GENERAL HAL M. HORNBURG, COMMANDER  
COLONEL CREID K. JOHNSON, DIRECTOR OF SAFETY

AFGHAN ADVENTURE, PART ONE OF THREE  
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Laughlin AFB, Texas

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As this issue of THE COMBAT EDGE hits the street, we are 6 days from the end of the 101 Critical Days of Summer, and will begin counting down the 264 days until Memorial Day weekend 2005. We don’t have a catchy campaign slogan to typify the remaining 264 days, but that doesn’t mean they aren’t just as critical or bear any less attention than their famous cousins. There is no letdown, no time for a “Safety Vacation” now that the 101 Critical Days are over, because tragedy doesn’t take a vacation. Besides, there is no consolation prize for letting your guard down and dying after the 6th of September 2004. You’re still a statistic; you’re just listed in a different column on a fatality brief to your commander and coworkers.

Check out this month’s lead story, “Afghan Adventure.” September features part 1 of a 3-part story that will be told over the next few months. It’s a good safety story from the field, told from the author’s viewpoint and shows what can happen in a deployed situation, and what you may be tasked to accomplish when deployed. On the surface, it reads like a good-natured look at the “misadventures” of someone placed in an unfamiliar situation and how “Murphy’s Law” comes into play. Below the surface, it reinforces why we train and illustrates the fact that we as Airmen need to be ready: every deployment to the AOR carries with it the possibility of being placed in a combat situation with little to no notice.

Other features this month include a look at Predator operations, how Explosive Ordnance Disposal teams are keeping Airmen safe in the AOR, a good ORM lesson learned from the Battle of the Bulge, and a reminder that school is back in session.

Remember: keep safety proactive — make it your Combat Edge!

Colonel Creid K. Johnson,
ACC Director of Safety
Afghan adventure
By Lt Col Robert Seaberg, Laughlin AFB, Texas
part one of three
The first part of the hike wasn't too bad: up and down a ridgeline, into a wash, before starting the vertical climbs. But, the fact that there was less oxygen at 7 to 8,000 feet started kicking in pretty quick.

Having been to the gym every day, I knew that 140 is a good cardio workout heartbeat. Well, I reached a cardio pace pretty quick, and I don't think I came below that for 2 hours or more. I was carrying Sarg's M-16, three water bottles in my pockets, plus a 30-pound flak vest, and a 4-pound Kevlar helmet. I was beginning to think the polyethers weren't necessary because it was probably 40 degrees in the sun, and we were sweating big time going up the mountain. I carried Sarg's rifle because he had the camera and was taking pictures of all the important evidence found on the trek. JB had a backpack full of stuff, and mentioned, if he had known he was going to do this, he wouldn't have gone to the gym and run 3 miles this morning.

As we approached the accident scene, I spotted an integrated circuit with "Lucent Technologies" (in fact, it's the only chip that remained intact) printed on it.

We took pictures, and then JB said, "Are you sure you don't have a safety investigator background?"

"Nope," I replied, "I saw it when I was looking down, because my lungs are about ready to come out of my chest, and they think they can get more air inside my body that way!"

It was time to rest a bit, but "rest a bit" to the Marines means stop until the last guy in the team catches up to you, which is about 15 seconds. As we were scrambling on the rocks, I looked at the path where everybody else had gone and discovered an unexploded soviet artillery shell, 107mm diameter and 12 inches long. Apparently everybody else had walked over. The only reason I saw it was because I was looking down ... again ... because my lungs were about to explode.

I said, "OK guys, I'm going to mark this, and let's not step on it on the way down."

Wishing I were a bit younger and more in shape, my only consolation now was that the young Marines were huffing and puffing the same as me. However, they were carrying 50-pound...
packs, so I cut them a little slack. A little further up, we came across the nose wheel of the aircraft. It still had air in it and was completely undamaged. I made a mental note to pick it up on the way down because there was no need to carry it up the mountain and then down again.

We arrived at the crash site, took some pictures, and scoured the area for the proverbial "black box." Headquarters (HQ) said they wanted us to retrieve. Well, after a crash — they’re all black! We decided to take everything that looked important and line it up to take down. It only amounted to enough to fill one classified box.

JB decided to blow up all of the remaining pieces of the aircraft instead of retrieving them, so we threw the remaining pieces and parts into a pile. After spending about 45 minutes searching for debris, my lungs and heart rate were back to normal, and the Lt approached saying they were fixing the crash site with 10 pounds of C-4.

“We’ll vaporize anything that’s left,” he added.

The Marine demolition troop approached the Lt and said, “We only have two fuse sizes, 5 minutes or 9 minutes. Which one should I use?”

We looked at him, and said in unison, “NINE!”

I thought to myself, “You’ve gotta be kidding me, only 9 minutes?”

I’m not a physics major, and evidently neither was anyone on the demolition team, but I can tell you when you blow 10 pounds of C-4 on a mountainside, it’s probably going to disturb the rocks. First the rocks are going to go up, and then they are going to come down, right into the ravine where we are standing. It was not one of my happier moments of the day as I assessed the situation,

“Hmm, it took us 45 minutes to get up here, could I make it down in 9 minutes?”

“Maybe if I curled up and rolled down like a ball ... what the heck, I had on my Kevlar vest and helmet. It probably wouldn’t hurt much.” The Lt told us the demo team would give us a head start. OK, a head start, I could understand that. I wondered how much of a head start they’d give us. Those poor demo guys though, they had to do the real 9-minute dash. We rushed down the ravine, and I stopped to grab the nose wheel that I meant to pickup on the way down and then put the Lucent chip in my pocket.

Further down the ravine we went around the unexploded shell that we had marked earlier with a little green flag. A little bit farther, I spotted a green wire coming out of the dirt and mentioned it to the troop behind me.

