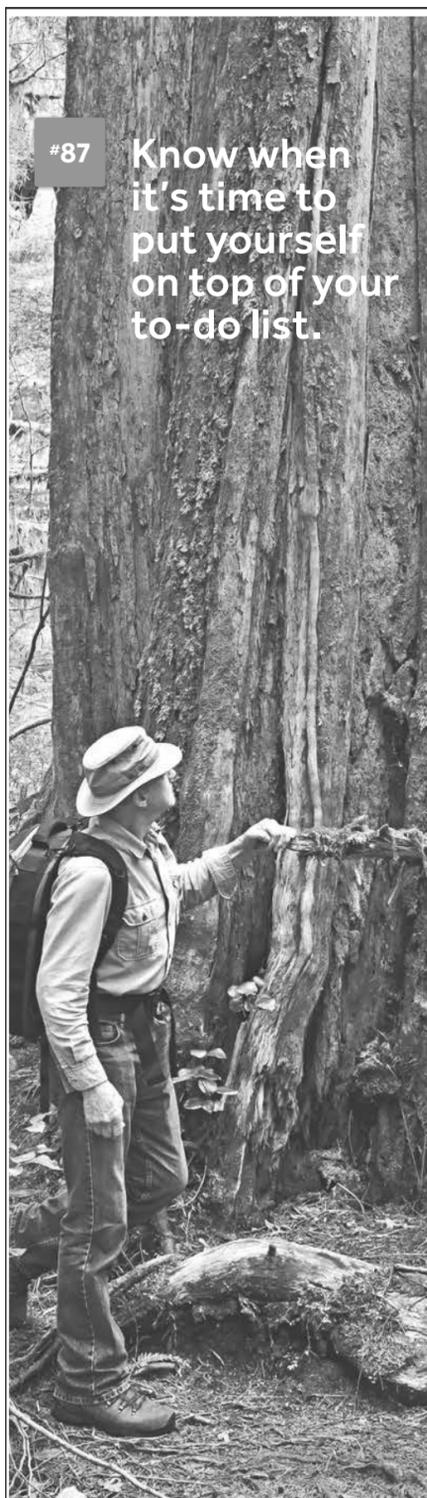
NASA is currently one of the C-5C's largest customers and has utilized it

By Senior Airman Charles Rivezzo  
60th Air Mobility Wing  
Public Affairs

**TRAVIS AIR FORCE BASE, Calif. (AFNS)** – Lockheed Martin and base officials recently recorded in-flight noise and vibration data onboard a C-5M Super Galaxy, ensuring the newly upgraded airframe was still compliant with NASA requirements.

The objective of the test was to collect interior noise and vibration data to verify that the C-5M Space Cargo Modification (SCM) cargo compartment still met the vibroacoustic requirements set forth by NASA, said Brian Austin, a Lockheed Martin representative assigned to the 60th Maintenance Group.

In order to record the data, engineers strategically placed 12 microphones, five single-axis accelerometers and four triaxle accelerometers throughout the aircraft's specially modi-



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## This day in espionage history

By AEDC Industrial Security

**Oct. 20, 1994** – Rosario Ames sentenced to 63 months in prison

**Oct. 28, 1986** – John Anthony Walker pled guilty to espionage, sentenced to two life terms plus 10 years

**Espionage Act of 1917**  
Originally intended to:

- ❖ Prohibit interference with military operations or recruitment
- ❖ Prevent insubordination in the military
- ❖ Prevent the support of U.S. enemies during wartime



# AEDC Woman's Club falls into planting

By Jo Todd  
AEDC Woman's Club

The November meeting of the AEDC Woman's Club will be Nov. 3, 9:30 a.m. at the Arnold Lakeside Center.

Don Shadow of Shadow's Nursery in Huntland will be the presenter. Shadow is a fourth-generation nurseryman, operating his own nursery since 1973. He focuses on species and cultivars that he describes as new and useful. He also promotes color as an important aspect. Shadow is recognized nationally and internationally as an expert plantsman and horticulturist.

The October meeting table donations of \$125 went to the organization "5 Loaves 4 Kids." The donations at the November meeting will go to the Wounded Warriors organization.

The November meeting is open to the public and provides the opportunity to meet the AEDCWC members and become a member. You don't need to have military connections or be involved with Arnold Air Force Base to become a member. For membership information call 455-3569.

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

Reservations and cancellations for the meeting must be made no later than noon, Oct. 27. Make reservations or cancellations by calling 393-2552 or 931-636-4152.

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

# Irish dancers 'step it up'



AEDC Woman's Club president, Kate Canady, fourth from the left, greets the group "Triquetra and One Random Guy" an Irish step dancers group of Wartrace, who performed at the Oct. 6 meeting of the club. Members of the group pictured here are (left to right) Philip Sugg, Tracy H. Sugg, Colt Sugg, Crimson Rose Sugg and Robert P. Sugg. The dance group may be followed on Facebook under the name "Triquetra Irish Step Dancers and one random guy." (Photo provided)

# AEDC VA Picnic Oct. 9 2015



# AFMC offers professional logistics certification programs

**By Air Force Materiel Command Logistics Workforce Development Branch**

**WRIGHT-PATERSON AIR FORCE BASE, Ohio** – Air Force Materiel Command has developed the Logistics Professional Development Program for civilian and military employees, working in a logistics career field, who are looking to formulate a career plan, determine job-related continuous learning objectives and enhance their professional credentials.

