
THE OFFICIAL MONTHLY MAGAZINE OF THE 177th FIGHTER WING
THE CONTRAIL

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On the cover: Airmen from the Connecticut, Maine, New Jersey, Rhode Island and Vermont Air National Guard Fire Departments perform a live aircraft fire training exercise at 165th Airlift Wing's Regional Fire Training Facility in Savannah, Ga. on April 4th, 2016. The airmen are conducting joint training exercises to maintain operational readiness. (U.S. Air National Guard photo by Tech. Sgt. Andrew Merlock/Released)

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COMMANDER'S COLUMN

Produce/innovate/deliver mission readiness

by Col. John R. DiDonna, Wing Commander

I hope this last little snow event on 9 April wraps up our Winter season and we can finally enjoy Spring!

My message to you this UTA focuses on the next 18 months; an 18 month period where our Mission Readiness will be tested and our ability to handle a higher than normal operations tempo will be verified.

I have occupied the positon of Wing Commander for just over a year now. I am routinely blown away by your willingness to serve, by your commitment to our Federal & State mission readiness, by your innovation, and by your accomplishments. I feel a great sense of pride when reflecting on what you have been able to achieve; the next 18 months present an opportunity for our Fighter Wing to further excel. Between now and the Fall of 2017, we have 3 major Fighter Squadron/Maintenance Group deployments, we have known ASOS/Civil Engineering/Fire Department unit deployments, we have 150+ Wing Airmen from various units who will deploy in support of multiple world-wide operations; and, these are the "known" mission taskings at this time – more will likely emerge. We also have our ACC Unit Evaluation Inspection Capstone scheduled in the Winter/Spring of 2017; a 4-5 day visit from the ACC IG team who will assess our overall Wing mission effectiveness and compliance. Between all these commitments, we must maintain and ensure our daily operations tempo remains disciplined in order to cement high readiness levels and continue our efforts/focus towards Airmen Force Development.

You are the makeup of the 177th Fighter Wing; you are members of the Total Air Force; you are Airmen who are fit, capable, dedicated, and bring both lethal and non-lethal readiness in the defense of Freedom. I am so proud of your contributions to the state of New Jersey and to the United States of America! Continue demanding excellence of yourself and others, continue to execute with high integrity, continue to produce/innovate/deliver mission readiness – Do all this and the next 18 months will produce only one thing – ***SUCCESS***! I am honored and fortunate to command our highly capable Fighter Wing – Thanks Jersey Devils!!

Fire Dept. Training—Feeling The Burn

Story and photos by TSgt. Andrew Merlock, 177th FW Public Affairs

SAVANNAH, Ga.- The 177th Fighter Wing Fire Department joined with four other Air National Guard Units to conduct a wide-variety of training exercises at the 165th Airlift Wing's Regional Fire Training Facility during the week of April 3, 2016.

Fire department members were mixed in with airmen from Connecticut, Maine, Rhode Island and Vermont Air National Guard Units to give the deployment exercises a more realistic feeling.