He shouted, “Green wire, alter course!”

When I asked why, he explained that the wire was a typical trigger for an Improvised Explosive Device, better known as a booby trap. OK, yet another important safety tip. We marked it as well and kept moving. Sarg hit a rock and his knee locked up. As we were asking him if he was OK and if he could walk, we heard over the radio that the fuse was lit.

Sarg said, “I can run!”

We started humping faster down the ravine, and my lungs wanted to come up again, but we were in the bottom of the ravine, and the big rocks and explosives were above us. It was about that time that I thought about praying and asking God to get us all to cover.

Right as I was about to start praying, the demolition team caught up and shouted, “I don’t know how to tell you this, but if you don’t move faster, you’re going to die.”

The “head start group” picked up the pace. My adrenaline kicked in, and I ran harder, drawing comfort that the young Marines were wheezing just like me. I pitched the nose gear, figuring it would be a great tire for some Afghani’s wheelbarrow.

We made it up the face of the next ridge as the Lt shouted, “8 minutes!” I splied a rock big enough to provide cover and dove for it. The troops behind me were piling up against whatever rocks they could find. The Lt yelled at his guys to keep their heads down below the rock, reminding them there would be a big boom and then shrapnel a few seconds later.

Editor’s Note: Look for our next installment of the Afghan Adventure in the following months. The story will run in its entirety on the Web at http://www2.acc.af/milcombat-edge/the month the last installment is published.
Orbiting?
In a recent RED FLAG, I was chosen to be the Predator Liaison down at Nellis for our crews flying out of Indian Springs. I attended every mission planning meeting, brief, and debrief during the 2-week stretch and found myself constantly repeating a certain theme. “Yes, the Predator is unmanned ... but it’s NOT unsafe.”

The Predator weapons platform is not going away. There are those of you who’ve flown with a Predator in your Area of Responsibility (AOR) and those of you who will. My intent with this article is to share information on some of the safety features of the Predator and to squash some of the rumors about its ability to operate in a busy operational environment.

The biggest misconception people have about the Predator is that we often lose communication with the plane, and that it begins to fly off into the wild blue with no clear direction. The truth is, with proper mission planning, the Predator location and direction is always known and predictable. Rarely do we lose all communications with the aircraft, but sometimes problems do arise, and we find ourselves in a “lost link” situation. To compensate for this, we constantly update a pre-programmed “lost link” mission for the aircraft. This mission consists of up to 100 waypoints, guiding the aircraft home using altitude and airspeed settings at each waypoint. We can also program the aircraft to orbit at any of the waypoints giving manned aircraft in the area a chance to complete their mission and exit the area prior to the Predator transiting the airspace.

The integral thing to remember though is if a Predator can’t change its profile after it goes “lost link,” and we lose communications with it. Therefore, the key to ensuring the safety of our manned assets is proper communication with the Predator Liaison during mission planning. The Liaison needs to know if your 4-ship of Vipers tasked for close air support is going to be anchored at Bullseye 270/50 in the block altitude for 45 minutes.

The Predator is also very limited in its climbing capability. It is not uncommon for us to spend 15 to 20 minutes climbing from 20,000 to 23,000 feet. It can’t plug in the afterburner and exit your block
expeditiously, nor do the operators like changing blocks repeatedly during a vulnerability time. We often prefer a vector around the block of airspace rather than climbing or descending through it. If a vector is unrealistic in a given scenario, a small 5-mile diameter circular orbit works well for the aircraft to climb/descend.

Another area of concern is one which is often misinterpreted. As a remote piloted aircraft, the Predator is unable to employ "see and avoid" techniques in the classic sense of the instruction. Instead, the pilots make every effort to "clear" using the radios. Predator aircrews rely heavily on traffic calls from AWACS and/or Air Traffic Control just like any other nonradar equipped aircraft.

Depending upon current mission events and priorities, the pilot may take his cameras off target for a quick scan of the skies for the traffic callout. An accurate bullseye call, with altitude and direction of travel, greatly reduces search time, enabling the pilot to "see and avoid" conflicting traffic quicker.

The bottom line is the Predator is a valuable combat asset for the mission commanders. It isn't any more "safe" or "unsafe" than any other aircraft. Statistically there are no more reportable near midairs on it than any other combat aircraft. If you communicate and coordinate your intentions during the planning phase, you will preclude as many problems as possible before the mission is executed. Finally, if you think of the Predator as the less maneuverable aircraft in a potential collision situation, it's understandable why it's easier for you to get out of its way than vice versa. With just a little time spent pre-coordinating and with your understanding of its maneuverability, you too can safely share the AOR with the Predator. ▶
Lessons Learned at an Aircraft Mishap

any ground safety professionals think they will not be called on to respond to an aircraft mishap. Actually, Ground Safety should be and often is involved from the start by planning, laying out, and developing the mishap site. After the site is organized, ground safety should remain on scene observing operations and overseeing workers' activities to help prevent another mishap from occurring.

Since arriving at Luke, I have responded to multiple aircraft mishaps. No two were alike; but I have discovered several common themes, and I can share a few lessons learned.

Do your homework: Review lessons learned, Operation Orders, and Situation Reports from previous crashes. Quite often Crash Recovery Teams (CRTs) can save hours of planning by going over these records. Use them and ensure you pass on this information to future teams by listing key facts of your recovery effort like conditions, procedures and equipment used, and time expended.

Mishap kit: Most Ground Safety offices already have a mishap response kit. Augment it with the following personal items: a cell phone with a vehicle and a household charger, a change of clothes, headgear, a camelback or other hydration system, a fold-up chair, a camera, and hygiene items to include sun block and baby powder. Yes baby powder! It has a million and one uses, all of which make being in the heat, dust, and brush a bit more bearable.