LPDP currently consists of three certification programs targeting specific workforce categories within logistics:

- Professional Maintenance Certification Program (PMxCP)
- Professional Deployment/Distribution and Transportation Certification Program (PD-DTCP)
- Professional Supply Management Certification Program (PSMCP)

The Defense Department's Logistics Human Capital Strategy established a vision for the

logistics workforce to evolve into an "integrated, agile, and high-performing future workforce of multi-faceted, interchangeable logisticians that succeed in a joint operating environment." In response, AFMC's Logistics, Civil Engineering and Force Protection directorate led a development effort beginning with PMxCP in 2010 based on active input and participation from an integrated process team consisting of maintenance professionals from each of the command's air logistics complexes, the Air Force Test Center, Air Force Personnel Center, and headquarters AFMC's Depot Maintenance Workforce Development Branch. Once PMxCP demonstrated results, the effort was expanded into the LPDP and now includes Deployment/Distribution and Transportation and Supply Management logistics workforce categories. More than 650 certifications have been awarded so far.

"Air Force senior leaders are charged with supporting and encouraging professional education and training for our logisticians and mentoring our people to ensure

they are highly-qualified members of the Total Force team," said Lisa Smith, AFMC Deputy Director of Logistics, Civil Engineering and Force Protection. "LPDP builds upon these deliberate efforts and takes it to the next level."

Based on the original PMxCP framework, each certification program offers eligible applicants a common framework of functional training requirements, formal and developmental education, work and supervisory experience, and career broadening experience within other logistics disciplines. There are five levels of certification, beginning with a basic entry level (Level 1), working through journeyman and advanced journeyman (Levels 2 and 3), and culminating in the development of enterprise logisticians (Levels 4 and 5). As part of the continuing effort to develop enterprise logisticians, LPDP ensures the three certification programs remain more than a set of static requirements by sustaining a common framework comprised of series-specific, workforce category and enterprise training, formal and developmen-

tal education, and years of experience.

Each certification program shares the same "enterprise" training requirements at each of the five levels. This is part of the deliberative effort to develop logisticians with an enterprise, "big-picture" perspective and to help reinforce other efforts within formal and developmental education and supervisory experience. Each program augments this enterprise training with both workforce category training and series-specific training that is determined by the various IPTs. Workforce category training is specific training applicable to all personnel within maintenance, DDT, or supply and represents the required knowledge for anyone working within these specific workforce categories for specific levels of certification. Series-specific training applies to personnel within any specific occupational series (maintenance, supply or DDT) generally considered eligible for a certification program and represents coursework those personnel should complete when working within a specific series and workforce category

at specific levels of certification.

According to Sandra Wimberly, AFMC Workforce Development Chief, "LPDP provides a professional development framework with consistent expectations, increases the marketability of logistics professionals in a highly competitive environment, and enhances our focus on understanding where we all fit into the big picture." Brig. Gen. Gene Kirkland, AFMC Director of Logistics, Civil Engineering and Force Protection, agrees and is highly supportive of the program. "The future logistics workforce will find itself evolving more rapidly to meet the challenges that will be posed to the warfighter. It's crucial to have a trained and educated logistics workforce in place to succeed," he said. "LPDP is a piece of the puzzle to assist in the development and growth of our vital logistics professionals."

Looking ahead, AFMC's Logistics, Civil Engineering and Force Protection directorate is researching opportunities to link LPDP certifications to recognition by non-DoD professional organizations.

The next open application season for all three certification programs will begin on October 19, 2015, and continue through January 8, 2016. All applicants are encouraged to work on

training and education requirements throughout the year and apply during the open seasons, which are offered bi-annually. Applicants are encouraged to contact their local point of contact early in the application process to ask any questions and submit their packages. Currently, information about the PMxCP can be found in AFMCI 36-402, *Professional Maintenance Certificate Program*. A new instruction (AFMCI 36-202, *Logistics Professional Development Program*) that will provide information on all of AFMC's logistics certification programs is in coordination and will be published when the review process is complete early in 2016. Information and application forms for each certification program, as well as a list of local POCs can be found at <https://cs1.eis.af.mil/sites/afmc-lpdp/SitePages/Home.aspx>.

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## Air Force kicks off Energy Action Month

**By Tech. Sgt. Dan DeCook**  
Secretary of the Air Force Public Affairs

**WASHINGTON (AFNS)** – October is Energy Action Month throughout the federal government and in the Air Force. During the month, the Air Force will

run several campaigns in order to promote using energy wisely.

In 2012, President Barack Obama issued a presidential proclamation declaring October as National Energy Action Month. In the proclamation, Obama called upon Americans to work together "to achieve greater

energy security, a more robust economy, and a healthier environment for our children."

