

THE OFFICIAL MONTHLY MAGAZINE OF THE 177th FIGHTER WING

# THE CONTRAL



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NOVEMBER 2015, VOL. 49 NO. 11



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*On the cover:* Two F-16C Fighting Falcons from the 177th Fighter Wing fly over MetLife Stadium in East Rutherford, New Jersey on Nov. 8, 2015 prior to the "Salute The Service" game between the NY Jets and the Jacksonville Jaguars. The ceremonies were opened by an enlistment of new troops in the end zone, followed by jumpers from the United States Military Academy- West Point Parachute Team and concluded with a giant 40 yard U.S. flag being unfurled by representatives from each branch of service for the singing of the National Anthem and the flyover. (Photo courtesy of John Iocono - Pro Football Hall of Fame)

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# Staggering Changes, Unwavering Commitment

by Col. Michael K. Love, 177th Mission Support Group Commander



As many of you know, I will be retiring from the military at the end of this year after serving with the 177th Fighter Wing for nearly 25 years. Facing this sort of life event, I've gotten a little bit nostalgic and started reflecting on

some of the more significant changes to the Wing since I first drove through the front gates in January 1991.

When I started my career, smart phones were the stuff of science fiction, the few computers we had on base were running MSDOS and staff meeting presentations were given using overhead projectors. The F-16s parked on our ramp were still somewhat of a novelty as we just converted from the F106 Delta Dart a few years before. Our sole purpose was Air Defense Alert and our mission was to intercept Soviet bombers coming over the polar cap to attack the U.S. We were justifiably confident in our ability to perform this mission; after all we had done it for years and even won the prestigious USAF Air to Air Weapons Meet known as "William Tell".

However, as I was heading off to basic training, our country had shifted its focus in a different direction. Desert

Storm, the operation to oust Saddam Hussein from Kuwait, was just hitting its stride and our cold war nemesis, the Soviet Union, had begun its slow collapse.

Before long, Bear Bombers stopped flying down the coast and our national leaders made the decision to transition most alert units into new roles. Our destiny was to become a "general purpose fighter wing" or, as we somewhat despairingly called it, "air to mud". While reluctant to give up our cherished alert mission, the men and women of the 177th did what they had always done; they committed themselves to the task at hand, shifted gears and began the massive task of retooling the Wing. Our pilots trained in new tactics, Ammo and Weapons practiced building and loading bombs and the rest of us busied ourselves learning new acronyms like CBRNE and MOPP while incorporating unfamiliar concepts into our business model such as "Total Force" and "Expeditionary".

The first test of these new-found skills came in late 2000 during our first ever AEF rotation to Prince Sultan Air Base, Saudi Arabia. The deployment was a great success, but the satisfaction from this was to be short lived. In just under a year, while preparing for a routine training sortie, news of the attack on the World Trade Center began to filtering its way through the base population. Without hesitation, the Wing instinctively reverted back to what we knew and established a robust and sustainable alert operation to provide persistent fighter CAPs over Washington DC, New York City and other major US cities. We were back in the Alert business, but now with

a commitment to the GP mission as well.

By the start of the Second Persian Gulf War with the expeditionary concept well established as part of our psyche we entered into a cycle of near continuous overseas deployments. The Wing engaged in direct combat for the first time in a generation and thousands of men and women from the 177th deployed to Iraq, Afghanistan and neighboring countries in support of Operations Iraqi Freedom, Enduring Freedom and other contingency and support operations around the globe.

And if that were not enough, we became heavily engaged in the DOMOPS mission as well. We staffed and trained a 100 person Quick Response Force and participated in a FEMA region Homeland Response Force. Hundreds of unit members were mobilized to assist citizens traumatized by Hurricane Katrina, Super Storm Sandy and several winter storms; we even provided security for the Super Bowl!

There is a staggering difference between the Wing 25 years ago and today. Our mission is much broader, the deployments are more frequent, longer and often more dangerous. The reason why is simple: the world has changed. Our monolithic enemy is (mostly) gone and a host of less-well-defined, but equally dangerous threats have emerged to take its place. Fortunately for us, time and again, the men and women of the 177th Fighter Wing have proven that they are up to the task.

# SFS AIRMEN RECEIVE ELITE TRAINING

Story by Master Sgt. Andrew J. Moseley, 177th FW Public Affairs—Photos courtesy SrA Joe Fasanella

Two members of the 177<sup>th</sup> Fighter Wing's Security Forces Squadron (SFS) were recently given a unique opportunity to train with an elite group of marksmen, learning procedures and tactics that could help them protect critical assets at the Atlantic City Air National Guard Base and also be the eyes and ears of the Commander during any potential stand-off situation.

The Ocean County, New Jersey, Special Weapons and Tactics (SWAT) team, who has won the World SWAT Team competition twice, held the class in Jackson, NJ in mid October and trained students how to precisely hit targets up to 1,000 yards away, while under both physical and mental stress.

177FW SFS Senior Airmen Brett Behrens and Joe Fasanella also learned how to create "urban hides", tactics which afford



them protection from visibility during a prolonged observation or a possible engagement.