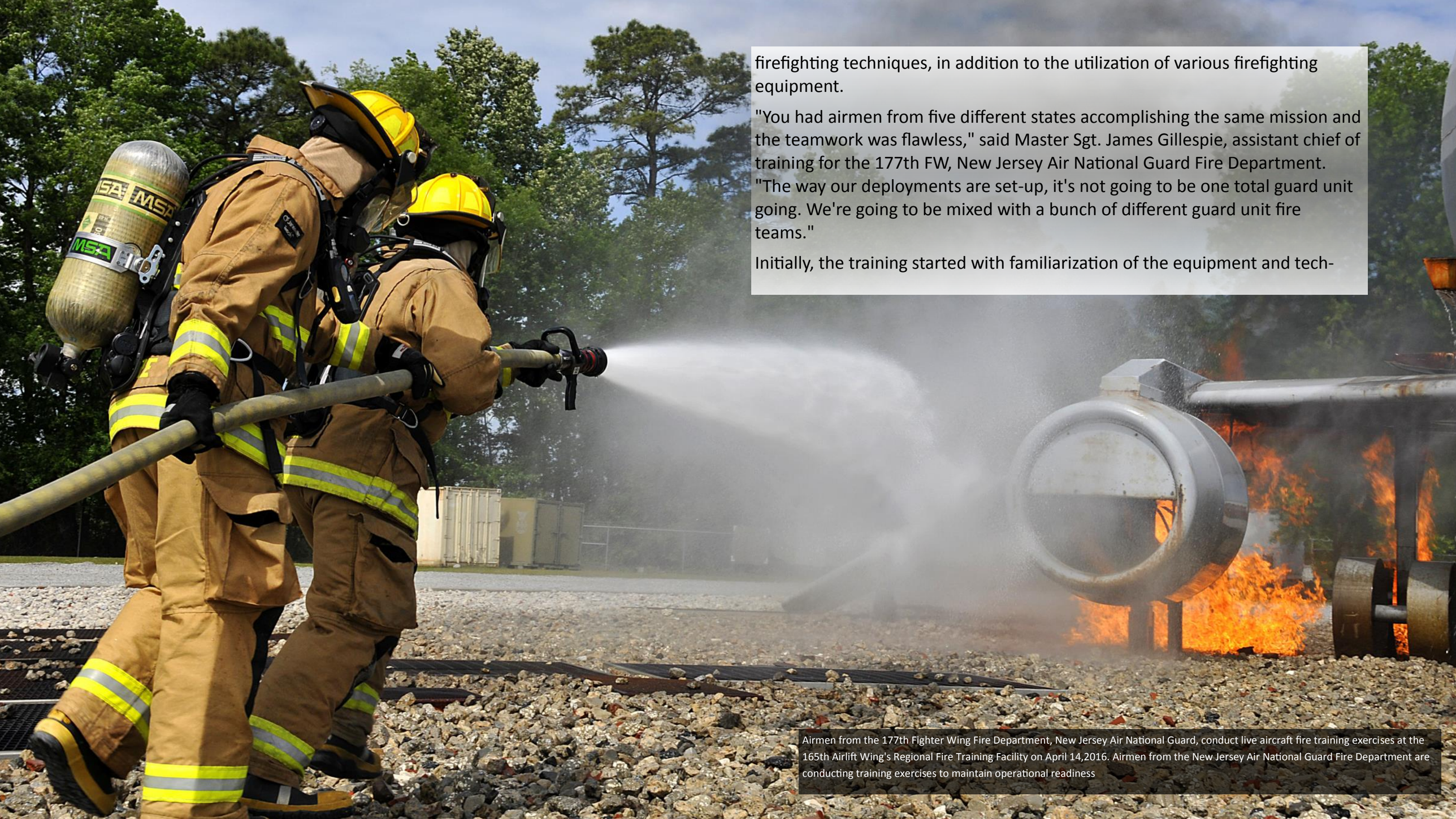
"Once we deploy, we want to make sure that everybody showing up has the same level of competence," explained Senior Master Sgt. Robert Cross, fire chief of the 103rd Airlift Wing, who served as the fire chief and an instructor for training evolution. "We want the highest level in a deployed location. By doing joint training, we're able to strengthen the weaker units and even out the playing field."

Airmen conducted live fire training exercises, including both structure and aircraft fires. The training, which is an annual requirement, enables airmen to practice various

YouTube

Click here to watch a video clip of the training.

Airmen from Connecticut, Maine, New Jersey, Rhode Island and Vermont Air National Guard Fire Departments perform a live aircraft fire training exercise at 165th Airlift Wing's Regional Fire Training Facility in Savannah, Ga. on April 4th, 2016. The airmen are conducting joint training exercises to maintain operational readiness.



firefighting techniques, in addition to the utilization of various firefighting equipment.

"You had airmen from five different states accomplishing the same mission and the teamwork was flawless," said Master Sgt. James Gillespie, assistant chief of training for the 177th FW, New Jersey Air National Guard Fire Department. "The way our deployments are set-up, it's not going to be one total guard unit going. We're going to be mixed with a bunch of different guard unit fire teams."

Initially, the training started with familiarization of the equipment and tech-

Airmen from the 177th Fighter Wing Fire Department, New Jersey Air National Guard, conduct live aircraft fire training exercises at the 165th Airlift Wing's Regional Fire Training Facility on April 14,2016. Airmen from the New Jersey Air National Guard Fire Department are conducting training exercises to maintain operational readiness

niques that the airmen would utilize in real-life situations. The guardsmen practiced obtaining water supplies from various outlets in addition to the utilization of the P-22 Pumper, P-19 Aircraft Rescue Firefighting, P-26 Water Tanker, and P-34 Rapid Intervention Vehicle.

"Each guard unit is given its equipment package based on the type of aircraft you fly," Gillespie continued. " To be able to come here and utilize all the equipment that the Air Force has to offer better prepares airmen for a deployed environment."

The training culminated with the live aircraft fire response training exercise. Airmen from the various Air National Guard Units assembled in four fire teams to extinguish fires on various aircraft locations, including the interior compartment.

