



CFD verifies new AEDC Hypervelocity Wind Tunnel 9 nozzle design

By Deidre Ortiz
AEDC Public Affairs

The new Mach 18 nozzle design at the AEDC Hypervelocity Wind Tunnel 9 in White Oak, Maryland, near Silver Spring, has been successfully verified using computational fluid dynamic (CFD) codes.

A new nozzle was needed to extend the range of desired conditions from the Mach 7, 8, 10 and 14 conditions currently available.

According to Ken Tatum, AEDC modeling and simulation engineer, the nozzle had to be designed analytically to yield the near-uniform conditions in the test section required for the design of advanced future hypersonic weapons.

CFD analyses, performed by Tatum and Derick Daniel, AEDC aerospace engineer, assessed the physically complex hypersonic flows within the nozzle and showed that a high-quality flow within the test section that is undisturbed by excessive wave reflections is theoretically achievable.

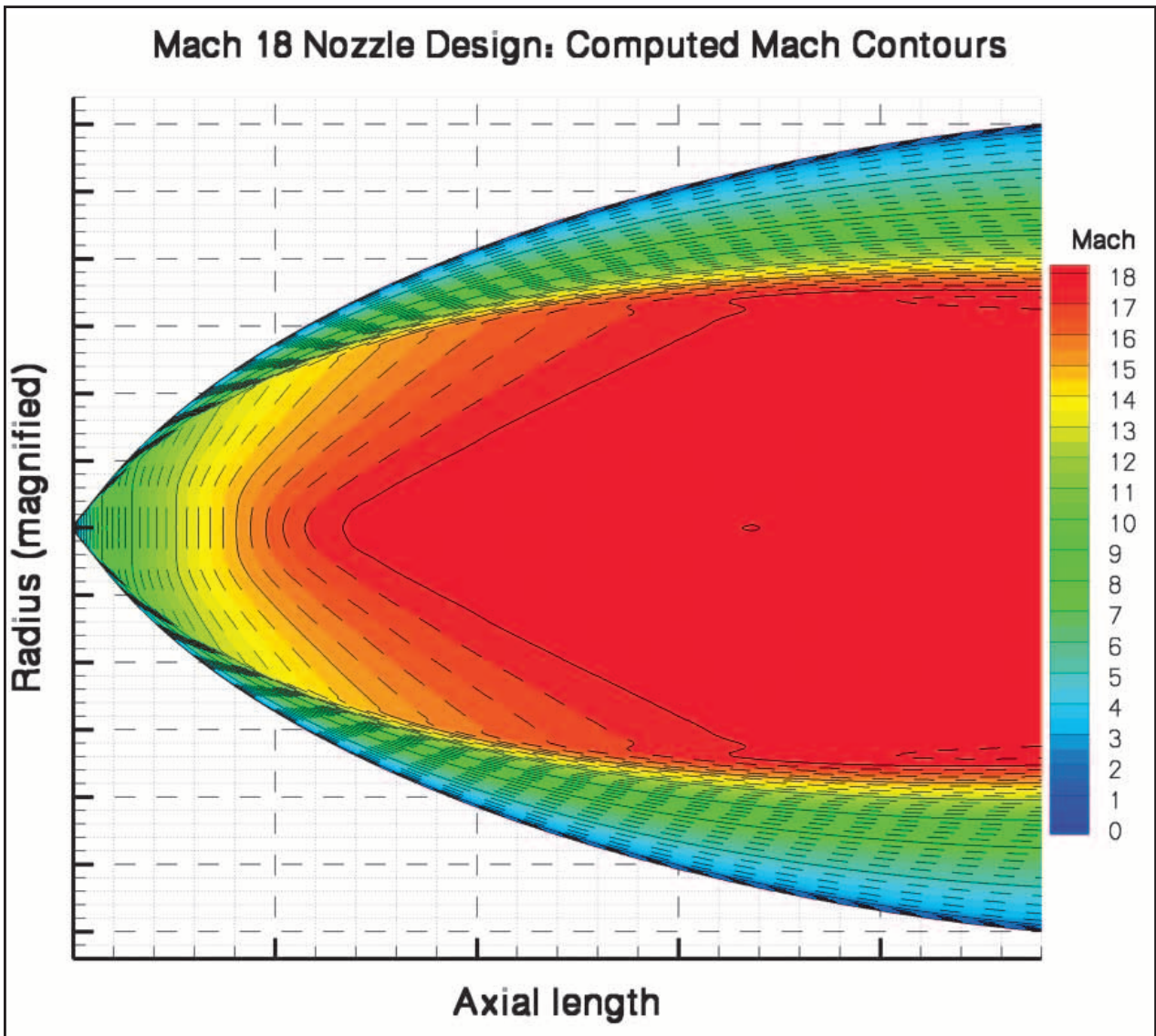
“Ensuring that these facilities provide high-quality test results at the desired conditions and that the facilities are applicable to understanding extreme flow conditions requires advanced numerical analysis to fill in details that are unavailable from testing,” Tatum said.

“The thermodynamic chemistry model used in the CFD codes were validated with Coherent Anti-Stokes Raman Scattering system test data taken by Andrew Alexander, instrumentation and diagnostics engineer,” he added. “Andrew’s measurements verified the existence of non-equilibrium effects at high Mach speeds. We also assessed the effects of pressure waves generated at nozzle joint locations and their effects on the test section for the new nozzle design at equilibrium and non-equilibrium extremes. Accurate modeling of both these effects are critical to building the best nozzle and test capability possible.”

The facilities at Tunnel 9 will be used to study advanced hypersonic system development. Part of these studies are continued advances in the understanding of turbulent boundary layers. High-quality flows will be necessary to provide useful data for such studies. One such diagnostic used to interrogate these boundary layers is particle-image velocimetry (PIV).

CFD analyses performed by Tatum were used to design a local particle injector nozzle for a PIV system in Tunnel 9.

“Particle-image velocimetry seeder designs have



The new Mach 18 nozzle design at the AEDC Hypervelocity Wind Tunnel 9 in White Oak, Maryland, near Silver Spring, has been successfully verified using computational fluid dynamic (CFD) codes. This image shows computed contours of Mach number within the new Mach 18 nozzle design. (AEDC image)

been shown to provide satisfactory particle distributions needed for future test programs,” Tatum said. “Studies of hypersonic boundary layers require careful design of injection flow paths for seeding high-speed boundary layers with satisfactory particle distributions for PIV techniques.”

Tatum performed analyses of numerous PIV seeder designs for both Mach 3 and 10 flows to assess boundary layer particle densities and disturbances on the boundary layer from particle injection into the stream.