"The main priority for us is to not be seen and to observe and report", said SrA Behrens. "This course was actually only about three percent about the shooting. We still have to go through the USAF Advanced Designated Marksman and Close Precision Engagement courses."

Possible scenarios could include over watch for a convoy or a dignitary passing through, or being directed to sit on a ridge-line for extended periods of time.

A former marine, during Operation Iraqi Freedom, Fasanella provided over watch for combat engineers rebuilding a forward outpost in Fallujah that had been decimated by heavy mortar fire. This over watch gave them the peace of mind that, within 500 to 1,000 yards of their location, they had trained team members ready to observe and report or engage.

"There's nothing safer than being able to go down a known IED (Improvised Explosive Device) road, and knowing that you had unit members doing over watch for the past twenty four hours and knowing that you could pass through safely," said Fasanella. "It's a force multiplier on so many levels in the sense that you could be tasked by multiple units within the Air Force to perform observations for an extended period of time."

"It's a good school in the sense that, with the weapon, anybody could shoot", said Fasanella. "You can get anybody behind the gun for a week and they could shoot it. It's the 99% of the rest of the job that really makes a good trained observer."



# ATLANTIC CITY AIRPORT HISTORY SERIES

## The 119th Fighter Squadron and the Thud

### Part 1: Development of the Thunderchief

*By Dr. Richard Porcelli*

The original Republic concept for AP-63FBX was based on their RF-84F Thunderflash photoreconnaissance version of the F-84F Thunderstreak fighter-bomber. (Public domain photo.)

Prior to moving from McGuire Air Force Base to the recently closed Naval Air Station Atlantic City, the 119th Fighter Squadron flew the North American F-86E Sabre in the fighter-interceptor role as part of the Air Defense Command. The move to Atlantic City on August 5, 1958, mainly due to overcrowding at McGuire AFB, coincided with a change in aircraft and a change in mission. The unit converted to the Republic F-84F Thunderstreak and the fighter-bomber mission. The 119th's emphasis on interdiction, ground attack and close air support continued in the following years and with a succession of aircraft, including the North American F-86H Sabre (1962-63) and the North American F-100 Super Sabre [1963-70]. The next aircraft flown and the subject of this month's story, continued the same mission. It was the Republic F-105B Thunderchief, known by a number of epithets, including Lead Sled, Ultra Hog and later simply as the Thud. While the original nicknames were derogatory in nature, the F-105 proved itself to be a superlative aircraft in the terrible cauldron of air war over North Vietnam and the Thud appellation

was used with a great sense of pride and accomplishment by its "drivers."

Republic Aircraft and its antecedent Seversky Aircraft (the eponymous Alexander P. deSeversky was a Russian émigré and naval pilot who escaped his homeland during the 1917 Revolution) were known as builders of solid, almost indestructible, big fighters. The chain began with the Seversky P-35, which evolved to the Republic P-47 Thunderbolt, the best fighter-bomber of WWII; the F-84B/E/G Thunderjet used effectively in close air support and interdiction during the Korean War; and the Cold War's F-84F Thunderstreak which served with the USAF, Air National Guard and NATO allies. The next link in the chain was the F-105 Thunderchief, which was followed by today's A-10 Warthog (officially, the Thunderbolt II). These aircraft shared a common denominator – they were produced at Republic's Thunder Factory in Farmingdale, Long Island, New York. (After two prototypes were built in Farmingdale, production of the A-10 shifted to Fairchild-Republic's

Hagerstown, MD, plant from parts still made in Farmingdale.) All but the A-10 also shared another common factor – they were the "brainchildren" of another Russian émigré and Republic's long-time chief designer, Alexander Kartveli.

The story of the name change from Seversky to Republic is an interesting but strange bit of history. Seversky Aircraft was founded in 1936 on Long Island, New York. Despite designing and producing quite advanced aircraft, sales were poor and the company had difficulty turning a profit. While the founder was in Europe during a winter 1938-39 sales trip, the company's Board of Directors voted Seversky out of the company accusing him of mismanagement. They also decided to change the company's name; but in order to minimize the cost of changing signage around the factory and on equipment, they wanted a name with the same number of letters as "Seversky." They settled on "Republic" written in the same style, and for the same reason, retained "Aircraft" in the official company name.

Getting back to the main subject, the F-105 began as a company-funded project in 1951 to develop a supersonic successor to the swept-wing F-84F Thunderstreak which itself had yet to enter service. The original concept of what Republic called "Advanced Project 63 Fighter-Bomber Experimental" looked a lot like the photoreconnaissance version of the Thunderstreak, the RF-84F Thunderflash. The RF-84F retained the 38.5-degree swept wing and mid-fin mounted tail plane of the fighter-bomber F-84F, but with two wing root air intakes, leaving the nose free to house cameras. The AP-63FBX initially had a slightly larger airframe than the F-84F designed around an Allison J-71 turbojet of 14,500 pounds static thrust and an internal weapons bay; estimated top speed was 800 knots at 35,000 feet. It could carry a 3,000-pound nuclear bomb and was to have four 0.50-caliber machine guns in the wing roots. The initial design underwent further studies and a total of 108 alternatives were evaluated, including a number with a pair of Allison turbojets and others with a 45-degree swept wing.