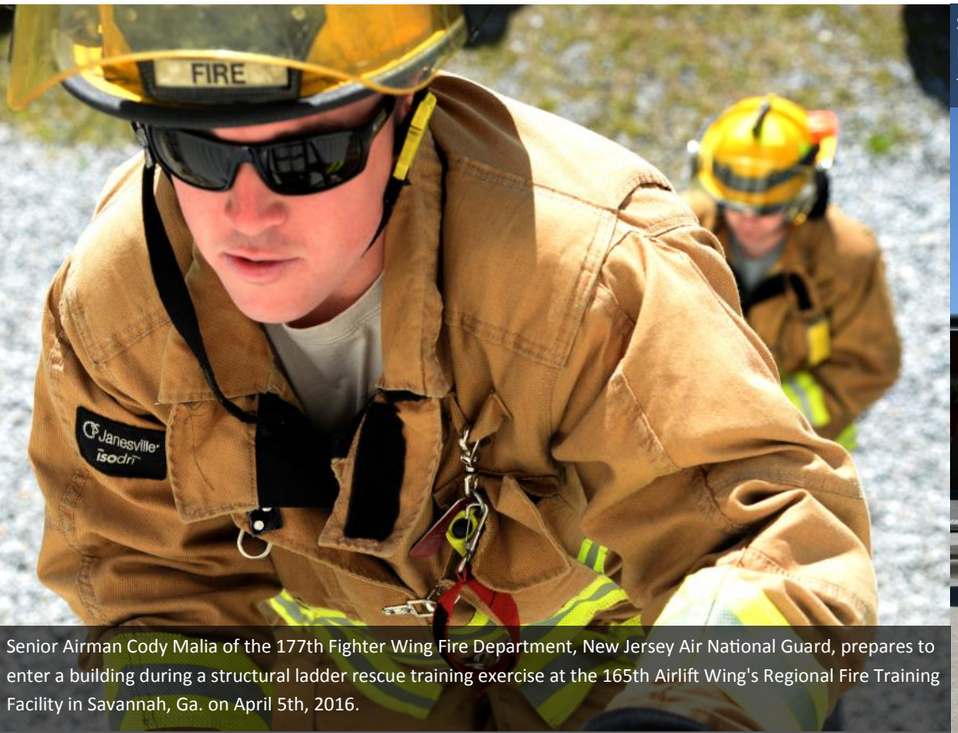
"We're ensuring that an egress path is cleared at all times," explained the evaluator and safety officer, Tech. Sgt. Brad Crandall of the 143rd Airlift Wing, Rhode Island Air National Guard. "The emphasis is to cool down the aircraft so that any potential passengers in a real-world situation have a path to get out of that danger zone. That's what we are ultimately there to protect."

Airmen also conducted basic vehicle extrication training exercises in which motor vehicles were disassembled. This training provided practical, hands-on exercises focusing on softening, a term utilized to describe the prying of doors and other openings, and stabilizing a vehicle in addition to the deployment and utilization of extrication tools.

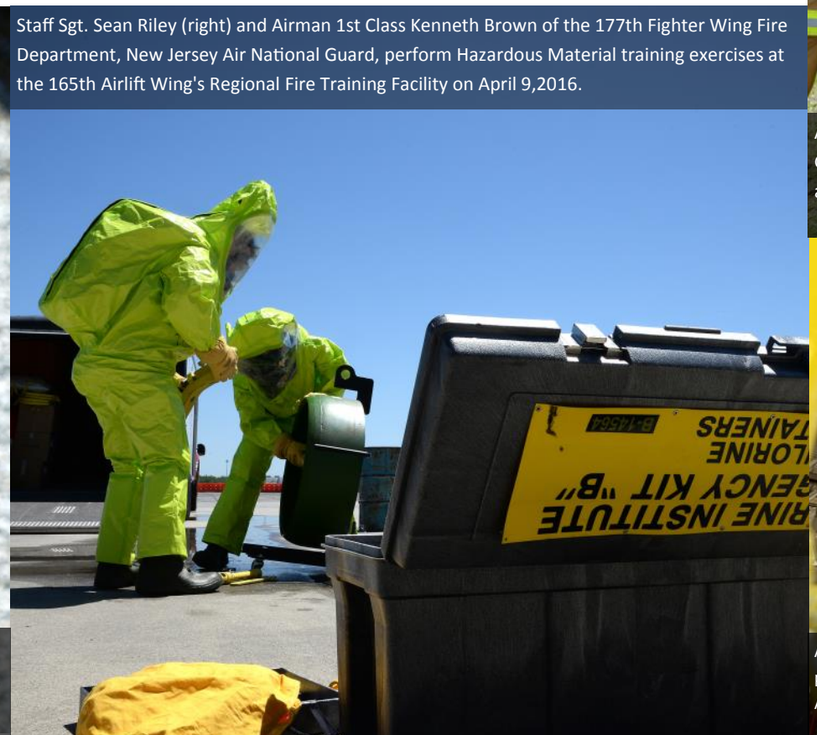
"Take it all in, make good sound decisions and take into account the safety of your crew," explained Tech. Sgt. Brandon

Airman 1st Class Scott Bramhall of the 177th Fighter Wing Fire Department, New Jersey Air National Guard, utilizes wedge cribbing to stabilize a vehicle during basic vehicle extrication training exercises at the 165th Airlift Wing's Regional Fire Training Facility in Savannah, Ga. on April 6th, 2016.

Airman 1st Class Brooke Hunt of the 177th Fighter Wing Fire Department, New Jersey Air National Guard, utilizes a halligan tool to soften a vehicle during basic vehicle extrication training exercises at the 165th Airlift Wing's Regional Fire Training Facility in Savannah, Ga. on April 6th, 2016.



Senior Airman Cody Malia of the 177th Fighter Wing Fire Department, New Jersey Air National Guard, prepares to enter a building during a structural ladder rescue training exercise at the 165th Airlift Wing's Regional Fire Training Facility in Savannah, Ga. on April 5th, 2016.