These efforts are just two of many to expand the range of capabilities of the Tunnel 9 facilities and to

add to the testing techniques available to Tunnel 9 researchers. The efforts are highly coupled in the sense that high-quality nozzle flows are essential to obtain high-quality data from new and improved test techniques.

AEDC team members are using innovative ideas to address issues that arise when taking on unique, and often challenging, work. It’s these ideas, according to Dr. Woodrow Whitlow, that “provide long-term benefits to test operations.”

See DESIGN, page 3

AEDC releases 2017 Arnold AFB Water Quality Report

By AEDC Civil Engineering Branch

IS THE WATER SAFE?

We have conducted numerous tests for more than 80 contaminants that may be in drinking water. As you will see on the chart with this report, we detected nine of these contaminants.

While eight of these contaminants were within the United States Environmental Protection Agency (U.S. EPA) health standards, sampling that occurred in August 2017 detected lead in a few water fountains above the EPA action level of 15 parts per billion (ppb), or 0.015 milligrams of lead per liter of water. Any detectable level of lead in the water is of concern, but the limits that were detected do not pose an immediate health risk to the base population.

However, Arnold Air Force Base is committed to ensure personnel health and safety are protected, and is taking steps to test 100 percent of water fountains, food preparation sinks and ice machines on base. Any water

sources determined to exceed 15 ppb of lead are being removed from service until remediation actions are implemented to fall below the EPA action level.

WHAT IS THE SOURCE OF THE WATER?

The water on Arnold’s Main Base area comes from Woods Reservoir and is treated at the Base Water Treatment Plant (Building 1503).

The golf course is served by a well located at the golf course. The water is filtered through cartridge filters and disinfected with liquid calcium hypochlorite.

Arnold Village is served by the Estill Springs water system. They have conducted numerous tests for more than 80 contaminants that may be in drinking water and only detected 12 of these contaminants. All of these contaminants are at safe levels.

WHY ARE THERE CONTAMINANTS IN THE DRINKING WATER?

Drinking water, including



Arnold Engineering Development Complex (U.S. Air Force photo/David Housch)

bottled water, may reasonably be expected to contain at least small amounts of some contaminants; however, this does not necessarily indicate that the water poses a health risk. This report is provided to show that Arnold AFB routinely samples

water to determine whether it meets all EPA health standards and is safe to drink. More information about contaminants and potential health effects can be obtained by calling the EPA Safe Drinking Water Hotline at (800) 426-4791.

DO I NEED TO TAKE SPECIAL PRECAUTIONS?

According to the EPA, lead can cause serious health problems if too much enters your body from drinking water or other sources. It can cause

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Arnold AFB Legal office offers holiday gift guidance

By Sara Anderson
Arnold AFB Legal Office

It's the season for giving and as the holidays approach, it is important to be mindful of the ethics rules as they apply to gift giving and gift acceptance. The Arnold Air Force Base Legal Office aims to provide the necessary ethical guidelines so everyone can go forward and enjoy the holiday season.

Any time something with monetary value is offered to a government employee – including a meal, party invitation, or wrapped gift – federal ethics regulations apply. The three main areas of concern during the holiday season are 1) gifts between government employees; 2) gifts between subordinate and supervisor; and 3) gifts between

government and contractor employees.

Gifts between Government Employees

As a general rule, peers and coworkers are free to exchange gifts. There are no legal restrictions on gifts given to peers or subordinates. However, common sense and good taste should apply.

Gifts between Subordinate and Supervisor

Generally speaking, supervisors may not accept gifts from subordinates or Federal personnel who receive less pay. Exceptions include any occasion on which gifts are traditionally given or exchanged. With the holidays being a traditional source of gift giving, Federal

law allows subordinates to gift items valued at ten dollars or less to their superiors. Also, supervisors may accept food and refreshments shared in the office and may share in the expenses of an office party. Lastly, if a subordinate attends a social event at the supervisor's residence, the subordinate may give the supervisor a hospitality gift of the type and value customarily given on such an occasion.

Gifts between Government and Contractor employees

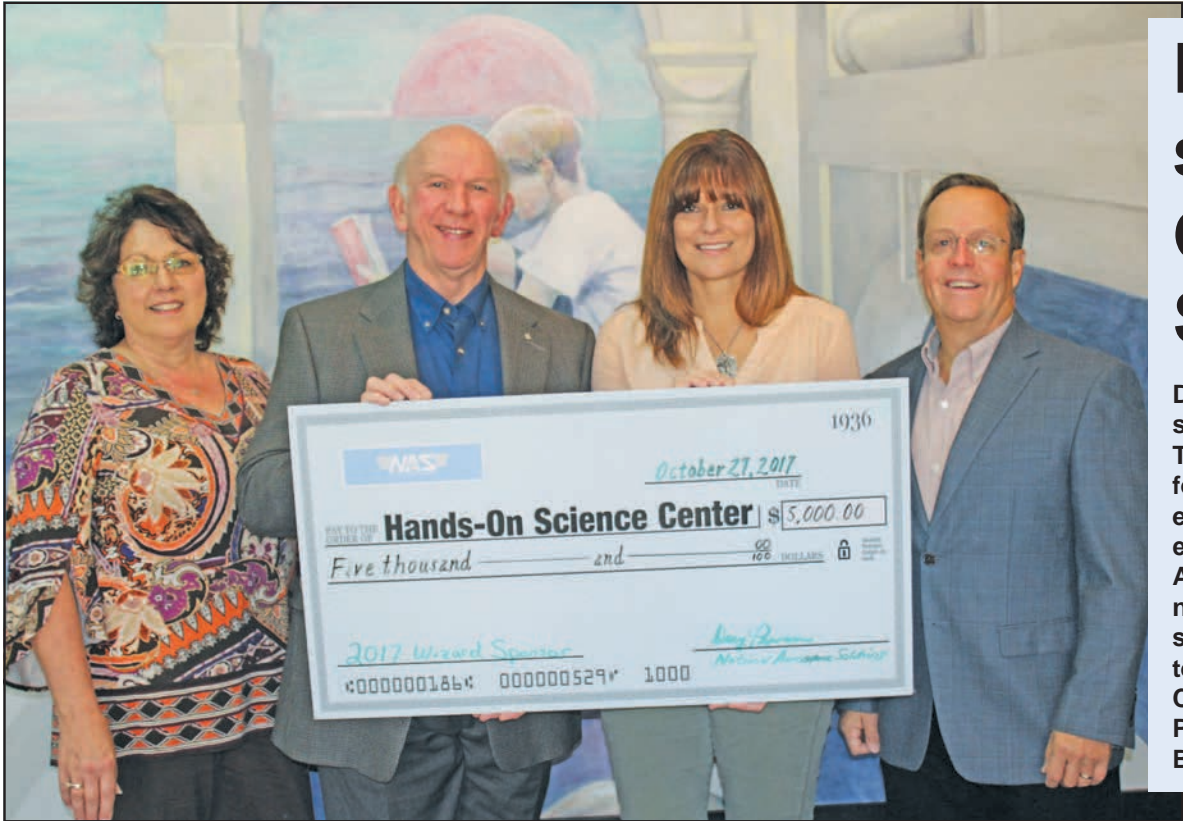
Basic ethics rules state that government employees may not accept gifts from "prohibited sources," defined as any person or non-federal entity currently doing business with or seeking to do business with the federal government. In addition, gifts