Take your time: Do not overlook this important step. The initial instinct is to run to the site, but if you can suppress this, you will be rewarded later. There is no reason to rush to a crash site unless environmental factors are going to destroy vital evidence. A good crash recovery team needs time to assemble, devise an effective response, and talk over the operation before heading out the door.

Control access to the mishap site: When a major mishap occurs, it seems every office on base tries to send a representative to the crash site. Too many people interfere with the tasks at hand, so ensure only personnel with duty requirements are allowed on the crash site.

Convoy procedures: Once essential personnel are identified, they should travel in a convoy to the site following a predetermined route. Each driver should have a map to the scene and a method for contacting other drivers. Each team member should be listed by name/unit and should check on
and off base through one established office. Do not make the mistake of having multiple check-in and send-out points or you will quickly lose control of your site.

As a safety advisor, you should be as near to the front of the convoy as possible and have mobile maintenance in the rear. This allows you to lead the convoy keeping speeds in check and allows mobile maintenance to assist those with mechanical problems.

En route: Travel at speeds agreeable to the slowest response vehicle. Bear in mind, many of the response vehicles have not been off base at highway speeds in a long while. Bringing a convoy onto freeways and highways is tricky at best. All vehicles should merge onto the freeway and pull to the far right after a mile or so of travel to allow others to catch up. DO NOT try reassembling the convoy immediately after entering the freeway. This causes a huge bottleneck and could cause a serious mishap.

Make frequent and planned stops. At each stop check the gear stowed on large trucks and flatbeds to ensure everything is still secure. Why so many stops? If your crash site is at a remote location, services provided by gas stations and rest stops will be invaluable. Think about it...

Arrival: Once you arrive at a crash site the natural tendency is to take a look and immediately focus on the smoking hole. Don't! You'll have enough time later to take pictures and such. Spend your first few hours setting up a proper base camp. Face all vehicles away from the crash site; that way if there is a need to get up and go quickly, you can. Also place hydration stations in several locations in the camp.

Keep the mishap prevention hat on: Get with the on-scene commander and find out what he wants your roles and responsibilities to be. Don't solely focus on the investigation at hand. Watch the people, the trucks, and the forklifts staying focused on mishap prevention. I have seen people wearing full respirators and body suits to protect against chemicals and composite fibers assembles. There will be crews working separately on hydrazine, composite fibers, and unexploded ordnances to name a few. Know each of their roles, and help the on-scene commander control the sequencing and flow of the teams to the mishap site.

Be flexible: There are so many variables at aircraft mishap sites. Your job is to ensure the mission gets accomplished as safely as possible. There are going to be many hazardous operations and tasks, and all will not go as planned.

A ground safety professional's job is to stay on scene and do risk analysis throughout the operation. Your efforts will help ensure one mishap site doesn't become two.

September 2004  The Combat Edge 15
Many of the precautions today's Air Force takes in flight safety come from on-the-job experiences of the aviators that came before us. One such aviator is 79-year-old retired Major Cecil Byrd. Almost 57 years ago in Fowlmere, England, Lt Byrd was asked to conduct a weather flight during an 18-day period in December 1944, when very poor flying weather had grounded his fighter group, the 339th. The decisions made that day affected the safety of many individuals just as the decisions we make today often do.

Major "Flak" Tower, our Squadron Operations Officer, had appeared angry that morning when he finished his conversation on the field phone and jammed the receiver back into its leather bag. He angrily announced, "Group Headquarters wants an airborne weather check." I'm sure he looked straight at me when he asked for a volunteer. A formidable German ground force, backed by tanks and heavy armor, had begun a major counter offensive a few days earlier. The brunt of the attack was near a Belgium town named Bastogne, which had unnerved Allied Command Headquarters. The Germans took advantage of the fact that our Air Forces probably would not be able to furnish air support for the hard pressed United States ground troops. Eventually, this attack became known as the Battle of the Bulge.

Colonel John B. Henry, our 339th Fighter Group Commander, entered the control tower when I
took off for the weather check. I know he went there to give me all the support he could. Henry, an outstanding officer and one of the youngest colonels in the Army Air Corps, pinned the eagles on his shirt collar at the age of 28. His rank and age reflected the high pilot attrition rate we suffered early on in the battle against the Third Reich. Henry surely watched with anxiety as my P-51 disappeared into the fog and freezing drizzle after takeoff. He called me on the radio to remind me of the twin, 200-foot radio towers just south of the airfield. The towers, shrouded in the low level clouds and fog, posed another hazard to avoid while maneuvering at low altitude near the airfield. Ice began to form on the aircraft surfaces as soon as I had the wheels in the well, but I emerged from the top of the cloud layer within a couple of minutes and the ice buildup rapidly disappeared. I didn’t know the altitude of the cloud tops when I took off, but surprise and delight greeted me as I broke out into the bright sunshine at 3,000 feet.

Brilliant sunlight surrounded me as I popped through the top of the cloud layer, and I immediately felt the warm rays that penetrated the Plexiglas canopy of my P-51 Mustang. Ascending from the dark interior of the clouds into the glare of the sun blinded me temporarily. I couldn’t spot a cloud anywhere above my present altitude. Below, all the way to the ground, the low level scud hid the
earth from view in all directions. In pilot jargon, it was really socked in. During climb-out, a coating of ice had formed on the leading edge of the wings and other surfaces of the airplane. Characteristically, the ice began to evaporate when I reached the clear air and sunlight, but began to accumulate each time that I entered the clouds, and evaporate once I entered clear air again as I skidded over the cloud tops.