Staff Sgt. Sean Riley (right) and Airman 1st Class Kenneth Brown of the 177th Fighter Wing Fire Department, New Jersey Air National Guard, perform Hazardous Material training exercises at the 165th Airlift Wing's Regional Fire Training Facility on April 9,2016.

Airman 1st Class Ryan Lueddeke of the 177th Fighter Wing Fire Department, New Jersey Air National Guard, performs mechanical advantage for low angle rescue training exercises during rope rescue training at the 165th Airlift Wing's Regional Fire Training Facility on April 12,2016.

Senior Airman Amber Lueddeke of the 177th Fighter Wing Fire Department, New Jersey Air National Guard, performs mechanical advantage for low angle rescue training exercises during rope rescue training at the 165th Airlift Wing's Regional Fire Training Facility on April 12,2016.

Sotter, assistant chief of operations for the 158th Fighter Wing, Vermont Air National Guard, who was instructing the vehicle softening portion of the exercise. "We didn't make the scene that way, we're just trying to make it better."

Airmen practiced the deployment and utilization of cribbing tools to stabilize an overturned motor vehicle, in addition to hurst spreaders and cutters. These tools are utilized by fire departments throughout the Air National Guard to prevent further injury and ultimately remove an entrapped victim of a motor vehicle accident.

"EMS is a large part of our job now," explained Senior Airman Colin Bellavance of the 158th Fighter Wing Fire Department, who also served as an instructor. "This is a big part of it, responding to scenes and providing assistance to patients in need."

One of the final training sessions that the airmen participated in focused on the Air Force inspection system, training records, awards and decorations and counseling. This session provided the airmen with a better understanding of the administrative actions required to ensure overall mission effectiveness.

"You matter to the overall picture," said Cross. "We intend to give you the tools to successfully progress in your career. Conformity in this area by all Air National Guard units is an integral part of overall mission success."

Cross, in addition to Senior Master Sgt. Jeremiah Jordan, chief of the 101st Air Refueling Wing Fire Department, Maine Air National Guard, instructed the airmen and stressed the importance of taking a proactive approach in fulfilling their training requirements. Both Cross and Jordan communicated how the successful completion of all training requirements benefit not only their units, but ultimately the Air Force in a deployed environment.

Staff Sgt. Sean Riley from the 177th Fighter Wing Fire Department, New Jersey Air National Guard, pauses during a live aircraft fire training exercise at the 165th Airlift Wing's Regional Fire Training Facility on April 14,2016.

"Self-motivation is a big part of the process," explained Jordan. "It's important to provide airmen at the lowest levels the tools, proper avenues and training to be self-motivated and understand the need to delegate responsibility throughout the organization."

Cross and Jordan also provided the airmen with some exposure to the Air Force's Management Internal Control Toolset (MICT). The airmen were taught the purpose of MICT and how the Air Force utilizes the program to conduct readiness inspections. Cross concluded the training day with a 2003 "And the Beat Goes On" video of Deputy Chief Billy Goldfeder, which stressed the importance of fire-fighter training and the tragic results that have occurred due to poor preparation and complacency.

"During the past week, we gave you the best training that we could," Cross concluded. "Our hope is that you lead the charge and facilitate a better future for the Air National Guard as a whole."

Airman 1st Class Adam Osmola (Center) and Senior Airman Brian Collison of the 177th Fighter Wing Fire Department, New Jersey Air National Guard, lower a ladder during a ladder operation training exercise at the 165th Airlift Wing's Regional Fire Training Facility on April 12,2016.

A message from the 177thFW SARC

Every day and almost every minute of our lives, we are making choices. We make small, seemingly insignificant choices that most likely will have little, if any effect on our daily lives. We make choices such as what type of dressing on our salad or, to wash or not the car this weekend. We also make choices that could possibly cause negative effects on ourselves or others. Should I speed up to try to make this yellow light which could get me and or someone else into an accident? Should I stay up late tonight knowing I'll be tired and un-productive tomorrow? As we all know, there is a vast array of different types of choices we can make each with their own cause and effect.

Today I want to talk about a very important choice that may present itself to you during the course of your life: The choice to take action and prevent a possible sexual assault. As United States Airmen, it is our duty to protect and care for our fellow Airmen. We must see to it that each and every Airman is physically and mentally capable to execute the mission. It is imperative that we start to develop our Air Force culture to view our fellow Airmen as not just co-workers, but as family members. By doing so, we'll be better equipped to want to ensure our "family" members' safety and well-being.

April is "Sexual Assault Awareness and Prevention Month" and the theme this year is "Eliminate Sexual Assault: Know your part. Do your part". With that in mind, the Air Force is incorporating a new training program called "Green Dot". This program, run at our wing level by 2d Lt Richard Ryan, will be launching within the upcoming months. This new training will give each and every Airman the tools needed to not only be able to identify the signs of a possible sexual assault, but how to dismantle the assault before it may happen.

Starting this month, let's begin to raise our awareness of what it means to "Do your part" by taking a look at these simple ideas:

The majority of Airmen will not commit sexual assault or be victims of sexual assault, but sexual assault in the Air Force is a problem for and affects all Airmen.

