

THE COMBAT EDGE

August 1998



The Combat Edge

Air Combat Command's
Mishap Prevention
Magazine

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Accent on Safety

Well, I hope you've had a great summer so far. Since you're reading this, I can only assume that you have done a reasonable job of being safe. But now comes the really hard part. August is a tough month. Historically, its safety record makes it one of the most dangerous months of the whole year. And this is true not only in the air, but on the ground and in the water, too.

I don't know if it's the cumulative effect of 2 months sweatin' in the hot sun, those long, long summer days, or the pressing need to squeeze in just a bit more fun before fall finds us packing away the baseball gear, boogie boards, and 2-wheelers. Whatever the reason, it's no time to give up using that number one safety device — your brain. Go ahead and crank it up now; I'll give it a second to get spinning, but I'm going to ask you a really tough question ...

What is the one thing you've done so far this year that's kept you out of trouble?

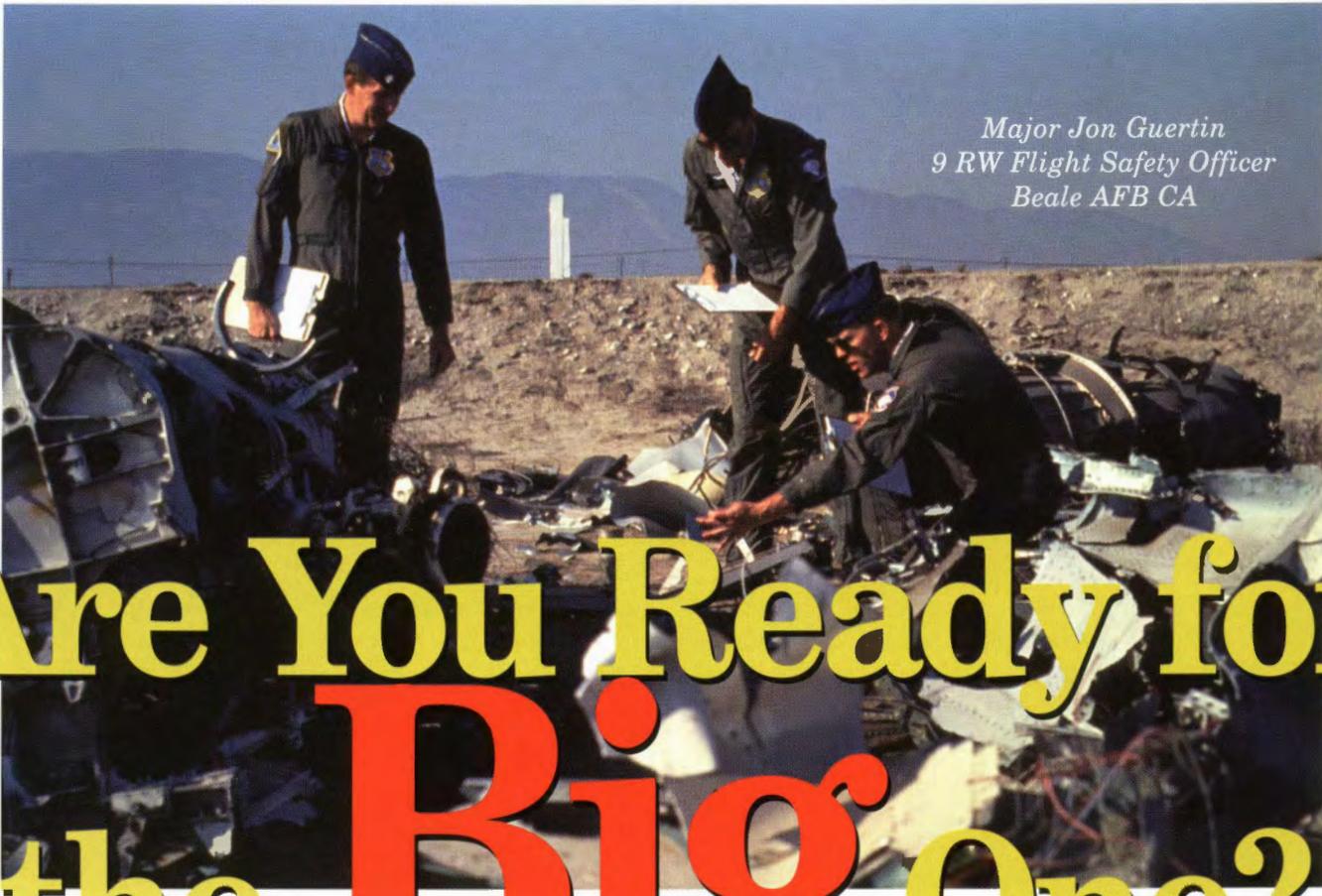
My little safety heart would really jingle if you said, "Gee, Turk, I've used ORM!" However, I am realistic enough to know that there's probably not a lot of you who had that answer pop out of your grey stuff. I'll be truly thankful if your answer was simply, "Uh, I guess I just thought about what could go wrong *before* I launched off into doin' it." Bless all you folks, 'cause you are ORM'ers but just don't know it! That's right, it's as simple as that — thinking before doing. That's all it takes to be a full-fledged, dyed in the wool, ORM-practicing safe person. If that was your answer, the next time someone asks you if you know what ORM is, you can say, "Not only do I know, I do!"