Suddenly, it occurred to me that the weather check flight had been ordered to prove to higher command that we could not fly our assigned missions without placing the aircraft and pilots at excessive risk. Uneasiness crept into my mind as I began to ponder the seriousness of my predicament, and I began to think I had been pretty stupid when I volunteered for the flight.

In a combat situation against enemy aircraft or anti-aircraft fire you can usually take evasive action or fight back. Fighting bad weather with no low approach landing aids seemed almost futile.

I passed the weather report to the tower and then configured my Mustang for landing by running a routine cockpit check: fuel tanks, fuel mixture control full rich, propeller control forward, pitot tube heater switch on. I was unable to locate the airfield on my first descent back into the clouds and climbed back into the sunlight above 3,000 feet. The tower identified a homing device operated from a radio shack located near the airfield. Simply explained, the homing device was nothing more than a radio used in conjunction with a loop antenna. Aircraft position could be determined within a 360-degree radius of the airfield; provided you were within radio voice range. When the radio operator on the ground received voice transmissions from the pilot, such as a slow count from one to 10, he determined the bearing of the aircraft from the radio station and gave the pilot a reverse compass heading or "steer" to the airfield. It usually worked pretty well, but could be time consuming. After climbing back into the sunlight after my second attempt to find the airfield, the tower advised me that they did not see the aircraft but heard the engine noise. I contacted the radio operator at the field and obtained a steer to the field prior in preparation for my third landing attempt.

Before descending, I ran another cockpit check to configure the fuel tanks, mixture, propeller pitch, and pitot tube heat. Once again I left the open blue sky and the bright sunshine and descended into the dark cocoon, realizing the termination of the flight would come soon. The rate of the icing buildup appeared to have diminished somewhat, but remained a problem as long as I was in the clouds and I wondered for a moment what the outcome of this attempt would be.

I asked our weather shop, code named "Gas Pump," for the latest ground level weather report. They reported continuing poor conditions with intermittent freezing drizzle, one half-mile visibility in fog and an obscured cloud base. I leveled off in the soup at 300 feet and slowed the aircraft to 150 miles per hour to lower the landing gear.

I had set my altimeter on zero before take-off and Gas Pump advised that the barometric pressure had not changed. It was then that I realized why "Flak" Tower had sent me to the Link Instrument Flight trainer a week prior. "Watch your needle, ball, and airspeed ... trim the aircraft controls and keep it level" was all I could think as I brought the Mustang tower.

The Control Tower called me on the radio and shot flares as I passed over the airfield at 300 feet, on a northeast heading. I did not see the flares. I knew I had to stay close to the airfield and seek some visual contact with the ground, so I...
held my heading for about 10 seconds and began a slow descent.

I was straining to make out any familiar landmarks as I leveled off at 200 feet above the ground. The local farmland was all practically the same elevation, and I knew the area surrounding the airfield and the local English countryside topography quite well, but even at 200 feet, I still had no forward visibility. Eventually I could make out the dim outline of the treetops directly below, and realized it was the tree line just west of the airfield. I felt a strong urge to stare at the treetops but realized such a tactic probably meant vertigo and disaster at this extremely low altitude. Normal instrument flight procedures while maneuvering close to the ground demanded a pilot's full attention, and I had to try to remain in control. After several more seconds, I left the tree area behind, made a left turn to the southwest runway heading, and began a slow descent.

As I approached within a few feet of the ground, it suddenly occurred to me, I was left of the landing area — heading straight for the Squadron Operations shack. I had no other choice but to thrust the throttle forward and start a go-around. The 1,600 horsepower, 12-cylinder engine responded without hesitation and I felt the welcome pressure of being pressed against the padded parachute backpack. The low pitch setting of the four bladed propeller allowed the engine to accelerate smoothly to 3,000 rotations per minute. I needed all the compatability I could get to clear the roof of the operations building. The maneuver scared me because I almost wiped out a large portion of the squadron in one big splash — at least the guys wouldn't forget me. Even though I came close to killing them, they probably didn't want to trade places with me. After all, they were safe and secure on the ground. SAFE? Such a "buzz job" under most other circumstances would have been rewarded with court martial proceedings. I left the landing gear down and after clearing the roof of the Operation's shack, raised the wing flaps, and leveled off.

I caught sight of the Fowlmere Church steeple just off the right wing. I had forgotten the church steeple until it suddenly appeared. The "Old Man," Colonel Henry, still in the control tower, must have forgotten about the church also, because he never mentioned it to me on the radio. With that reassuring sight, I began to have hope for a successful landing, as I planned to use the church steeple as a reference point to help line up with the landing strip. My confidence increased when I sighted the church steeple, but in my excitement, I forgot to lower the wing flaps. When I made visual contact with the ground, I realized that by doing a flaps-up approach, I would land at least half way down the field, but I didn't intend to go around for another try.

I touched down long, and soon discovered the pierced steel planking landing surface was very slippery. Still on roll-out, I unlocked the canopy and rolled it back to keep it from jamming closed if I went off the runway. I closed the fuel mixture control to shut down the engine and started turning off switches. After my forward speed diminished somewhat, I moved the control stick forward to unlock the tail wheel and attempted to ground loop the aircraft. I managed to turn the nose of the P-51 about 45 degrees to the left, but continued to slide straight ahead on the pierced steel planking. The red and white checkerboard nose Mustang stopped abruptly off the end of the airfield, collapsing the right landing gear and buckling the wing as the aircraft piled into a shallow ditch filled with rocks. My body slammed against the right side of the cockpit hard enough to knock the wind out of me. The strong smell of gasoline penetrated my nostrils and prompted me to immediately evacuate the aircraft.