Throughout the month, the Air Force will share innovative ways in which Airmen and their families can make more energy-aware choices. These include turning off lights, limiting the time vehicles

idle, shutting down unnecessary appliances and other equipment, and observing energy efficient behavior on the job. Implementing these types of best practices can have a significant impact on reducing energy demand.

While the Air Force runs many energy awareness programs, it relies

on its Airmen to find new ways to save time, money and energy. Airmen who wish to submit energy saving ideas may do so by working with their local Air Force Smart Operations for the 21st Century office.

The Air Force not only looks for ways to save energy but also to use

renewable energy. Currently, the Air Force is the leading purchaser of renewable energy within the federal government and has been a long time pioneer of renewable energy development and leadership.

For more innovative ways to save energy visit [www.energy.gov](http://www.energy.gov).

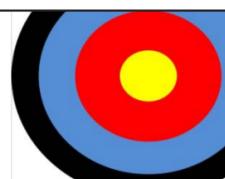


**Arnold AFB SERVICES**  
Combat Support & Community Service

ALC – Arnold Lakeside Center, 454-3350  
Café – Café 100, A&E, 454-5885  
ODR/ITT – Outdoor Recreation, 454-6084  
RRRP – Recycling, 454-6068  
Marketing/Sponsorship – 454-3128  
Barber Shop – 454-6987

**November 2015**

GC – Arnold Golf Course, 454-GOLF  
MG – Mulligan's Grill, GC, 454-FOOD  
FC – Fitness Center, 454-6440  
WI – Wingo Inn, lodging, 454-3051  
Resource Management – 454-7425  
Admin – 454-7779

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
<p>Arnold Lakeside Center is celebrating Thanksgiving early with a Lunch at the Lake</p> <p><b>Nov 4 11am-1:30pm</b> <b>\$8 member</b> <b>\$9 non</b></p> <p>Turkey &amp; dressing, giblet gravy, mashed potatoes, green beans, corn on the cob, &amp; pumpkin pie</p> <p>454-3350</p>	<p><b>4</b></p> <p><b>HAPPY THANKSGIVING</b></p> 	<p><b>4</b></p> <p><b>FC The Triple Threat bench, deadlift, and squat competition</b></p> <p>- Winner based on highest total combined weight - First 20 to participate get t-shirt - Break 1,000 lbs total and receive Hoodie</p> 	<p><b>5</b></p> <p><b>ALC Dining Room</b> Thu 5-8pm Fri 5-9pm Sat 5-9pm</p> <p>Movie: Minions</p>	<p><b>6</b></p> <p><b>ALC First Friday Jam</b> 6pm</p> 	<p><b>7</b></p> <p><b>ODR Dutch Oven Cooking Class</b> 8-10am all ages Crockett Cove bonfire area Learn to build fire, types of Dutch ovens, and how to prepare "Mountain Man Breakfast with Biscuits"</p> 	<p><b>8</b></p> <p><b>9</b></p> <p><b>10</b></p> <p><b>11</b></p>
<p><b>15</b></p> <p><b>Outdoor Recreation</b></p> <p><b>Deck The Doors Contest</b></p> <p>Decorate your office door for the holidays</p> <p>Services Gift Cards for 1<sup>st</sup> (\$100), 2<sup>nd</sup> (\$75), &amp; 3<sup>rd</sup> (\$50)</p> <p>454-6084 Sign up by Nov20 Judging Nov 24</p>				<p><b>12</b></p> <p>Movie: Ant-Man</p>	<p><b>13</b></p> <p><b>ALC Friday Trivia</b> 6:30pm</p>	<p><b>14</b></p> <p><b>ODR Archery Class</b> \$8 age 10+ 10am-noon Sign up by Oct 6</p> 
<p><b>22</b></p> <p>tees with cart \$10 tees with cart \$20</p> <p><b>Old Golf Course</b></p> <p><b>Black Friday</b> The Long Special Nov 23-Nov 30</p>				<p><b>19</b></p> <p><b>ALC Brushes &amp; Bottles</b> \$25 GLC 6pm Sign up by Nov 13</p>  <p>Movie: The Man from U.N.C.L.E.</p>	<p><b>20</b></p> <p><b>ALC Jewelry Fair</b> Café 100 8am-1pm All jewelry \$20 or less</p> 	<p><b>21</b></p> <p><b>Discounted tickets now available through Outdoor Rec</b></p> <p>Call 454-6084 for ticket availability and special offers</p>
<p><b>25</b></p> <p>ALC &amp; Café 100 Closed</p>				<p><b>26</b></p> <p><i>Happy Thanksgiving</i> All activities closed</p>	<p><b>27</b></p> <p>ALC, Café 100, &amp; Barber Shop Closed</p> <p>FC Open 8am-1pm, no classes</p>	<p><b>28</b></p> <p>ALC Closed</p> 
<p><b>29</b></p> <p><b>GC Black Friday Par 3 Turkey Shoot</b> 2pm shotgun start \$22 / \$30 Sign up by Nov 25</p> <p><b>Nov 27</b> 9 hole stroke play 454-GOLF</p>						