from any source offered because of a government employee's official position cannot be accepted. However, in limited circumstances, government employees may accept gifts from contractors and other outside sources. Gifts from prohibited sources must never exceed \$20 per gift or \$50 per year. This is often referred to as the "20/50 rule." Under no circumstances is the giving of cash permissible, even via a gift card (however, a gift card from a specific vendor, such as Starbucks, is permissible as long as it is within the limitations of the 20/50 rule). Other exceptions to the general gift giving guidelines exist. For example, gifts motivated by a genuine personal or family relationship are acceptable on a much broader basis. Also,

certain items are not classified as gifts, such as greeting cards and modest items of food and refreshment like coffee and donuts. There are many other requirements and exceptions, and it's always a good idea to consult with an ethics counselor before deviating from the general rules.

Whether you think the holiday season begins the day after Thanksgiving or the day Army & Air Force Exchange Service puts up its first Christmas tree, being mindful of the ethical guidelines ensures everyone in the AEDC family at Arnold is able to enjoy the holiday fun!

If you have any questions or concerns and would like to consult an ethics counselor, contact the Legal Office at (931) 454-7814.



Donation made in support of Hands-On Science Center's STEM programs

Doug Pearson, deputy general manager of National Aerospace Solutions, LLC, the contractor overseeing the AEDC Test Operations and Sustainment contract, presents a check for \$5,000 to Deb Wimberley, director of the Hands-On Science Center in Tullahoma, to help support the HOSC's Science, Technology, Engineering and Math (STEM) programs. AEDC supports many STEM efforts throughout middle Tennessee impacting nearly 19,000 students in more than 60 schools since 2013. AEDC also has a program dedicated to STEM at Arnold Air Force Base. Pictured left to right are Carole Thomas, president of the HOSC Board of Directors; Pearson; Wimberly; and Jim Jolliffe, a member of the HOSC Board of Directors. (Courtesy photo)

November safety campaign focuses on importance of explosive safety

By AEDC Safety

The NAS Safety Condition Campaign focus for November is Explosives Safety.

The purpose of the Safety Condition Campaign is to identify conditions that make compliance with safety requirements a challenge, to ensure we are in compliance with the Air Force safety standards, and to establish consistency in practices.

Safety, Health and Environmental Standard E15 lists all of the requirements for Explosives Safety. The standard is summarized as:

- A minimum of two persons must be present when conducting explosives operations.
- Metallic equipment, used with explosives, must be grounded and/or bonded.
- An Explosives Site Plan must be developed in accordance with SHE

Standard E15 requirements.

- Work instructions must be approved by the Fire Department and Air Force Safety.
- Hand tools used in locations containing explosives must be non-sparking.
- In facilities containing explosives, personnel limits must be posted.
- Cell phone and/or radio transmissions are prohibited within specified limits, 10 ft. or 25 ft.
- Transporting rocket motors shall be done during off peak travel times and not during shift change.
- The name and title of those responsible for safe handling of explosives shall be designated in writing.

Improper handling of explosive components may not only result in malfunctioning and loss of test data and time, but may cause mishaps that could result in injury, loss of life or damage to property.

Inattention to detail, failure to follow written instructions, improper work practices, complacency and poor housekeeping practices are just some of the human factors that contribute to a mishap. Explosives operations must be performed by trained and qualified employees under the supervision of an employee who is trained and qualified to understand the hazards of the operation. For this reason, a two-man rule is always in effect when working with explosives. Personnel must be trained to work with explosives and follow written work instructions. They must also know to question such instructions or other work practices that are or have the potential to become unsafe.

The Base Operating Contractor Explosives Safety Officer or ESO is the individual designated to oversee the explosives safety program. The AEDC Air Force Safety Office will have an individual designated AEDC

Explosives Safety Manager with overall responsibility for direction and management of the AEDC explosives safety program. The Base Operating Contractor Safety, Health, and Environmental also has an individual designated as the Base Operating Contractor ESO who will be responsible for the administration of the Base Operating Contractor's explosives safety program.

In addition to explosive safety, this year 10 safety focus topics have been completed: fall protection, barricades and signs, lock out/tag out, confined space entry, energized electrical work, lifting & rigging, excavation & trenching, scaffolding, elevated work platforms and hazardous chemicals. Efforts resulted in successfully identifying areas that need to be improved. In each case, a short term solution was identified and the process for identifying longer term fixes are underway.