I slid off the leading edge of the wing and collapsed to the ground, gasping for air. I regained near-normal breathing after a short while, and considered myself in pretty good condition except for my pride. I waited in the cold silence for what seemed an eternity. I never felt so alone in my life, but it felt good to have my feet firmly planted on solid ground again. Suddenly, I heard the sound of a vehicle approaching through the fog.

"GEEZ!" was all I heard from "Flak" Tower and the Squadron Commander as they pulled up in a jeep. I promised myself I would never volunteer for ANYTHING again. Besides, wasn't any landing you could walk away from a good one? "Flak" put his arm around my shoulder and helped me into the Jeep, and never said a thing about the broken airplane.

Editor's Note: It can be said that there was a war on then, and modern technological advances in weather observation and prediction make this story non-applicable to the current times. Satellites, computers, and Doppler radar systems have tremendous capabilities; but like the weather forecasters of 1944, they are tools and interpreters to aid commanders in the decision making process, they are not the sole decision makers. This is a leadership issue, and had the Squadron Commander and "Flak" Tower used Operational Risk Management (ORM), this weather flight scenario would have played out very differently.

Decisions made on the flight line and throughout the Air Force today affect the safety of people we might never have the opportunity to meet. ORM supports better weather making, saving lives and resources. Risk management decisions are not always black and white, but the principles of ORM are straightforward and apply to every situation:

- Don't accept unnecessary risk.
- Make risk acceptance decisions at the appropriate level.
- Accept risk when benefit outweighs the cost.
- Integrate risk management into all levels of activity.

We continue to learn from past mishaps, and in the case of the airborne weather check, it violated all four ORM principles. A combination of better instrumentation, better approach aids, and strict adherence to weather minimums would make it easier for today's pilots to make the call not to fly. Likewise, informed commanders would never force the decision down to the crewmember's level. Supervisors at all levels must understand the level of risk they can accept, and in turn ensure their subordinates know the amount of risk they can accept at their level of responsibility. When decision makers at all levels understand what constitutes unnecessary risk, ORM is truly integrated at all levels of the operation. Finally, there is no reason to risk losing an aircraft or pilot simply to satisfy a supervisor's curiosity, or provide proof that a mission is too risky to complete in the first place.
Air Force safety rules are just as important here, in the heart of the worldwide war on terrorism, as they are at bases outside of the "war zone." Challenges to maintaining a safe environment are all around here — literally. There are land mines placed by the former Soviet military and the Taliban. Most are outside of the main working and living areas, but are never very far away.

Considering the number of people here and their mission, there is not a lot of room to operate. Land mines impose some tough "neighborhood zoning restrictions." "My biggest concern is living and working close to ... explosives. We have limited space here because of all the mined areas," said SSgt Thomas Grandstaff, the 455th Air Expeditionary Wing weapons safety manager. Also, everyone here is armed and, if they are not constantly thinking about weapons safety, there is a high potential for someone being accidentally injured.

Because of the conditions, it is important that every person keeps a safety-first mindset to reduce the chance of a major accident, said MSGt Steve Sinatra, the 455 AEW ground safety manager. People cannot let the psychological "war-zone" factor lessen the need to work safely, he added.

"We constantly publicize relevant safety issues, conduct aggressive spot inspections and mingle with the 455 AEW personnel," Sergeant Sinatra said. "We sell safety as being a necessity, and not a mission inhibitor. We remind people that the safe way is the best way."

Because Airmen here are enthusiastic about completing the mission, they may be tempted to take shortcuts that would lead to unsafe operations, said SSgt Aaron Spanier of the flight safety office. He said people from the safety office must get out and about to make sure shortcuts do not happen. "We are the checks and balance in the system," he said. "We ensure that people can accomplish the mission, while doing it as safely as possible."

Lt Col Dave Kensinger, the 455 AEW chief of safety, said the joint warfighting environment here presents a scenario unlike anything he or his Airmen have seen at their permanent-duty stations. "The Air Force shares the airfield with the Army, Navy, and Marines, which requires cooperation among the services," he said. "We have a level of complexity here we don't see at home station."

One way the Airmen in the safety office help to keep people here safe is by making sure sound risk management is used. "It's tough to ensure this," Sergeant Grandstaff said. "We're at war, and sometimes individuals forget certain things. We're here to ensure that 'things' (are not) forgotten."

"We've assessed different risks that people were taking and outlined those risks," Sergeant Spanier said. "Some risk, especially in a forward environment, has to be accepted — that's part of risk management. But any risk that is unacceptable, we have worked hard to remove or mitigate it."

A large part of managing risk comes from staying focused at the workplace and doing the job the way it is supposed to be done —
The "101 Critical Days of Summer" are now over, and life is getting back to a daily routine that will be followed for the next 9 months. The carefree days of summer are now replaced with the challenges of a new school year. That's right — SCHOOL IS OPEN! Our children will be exposed to a whole new set of hazards. What can we do to help them? As parents, it's our responsibility to teach our children how to be aware of these hazards and avoid them.

**Pedestrian Safety.** To keep our children from becoming a pedestrian statistic, we need to find safe routes to school. This means a route with slower traffic, more crosswalks, more crossing guards, and more sidewalks with wider surfaces and unobstructed views. Most of all, we need to teach our children how to get to and from school safely. To accomplish this, parents need to teach traffic safety rules at an early age.

**Small Children Are Hard To See.** Children must also be seen to be safe. Children are less visible because they are smaller than other pedestrians. Wearing brightly colored clothing is one way of making it easier for drivers to see young pedestrians during the day. After dark, children should carry a flashlight or wear special reflective material on their clothing, or book bags. It is also important to stop, look, and listen before crossing the road at night.

