

The
Contrail

The official monthly newspaper of the 177th Fighter Wing



JULY 2013, VOL. 47, No. 07



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COVER: U.S. Air Force Senior Airman Vincent Loglisci hydrates while taking shelter in a simulated bunker during an Operational Readiness Exercise here on June 23. Loglisci is assigned to the 177th Comm Flight. Photo by Tech. Sgt. Matt Hecht, 177th FW/PA



A North American F-100C Super Sabre from the 119th Fighter Squadron, New Jersey Air National Guard, in an undated photo.

SOCIAL MEDIA

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A MESSAGE FROM THE WING COMMANDER

Nationwide, the National Guard is experiencing a disturbing trend in motor vehicle safety - especially motorcycles. Thus far in FY13 we have lost 11 members of our Guard family to vehicle accidents.

That's a 50% increase over last year. In the month of June alone this year we have lost 3 Guardsmen to preventable motorcycle mishaps - and we're only 6 weeks into the 101 critical days of summer. All of these accidents have involved collisions with other vehicles.

The sobering truth is that over the past 10-years we have lost exponentially more Guardsmen to vehicle accidents than we have to aircraft mishaps and combat-related fatalities combined. Driving to and from work is one of the most dangerous things we do each and every day. Unnecessary risks including seat belt usage, distracted driving, speeding, helmet use, alcohol/drug use while operating vehicles, reckless behavior, risk management and complacency create the opportunity for unnecessary accidents and need to be avoided at all costs.

I am asking all of you to STOP and briefly consider the potential unintended consequences of a bad decision!



Please, take a moment, think about it, and make the conservative call...We can't afford to lose a single airman in the 177th Fighter Wing due to injury...or worse. I would also ask you to share this "mindset" with your families as well. Preventable mishaps have a profoundly negative effect on our families as well as our overall readiness/combat capability. I'm asking for your help to curb this trend.

KERRY M. GENTRY

Colonel, NJANG

Wing Commander

Motorcycle Safety

Be visible. Use reflective strips or decals on clothing and motorcycles. Flash the brake light when slowing down and before stopping.

Dress for safety. Wear a quality helmet and eye protection. Wear bright clothing and a light-colored helmet. Wear leather or other synthetic, protective clothing. Choose long sleeves and pants, over-the ankle boots and gloves.

Know the bike and how to use it. Develop riding techniques before going into heavy traffic. Know how to handle the bike in conditions such as wet or sandy roads, high winds and uneven surfaces. And, master the controls such as shifting, braking and turning.

Give yourself space. People driving cars often don't see motorcycles and if they do, they cannot properly judge speed.



Atlantic City's Drones

by Dr. Richard Porcelli

In recent issues of “the Contrail”, the inspiring story of Col. Walker ‘Bud’ Mahurin and his P-47 Thunderbolt “The Spirit of Atlantic City, N.J.” was related.

Largely a result of the important role they are playing in the War on Terror, unmanned aerial vehicles [UAVs], popularly called ‘drones’, are in the news every day. UAVs have an increasing role in the U.S. military and intelligence services for both persistent reconnaissance as well as attack. However, it is a little known fact that early development of UAVs took place at Atlantic City.



The F6F-3K and -5K Hellcats had color coded tails that were used to distinguish different controlling radio frequencies.

Another interesting aspect of Atlantic City’s rich aviation history is the role that Naval Air Station Atlantic City, the current home of the 177th Fighter Wing, played in the development of unmanned or ‘drone’ aircraft. - Dr. Richard Porcelli

In 1946 the U.S. government decided to stage a series of nuclear tests, known as “Operation Crossroads,” that would be the first detonations of atomic weapons since the one “Trinity” test in Yucca Flats, Nevada in July 1945 and the two bombs dropped on Japan to end the war. Considering this lack of practical knowledge surrounding the effects of nuclear explosions, very little was known at that time about the nature of the characteristic ‘mushroom cloud’ formed after detonation, the generation of radioactive particles, how they were carried aloft by air currents, and the impact of contaminated dust particles on the surroundings. To answer some of these questions the Army Air Corps and Navy decided to employ aircraft that would fly through the airspace above the detonated bomb to take air and dust samples at various altitudes and various distances from the center of the detonation.