Now for the crowd that scares me. Yeah, that's those of you whose answer was, "Gee, I don't know how I kept out of trouble. I guess I was just lucky." You've got to trust me, folks; the only place luck might help you is in Las Vegas. Even there, the consistent winners don't bank just on luck; they use their brains. Before they put their money down, they figure the odds, they know the angles, and they back away when it's a fool's play. In short, they do what those good folks above did; they think before doing. [Kind of an awesome thought, isn't it? ORM in the city of Lost Wages, who would have guessed?]

So, my friends, as you start to plot out your Labor Day last fling o' summer, take this to heart and mind. *Think before you do!* Here's the litany: What can go wrong ... How bad could it be ... What can I do to make it not so bad? Do this for me, and I'll put odds on you being back to read next month's issue. Take care, and stay safe!

*Colonel Turk Marshall
Chief of Safety*





*Major Jon Guertin
9 RW Flight Safety Officer
Beale AFB CA*

Are You Ready for the **Big** One?

As you read this article, my wing will be 2 years out from the last major aircraft mishap where we had twisted, burning metal and a shattered young family stood in stark testimony to the loss of an irreplaceable pilot and aircraft. While sitting through the Flight Safety Officer (FSO) Course at the Air Force Safety Center, I had no idea our safety office would be involved with the response to six Class A mishaps in less than 3 years. While it is true that nobody can predict with certainty if or when an actual mishap will occur, the experience I've gleaned over the past several years has convinced me that definite preparations can and should be made prior to such an event. Advance preparation can make a "huge difference" in the relevance of the interim work you and your office complete in the event of

an aircraft mishap. So, let me ask you ... "Are You Ready for the Big One?"

Mishap Response Plan

How thorough is the Mishap Response Plan you've designed? Does it address the variety of mishap scenarios you may encounter? For example, the first two major mishaps occurring on my watch involved our aircraft crashing on overseas military installations. The third was a local jet crash landing at our own airfield. The fourth was a local jet crashing into a nearby civilian community. The fifth was another command's aircraft that crashed at sea 200 miles from our base. The sixth was a strange scenario in which one of our jets landed without incident until maintenance discovered massive internal heat

damage several hours after the mission was over.

Each incident had unique and sometime perplexing problems. AFI 91-204, "Safety Investigations and Reports," gives solid guidance in most scenarios, but how many folks "outside," your safety office know what it says? They are probably more familiar with the guidance contained in the Disaster Control Group checklists and/or the Mishap Response Plans you use. How prepared are you for an off-base versus on-base mishap? How about one involving transient or other local/regional aircraft? How does your office respond when one of your deployed aircraft goes down or gets badly dinged? I realize that these are not all safety office issues; but in every scenario we've had, leadership has approached us for answers. In several cases, I wish we had been better prepared.

Interim Safety Investigation Board

How well are your Interim Safety Investigation Board members trained? One thing I've realized is that no matter how good your list of potential board members looks this month, next month — when half of them are TDY, on leave, or have PCS'd — you'll wish you had prepared with greater depth. In other words, have a number of people who can fill each position. In our office, the names and numbers of potential board members are updated about every 8 weeks. We attempt formal training every 6 months in mass and then pick up the "no shows" as needed. My interim training is simple and concise. Since most Interim Board members are not "safety people," all they want to know is "where to go" and "what to do first" when summoned for duty. Though not required for an Interim Board, having some formally trained Board President candidates on base has been very helpful. Identifying good candidates ahead of time has proven highly valuable.