The final design was based on the brand new Pratt & Whitney J-75 twin-spool axial turbofan that could maintain 17,500 dry pounds static thrust, boosted to 23,000 pounds static thrust in full afterburner, and a larger (by more than 10 feet) but still slab-sided airframe, 62 feet long, with thin, 45-degree swept wings that had a reduced span of only 35 feet.

The “heart” of the system was an all-new, groundbreaking but very complex GE MA-8 fire control system. It included a modified K-19 sight system linked to an AN/APG-31 Radar Ranging System; an E-30 Toss Bombing Computer and a T-145 Special Weapons (i.e., nukes) Release System. An automated flight control system was linked to full span leading edge flaps, Fowler flaps and *spoilerons* on the wing’s upper surface that acted to

dump lift and provide roll control in place of conventional ailerons.

The tail plane was moved to a position low down in the rear fuselage. The air intakes initially had straight across front openings, much like those on the RF-84F *Thunderflash*, of very thin cross-section and were fixed (unmoving). Four wing hard points for fuel tanks and weapons supplemented the internal weapons bay that was capable of carrying bombs or a 350-gallon supplementary fuel tank. A 6-barrel GE T-171D rotary cannon, better known as the Gatling gun, replaced the 4 machine guns. The gun had two revolution speeds controllable by the pilot, corresponding to 3000 or 6000 rounds per minute. A circular drum held 1,028 rounds of 20-millimeter shells.

Although characterized as a fighter-bomber, its primary mission was considered to be as a high speed, nuclear strike fighter. At a combat weight of more than 28,000 pounds carrying a single “special store” and two drop tanks, the maximum speed was projected to be 765 miles per hour (Mach 1.33) at 35,000 feet with an unrefueled combat radius of 965 miles. But as the design concept matured, the Air Force and Republic agreed that even higher performance was required.

This design was submitted to the Air Force in April 1952 and a go-ahead decision from the Air Staff was received just a month later. The Air Force, particularly the Tactical Air Command [TAC], was so enthusiastic over the new Republic nuclear strike fighter that a letter contract for engineering, tooling, and acquisition of materials covering 199 aircraft was signed in September 1952. For TAC the new aircraft gave them a nuclear strike mission that paralleled that of the Strategic Air Command, which up to that point had dominated the Department of Defense budgets. However, a re-evaluation by the Air Force’s Weapons Board in March 1953 reduced the order (of the airplane that still existed only on paper) to 46 aircraft – 37 strike fighters and 9 photoreconnaissance aircraft.

A mock-up inspection was successfully passed in October 1953 but development problems that plagued Republic for the next months caused a delay of procurement and a reduction in the order to just 6 aircraft.

In December 1954 the operational requirements were redrafted by the Air Force, requiring further redesign to incorporate in-flight refueling capability, a more complex fire-control system and a higher design performance target. While production versions were expected by 1955 and squadron service by 1958, before the first example was built, the Aircraft and Weapons Board modified the Contract totals to 46 aircraft comprising 37 “special weapons” strike fighters and 9 high-speed RF-105 photoreconnaissance aircraft. In February 1955, the Air Force again revised authorized acquisition for 15 test aircraft – 2 F-105As, 10 F-105Bs and 3 RF-105As. (Ultimately, the USAF decided against procuring the reconnaissance version and the three prototypes, re-designated as JF-105Bs, were used in the F-105B test program.)

Republic met the Air Force schedule requirement in terms of airframe production but Pratt & Whitney’s J-75 turbofan’s development was delayed. As a result, in order to allow the first prototype YF-105, serial 54-0098, to fly on schedule it was fitted with the lower thrust but well proven (as used F-100 and F-102, among others) J-57 turbojet. First flight, with Republic chief test pilot “Rusty” Roth at the controls, took place from Edwards AFB on 22 October 1955. The 45-minute first flight included

exceeding Mach 1 in level flight.

Two months into the test program, during a high-speed (550 knot), 5.5G turn the right main landing gear was torn off the aircraft when it unexpectedly extended; the wheels-up crash landing on Edwards’ lakebed runway resulted in substantial damage requiring the first prototype to be returned to Republic for a major rebuild.