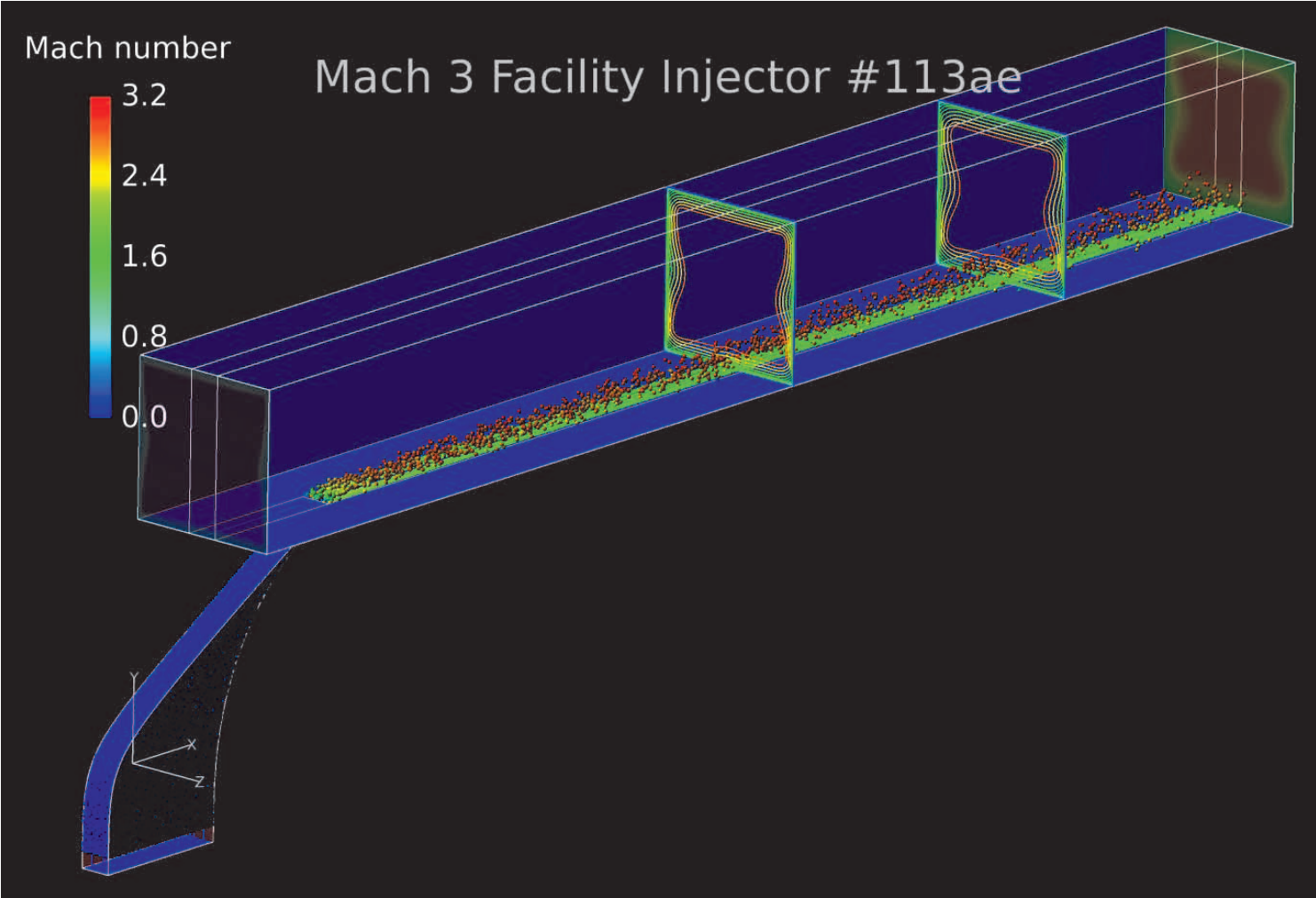
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Innovative ideas are also important to the U.S. Air Force because complex security and fiscal challenges demand that Airmen are innovative and find better and smarter ways to "fly, fight and win." The Air Force leverages many channels to empower Airmen and industry partners to submit ideas as part of an overarching culture of innovation.

In a recent interview with *Defense News*, Air Force Secretary Heather Wilson commented on the Air Force's focus on innovation and looking toward the future.

"What kind of an Air Force do we need in 2030, and how do we start ourselves on the process of getting there? We are a service whose roots and history are very deep in innovation, and I want to make sure that we're not losing that," she said.

If any AEDC team members have an idea about how to do work more efficiently or how to reduce mission risk, the AEDC Technical Innovations Branch managers would like to hear about it. Contact the Technical Innovations Branch at (931) 454-7491.



An AEDC modeling and simulation engineer performed analyses of numerous particle-image velocimetry (PIV) seeder designs for both Mach 3 and 10 flows to assess boundary layer particle densities and disturbances on the boundary layer from particle injection into the stream. This image shows simulated particles being injected from below, into and down a duct of Mach 3 flow. (AEDC image)

AEDC quarterly award winners announced



1st Lt. Roy Fisher
Test Operations Division,
Arnold AFB
Company Grade Officer of the
Quarter



Staff Sgt. Oscar Samame
Financial Management &
Comptroller Division, Arnold
AFB
Honor Guard of the Quarter



Kristina Herrera
704th Test Squadron, Holloman AFB
Civilian of the Quarter
Category II



James Tapp
Test Support Division, Arnold AFB
Civilian of the Quarter
Category III



John Garner
Services Branch, Arnold AFB
Non-Appropriated Fund employee of the Quarter
Category II



Steven Barnes
Services Branch, Arnold AFB
Non-Appropriated Fund employee of the Quarter
Category I



Patricia Henderson
AFTC Contracting Execution Division, Arnold AFB
Directorate of Contracting of the Quarter, Category III



Kathy Swanson
AFTC Contracting Execution Division, Arnold AFB
AFTC Staff 2016 Civilian of the Year, Category II



Scott Williams
Test Operations Division, Arnold AFB
AEDC Technical Achievement Award

Photos unavailable for:
Tech. Sgt. Daniel Hansford; 704th Test Group, Holloman AFB
- Non-Commissioned Officer of the Quarter

Master Sgt. Marc Berger; 704th Test Group, Holloman AFB -
Senior Non-Commissioned Officer of the Quarter

AEDC Exceptional Innovator Award

746th Test Support NAVWAR Direct Inject Capability
704th Test Group, Holloman AFB

Team Members: Nicolas Arosemena, Daniel Bacungan, Jason Bingham, Jerome Echelbarger, Grant Graupmann, Jeremiah Johnson, Kalyn Jones, Dominick Martin, Don Morales, Carlos Ruiz, Rodney Smith, Jill Stevens, Nicole Tekell, Eddie Thompson, Kim Tillotson, Brandi Wong

BE CAREFUL of
what you post online
Don't become an EASY TARGET

Preventative measures include:

- Do not post any information you want to protect on any device that connects to the internet.
- Always use high security settings on social networking sites, and be very limited in the personal information you share.
- Use anti-virus and firewall software. Keep them and your browser, and operating system patched and updated.
- Change your passwords periodically and do not reuse old passwords. Do not use the same passwords for more than one system or service.
- Do not post anything that might embarrass you later, or that you don't want strangers to know.
- Verify those you correspond with. It is easy for people to fake identities over the internet.

Internet-based social networking sites have created a revolution in social connectivity; however, con artists, criminals, and other dishonest actors are exploiting this capability for nefarious purposes.

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damage to the brain and kidneys, and can interfere with the production of red blood cells that carry oxygen to all parts of the body. The greatest risk of lead exposure is to infants, young children and pregnant women. Scientists have linked the effects of lead on the brain with lowered IQ in children. Adults with kidney problems and high blood pressure can be affected by low levels of lead more than healthy adults. Lead is stored in the bones, and it can be released later in life. During pregnancy, the child receives lead from the mother’s bones, which may affect brain development.