Be Prepared!

How well is your office prepared for a major mishap response? Just because you're an "expert" doesn't mean you have all the bases covered. Invariably, you — or some of your key office staff — will be absent when the flag goes up. Can everyone in the safety office start the ball rolling to respond to a problem? Whether I'm on duty, or it's one of the Squadron Assigned Flight Safety Officers (SAFSOs) that gets the call, or even if one of the Ground/Weapons Safety people are first to reach the office after notification, the game plan is still the same — "Run the Checklist!" We keep a big visible Quick Response Binder on my desk with all the initial response checklists in it. We begin by recalling the office personnel; this is immediately followed by

obtaining the details of the event and getting the Interim Safety Investigation Board process in motion. We've also realized that having a person from the office at the Disaster Control Group/Battle Staff is a big help in keeping communication flowing. Hopefully, your office has developed a game plan about "who does what" in the first few hours. Establish a time line for outgoing message traffic, meetings, site visitations, and briefings. If you're a trained FSO, a lot of people will look to you for guidance — even in the early stages of a mishap. I've found that I haven't needed to know everything, but I did need to know what should happen next.

Interim Board Response Kits

Take time now to ensure that your Interim Board Response Kits and office equipment can meet your needs in a crisis. Not to fly in the face of current electronic storage guidelines, but we keep several paper copies of AFI 91-204 and the most recent ACC supplement handy. Recent purchases for our mishap response inventory include an electronic digital camera, video camera, hand-held GPS receiver, a second lap top computer with portable printer, long distance calling cards, cellular phones, blood borne pathogen protection equipment, and electronic highway and local street map computer programs. Keep a message shell ready for the 8 hour and 72 hour reports. Be ready to assist the Operations Group (OG), Logistics Group (LG), and Medical Commanders with their initial messages. Have a primary and backup Interim Board meeting location with message boards, telephones, and controllable access. What you do to prepare now will reap huge dividends when you need the resources on short notice.

On-Base Agency Assistance

Talk to base agencies that can

greatly assist your mishap response. If you have an Aero Club, work out an agreement for use of their airplanes and instructors; they can greatly speed your response time to a remote crash site. Does the survey team at Civil Engineering know what you'll be asking them to do at a mishap site? Since the Support Group Commander or Deputy will probably be the On Scene Commander in most disaster scenarios, have you talked with him/her about how you'll be involved and what is important to safety during and after the event? Will you have a photographic/videographic person or team dedicated to your office and for how long? Does Public Affairs understand how Safety Privilege information is balanced against the desire to know from local and national media? Will the legal office be involved for claims or access disputes? Also, can civilian law enforcement officials assist in identifying witnesses and recovering wreckage that is removed from a crash site? We encourage an office table top discussion — as well as a Major Accident Response Exercise — with your Wing level planing staff to test some or all of these questions from time to time.

The Seven P's

Remember the Seven P's for anything that requires a coordinated response: Proper Prior Planning Prevents Pathetically Poor Performance. Also, remember that "Perfection" is the enemy of "Good." Without fail, something will be overlooked or forgotten; so if it's not a show stopper, move on to the next thing. Hopefully, your tour as an FSO at the Wing or Squadron will include none of the challenging experiences like I've gone through the past few years. I certainly never thought it would happen to me! But just in case ... build a good team and know the key people you'll be working with in a crisis. It will pay big rewards if (or when) you need them. ■

TURNING TOWARD TRAGEDY

*Major Reed Estrada
USPACOM/J6112
Camp H.M. Smith HI*



There I was ... driving down a road just outside a little town called Olovo in north central Bosnia-Herzegovina. We were part of a four-vehicle convoy that made up the Task Force (TF) 4-12 mobile Tactical Command (TAC) post. The TAC's mission for the day was to transport senior TF leadership to meet with Croatian military officers and observe a live fire training exercise in an isolated mountain town outside Vares, a predominantly Moslem city north of Sarajevo.