**It is important to keep in mind that children ARE NOT small adults.** Until a child is at least 10 or 11 years old, he or she won't have the skills to handle traffic. Because children are short, it is also difficult for them to see motorists and for motorists to see them. Because their peripheral vision is approximately one-third narrower than an adult's, children can't see a car approaching as soon as an adult. Children also have difficulty judging a car's speed and distance, and they often think that if they can see a motorist, the motorist can see them.

**School Bus Safety.**

Growing up, I was a "Country Kid." "Country Kid" was the name that the kids who lived in the city of Superior, Wisconsin, used to describe those of us who were bused to school each day. I would get on the bus at 6 a.m. for the 1 hour and 40 minute ride and wouldn't return home until half past 4 in the afternoon. Snow and ice made for hazardous driving during the winter months and it was always cold, but in 9 years of riding a bus I never experienced a traffic accident or saw someone get hurt riding or getting off of the bus. That fact is a testament to the skills of my drivers, my parents and to me and my fellow students for knowing the rules and following them.

We knew that the bus was a privilege, not a right, and could be taken away for misbehaving. We were told that the drivers had the responsibility to drive us safely to and from school and not to distract them because it could cause an accident. Drivers also wielded the authority to take away bus privileges for not following the rules and often did. I can remember Mr. Harnstrom (who looked like Vince Lombardi and just as strict) stop the bus and discipline a student, and then pull their privileges on the spot when they didn't comply. No false threats, no second warnings, just swift action. No one wanted to tell their parents that you needed them to drive 50 miles roundtrip to and from school for a week or more because you couldn't behave on the bus; and that kept us in line, and safe.

Children do not drive cars or buses, and have no concept of the amount of responsibility or concentration it takes to drive them safely from "Point A to B." As parents, we need to teach students that a distracted bus driver isn't the only one who is in danger during a bus accident. Children don't realize that yelling, fighting, moving from seat to seat, yelling out of windows and lifting up on the handle of the emergency exit high enough to make the buzzer go off is distracting to the driver, and puts them in danger. Drivers can't concentrate on driving when riders don't behave, and if they are constantly disciplining students or keeping an eye on them in the bus mirror, then their eyes aren't watching the road. I recently chaperoned a middle school field trip and put up with the yelling, and "jumping seats" for about 5 minutes until I realized that the driver was spending more time disciplining than driving, before restoring order myself. The driver thanked me and the students didn't be-
cause I enforced the rules, and was accused of "ruining their fun," but we arrived in one piece.

Following the tips below will help your children be safe bus riders and you to be safer drivers when school buses are out on the roads.

**Safety Rules for Children**

- Arrive at bus stop at least 5 minutes early.
- Stand at least five giant steps (10 feet) away from the edge of the road.
- Wait until the bus stops, the door opens, and the driver says it's okay before stepping on the bus.
- Be careful that clothing with drawstrings and book bags with straps or dangling objects do not get caught in the handrail or door when exiting the bus.
- Walk in front of the bus; never behind the bus.
- Be sure the bus driver can see you, and you can see the bus driver.
- Stop at the edge of the bus and look left-right-left before crossing.
- Tell the bus driver if you drop something beside the bus. Should you try to pick it up, the bus driver may not see you and drive into you.

**Obey School Bus Laws**

- It is illegal in every state to pass a school bus stopped to load/unload students.
- Yellow flashing lights indicate the bus is preparing to stop to load/unload children. Motorists are required to slow down and prepare to stop their vehicles.
- Red flashing lights and extended stop arms indicate that the bus has stopped and children are getting on or off. Motorists must stop their cars.
- It is illegal in every state to begin moving before the red flashing lights are turned off, the stop arm is withdrawn, and the bus begins to move.

School bus safety is everyone's responsibility. The school district is responsible for providing safe, qualified drivers and well-maintained buses, and parents and students are responsible for following school bus rules of behavior and safety.

Editor's Note: The information contained in this article was obtained from the National Highway Transportation Safety Administration. For more information, visit www.nhtsa.gov.
Sgt McIntyre, SrA Mulero, SrA Cass, and SrA Kavanaugh were tasked to download and replenish 20mm ammunition from the M61A1 gun system on an F-16CJ, tail number 93-3532. They performed aircraft safe for maintenance steps and ensured the gun system was cleared in accordance with applicable tech data. Afterwards, they prepared the Universal Ammunition Loading Set (UAL) and connected it to the aircraft ensuring everything mated properly. As they rotated the gun system, they noticed that the gun system would intermittently bind using the pneumatic wrench and slip clutch. They were able to continue to load the gun system manually using a speed handle without any notice of binding in the system. The binding of the gun system did not flag a problem due to the fact that the UAL was loaded with three 512 round belts of ammunition and this tends to cause gun systems to bind slightly. After the gun system was replenished with 510 rounds of ammunition, they disconnected the UAL and proceeded to post load the aircraft. Sgt McIntyre decided to rotate the gun system to ensure it would rotate without binding. Initially the gun rotated normally but after approximately 100 rounds, the gun system started to bind; and then stopped. Amn Kavanaugh used a speed handle to rotate the gun system in an attempt to identify the problem. At that time, Amn Mulero heard an abnormal noise coming from inside the gun system. Sgt McIntyre notified the Weapons Expeditor of the situation who then notified the Armament Shop and Quality Assurance. Sgt McIntyre and crew started removing aircraft panels to look for defects. Preliminary inspection of the gun system showed no obvious defects. Sgt McIntyre decided to rotate the gun system again and it continued to bind. Amn Cass noticed that the binding seemed to originate at the Exit Unit of the Ammunition Handling Set and the scoop disk inside the Ammunition Drum. Based on his extensive system knowledge Sgt McIntyre determined this was the cause of the binding and the gun system should be removed. After Armament Shop technicians inspected the gun system, it was determined the Exit Unit was cracked, and the scoop disk and ammunition drum partitions were damaged. The total damage assessment was $35,000. If it was not for the astute attention to detail of Sgt McIntyre and Airmen Mulero, Cass, and Kavanaugh, the gun system, if fired, would have catastrophically failed resulting in possible loss of aircrew and aircraft. The outstanding maintenance professionalism of Sgt McIntyre and his crew directly reflect the quality maintenance and stellar safety record of the 20th Fighter Wing.