While Arnold AFB personnel are testing all drinking water sources on base and removing from service any that test above the EPA action level of 15 ppb for lead, there are steps you can take to reduce exposure to lead in drinking water both at work and at home:

- (I) Run the cold water 15 to 30 seconds to flush out the water in the faucet body and plumbing. This is the source of lead in almost all drinking water from a home tap.
- (II) Drink and cook with cold water only, do not use hot water from the tap for cooking. Boiling water will not reduce lead.
- (III) Look for alternative sources of water, such as bottled water, or use a water filter.

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections.

These people should seek advice about not only their drinking water, but also food preparation, personal hygiene, and precautions in handling infants and pets from their health care providers.

EPA/Centers for Disease Control (CDC) guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and other microbial contaminants are available from the Safe Drinking Water Hotline at (800) 426-4791.

WERE THERE ANY CONTAMINANTS DETECTED IN THE DRINKING WATER?

All sources of drinking water contain some naturally occurring contaminants. In order to ensure that tap water is safe to drink, the USEPA prescribes regulations which limit the amount of contaminants allowed in water provided by public water systems. At low levels, these substances are generally not harmful in our drinking water. Removing all contaminants would be extremely expensive, and in most cases, would not provide increased protection of public health. The EPA or the State requires us to monitor for certain contaminants less than once per year because the concentrations of these contaminants do not change frequently.

Due to the water fountains that were found to have lead above the EPA action level, the number and frequency of water samples has been increased until such time the detection levels for lead falls below 15 ppb in all tests.

For more information about the drinking water on Arnold AFB and the AEDC Golf Course, call the Base

bioenvironmental engineer at (931) 454-5635.

For more information about the drinking water in Arnold Village, call Estill Springs City Hall at (931) 649-5188.

Detailed Information on Contaminants

Barium occurs naturally at very low concentrations in our groundwater.

Chlorine Residual Disinfection is maintained throughout the distribution system. Chlorine is added to the drinking water supply at well sites to provide assurance that water delivered to customers will remain free of microbiological contamination. This also ensures that the water meets microbiological drinking water standards from the time it is pumped from the ground until it reaches the customer’s tap.

Disinfection Byproducts are the unintended reactions of disinfectants with naturally occurring materials in the water (e.g., natural organic matter, bromide, or disinfection by-product precursors).

HAA5s (Halo acetic Acids) are chemicals that can form resulting from water treatment, when water acidity and temperature are slightly high and treatment chemicals react with organic particles or bromide.

Lead and Copper are naturally occurring metals which are generally found at very low levels in source waters. If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing.

Nitrate is a form of nitrogen and an important plant nutrient. Nitrate in drinking water at levels above 10 ppm is a health risk for infants less than six months of age. High nitrate levels in drinking water can cause blue baby syndrome. Nitrate levels may rise quickly for short periods of time because of rainfall or agricultural activity. If you are caring for an infant, ask advice from your health care provider.

PFOS/PFOA (Perfluorooctanesulfonic acid/Perfluorooctanoic Acid) is a synthetic, fully fluorinated organic acid; it used in a variety of consumer products and in the production of fluoropolymers, and it is generated as a degradation product of other per fluorinated compounds.

TTHMs (Total Trihalomethanes) are a group of four chemicals that are formed along with other disinfection by products when chlorine or other disinfectants used to control microbial contaminants in drinking water react with naturally occurring organic and inorganic matter in water.

*The Action Level for Naturally Occurring Metals (Lead and Copper) is calculated based on the 90th percentile of all the samples taken in the distribution system (e.g., of 10 samples collected, if two samples are above the Action Level, then the Action Level has been exceeded). The levels found in the AEDC drinking water system are below the Action Level, therefore, we are in compliance, and the water is safe to drink.

What does this chart mean?

- **MCLG - Maximum Contaminant Level Goal**, or the level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.
- **MCL - Maximum Contaminant Level**, or the highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology. To understand the possible health effects described for many regulated constituents, a person would have to drink 2 liters of water every day at the MCL level for a lifetime to have a one-in-a-million chance of having the described health effect.
- **AL - Action Level**, or the concentration of a contaminant which, when exceeded, triggers treatment or other requirements which a water system must follow.
- **Parts per million (ppm) or Milligrams per liter (mg/l)** - explained as a relation to money as one part per million corresponds to a single penny in \$10,000.
- **Parts per billion (ppb) or Micrograms per liter** - explained as a relation money as one part per billion corresponds to a single penny in \$10,000,000.
- **Parts per trillion (ppt) or Nano grams per liter** - explained as a relation money as one part per trillion corresponds to a single penny in \$10,000,000,000.
- **MRDL - Maximum Residential Disinfectant Level** -The highest level of disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for the control of microbial contaminants.
- **MRDLG - Maximum Residential Disinfectant Level Goal** -The level of drinking water disinfectant below which there is no known or expected risk to health.
- **RAA - Running Annual Average** of the Results.

Water Quality Data

Disinfectants and Disinfection By-Products							
Contaminant	MRDLG	MRDL	RAA	Range	Sample Year	Violation	Typical Source
Golf Course							
Chlorine (ppm)	4	4	1.6	0.4 – 2.2	2017	0	Water additive used to control microbes.
Main Base							
Chlorine (ppm)	4	4	2.1	1.6 – 2.3	2017	0	Water additive used to control microbes.
Chlorite	MCLG 0.8	MCL 1.0	0.59	0.52 – 0.70	2017	0	Byproduct of disinfection
TTHMs	N/A	MCL 0.08	0.074	0.062 - 0.074	2017	0	Byproduct of disinfection
HAA5s	N/A	0.06	0.003	<0.003 - 0.007	2017	0	Byproduct of disinfection
Inorganic Contaminant							
Contaminant	MCLG	MCL	Highest Level Detected	Range	Sample Year	Violation	Typical Source
Barium (ppm)	2	2	0.01	N/A	2014	0	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits.
Nitrate [measured as Nitrogen] (ppm)	10	10	0.70	N/A	2017	0	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.
Naturally Occurring Metals							
Contaminants	MCLG	AL	Level Found*	Sample Date	Typical Source		
Copper (ppm) - action level at consumer taps	1.3	1.3	0.54	8/8/2017	Erosion of natural deposits; Leaching from wood preservatives; Corrosion of household plumbing systems.		
Lead (ppb) - action level at consumer taps	0	15	24	8/8/2017	Corrosion of household plumbing systems; Erosion of natural deposits.		
Fully Fluorinated Organic Acid							
Contaminants	MCL	AL	Highest Level Detected	Sample Date	Typical Source		
PFOS (ppt)	70	N/A	3.9	8/24/2016	Aqueous film forming foam used in firefighting.		