While the Army Air Corp chose to use a number of radio-controlled, war-weary B-17 Flying Fortress bombers fitted with cameras and radiation sensors, the Navy chose to use remote-controlled drones based on the wartime Grumman F6F Hellcat fighter. The drones were intended to fly into radioactive environments, such as the resulting mushroom cloud, which would be lethal to live crew members. This is where Atlantic City enters the story.

During the Second World War, Naval Air Station Atlantic City was a fighter training base. From April 1943 until the end of hostilities, more than 50 fighting squadrons were

established. Flying Grumman Hellcats and Vought Corsairs, these squadrons went into combat mainly in the Pacific although a few squadrons ended up fighting in Europe as well. At the end of the war, the Navy considered closing Atlantic City, but thanks to the efforts State Senator Frank “Hap” Farley and U.S. Congressman Charles Sandman, the air station stayed open but with a change of role to R&D rather than combat training. At the same time, commercial operations began out of a small terminal and ramp on the western side of the airfield.

One of the first tasks assigned to Naval Air Station Atlantic City was to develop and test the hardware and procedures for flying drone aircraft for air sampling during the pending July 1946 “Operation Crossroads” nuclear bomb tests at Bikini Atoll in the Marshall Islands. The Navy selected 18 veteran Grumman F6F-3 and -5 Hellcats and converted them into -3K/-5K variants by installing sophisticated radio equipment linked to rudimentary autopilot controls. The conversion work was done during March 1946 at Naval Air Development Center Johnsville, at Warminster, Pennsylvania and the aircraft were flown to Naval Air Station Atlantic City for the testing of equipment, development of procedures and the training of both the ground and airborne controllers. For the purpose of monitoring radiation the aircraft carried rudimentary but specialized instrumentation including a photographic plate taped to the control stick. To obtain particulate samples

from the dust cloud, the Hellcats were fitted with wooden sampling boxes carried on the inboard port bomb pylon. The 'orange-crate' looking attachment contained layers of filter paper to screen the radioactive particles out of the air passing through the box as the unmanned aircraft flew through the radioactive cloud.



Colorful Hellcat drones on NAS Atlantic City ramp where 177FW F-16s now sit. The original Navy tower is in background as is one of two hangars built in 1942; none of these structures remain today.

The aircraft were painted a bright red color to denote their unmanned, drone status. For identification purposes, the aircraft displayed large numbers on different colored tails (white, pink, yellow, blue, green, etc.). The tail color denoted the controlling radio frequency to avoid confusion when multiple drones were flown at the same time. The only airframe modification, other than a few additional radio antennae, was a longer, fixed tail wheel strut to make remote controlled takeoffs and landings a bit easier.

The procedure developed at Atlantic City involved the use of an airborne controller/chase plane in another Hellcat to guide the drone in flight. After the one or two airborne control/chase Hellcats took off, a ground controller taxied the drone Hellcat to the end of the runway and then guided its takeoff. The ground controller used a handset not very different from what today's radio control model airplane hobbyists use. After takeoff, the airborne controller

took control and guided the Hellcat drone through the area of interest and then to the destination airfield. At that point a ground controller took over again, guiding the drone to a safe landing.

After a number of weeks of evaluation and testing off the coast of Atlantic City the drones were flown down to Naval Air Station Norfolk for loading aboard the aircraft carrier USS Shangri-La. The carrier transited the Panama Canal and arrived in the Marshall Islands in time for the planned Bikini Atoll nuclear tests. Three detonations, named "Able", "Baker" and "Charlie" were planned. The "Able" test on July 1, 1946 involved the dropping of a 23 megaton fission bomb from a B-29 Superfortress named "Dave's Dream", with detonation at 520 feet above the surface. The "Baker" test on July 25 was with a bomb suspended 90 feet below a ship anchored in the lagoon. The "Charlie" test of a deepwater detonation outside the lagoon was postponed due to a lack of uncontaminated target vehicles. A fleet of 95 target ships, mainly veterans of the war plus a few captured vessels (including the infamous German pocket battleship "Prince Eugen") were moored in the Bikini lagoon. Another fleet of ships outside of the lagoon provided support and observation posts for the tests.

Instead of trying to land the unmanned drones back on the carrier deck (a dangerous proposition even for manned aircraft at that time), after the Hellcat drones were catapulted off the carrier and made multiple passes through the radioactive mushroom cloud under the control of the manned Hellcat airborne controllers/chase planes, they were then recovered on an airstrip at Roi Island in the Marshall Island chain. After recovery, naval officers and scientists first measured radioactivity around the drones and then removed the instruments and dust particle filters from the aircraft for laboratory analysis. For most of the drones, residual contamination and radioactivity was minimal. The drones were eventually returned to NAS Norfolk.