Leadership does not require rank or position. Any Airman can and should take action to lead their peers and set an example for compassionate and professional support for victims of sexual assault.

A whole team, effectively responding to sexual assaults is critical to the health, morale and welfare of Airmen, and ultimately essential to Air Force readiness.

Every Airman who enforces professionalism in their workplace and insists their Wingmen treat each other with dignity and respect is taking action to eliminate sexual assault and support survivors.

I've been with the 177th FW for 17 years now and I've met a lot of Airmen from all parts of this base. I know that everyone here has the courage and strength to step up and do the right thing. One of our many Air Force mottos is "Aim High!" So, let's "Aim" to take care of one another and do our part as a Wing team to prevent sexual assault.

1st Lt Ryan Carlson
177th FW Sexual Assault Response Coordinator
Office (609) 761-6726
177FW SARC Cell 609-385-3671
DoD Safe Helpline 1-877-995-5247

http://www.177fw.ang.af.mil/resources/SAPR/index.asp

24 Hr. Challenge Run a success

Photos by MSgt. Andrew Moseley 177th FW/PA

Airmen from the 177th Fighter Wing participated in the Fifth Annual 24 Hour Run Challenge put on by the 227th Air Support Operations Squadron which ran from March 23rd at 1200L and ended on March 24th at 1200L . During the 24 hour period 104 participants, including friends, family and co-workers ran 880 miles and raised $2,180. The 177th base track served as the rally point and once again, the 177th showed up to raise awareness and money for all our fall-en brothers, their families as well as keeping the TACP-Association going strong in order to provide aid to the community.

The Convair F-106A Delta Dart – The Ultimate Interceptor

Part 3: USAF Squadron Service

F-106s of the 71st FIS (Richards-Gebaur AFB) take fuel over the Pacific Ocean on the way to Osan AB in Korea during the Pueblo Crisis. (USAF via www.f106deltadart.com)

The Air Defense Command Fields The "Six"

In the last two issues of The Contrail we related the interesting history of the development of the delta wing aircraft concept and its application to what was probably the best, dedicated fighter-interceptor of all times, the Convair F-106A Delta Dart. While the initial Air Force planning called for the acquisition of 1000 Delta Darts, enough to re-equip the entire Air Defense Command [ADC], budget realities drastically curtailed that plan. In the end only 342, including the two prototypes, were produced. This was about one third of ADC's originally intended force. This number procured allowed about half of the ADC, or 15 fighter-interceptor squadrons, to transition to the Delta Dart.

In Air Force service, it was referred to simply as "the Six." Typically a squadron was equipped with 18 single seat F-106As and two, two-seat F-106Bs. The remaining squadrons were equipped with the less costly but also less capable two-seat McDonnell F-101B Voodoo, of which a total of 479 were acquired.

As noted last month, the first Air Force units to get the Six were McGuire AFB's 539 FIS and Geiger AFB's (in Washington State) 498th FIS in mid-1959. Shortly thereafter, on 21 July while still in the conversion phase, the 498th was able to scramble five Sixes on a simulated combat mission with remarkable success, an early endorsement of the program. Initial operational capability (IOC) was reached October 1959, five years later than originally planned. Within the same year, the 27th FIS (Loring AFB), 95th FIS (Andrews AFB) and 456th FIS (Castle AFB) began F-106 operations.

Despite the initial achievements of the first F-106 units, the ADC still had some concerns about whether they were truly "combat ready." There were continuing problems with the generator, fuel-flow difficulties especially acute in cold weather, and fuel-combustion-starter malfunctions among other issues. These along with the December 1959 grounding of the fleet due to the loss of a canopy in flight stimulated the two major modification projects mentioned in last month's Contrail article.

In 1960 a further 9 squadrons were re-equipped with the Six: 5th FIS (Minot); 11th FIS (Duluth); 48th FIS (Langley); 71st FIS (Richards Gebaur); 94th FIS (Selfridge); 318th FIS (McCord); 319th FIS (Bunker Hill); 329th FIS (George); and the 438th FIS (Kinchloe), bringing the total to 14 operational squadrons, all within the ADC.

Total production of the single-seat F-106A was 275 including the two prototypes and initial test aircraft. The two-seat F-106B first flew in April 1958 with the delivery of 63 examples starting in October of that year. The "flyaway" cost per production aircraft was $4.7 million (in 1960 dollars) that included $2 million for the airframe, $0.275 million for the engine, $1.3 million for the electronics, $0.95 million to armament and $0.1 million for ordnance. Interestingly, the average flying cost including maintenance was $1,600 per hour in 1960 dollars, equivalent to $12,800 per hour today. For comparison, today the flying cost is about $25,000 per hour for the F-16 Viper and $68,000 per hour for the F-22A Raptor.