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Dec 2 Outdoor Rec Trip
Cumberland Caverns Tour
PLUS Suzy Bogguss Christmas

\$30 9am
 5pm
 includes + skit

Sign up by Nov 28 454-6084

See the December Services Calendar on page 11.

Speed drives Air Force, DoD innovation, improvements

Wilson said the Air Force is focused on the need for speed.

"We can't buy new capabilities using old ways," he said.

"Everything we do is to try to compress that time," Wilson said. "Speed is the big driver."

Developing military capabilities is an

“We are going to have to be thoughtful about this as we go about making truly autonomous things,” Wilson said. “We can’t just unleash technology without being thoughtful about how autonomous it can really be.”



Runners leave the starting line during the 32nd annual Turkey Trot. The 5K run on Nov. 9 drew more than 50 participants made up of AEDC staff, their families and retirees and service members at Arnold AFB. (U.S. Air Force photo/Rick Goodfriend)



Beth Sinemus, Jory Boudreaux and Annawyn Boudreaux (pictured left to right) show off their Turkey Trot attire after crossing the finish line. (U.S. Air Force photo/Rick Goodfriend)



Paul Wright, program manager with Arnold Air Force Base Capital Improvement Branch, approaches the finish line with the fastest time during the 32nd annual Turkey Trot. (U.S. Air Force photo/Rick Goodfriend)

Return of Turkey Trot draws dozens of runners

By Bradley Hicks
AEDC Public Affairs

The vibrant hues of the falling leaves blanketing the ground outside the Arnold Air Force Base Administration & Engineering Building along with the crisp autumn air created an ideal backdrop as AEDC team members and local community lined up to take part in a pre-Thanksgiving tradition, the AEDC Turkey Trot.

The 32nd annual Turkey Trot was Nov. 9 and the 5K, or approximately 3.1-mile run that began outside the A&E Building, took the 55-registered participants around the loop in front of the building, onto the Fitness Trail and back to the A&E Building.

This year the AEDC Turkey Trot, in a way, marked the return of the decades-old event hosted for years by the Arnold AFB Company Grade Officers Council. First-time organizer 2nd Lt. Ryan Boudreaux, with Space and Missiles Combined Test Force, said an official Turkey Trot was not held last year. Still, around 15 avid runners and prior participants across AEDC joined forces to hold an ad hoc Turkey Trot in 2016.

“They kind of missed the Turkey Trot last year,” Boudreaux said. “They didn’t have an officially sanctioned one last year, so we wanted to make sure that we absolutely got it this year so that we could keep up the tradition.”

To resurrect the Turkey Trot, organizers of this year’s event reviewed notes left by past race coordinators to glean what has worked and what could be tweaked.

“One of the obstacles we ran into this year was that it’s during CFC [Combined Federal Campaign] time, so we didn’t really want to do it as a fundraiser,” Boudreaux said. “I think in years past they’ve done it as a fundraiser either for the CGOC or for a local charity, so we went with the food donations.”

While each participant was able to purchase a Turkey Trot T-shirt for \$5, the true entry fee for this year’s run was the donation of nonperishable food items. The food donations will be provided to a local food bank.

Registration for the 2017 Turkey Trot began weeks prior to the event. Boudreaux said the response was very positive.

“A lot of people were very excited we were doing it,” he said. “I was surprised that we had 55 people come out. That’s a pretty big number, I think, for fitness stuff, at least when it’s not forced.”

Unlike past Turkey Trots, this year’s event did not have divisions based on age and gender. There were no prizes

and the only thing on the line was bragging rights. Those bragging rights were earned by Paul Wright, program manager in Arnold AFB Capital Improvements, who outpaced the field with a time of 20 minutes, 22 seconds, crossing the finish line more than two minutes ahead of the next finisher.

Wright, who recently took up running again after a brief layoff, had taken part in the AEDC Turkey Trot each of the seven years prior to this year. He intends to run in the 2018 installment.

“It’s a really fun event to get contractors and government folks out here together to have some camaraderie and just have some fun together,” Wright said.

Shanda Peterson, who works in Arnold AFB Financial Management, took up running in July and the Turkey Trot was her first 5K. Her goal is to run a half-marathon, which is 13.1 miles, and the Turkey Trot was a way to gauge her progress. She finished with a time of 25 minutes, 42 seconds.

“I think it’s just a good way to start off Veterans Day, and it’s near Thanksgiving,” she said. “So, when I’m running, I’m envisioning all that I’m thankful for.”

Jory Boudreaux, who works in the Air Force Research Laboratory at Arnold AFB and wife of Ryan Boudreaux, trained with her 12-year-old daughter Annawyn to participate in the Turkey Trot. It marked Annawyn’s first 5K, and she accomplished her goal of running all the way through it.

“I’m happy and tired at the same time,” Annawyn said following the run. “I’m glad I didn’t stop.”

The mother-daughter duo not only trained together, they also coordinated their Turkey Trot attire, donning the official event T-shirts and the same striped, Turkey emblazoned knee socks.

“We decided to go all out,” Jory said.

Beth Sinemus, wife of 1st Lt. Tom Sinemus with the Arnold AFB Integration & Support Branch, arrived wearing the same socks, even though she had not coordinated with Jory and Annawyn, allowing them to form a Turkey Trot trio. Sinemus also got into the spirit by running while wearing a colorful turkey hat.

“It’s not a trot without a turkey,” she said.

Jory, Annawyn and Sinemus all said they will continue to participate in future Turkey Trots at the Complex.

“It’s neat to see everybody come together to do it, and I think the loop was really fun,” Jory said. “It was so leafy and pretty. It really gets you in the fall mood.”

Boudreaux said organizers are already

looking toward the next Turkey Trot, considering ways to enhance the event now that the race is back. Fun, fellowship and lending a helping hand to a worthy cause will remain the priorities, but the 2018 AEDC Turkey Trot could be a venue for participants to get their pre-holiday com-

petitive juices flowing.

“This year was a fun run, but I think with the amount of success we had this year and the notes we were able to take, I think we’ll probably do some kind of prizes or something next year,” Boudreaux said.