Interestingly, one of the F6F-3K Hellcat drones (pink tail, number 14) survives. It was assigned to the Smithsonian's National Air Museum in November, 1948 but held in storage at NAS Norfolk. During 1983 it was restored by Grumman Aerospace in Bethpage, Long Island (its original builders) and put back into storage at the Smithsonian's Garber restoration center in Maryland until it was put on permanent display in 2004 at the Museum's Steven F. Udvar-Hazy Center at Dulles Airport, where appropriately it hangs above the famous B-29 named Enola Gay that was used on the Hiroshima raid.

Hellcat drone "white 7" flies in formation over southern New Jersey with its manned controller and chase planes. The idea was that the armed chase plane could shoot down the drone if control was lost and a populated area was threatened.



For landing, control of the drone was turned over to the ground based controller shown sitting at the edge of the runway.



FBI NATIONAL ACADEMY



Story by Tech. Sgt. Matt Hecht, 177th FW/PA

Senior Master Sgt. Dan Mitchell, 177th Security Forces Squadron superintendent of training, graduated June 14 from the 253rd session of the FBI National Academy.

Mitchell's class was made up of 216 law enforcement professionals from 48 states, 24 countries, and three military branches – including the New Jersey Air National Guard.

The FBI National Academy has been lauded internationally for its academic excellence, and features not only traditional education facilities, but also athletic areas, firing ranges, and a mockup of an entire town. Consequently, the grueling ten week leadership course, held at Quantico, Va., is attended by less than one percent of all law enforcement officers. Mitchell was tapped to attend the course for the benefits the Security Forces training section would gain.

“The curriculum of the FBI National Academy focuses on leadership and emphasizes critical thinking,” said Mitchell. “We focused on legal issues, fitness, and a specialized instruction program in law enforcement arts.”

The training also featured a wide range of instructors and guest lecturers, including officials from the Federal Bureau of Investigations, Naval Criminal Investigation Service, and the U.S. Drug Enforcement Agency. The class also heard from speakers such as Michael Durant, the U.S. Army Black

Hawk helicopter pilot who was shot down and held as a prisoner of war in Somalia.

“The FBI National Academy has long been a vital element in the continuing improvement of law enforcement standards, knowledge, and cooperation throughout the world,” said Mitchell. “The Academy provides a wide range of leadership and specialized training, as well as an opportunity for law enforcement professionals to share ideas, techniques, and experiences.”

The learned experience from this training along with Mitchell's civilian employment will provide valuable knowledge that he can use in his position at the 177th.

“My civilian employer is the City of Northfield, N.J. Police Department, where I am the Acting Captain of Police and the Commander of Police Operations. I plan, direct and coordinate all police operations for over 9,000 city residents,” said Mitchell.

“Having Senior Master Sgt. Mitchell attend the training provides our squadron with not only a subject matter expert in law enforcement operations and investigations, but also an incredible resource that is able to fuse the best of both civilian and military law enforcement practices,” said Maj. Andrew Mattson, 177th Security Forces Squadron commander. “This is a utopian example of why the Air National Guard remains viable, relevant, and resilient.”



Senior Master Sgt. Dan Mitchell (right) meets with CW4 (Ret) Michael Durant, former Black Hawk pilot with the 160th Special Operations Aviation Regiment. Courtesy photo.



The summer months here bring a few things: sunshine, blue skies, and 177th Fighter Wing base tours!

Tour season is in full swing, and the Wing has hosted two large tours so far, both from summer camps sponsored by the Federal Aviation Administration.

The first tour was on July 10, and saw about 30 students from the Aviation Career Enhancement Academy. The second tour was on July 16, and had 15 students from the Careers in Aviation Academy. All of the students got to see a 177th Fighter Wing F-16C Fighting Falcon up close, as well as a look at armament systems, engines, and a briefing by crew chiefs and weapons specialists. The Careers in Aviation Academy also got a tour of the Air Crew Flight Equipment shop.