The second YF-105, serial 54-0099, also had to rely on the lower thrust J-57; it joined the test program on 28 January 1956. In the following months the test program exposed a more fundamental problem, the lack of performance, especially speed, even after the more powerful J-75 engine was installed. Before the third prototype was flown, extensive wind tunnel testing resulted in a major redesign. The most dramatic change was the application of “area ruling” to the fuselage which results in a delay of drag-inducing boundary layer breakaway at high speeds. Republic had witnessed the agonizingly long and costly development program that Convair had to go through with their YF-102A *Delta Dagger* that could barely get to Mach 1 despite its powerful J-57 turbojet. Republic applied the lessons learned with the YF-102 to their project; the redesigned F-105 fuselage featured a “wasp-waisted” or “Coke-bottle” look, bulging approximately one foot compared to the original fuselage at a point near the trailing edge of the wing near where it mated to the fuselage. In addition changing the intakes from fixed, straight profile, to a variable air inlet, forward-swept design so characteristic of production F-105s, increased engine performance. The system used a set of variable “ramps” which were controlled by a Bendix Central Air Data Computer. At low speeds and in cruise, the ramps were retracted allowing maximum airflow. At high Mach the ramps closed to optimize the amount of air; air bleed doors within the intake allowed excess air to bleed off, preventing an excess flow that would ultimately ‘choke’ the engine. Without this intake change, the top speed would still have been limited to below Mach 1.5.

While it was too late to incorporate these changes into the second prototype, the third YF-105 was virtually identical to the resulting first production version, the F-105B, including its J-75 turbofan engine. The new fuselage shape and computer-controlled variable intake ramps and bleed air doors allowed for a top speed in a clean configuration of close to Mach 2.1 at 34,000 feet with a service ceiling above 49,000 feet, and an initial climb rate in full afterburner of 34,000 feet per minute. Another change instituted on the third prototype was a very elegant design for speed brakes. To avoid wing or mid-fuselage mounted speed brakes upsetting the balance of the aircraft



Lineup of F-105B-10-REs of 335th TFS/4th TFW, first operational squadron, 1959. (USAF photo.)



when deployed, the engineers designed a novel four “petal” assembly, all hinged at the front edge, mounded around the exhaust nozzle. When the landing gear was extended, only the two side petals opened; but in a dive or when maneuvering, all four petals opened to provide a rapid and controllable decrease in airspeed.

A retractable inflight refueling probe was mounted on the port side, just ahead of the cockpit giving the capability of refueling from the probe and drogue system. Another change was an increase in the vertical tail’s height (from 17.5 to 19.5 feet) and thickness as well as an increase in the rudder’s height and width, all to resolve some high-speed controllability and flutter issues, avoiding the problems (described in earlier issues of the *Con-trail*) that plagued the early F-100 *Super Sabre*. At the same time a small ram-air inlet was added at the base of the rudder to provide cooling for the afterburner. The heart of the redesigned F-105B was the Model 306A nominally all-weather bombing system that comprised the flight control system, autopilot and AN/APN-105 Doppler all-weather navigation system – systems that remained problematic during the F-105B’s development and service. Despite this, the *Thunderchief* (its official name as of 1956) was acclaimed as the “World’s Most Powerful One-Man Fighter.”

The first YF-105B, serial 54-0100, made its first flight on 26 May 1956 piloted by Republic’s Hank Baird. In an early test flight, the nose gear failed to lower; landing on the two main landing gears, only minor damage was suffered when the nose settled to the runway. Unfortunately, the rescue crane dropped the prototype while being lifted from the runway causing more extensive damage and time-consuming repairs. The second YF-105B, serial 54-0101, was also plagued with landing gear problems. Again, during a test flight, the main landing gear failed to extended requiring a wheels-up crashed landing on the lakebed. Strangely, as the pilot walked away from his “slightly bent aircraft”, he heard a noise and turning back, watch the landing gear doors open and the landing gear lower as the jet was lifted off the runway by a salvage crane; the problematic landing gear strut extended to the full down position on its own! It turned out that an intake blow-out door built into the wheel well for each main landing gear, used during ground engine run-ups and taxiing, opened in flight causing a vacuum to form, preventing the landing gear from lowering during flight even when the pilot selected “down.” Once standing on the ground the vacuum dissipated and released the landing gear.

On 27 May 1958, the USAF accepted the first production F-105B-6, serial 54-0111, for squadron service. The first unit in operation was the 335<sup>th</sup> Tactical Fighter Squadron [TFS] at Eglin AFB Test Center (part of the 4<sup>th</sup> TFW normally based at Seymour-

Johnson AFB, SC), which performed Category II operational testing. The 335<sup>th</sup> was joined by 334<sup>th</sup> TFW, and both were eventually equipped with a mix of block 10 and block 15 aircraft for Category III operational testing; block 20 aircraft followed shortly thereafter. Operational evaluation showed that with a full load the F-105B required 8,000 feet of runway to get airborne, resulting in its first nickname “*Ultra Hog*.” [The F-84F had a similar problem of an insatiable appetite for runways and gained the name “*Hog*.”] By the time 38 production aircraft had been put into service, they comprised 4 diverse production blocks. A complete squadron complement was not achieved until mid-1959.



The first YF-105A Thunderchief prototype is shown at Edwards AFB; note the similarity to the RF-84F Thunderstreak in general configuration. (Republic Aviation/USAF photo.)

But the service experience of these first squadrons pointed to the need for further improvements, including the fire-control system, which was accomplished by July 1960, under a Republic Aviation program called “Project Optimize.” Other changes included a new antiskid brake system, as well as an improved central air data computer and autopilot. Another goal of this program was to bring all the previous production blocks to a common F-105B-20-RE standard.