AEDC Woman’s Club prepares for Christmas

By Barbara McGuire
AEDC Woman’s Club

TULLAHOMA, TENN. - During the AEDC Woman’s Club Dec. 7 meeting, singer and songwriter Carson Hill, from South Carolina, will entertain members.

Christmas will be the theme of the meeting and will include Christmas music, a Christmas Boutique, donations for Toys for Tots and a Christmas sing-along. Gifts and food items will be available to purchase at the meeting through the Christmas Boutique, and participants are encouraged to bring toys for the Toys for Tots donations or give to the Toys for Tots table donations. The Tullahoma Fire Department will pick up donations.

The Nov. 2 meeting featured Dan Thomas, meteorologist from WSMV/TV. His presentation featured a Weather Challenge with questions concerning thunderstorms and tornadoes. He spoke about misinformation concerning tornadoes and what to do if caught in a tornado. The members and guests viewed his experiments showing a cloud in a bottle and a tornado in a box.

The meeting also featured the Secret Shoppers. Three members shop and display their wares. Members purchase the items and the money raised goes toward the AEDCWC scholarship fund. The secret shoppers were Kate Canady, Suzette McCrorey and Patti Mathis. Suzette was crowned Queen of the Secret Shoppers.

Table Donations of \$125 at the Nov. 2 meeting went to Fisher House of Mur-



Meteorologist Dan Thomas, fourth from left, takes a moment to pose for a photo with the AEDC Woman’s Club members during his presentation at the AEDCWC meeting Nov. 2. Thomas is a meteorologist at WSMV/TV. Pictured left to right are Sande Hayes, Kate Canady, Suzie Schultz, Thomas, Anne Wonder and Violet Nauseef. (Courtesy photo)

freesboro.

The social hour of the Dec. 7 meeting starts at 9:30 a.m., with the business meeting and program beginning at 10 a.m.

Reservations must be made no later than noon Nov. 30 and are required to gain access to the ALC. Make reserva-

tions by calling (931) 393-2552 or (931) 636-4152.

The December 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 visit and be-

come a member.

For information about the AEDC Woman’s Club, call the membership chairman at (931) 455-3569.

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.

Airman shares story of family, service in wake of natural disasters

By Staff Sgt. Robert Hicks
621st Contingency Response Wing

R O O S E V E L T
ROADS, Puerto Rico
(AFNS) – Growing up in Puerto Rico five miles from Roosevelt Roads, one Airman from Travis Air Force Base, California knows all too well the dangers due to the location of the island.

“Since I was a child, my

family would always stock pile food and water in preparation for the hurricane season,” said Capt. Christian Ocasio, 821st Contingency Response Support Squadron civil engineering officer. “There would always be a powerful storm heading straight toward us, but would change directions at the last minute.”

That’s exactly what Hurricane Irma did after devastating the U.S. Virgin

Islands.

In the wake of Hurricane Irma, Ocasio and his team were sent to the Virgin Islands to perform an airfield assessment of airports in St. Thomas and St. Croix.

After the assessments were complete, the team went to Puerto Rico to wait for a flight back to Travis AFB. While there, Hurricane Maria formed.

He spent several nights

in Puerto Rico with his family tracking Hurricane Maria’s every move. As the storm grew to a category 4 hurricane and was on a direct path to hit the island, the assessment team received orders to move to MacDill AFB, Florida.

“Fear, anger, abandonment are a few things I felt when I had to leave Puerto Rico right before Hurricane Maria devastated the Island,” he said. “I didn’t want to leave them behind. I felt like I abandoned them during one of the worse storms ever.”

According to Puerto Rican Governor Ricardo Rossello, Puerto Rico has not experienced an event of this magnitude in their modern history. The hurricane struck the island with winds up to 155 mph and left millions of people without water, power or telephone coverage.

The night the storm made landfall, Ocasio was in constant contact with his mother and sister until around 4 a.m. when they lost cell phone service.

“I didn’t sleep at all that night,” Ocasio said. “I was getting messages from my sister saying how the kids were scared, and how they had experienced nothing like this before. This was only the first hours of the

storm, I knew they still had another eight hours to go. it was terrifying.”

After Ocasio lost contact with his family, he attached himself to the news and social media, trying to get any information he could to paint a better picture of what was going on in Puerto Rico.

“My family lives in a lowlands area, and you see the videos of the massive flooding online and you immediately think, ‘They have to leave the house during the storm and fight the dangerous winds to get to higher ground,’” he said. “Then you start creating all these scenarios in your mind that could happen, but are probably not.”

After Hurricane Maria passed, the assessment team was tasked to reassess the airfield in St. Thomas to ensure the runway was not damaged and could still support aircraft delivering relief supplies to the island.

“When they told me I was going to St. Thomas, it bothered me a little...it had been several days after the hurricane and I still had not heard anything from my family, but I knew, just like I was responding to St. Thomas, my brothers-in-arms will be responding to Puerto Rico,” he said.

Once the team was fin-

ished in St. Thomas, Ocasio was sent to Puerto Rico.

“As soon as I landed, I went to check on my family,” he said. “When I drove up to my sister’s house, she was outside trying to get leftover water from the pipes. She didn’t recognize me until I got out the car, and she immediately got emotional. Then my nephew came over and gave me a hug and started crying as well. It was just a total relief seeing them and knowing they were okay.”

Once he knew his family was okay, he wanted to be hands-on with any type of operations assisting Puerto Rico back on its feet.

“My family was safe,” Ocasio said as he smiled. “Now I just wanted to help, so I drove to Roosevelt Roads where I knew there would be a contingency response element arriving in a couple days. I performed an airfield assessment and started creating relationships with the other agencies already on the ground.”

When the contingency response element arrived from Travis AFB, Ocasio was the first person the team met.

“After all his family had just gone through with Hurricane Irma and Hurricane Maria devastating the island, he was still here ready to complete the mission,” said Lt. Col. John Berger, CRE commander at Roosevelt Roads. “He provided us with a detailed brief on the status of the airfield and then he served as a translator and trusted advisor as we met with local airfield authorities.”

Since arriving in Puerto Rico, Ocasio has traveled to Aguadilla and Ponce to perform airfield assessments to ensure humanitarian aid can continue to flow through Puerto Rico by aircraft.

“By performing assessments on three of the four major airports in Puerto Rico, Ocasio has done more for the relief effort on the island than anyone I’ve met,” Berger said.



Information subject to change. Please call to verify.

Services is open to all base employees, to include contractors; all branches of military (active, retired, guard, reserves) and their dependents; DoD civilians (active and retired) and their dependents (includes NAF employees).