Tech. Sgt. Hector Vasquez, an F-16C crew chief, leads the maintainers as they discuss the capabilities and operational history of the 177th's aircraft on July 10. Photo by Tech. Sgt. Matt Hecht, 177th FW/PA

I want to say thank you for all your help and support for such a wonderful tour of the 177th Fighter Wing. It was a very interesting and informative tour. - Marilyn Conover, FAA Tech Center, Visitor Program Team



Tech. Sgt. Hector Vasquez, an F-16C crew chief, leads a briefing on the aircraft with students from the Careers in Aviation Academy on July 16. Photo by Tech. Sgt. Matt Hecht, 177th FW/PA



Senior Airman Kyle Brier, a 177th Operations Group Aircrew Flight Equipment Specialist, briefs students from the Careers in Aviation Academy on pilot survival gear on July 16. Photo by Tech. Sgt. Matt Hecht, 177th FW/PA



A student with the Aviation Career Enhancement Academy gets a look at a M61 Vulcan 6 barrel gatling cannon. Photo by Tech. Sgt. Matt Hecht, 177th FW/PA

AIR SHOW ROUNDUP



Photo by Master Sgt. Andrew J. Moseley

This year's Atlantic City Thunder Over the Boardwalk Airshow was quite a success, despite the lack of military aircraft. This year's show featured professional stunt and aerobatic teams, as well as vintage fighters from World War 2. The Atlantic City boardwalk (below) was filled with military recruiters, tourists, and air show fans. Photo by Master Sgt. Andrew J. Moseley, 177th FW/PA



A P-51 Mustang, "Baby Duck," flies over Atlantic City International Airport on June 26. Photo by Tech. Sgt. Matt Hecht, 177thFW/PA



The Geico Skytypers provided the finale flyover at the Atlantic City Thunder Over the Boardwalk Airshow on June 26. Photo by Master Sgt. Andrew J. Moseley, 177th FW/PA

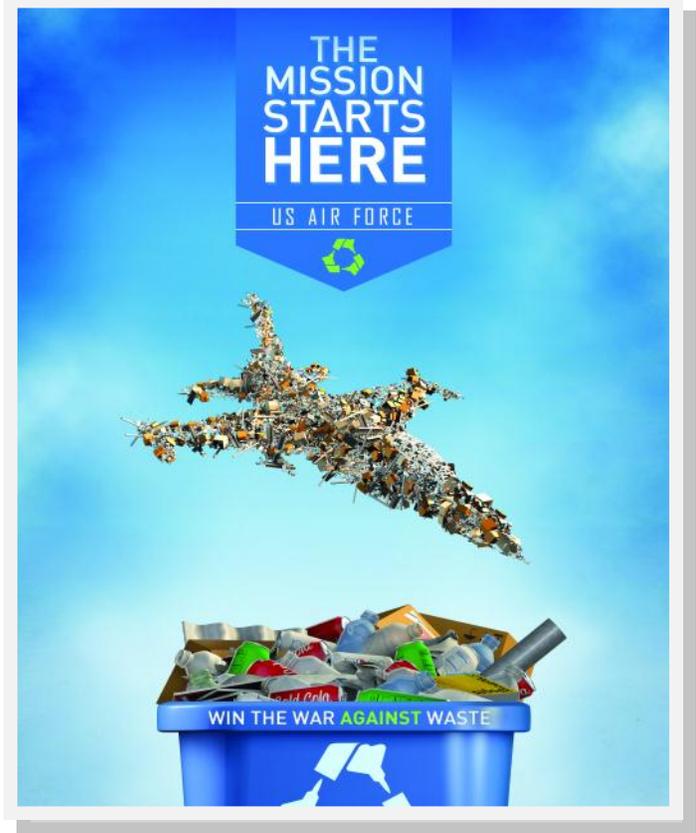
JERSEY DEVILS IN THE NEWS



HUMBERT AWARDED AIR MEDAL



U.S. Air Force Maj. Jered Humbert was awarded the Air Medal on June 23. The medal, which was presented for meritorious achievement while participating in aerial flight, was presented by Col. Kerry M. Gentry (left), Wing Commander, 177th Fighter Wing, and 177th Command Chief Master Sgt. Ray Morales (right). Photo by Tech. Sgt. Andrew J. Merlock, 177th FW/PA