The Ultimate Interceptor Proves Its Title

Thus, by the early 1960s about half of the ADC flew F-106s. The ADC greatly valued the basic performance characteristics and design criteria. The Delta Dart was designed to get off the ground quickly, climb fast and cruise fast! It was designed to destroy enemy bombers at any altitude, day or night, in any weather. For the most part, the ADC "looked north" as a Soviet bomber attack was anticipated to follow the shortest route over the North Pole to attack the continental US. Therefore, the goal was for the Delta Darts to intercept the attacking bombers far north over Canada before they could threaten US targets. The incoming bombers would be detected by the three radar lines which were, starting from the northernmost, the Distant Early Warning, or DEW line; then the Mid-Canada Line of unmanned microwave stations; and the southernmost Pine Tree Radar Line. The Delta Darts would rely on Ground Control Intercepts [GCI] and the SAGE [Semi-Automatic Ground Environment] system to direct the fighters into position so that the sophisticated, on-board MA-1 fire control system could take over for the final attack and destroy the attackers.

Each ADC squadron had at least two fighters on five-minute alert. This meant that they would scramble and climb toward the threatening bomber attack within five minutes of the scramble klaxon sounding. Actual ADC times were more like two to two and a half minutes. These five-minute alert Delta Darts were equipped with two AIM-4E radar guided and two AIM-4F heat (IR) guided Falcon missiles.

To save money, the Air Force decided to reduce the F-106 buy and instead equip about half of the ADC with the lower cost, but less effective, McDonnell F-101B Voodoo, such as shown from the 18th FIS, Grand Forks AFB. (USAF)

Backing up the 5-minute alert birds, were two or four aircraft kept on 15 minutes alert. They were also armed with the four Falcons. But they were also armed with one nuclear tipped MB-1 Genie air-to-air rocket. These white "Blivits" (that is what the ADC pilots called them) were designed to be fired ahead of an incoming enemy bomber formation, to detonate, and for the ensuing fireball to consume the fleet of hostile attackers. Backing up these aircraft were a further two or four similarly armed Delta Darts on one-hour alert.

Alert aircraft were cocked, loaded and pre-flight checks completed. Sitting in their shelters, they were connected to compressed air hoses (for engine starts) and electrical umbilical cables from dedicated power carts. When the alert klaxon sounded, the fully dressed pilots would run to their aircraft, closely followed by the crew chiefs. After engine start, the alert birds would quickly taxi to the nearby runway threshold and launch, typically streaming takeoffs at three second intervals. The climb to 40,000 feet would take two minutes from the time of brake release, or less than five minutes from the time the alert was sounded.

Relying on the combination of the SAGE ground based command-control-communication [C3] system and on-board MA-1 fire control system, the Delta Darts were capable of

The 498th FIS, based at Geiger AFB, Washington, was the second squadron to receive the F-106 but the first to declare Initial Operating Capability in October 1959. (USAF)

flying a complete mission "hands free" from "wheels in the well" to 50 feet above the runway during landing. The pilot was only required for the take off, "pulling the trigger" after identifying the hostile intruder, and final landing. But in practice, most ADC pilots preferred to maintain control throughout the flight.

With this northerly focus, you can imagine the turmoil caused in the ADC in 1962 when it was discovered that Soviet missile and bomber bases were being constructed in Cuba. If the US allowed these offensive bases to be completed, any attack from Cuba would totally negate even the 15-minute anticipated warning time. Targets throughout the southeastern part of the US could be attacked even before the 5-minute alert aircraft were launched. It is no wonder, therefore, why President Kennedy made the stand he did and was willing to go to war if the Soviets and Cubans did not back down!

During the 1960s, the Soviet bomber threat was superseded by the missile threat. Soviet launched Intercontinental Ballistic Missiles [ICBMs] represented virtually an unstoppable threat. Once detected, Russian ICBMs would give the US defenses about 15 minutes to respond. In that case, the ADC strategy was to "flush the fleet." This meant that all flyable aircraft were immediately launched from their home bases and dispersed in small numbers each to numerous Air National Guard and civilian airfields

This fine in-flight study of a 539th FIS F-106A based at McGuire AFB displays their original tail markings. (USAF via www.f106deltadart.com)

away from populated areas. In moving the fighter-interceptors to non-targeted airfields, the air defense force was kept intact and available to defend against the subsequent Soviet bomber attack that would likely follow after the ICBM attack.

ADC's F-106 Operations

Air Defense Command leaders drove its units and pilots almost as hard as did the legendary Gen. Curtiss LeMay and his Strategic Air Command. The fighter-interceptor squadrons were constantly practicing with planned and un-planned scrambles in all kinds of weather, day and night. It would not be untypical for a Delta Dart alert pilot to be scrambled three times a day! This high level of training and the criticality of their mission led to a high esprit de corps. ADC pilots wore blaze orange flight suits. The color choice was one of necessity since, with their northern focus, their intercepts would be over frozen, snowy northern regions. If they needed to eject, the color of their flight suits would make locating them for rescue easier. The flight suits were also liberally adorned with patches – ADC, squadron and aircraft type. The need for anonymity of Tactical Air Command pilots was superfluous for ADC since it was highly unlikely their pilots would fall into enemy hands!