Clearly, those modifications did not resolve all of the issues. A total of 75 F-105Bs (including 13 test aircraft, plus 3 JF-105Bs) were built by the time production ended in December 1959 and the much-revised F-105D entered production. But in the early

months of 1960 none of the USAF’s 56 F-105Bs in squadron service (the 334<sup>th</sup>, 335<sup>th</sup> and 336<sup>th</sup> TFS, all part of the 4<sup>th</sup> TFW) were considered operationally ready due to continuing problems with the electronics, the shortage of spare parts and the lack of maintenance experience and skills. In June 1962, the Air Force instituted “Operation Look-Alike” for the entire F-105 fleet (including newly delivered F-105Ds); it was similar to Project Optimize but more involved. All systems were brought up to the latest standard and all flight controls were re-rigged as a result of incidents caused by chafing and wear of wires and control cables. The aircraft were also painted with a silver lacquer in an

attempt to seal all the electronics compartments from problem-causing moisture and water leaks.

Despite its teething problems, the F-105B did prove the *Thunderchief’s* concept of a single engine, high-speed nuclear strike and attack aircraft. But both the Air Force and Republic Aviation recognized that the B model was only an interim aircraft. Therefore in the same year that the F-105B entered service, Air Force plans called for Republic to produce 472 advanced F-105D versions, incorporating a number of new subsystems but most importantly, to give the *Thunderchief* true all-weather, day/night attack capability – one area in which the F-105B was lacking.

The Air Force took the opportunity to incorporate an all new electronics and avionics suite that would take advantage of new technology that was emerging. This time, the “heart” of the system was the AN/ASG-19 *Thunderstick* bombing and navigation system which included an enhanced fire control unit. This system gave the pilot the option of either visual or “blind” bombing depending on the weather. He also had the option of conventional or nuclear weapons (up to 70 kilotons in strength), with the ability to change from air-to-air to air-to-ground modes, employing bombs, missiles or the internal Gatling gun, at the flip of a switch. The AN/ASG-19 was built around North American Aviation Autonetics Division’s NASAAR R-14A ground map, terrain avoidance and contour map radar, plus the APN-131 Doppler radar. Due to the larger diameter of the radar antenna, the entire forward fuselage had to be redesigned with a larger radome, increasing the overall length by 15 inches. The reshaped, enlarged nose is the main external feature that distinguishes the F-105D from the F-105B.

The instrument panel was also redesigned incorporating the latest tape instruments in place of the standard “steam gauge” circular dials. The tape instruments were believed to be easier to read during the “heat of combat.” The on-board computer, integrated with the radar system, provided the pilot guidance information to keep him on the pre-entered course as well as the altitude and speed profile. Power was supplied by an upgraded J-75-P-19W turbofan which incorporated a water injection system that could boost takeoff thrust to 26,500 pounds in afterburner – a change that would prove invaluable when heavily laden *Thunderchiefs* had to take off in the heat and humidity of Thai air bases during the Vietnam War. This new engine required enlarging and reshaping of inlet air ducts in order to supply the required air flow for maximum thrust operations. The resulting increase in weight called for beefed up landing gear and brakes. And, the D model became the first Air Force jet capable of both probe and drogue, as well as flying boom air-to-air refueling with the installation of refueling slipway on the top of the nose.

The first production F-105D flew on 9 June 1959 at the hands of Republic test pilot Lin Hendrix. While the entire F-105 program was over 3 years behind schedule, the D’s first flight was actually a month ahead of schedule! Again, the 4<sup>th</sup> TFW’s 335<sup>th</sup> TFS was pegged





No. 3 F-105B-1-RE at Edwards AFB in 1958. (USAF photo)

for the Category II operational tests, but problems with the revised J-75 engine caused delays into early 1961.

With the continuing technical problems plaguing the *Thunderchief* program the Air Staff decided in late 1959 to have a competition to either restore confidence in the F-105 or justify cancelling it. They pitted the new F-105D against McDonnell's F-101 *Voodoo*. The *Thunderchief* beat out the *Voodoo* in almost every test category, and the Air Force promptly ordered 1,500 F-105Ds. As it turned out, Republic's good fortune was relatively short lived. In November 1961, the "wiz kid" Secretary of Defense Robert Strange McNamara ordered the cut of F-105 production limiting it to seven tactical fighter wings, with the newer twin-engine, two-pilot McDonnell F4C *Phantom* to equip seven more wings. Total production of the F-105D would be 610 aircraft. Initial deployment was with the 4520 Combat Crew Training Wing at Nellis AFB, followed by the 4<sup>th</sup> TFW at Seymour-Johnson AFB, the 36<sup>th</sup> TFW at Bitburg AFB, Germany and then the 49<sup>th</sup> TFW at Spangdahlem AFB, also in Germany. The 18th TFW, Kadena AB, and the 8th TFW at Itazuke AB followed these fighter wings in 1963, both in Japan. The *Thunderchief's* "baptism with fire" in South East Asia was less than two years away.