SSgt Erik McIntyre, SrA Jose A. Mulero, SrA Andrew J. Cass, SrA Michael E. Kavanaugh, 55th Aircraft Maint. Unit, 20th Fighter Wing, Shaw AFB, South Carolina

Sgt Dunn’s awareness of stringent new range safety requirements and his safety-conscious attitude has led to the identification of major safety violations in the current range configuration. Using an Operational Risk Management checklist, he identified several extremely high-risk hazards. Sgt Dunn found that with an earthen backstop and overhead baffles angled at 90 degrees, rounds were escaping the range facility. The Surface Danger Zone of where these rounds impacted extended beyond Ellsworth property and the Vertical Danger Zone (VDZ) had not been identified. Working with airfield management, he plotted the VDZ to ensure that aircraft were made aware of the hazard. Further inspection identified problems in the flooring and overhead containment material. The use of pea gravel on the range floor collected lead dust and created uncontrollable ricochets, while rounds penetrated the overhead baffles. Sgt Dunn counted over 50 holes that left the range at less that a 45-degree angle. Working closely with ACC, he secured $2.2M for range renovation. His experience resulted in creation of a benchmark for ACC’s firing ranges. He offered an innovative design solution which incorporated the use of low-angle overhead baffles, concrete floors, wing wall baffles and a bullet trap system. The use of wing walls facilitates air circulation so students are not subjected to high levels of lead dust. The low-angle overhead baffles and concrete floors ensure stray rounds are safely deflected into a bullet trap which contains all rounds fired down range. His strong awareness of environmental concerns helped him create a suitability standard for commercial bullet traps. The requirements he set called for a bullet trap with a single collection point for all hazardous waste, and the conversion of all bullet traps using a vacuum system which sends lead dust into the air, to a "wet system." A wet system creates a wall of water down the bullet traps, limiting the amount of lead dust created and released into the atmosphere. These upgrades have eliminated all Operational Risk Management hazards, ensuring over 3,700 active duty, ROTC, and local law enforcement personnel have an environmentally safe facility to perform vital weapons training.

TSgt Robert D. Dunn, 28th Security Forces Sqdn., 28th Bomb Wing, Ellsworth AFB, South Dakota
On 19 May 2004, Lieutenant Colonel Campbell and the crew of REAPER 36 departed on a routine training sortie consisting of a low level route, high altitude training, and pattern activity. The sortie was uneventful until the en route descent into Dyess AFB for recovery. At this time, Captain Combs remarked on the presence of an abnormality in the flight controls, as the aircraft began to exhibit an uncommanded rolling tendency. Not content with the flight control irregularity, the crew elected to troubleshoot the problem, terminate approach training, and perform radar vectors to final for a full stop. Aircraft control authority was positively checked. While examining the control surfaces visible from the cockpit for any evidence of damage, Colonel Campbell observed an irregular spoiler which appeared to be warped. On final approach, REAPER 36 was directed to go around due to a separate incident unfolding which presented a FOD hazard on the runway. The crew initiated a go-around aware of the potential for controllability issues, and solicited assistance from the SOF who visually confirmed the spoiler abnormality. The crew was subsequently cleared and executed a safe landing. REAPER 36's aircraft displayed controllability problems that could have been characterized as a "bent jet" requiring extra trim. However, the crew of REAPER 36 discarded the "bent jet" notion. They realized that structural damage was the cause of the flight control malfunction, thereby averting further damage to the airframe and associated costs through early RECOGNITION, CONFIRMATION of the problem, and safe RECOVERY of the aircraft. The successful return of a $280 million asset, and, most importantly its crew, was the outcome of this crew's attention to detail, and keen flying skills.

Lt Col Craig P. Campbell, Capt Jason R. Combs, Maj Gordon P. Greaney, 1Lt Diego M. Uribe
9th Bomb Sqn., 13th Bomb Sqn., 7th Bomb Wing, Dyess AFB, Texas

Capt Jayant "Axle" Mahajan, the pilot of JACKPOT 44, displayed extraordinary airmanship during an incident involving simultaneous flight-control and engine malfunctions. On takeoff, sometime during gear retraction, the aircraft experienced a severe Air Data Computer (ADC) failure. With erroneous air data information going to the flight control computer and the engine, the aircraft started to oscillate violently in pitch at low altitude while the engine surged between 90-100 percent RPM after the afterburner terminated and the engine transferred to Secondary Mode. Capt Mahajan quickly analyzed the situation as the jet pitched between 10 degrees nose high and 10 degrees nose low, and assessed that he could maintain a climb as the speed increased. As the oscillations dampened with increased airspeed, he decided to stay with the aircraft. Capt Mahajan began coordinating with the Supervisor of Flying to troubleshoot the problem and reset the multiple flight control and engine system fault indications that had occurred. Capt Mahajan requested and joined up with a chase ship to help isolate the problem and confirm the jet was airworthy. Once rejoined, the chase ship verified what Capt Mahajan had suspected — that the airspeed indications in the cockpit were completely unreliable. After comparing airspeed indications, he determined that the HUD was indicating 150 knots slow and the analog round dial airspeed indicator was 210 knots slow when compared to the chase aircraft's airspeed. After assessing the aircraft to be controllable, he flew a straight-in approach with the chase aircraft providing airspeed and angle of attack indications to him over the radio, and landed the crippled aircraft uneventfully. Upon further investigation, maintenance determined that all pitot-static indications were erroneous due to a leak in the high-pressure pneumatic portion of the air data system, which fed inaccurate information to the flight controls and the engine. His decisive actions, in-depth systems knowledge, and Crew Resource Management skills during a time critical in-flight emergency resulted in the safe recovery of a $30M F-16CJ aircraft.