Furthermore, Delta Dart pilots wore spurs attached to their flight boots! These fixtures were part of the ejection seat system. When seated in his cockpit, the spurs would lock onto steel balls that were at the end of two cables that retracted into the ejection seat to restrain the legs during an ejection. This prevented any danger of the loss of the pilot's lower limbs

This lineup of F-106As and F-106Bs of the 539th FIS depicts their final squadron markets, some time before the unit was deactivated in 1968. (USAF via www.f106deltadart.com)

from contacting the peaked windscreen during an emergency ejection. But frankly, the pilots enjoyed the noise the spurs made when they walked around the squadron spaces or when at the Officer's Club at the end of the day! It added to their image as "gunfighters of the Old West."

F-106 Modernization And Replacement Plans

Starting in 1965, the F-106 fleet entered a modernization phase which, as noted in last month's Contrail, included improved microelectronics, a new canopy, the 20-mm gun (for close-in attack against hostile bombers), radar homing and warning equipment, and other enhancements that all resulted in the further improvement to what was already the best fighter-interceptor in existence.

As an interesting historical aside, the mid-1960s also witnessed the Air Force's attempt to define the next generation interceptor that would replace the F-106. Initial focus was on a fighter version of Lockheed's A12/SR-71 Blackbird family. But the background is a bit convoluted. Lockheed Aircraft's famed "Skunk Works" was contracted by the Central Intelligence Agency to develop and build a stealthy, supersonic, high-flying replacement for the fabled U-2 reconnaissance aircraft, under the code name "Oxcart." The resulting single-seat aircraft was designated the A-12 Archangel. Its performance was outstanding, with a top speed of Mach 3.2 at 75,000 feet, with a service ceiling of "above 95,000 feet." A total of 15 were built, of which six were lost in accidents. But it served the CIA with distinction from April 1962 to June 1968 when it was replaced by the slightly larger, two-seat SR-71 Blackbird operated by the USAF. (If you wish to see a rare A-12 in person, visit the USS Intrepid museum in New York harbor.) With such outstanding performance, however, the Air Force thought it would make a great interceptor. The A-12 design was tweaked by the addition a second seat for a radar intercept officer and the conversion of the four existing electronic equipment bays to house three Hughes AIM-47A air-to-air missiles, plus the associated electronics. Three A-12s were pulled off the Lockheed production line and produced as the YF-12A interceptor. Testing yielded very impressive results including six successful firings of the AIM-47 missile, shooting down supersonic targets flying at altitudes as high as 75,000 feet and as low as 500 feet. The YF-12A also set a number of speed and altitude records, some of which have not been surpassed. As an interesting bit of historic trivia, President Johnson announced the existence of the YF-12A interceptor program to hide the fact that the highly secret A-12 reconnaissance aircraft was being developed and deployed by the CIA.

The 95th FIS received their Sixes in 1959 while at Andrews AFB; the squadron transferred to Dover AFB in 1963. This photo shows the squadron's Delta Darts during their 1968 deployment to Osan AFB, Korea, outside of their opened ended shelters. (USAF via www.f106deltadart.com)

However, early in 1967 Secretary of Defense Robert McNamara made the decision to cancel the YF-12A project and instead focus on a radically revised version of the F-106. The $1 billion program known as the F-106X would have been fit with canards to improve maneuverability. It was to be powered by an experimental JT4B-22 turbojet. The greater airflow required enlarged, squared-off intakes with movable ramps, not unlike the intakes used on today's F-15 Eagle. The F-106X was to have been equipped

The 94th FIS based at Selfridge AFB deployed to Osan AB as part of the Pueblo Crisis buildup; they are shown here refueling from a KC-135A on the way across the Pacific Ocean. (USAF via www.f106deltadart.com)

with a more advanced fire control system with the capability of look-down/shoot down intercepts of high and low flying targets. These changes would require a larger fuselage including a 40-inch radar dish that added five feet to the overall length. In September 1967 that program was shelved in favor of a more modest program, known as the F-106E/F, that would have the same look-down/shoot down capability of the F-106X, as well as two-way UHF voice and data link radios, and the ability to fire the advanced AIM-26 Falcon and AIM-47 air-to-air missiles. Ultimately, Congress cancelled the F-106E/F program as well and the ADC had to settle for a cheaper Minimum Essential Improvement in System Reliability [MEISR] program for 250 of the F-106A/B in service. (Incidentally, an earlier F-106C/D program with some of the features of both the –X and the -E/F versions had been considered and then rejected on cost grounds.)