Three times during the development of the single-seat *Thunderchief*, Republic tried to convince the Air Force of the merit of a two-seat trainer version. The first proposal was a two-seat F-105B, known as the F-105C. An initial order of 5 aircraft in 1956 was promptly cancelled due to rising costs. A similar proposal in 1959 for the F-105E, a two-seat version of the F-105D, also failed. Due to a lack of trainers, new F-105 pilots had to rely on the two-seat F-100F *Super Sabre* but they were becoming very short in supply. In May 1962, the Air Force finally agreed to purchase the F-105F, a stretched version of the F-105D-31. Except for the deletion of a forward fuel cell and a slight increase in total length to accommodate the second pilot, the aircraft and its capabilities were virtually unchanged. A total of 143 of the two-seat F model were eventually produced. Although ordered as a transition trainer, the F-105F earned its reputation in the *Wild Weasel* role during the Vietnam War.



No. 2 F-105B-1-RE in flight over Edwards AFB, 1957. (Republic Aircraft/USAF photo.)

***Part 2 of this article will describe the Thunderchief's operational history, especially during the Vietnam War, but also its short career with the Thunderbirds and its sterling service with the New Jersey Air National Guard.***



F-105B-5-RE of 335th TFS/4th TFW during Category II testing, Eglin AFB, 1958. (USAF photo.)



# Quick Reaction Force Training – for a moment's notice

Story by Lt. Col Jesse Arnstein, 177th FW QRF Officer in Charge

Whether responding to emergencies such as Hurricane Sandy, blizzards, or civil unrest situations similar to ones in Baltimore and Ferguson, MO, National Guardsmen must be trained and prepared to respond at a moment's notice.

Fourteen Airmen from the 177th Quick Reaction Force (QRF) sharpened their readiness to respond by receiving advanced QRF training from 2ND BN 254th Regiment soldiers on 17-18 October at Ft. Dix.

The instruction included training scenarios de-

signed to mimic real world conditions. Subject matters included conducting convoys, establishing vehicle checkpoints, searching vehicles and personnel, controlling civil disturbances and providing security to facilities and perimeters.

In addition to learning valuable skills, the airmen enjoyed the experience. "What I enjoyed most about the QRF Training was the hands on training.....I'm more of a tactile learner with learning something by doing it in repetition," said TSgt William Dingman, 177th Aircraft Maintenance Squadron.

Dingman was pleased with the training, stating "The professionalism, positive attitude and the personal real-world stories from the instructors made for an interesting and engaging course."

The airmen impressed their Army National Guard instructors. "I really do not see a huge difference between training Airmen and Soldiers in QRF tasks..... At the basic level they are all service members that have volunteered to serve and their branch affiliation does not seem to matter," said SFC Timothy Hoke, the course manager.

"They (airmen) just want to do their part in serving the community and that shows in their motivation. We do have a little fun with it, poking fun at the other branches but that is just part of the esprit de corps that most of us share," said Hoke.

While it can be challenging for an Airman to learn Army-centric skills, participants stayed motivated by maintaining enthusiasm, focus and a great attitude, knowing someday they could answer the call to help their community and New Jerseyans when they're needed most.

177th Fighter Wing airmen participate in advanced Quick Reaction Force Training at Fort Dix, 17-18 October 2015. 2ND BN 254th Regiment (NJ ARNG) NCOs conducted the training. Photos by Lt Col Jesse Arnstein



Vehicle Inspection and search photos by SFC Tim Hoke



Group photo by SMSgt Bobbie Panger



# PARADOCS

By Dr. Andrew Savicky, 177th Fighter Wing  
Director of Psychological Health



“Give thanks for unknown blessings already on their way” ~Native American Saying

Over the years I have experienced challenging times, and being thankful was a difficult task. Whenever I struggled with worry, anger, frustration, or anxiety, my normally positive attitude was easily overshadowed by that which was going wrong. However being fixated on difficult circumstances, although a natural reaction, did not bring peace or created any solutions. The negative thoughts did nothing to motivate me in a direction that served a greater purpose than myself.

It has always been easy to be thankful when everything was going smoothly. Rarely did I give thanks in such circumstances. After all these years as a Psychologist, it was the challenging moments in my life that stopped me in my tracks and caused me to make a choice between moving ahead with faith and determination or being a victim of my circumstances. Introspection allowed me the opportunity to search inward for strength and to gather support from my family and friends. With resiliency, the results are amazing.....whereas once I took my blessings for granted, the struggles opened my eyes to all that I should be thankful for.

This UTA, I encourage all Service Members to share their gratefulness for both their challenges and blessings with each other. “Health, weather, sports, food, smiles, and many others are but a few to share. Remember to laugh in the face of both success and adversity, because in the end, it is “the laughter we remember, when we remember the way we were!”