Contractor employees are invited to attend in accordance with company policy and supervisor approval.

Admin – 454-7779
 ALC – Arnold Lakeside Center, 454-3350
 Barber Shop – 454-6987
 Café – Café 100, A&E, 454-5885
 FC – Fitness Center, 454-6440
 GC – Arnold Golf Course, 454-GOLF

Marketing/Sponsorship – 454-3128
 MG – Mulligan's Grill, GC, 454-FOOD
 ODR/ITT – Outdoor Recreation, 454-6084
 Resource Management – 454-7425
 RRRP – Recycling, 454-6068
 WI – Wingo Inn, lodging, 454-3051



LIKE US
 Arnold AFB Services

sign up by Nov 28
454-SNTA

On base sign up through SharePoint

Children's Christmas Party
 Arnold Lakeside Center
SATURDAY, Dec 2 11am-2pm
 Free event open to ALL AEDC employees, reserve/guard, retirees, and immediate families
 Goodies for age 12 & under, indoor/outdoor activities, food/snacks, petting zoo, AND SANTA!

1 ALC Jam Night goes dark Dec & Jan
 Returns Feb 2

2 Outdoor Rec Trip Cumberland Caverns Tour
 PLUS Suzy Bogguss Christmas
\$30 9am-5pm
 includes t-shirt
 Sign up by Nov 28 Limited Space Available 454-6084

3 See Café 100 Dec 1-12 specials below

6 ALC Book Fair!
 Café 100 10am-2pm
 Save up to 70% off
FC Bench Press Competition
 all day
 Men & Women categories
 1st 2nd 3rd

7 "PIRATES OF THE CARIBBEAN: DEAD MEN TELL NO TALES"
 PG13
CC 6PM
ALC Free Family Movie Night

8 USAF SERVICES Information Tickets & Travel ODR
Tix 2 Go
 *Combo-Ruby Falls, Rock City, Incline Railway
 *Treetop Zipline
 *Country Music Hall of Fame
 Discount Pricing
 No Preordering
 Call 454-6084
BOOK THE BUS!
 For these or other ODR Day Trips.
 You pick destination.
 Call for details! 454-6084

9 Outdoor Rec Day Trip
Nashville Opry Mills
 9am-4:30pm
\$13
 \$10 AF Club Member
SHOP ON YOUR OWN
 Limited space
 Sign up by Dec 2 454-6084

10 Outdoor Rec Day Trip
Franklin Movie
 showing "A White Christmas"
 1-10pm \$20
 \$18 AF Club Member
 includes movie ticket
SHOP & ENJOY SITES BEFORE MOVIE
 Meal not included, option for reserved table at Puckett's Grocery & Restaurant
 Limited space
 Sign up by Dec 9 454-6084

11 Jewelry Fair CC
 Café 100 8am-1pm
 All jewelry under \$20
 Christmas Tree Painting
 Sign up by Dec 11 454-3350

15 Tell us what you think!
ICE
 Interactive Customer Evaluation
 ice.disa.mil

16 Rudolph Ramble
 9am 2 person teams
 Sign up by Dec 15 454-GOLF
 \$30 + \$10 green fee
 \$10 cart optional

CAFE 12 DAYS OF CHRISTMAS (Dec 1-12)
 On the ___ day of Christmas the Café gave to me...

- 1st: buy a cookie get one free
- 2nd: a day off for Children's Christmas Party
- 3rd: a day off to watch TV
- 4th: a personal cheese pizza for \$3
- 5th: buy a salad get a fountain drink free
- 6th: buy a burger make it a double for free
- 7th: order from hotline get extra side free
- 8th: a cup of hot chocolate for free
- 9th: a day off with family
- 10th: a day off to watch football on TV
- 11th: buy a breakfast sandwich get tots free
- 12th: a free bag of candy

FC Intramural Basketball Coaches Meeting
Jan 8 3:30pm
 Get your teams together!

Wingo Inn welcomes
 both Military and Civilians,
 Friends and Family to be our guests
 We can even accommodate pets!
 454-3051 or www.dodlodging.net
\$60 per night
AIR FORCE INNS
 Wingo Inn will have reduced availability starting Jan 2018 due to room renovations

Happy Holidays Services Hours

ALC/GLC	DEC 17-31	CLOSED
Café 100	DEC 22, 25-26	CLOSED
	DEC 27-29	7AM-12:30PM
	JAN 1	CLOSED
GOLF COURSE & MULLIGAN'S GRILL	DEC 25	CLOSED
OUTDOOR REC	DEC 21, 24, 31	CLOSED
REMEMBER, ODR IS NORMALLY CLOSED MONDAY & WEDNESDAY		
BARBER SHOP	DEC 22-JAN 2	CLOSED
FITNESS CENTER	DEC 25	CLOSED
	DEC 26-29	8AM-1PM
	JAN 1	CLOSED



See the November Services Calendar on page 8.



ARNOLD AFB COMMISSARY

TURKEY COUPON BOOKLETS ARE HERE!

"Your Bird Could Be Free!" Over \$42.00 in savings on your Turkey for Thanksgiving! Come in and grab a booklet today!

SPECIAL ORDERS ARE ALWAYS APPRECIATED!

Meat Department Specials
 Bone In Ribeye Roasts
 Produce Department can make your Vegetable or Fruit Trays or a nice Fruit Basket!

Place your order today so we can make your Thanksgiving that much better!

(931)454-5923
 for either department

THANKSGIVING HOLIDAY HOURS

MONDAY Nov. 20
 CLOSED

TUESDAY Nov. 21
 OPEN 0900 – 1730

WEDNESDAY Nov. 22
 OPEN 0900 – 1730

THURSDAY Nov. 23
 CLOSED
 IN OBSERVANCE OF THANKSGIVING

FRIDAY Nov. 24
 CLOSED

SATURDAY Nov. 25
 OPEN 0800 – 1630

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STORE HOURS
 SUN & MON **Closed**
 TUE 9AM - 5:30PM
 WED 9AM - 5:30PM
 THU 9AM - 6:30PM
 FRI 9AM - 5:30PM
 SAT 8AM - 4:30PM

Patrick S. Jourdan | 931.454.3546
 STORE DIRECTOR | DSN: 340.3546
 Patrick.Jourdan@deca.mil

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OTHER IMPORTANT NUMBERS
 (931) 454- PLUS EXT.
 DSN: 340- PLUS EXT.

GROCERY x5921
 CUSTOMER SERVICE x5921
 SECRETARY x7710
 PRODUCE/MEAT x5923
 ASST. STORE DIR. x3546