Peak Service And Deployments

By 1968, the Air Force's inventory of F-106 squadrons peaked at 15. While the 319th, 329th, and McGuire's 539th FIS were deactivated, new F-106 squadrons were the 49th FIS (Griffiss AFB); the 84th FIS (Hamilton AFB); the 87th FIS (Duluth); and the 437th FIS (Oxnard AFB). Also in 1968, the most important overseas deployment took place. As part of the Korean buildup that stemmed from the Pueblo Crisis (North Korea's capture on 23 January 1968 of the Navy intelligence ship USS Pueblo and its 83 crewmen in international waters) a series of F-106 deployments to South Korea began. The first of these was the deployment of the 318th FIS from McCord AFB across the Pacific. It is notable as the first overseas deployment and the operational use of the newly retrofitted in-flight refueling capability. All told, in addition to the 318th, the 48th, 71st, 94th and 95th FISs deployed to Osan AB, South Korea for various periods where they stood alert. The F-106 presence at Osan continued beyond the release of the Pueblo crew (82 survivors and one set of remains) on 28 December 1968. The TDY F-106s gained the added task of escorting Air Force EC-121 Constellation radar/electronic intelligence aircraft after North Korean MiGs shot one down on 15 April 1969. The last deployed unit, the 95th FIS, returned to its home at Dover AFB on 1 May 1970. Incidentally, the USS Pueblo still exists and is part of the "Victorious Fatherland Liberation War" propaganda display in North Korea's capital of Pyongyang. The USS Pueblo remains the only U.S. naval ship to be in captivity. Incidentally, the activation of the 119th FS described in the September 2015 issue of the Contrail was also related to this incident.

The F-106 also participated in other deployments during its Air Force career, but none of the same level of the threat of combat as that to Korea. In 1975, the 5th FIS deployed a detachment to Germany as part of NATO's exercise "Autumn Forge/Cold Fire." In 1978 the 87th FIS deployed to Keflavik, Iceland, to relieve the 57th FIS which was transitioning to the F-4E Phantom. In addition, June 1963 saw two 48th FIS F-106s become the "star attractions" at the annual Paris air Show.

The Delta Dart vs. The MiG-21 Fishbed

In 1959, the Air Force's ADC conducted projects "Have Drill", "Have Ferry" and "Have Donut" at Area 51 in Nevada that pitted operational and developmental aircraft against Soviet MiG-15, MiG-17 and MiG-21 aircraft acquired via Israel. Operational F-100, F-102, F-104, F-105 along with the F-106 and even the YF-12A were tested for their ability to detect and engage the more maneuverable and smaller Soviet fighters. For the F-106, the ADC found that the targets could be acquired at 20-25 miles range from all aspect angles, with stern contacts the best and head-on the worst. When flown in project "Have Donut" against the most potent adversary, the MiG-21 Fishbed-E, the F-106 had superior acceleration, higher speed, a great ability to disengage and its MA-1 fire control system proved adequate for tracking and lock-on under most test conditions. However the results also

Air Force F-106s flew mock combat against this captured MiG-21 Fishbed-E as part of the project "Have Donut" evaluation. (USAF)

The 5th Fighter Interceptor Squadron "Sixes" over Mount Rushmore; based at Minot AFB, North Dakota, they recorded the longest operational use of the "Six" of any Air Force or ANG unit, spanning from February 1960 to April 1985. (USAF via www.f106deltadart.com)

This is an artist's impression of the canard-winged advanced version known as the F-106X; it was never built. (www.f106deltadart.com)

reinforced the ADC's plans to retrofit a clear cockpit canopy and install a gun, as described earlier in this article. Also, Six pilots found the small size of the MiG-21 to be misleading in their estimation of range and rate of closure. The results also stressed the need for Six pilots to avoid slow speed turning contests with the MiG-21 as performance was close to equal and a slight miscue could be fatal. For details of project "Have Donut" the declassified report available from the National Security Archive at George Washington University makes a very interesting read. (See http://nsarchive.gwu.edu/NSAEBB/NSAEBB443/docs/area51_50.PDF)

In The Next Segment…

In 1971 the Air Force began to reduce its F-106 fleet with the deactivation of some ADC squadrons and the transfer of their aircraft (as well as the continental air defense mission) to the Air National Guard as will be described in the next installment.

PARADOCS

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

During this April time of stress with Weddings, Holidays, Graduations, and other Stressful Activities be a **WINGMAN** and look out for each other. This is the month for Women in the Military, so be especially watchful to look out for our sisters in Uniform. Consider the following poem by Don Merrill, as your reminder of the importance of **SAFETY!**

I Chose To Look The Other Way

I could have saved a life that day,
But I chose to look the other way.
It wasn't that I didn't care;
I had the time, and I was there.

But I didn't want to seem a fool,
Or argue over a safety rule.
I knew he'd done the job before;
If I spoke up he might get sore.

The chances didn't seem that bad;
I'd done the same, he knew I had.
So I shook my head and walked by;
He knew the risks as well as I.

He took the chance, I closed an eye;
And with that act, I let him die.
I could have saved a life that day,
But I chose to look the other way.

Now every time I see his wife,
I know I should have saved his life.
That guilt is something I must bear;
But isn't' something you need to share.

If you see a risk that others take
That puts their health or life at stake,
The question asked or thing you say;
Could help them live another day.

If you see a risk and walk away,
Then hope you never have to say,
"I could have saved a life that day,
But I chose to look the other way."

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FINAL PHOTO

FIRE DEPT DFT TO SAVANNAH

Airmen from the 177th Fighter Wing Fire Department, New Jersey Air National Guard, conduct live aircraft fire training exercises at the 165th Airlift Wing's Regional Fire Training Facility April 2-15,2016. (U.S. Air National Guard photo by Tech. Sgt. Andrew J. Merlock/Released)