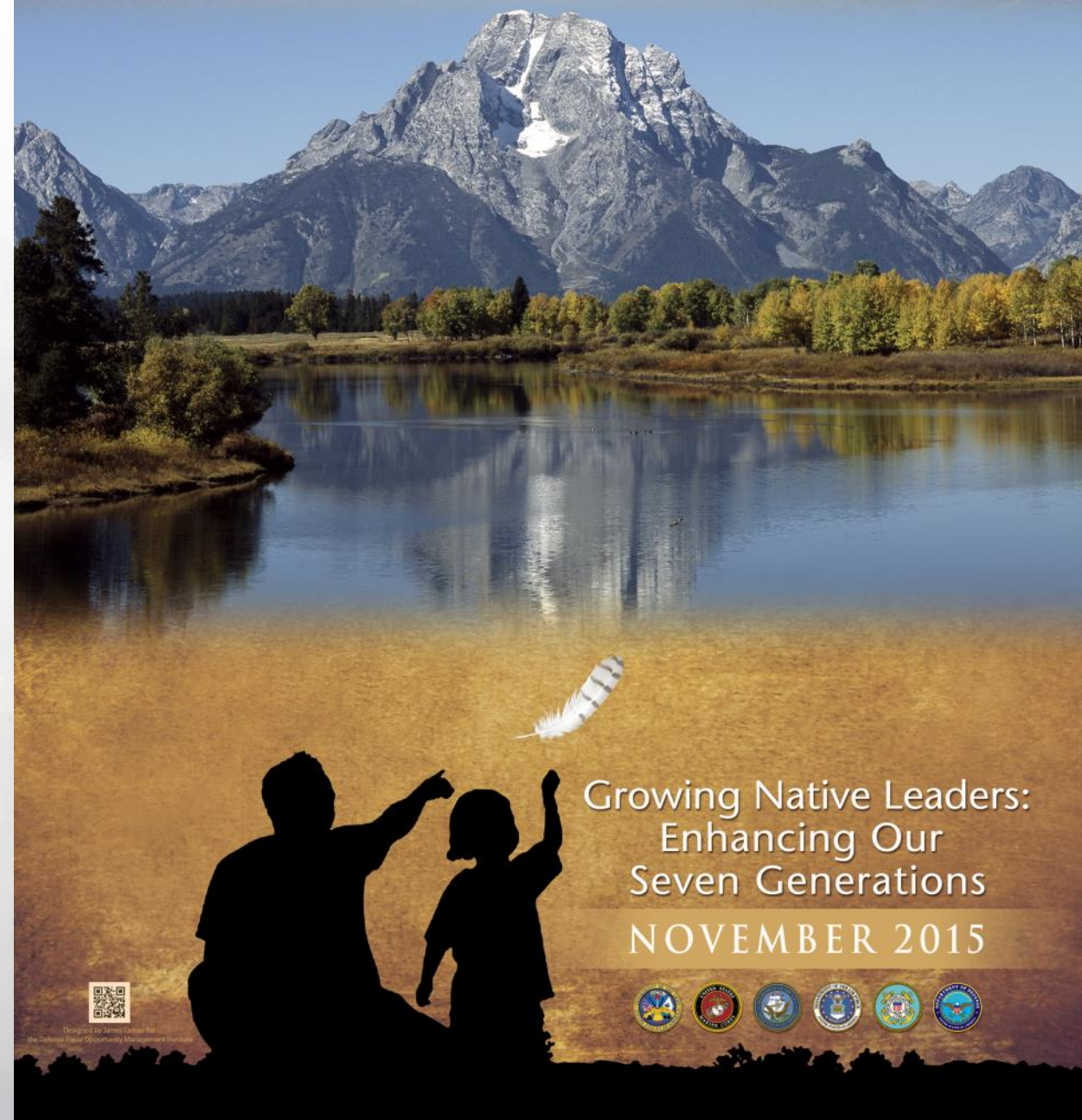
So I ask you, for what are you thankful? What brings a smile to your face, a peace to your heart? Now, share it with a colleague and family member. Whether you choose to email or text your response or even identify it in person preferably, I challenge each of you to identify a daily blessing and share it with one another in some format. Not only will it reinforce your connectedness to one another, it will make the basis of that connection a positive force and empower us for this year and the years to follow.

To you and yours, I wish a Thanksgiving filled with joy, peace, and plenty of laughter.

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## NATIONAL AMERICAN INDIAN HERITAGE MONTH



# Around the Wing

For more awards photos, check out the 177th Fighter Wing Facebook page!