Capt Jayant U. Mahajan, 77th Fighter Sqn.,
20th Fighter Wing, Shaw AFB, South Carolina
As the lead aircraft during a two-ship training sortie to the Utah Test and Training Range (UTTR), Captain Dujmovic's crew conducted ground ops and started engines normally. The aircraft was loaded with 100 bundles of RR-112 training chaff, 16 ALA-17 flares and 9 BDU-50 low-drag training weapons. All indications regarding engine operation, hydraulics and electrics appeared normal as the two aircraft prepared to taxi. During taxi, however, the crew experienced excessive vibrations when the brakes were applied. Although the hydraulics and anti-skid brake system of the B-52H indicated normal operation, the pilots stopped the aircraft in the hammerhead and called maintenance for help in correcting the problem in accordance with a warning in T.O. 1B-52H-1 for wheel shudder/brake chatter. Although the brakes tested normally, the crew elected to taxi back to the chocks for a brake pressure check with a maintainer on board and additional maintainers outside following the aircraft. As before, each time the brakes were applied during taxi the crew experienced excessive shudder and vibrations. The maintainers following the aircraft reported seeing smoke and hydraulic fluid pouring from one of the hydraulic lines associated with the aircraft's landing gear. Recognizing the great potential for fire when pressurized hydraulic fluid contacts hot brakes, the pilots brought the aircraft to an immediate stop and Captain Dujmovic ordered the crew to emergency ground egress the aircraft. The crew successfully egressed the aircraft after which it was turned over to maintenance. The aircrew's thorough knowledge of aircraft systems and keen judgment in a situation where "something just didn't feel right," prevented a bad jet from becoming airborne and resulted in the safe recovery of the aircraft. As a result of the aircrew's actions, no injuries were suffered while preventing potentially catastrophic damage to a valuable combat asset.

Capt Steve Dujmovic, 1Lt Nathan Oltmans, Capt Dave Aragon, Capt Matt Stanley, Maj Todd Callahan, 1Lt Ken Mickelson, 96th Bomb Sqdn., 2nd Bomb Wing, Barksdale AFB, Louisiana

ACC Safety Salutes Superior Performance


Fleagle

zoom

WHAT IN SAM'S HILL WAS THAT? BETTER GO UP AN' CHECK IT OUT.

WELL AIN'T YOU A CUTE LITTLE FELLER.

WOW!

TRYING TO OUTFLY THE OLD PRO HUH.

WHAT? HE'S COMING BACK!!

SWISH

SCRAPE!

SHUT UP
### Mishap Statistics Scoreboard

#### Aircraft Notes

In July, ACC had one Class A. An F-16's brakes failed on landing roll in the AOR at night. The aviator walked away. Let's put the rally caps on for the home stretch! This month completes the 101 Critical Days of Summer and 1 month remains in this Fiscal Year. Fight the temptation to let your guard down with "get-home-itis." Stay focused ... stay vigilant ... and follow the rules. Listen to the hairs on the back of your neck. Check yourself before you wreck yourself. Fly Safe!

#### Ground Notes

Since the start of the 101 Critical Days of Summer campaign, ACC has lost five valuable members to fatal mishaps. All of our fatalities involved the operation of private motor vehicles (three PMV4 and two PMV2 mishaps). Excessive speed was a major contributing factor in 60 percent of these highly preventable mishaps. Although tragic, these five fatalities represent a 37 percent reduction over the same time period for FY03.

#### Weapons Notes

The ACC weapons safety community enjoyed another month without a Class A or B mishap. Your diligence, attention to detail, and willingness to go the extra mile is certainly paying off. However, we don't want to rest on our laurels; we still have plenty of room for improvement in the Class C and D arena. Statistics show compliance with technical data continues to be a problem. Technical data is our strongest ally if we just make sure we use no matter how familiar you are with the task at hand. Remember, not following technical data is not indicative of how well you know a task; it's an indicator of how little you really understand about preservation of precious AF assets. Stay focused!

### FY04 Aircraft

#### As of July 31, 2004

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### FY04 Ground

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### FY04 Weapons

#### As of July 31, 2004

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### Legend

- **Class A**: Permanent Total Disability; Property Damage $1,000,000 or more
- **Class B**: Permanent Partial Disability; Property Damage between $200,000 and $1,000,000
- **Class C**: Lost Workday; Property Damage between $20,000 and $200,000
- **Class D**: Property Damage between $2000 and $20,000
- **Non-rate Producing**

### Symbols for Mishap Aircraft

- A-10
- B-1
- F-16
- F-2
- B-2
- B-3
- F-4
- RQ-1
- QF-4
- HH-60
- F-15
- RQ-4
- T-38

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September 2004  The Combat Edge 31
That one short phrase brings all work to an immediate halt, gets everyone's attention, and makes your breathing slow, as minutes tick by like hours until the Explosive Ordnance Disposal Team arrives to "defuse" the situation. From responding to stateside calls for assistance from civilian authorities, to the disposal of unexploded military munitions from previous conflicts around the world, to keeping our deployed locations in support of Operation ENDURING FREEDOM, and IRAQI FREEDOM safe. Air Force EOD teams are on call 24/7. The highly trained personnel that make up our EOD teams work behind the scenes to keep the war on terror rolling, and for that, we at THE COMBAT EDGE salute you!