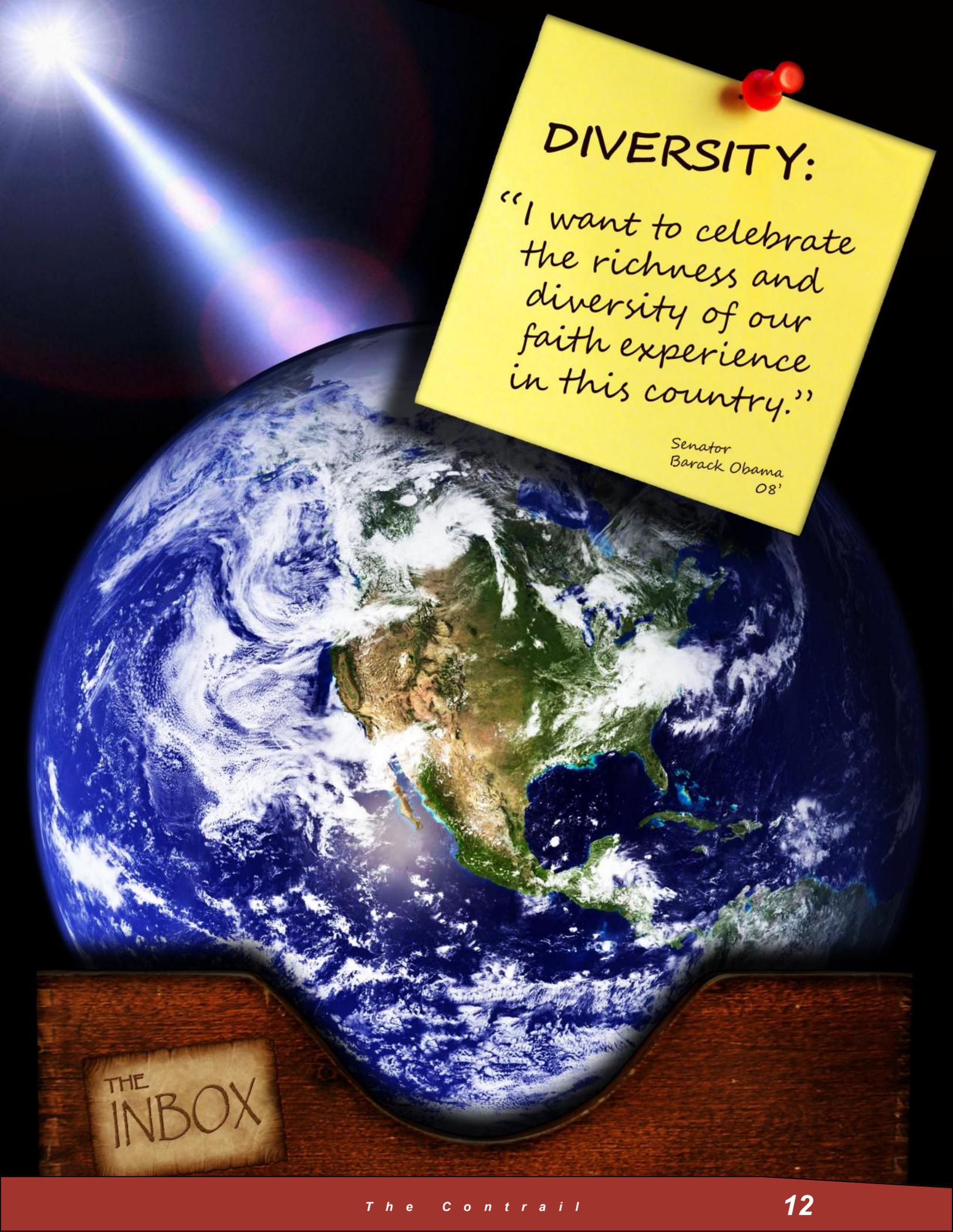
JULY 2013

Promote the promise of patriotism; implement diversity education

- ✓ Identify leader potential amongst your Airmen
- ✓ Recognize strengths and improve on weaknesses
- ✓ Do a self-assessment of your professional development

Uniformity is not nature's way; diversity is nature's way.

- Vandana Shiva



DIVERSITY:

“I want to celebrate the richness and diversity of our faith experience in this country.”

Senator
Barack Obama
08'

THE
INBOX

FINAL PHOTO T-6 TEXAN

The North American Aviation T-6 Texan was a single-engine advanced trainer aircraft used to train pilots of the United States Army Air Forces, United States Navy, Royal Air Force and other air forces of the British Commonwealth during World War II and into the 1950s.



A T-6 Texan "Pamela Marie" flown by Andrew McKenna flies over Atlantic City International Airport on June 26. Photo Illustration by Tech. Sgt. Matt Hecht, 177th FW/PA