## EHT Eagle Academy Base Tour



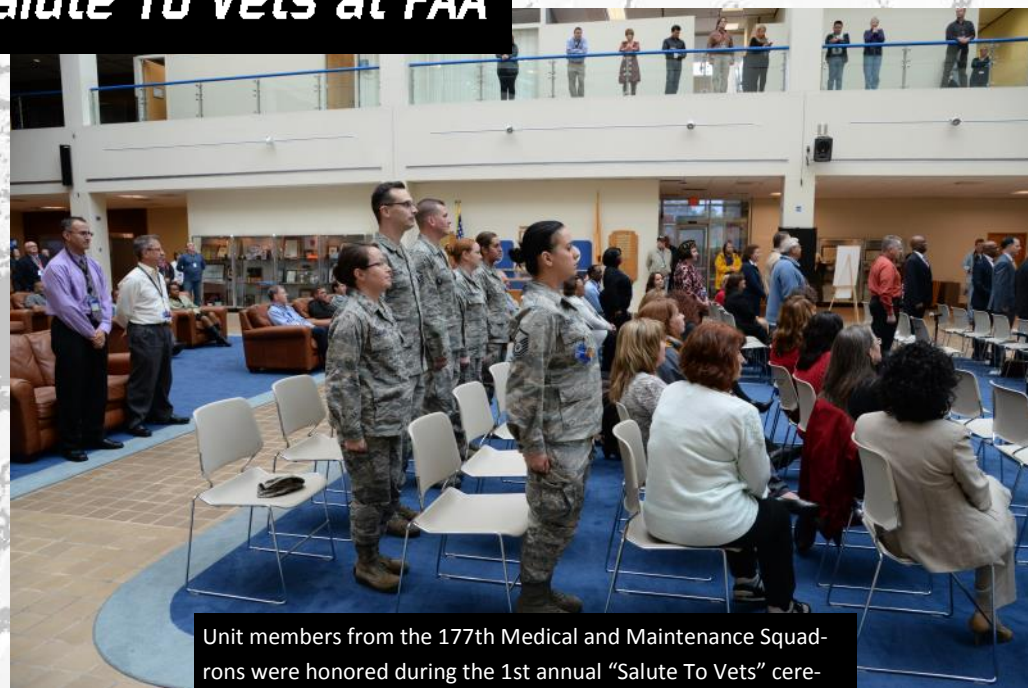
Students from Egg Harbor Township's Eagle Academy, led by teacher Gregory Smith, visited the 177th for a base tour on Nov. 4. ANG/MSgt Andrew J. Moseley

## Operations Support Squadron NCO at Mullica Twp.



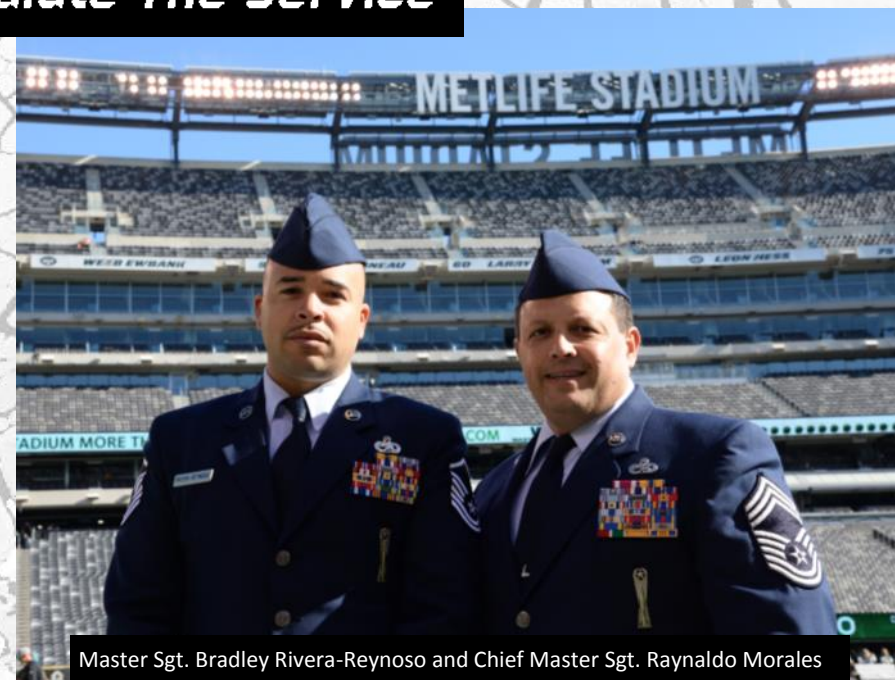
TSgt Jasin Nesmith, 177th Operations Support Squadron Flight Services Manager, speaks to students, faculty and Veterans at Mullica Twp. School on Nov. 10, 2015. Courtesy Photo

## Salute To Vets at FAA



Unit members from the 177th Medical and Maintenance Squadrons were honored during the 1st annual "Salute To Vets" ceremony at the William J. Hughes/FAA Technical Center on Nov. 10. ANG/MSgt Andrew J. Moseley

## Salute The Service



Master Sgt. Bradley Rivera-Reynoso and Chief Master Sgt. Raynaldo Morales participated in the "Salute the Service" events at Meadowlands Stadium in East Rutherford, New Jersey on Nov. 8. ANG/MSgt Andrew J. Moseley

# FINAL PHOTO

Red White and Blue

TOL 3 JAGUARS 0 QTR 1 6:29 DOWN 1ST TO GO 10 BALL ON 20 25 TOL 3 JETS



Representatives from each branch of the military practice unfurling a giant 40 yard long U. S. flag on the field at MetLife Stadium in East Rutherford, New Jersey on Nov. 8, 2015, prior to the "Salute The Service" game. ANG/Master Sgt. Andrew J. Moseley