Our job in the TAC, as the Air Force Tactical Air Control Party

(TACP), was to provide fire support and communication for the TAC as it maneuvered outside the range of both division and TF organic artillery. During the pre-convoy meeting, we ran the risk assessment checklist that noted the hazards for the route as land mines and possible ambushes by local militia. Due to a paperwork SNAFU with the release on our vehicle (similar to a 781 check on an Air Force aircraft, the Army requires a release by their maintenance officer before a vehicle is allowed out of the compound), we were late making the gate check where we armed our weapons and

did radio checks with the other vehicles in the convoy.

As timing was critical, our TF commander opted for a new route to shave some travel time from the trip. The TF commander was a seasoned Army battalion commander with a firm grasp of leadership technique that inspired a high degree of confidence with all who worked with him. This (along with my desire to improve my rookie career as a combat photojournalist) led me to relax from my usual practice of backing up convoy navigation. The mission started routine as we rolled down the typical pot-holed

Bosnian highway, with each vehicle maintaining the required spacing to prevent collateral damage in order to minimize casualties in case of a land mine strike or ambush.

As we reached the town of Olovo, the convoy commander directed the convoy down the road that was to be the “short-cut” to the meeting place. I continued to update my photo collection of war torn scenery, and the new route was providing some of the best examples yet seen. The new road began to get extremely narrow and overgrown with brush on both sides that now scraped the sides of the High Mobility Multi-Purpose Wheeled Vehicles (HMMWVs). The convoy reduced its speed and began to bunch together. I began to get that all too familiar “uncomfortable feeling” — things were not quite right. As I looked over at my Enlisted Terminal Air Controller (ETAC), he looked back at me with the same look of discomfort.

Our Air Force MK-144 was the third vehicle in the convoy, and the only vehicle with canvas sides, top, and doors, as well as the standard auto-glass windshield. These features are good for driving on U.S. highways, but very little protection in a land mine infested war zone. This was a fact we now wished we had stressed in the risk assessment part of the pre-convoy meeting before we ended up on this road. The other vehicles in the convoy were the latest up-armored HMMWV variation with bulletproof windows, doors, and a blast resistant floor. We had our kevlar blankets in place on the TACP MK-144 seats and floors, and we were feeling a little relieved that we had stood down the day before to clean

out the ever present Bosnian mud (as per the maintenance manual) to gain the maximum design protection from the kevlar. The non-verbal communication between the two of us was plainly understood as we both tightened our kevlar helmets and body armor.

The road, with the encroaching brush on either side and the

“As the front right tire
of the HMMWV
flattened and dropped
into a small blast
crater, my heart
leaped into my throat.
They hit a land mine!”

lack of inhabitants in the nearby-destroyed buildings, began to ring alarm bells in our minds. There was a definite lack of recent use, something I should have analyzed instead of photographing! We now had bunched up almost bumper to bumper and had slowed to a crawl when we rounded a curve and ran smack into a dead end. The commander dismounted and assessed the situation while cross-checking his watch. Backing up the road would be a slow and arduous process. Time was short, and he quickly made the decision to do a three-point turn on a small clearing off the side of the road.

All U.S. military personnel are

required to attend the land mine awareness training at Hohenfels, Germany, before we deployed down range. The training taught us what signs to look for that indicate the presence of a minefield. It also drummed into our heads over and over again to **never, never, never** leave the prepared road surface. The ETAC and I both looked at each other again as the discomfort level began to rise to a fever’s pitch. Still ... the convoy commander was in charge, we were late, and I felt a little out of my element in advising an Army Lieutenant Colonel on safety. Based on his experience, I figured he knew more about risk assessment and ground operations in a combat zone than I did anyway.

The commander’s vehicle turned around with no problem and the other vehicles had to crowd farther off the opposite side of the road to allow his vehicle to pass. The tension began to relax with the successful passage of the command vehicle. The next vehicle was the security vehicle directly in front of ours. As it swung out into the clearing, the front of the vehicle suddenly lurched down and was surrounded by a black-gray spray of smoke and mud followed by a deafening roar that echoed around the deserted buildings. As the front right tire of the HMMWV flattened and dropped into a small blast crater, my heart leaped into my throat. They hit a land mine!” We then extracted the vehicle, assessed the damage caused by the anti-personnel mine, and limped back to the nearest base camp for repairs.

Lessons Learned Summary

Besides missing the appointment and scaring everyone into

one more shade of gray, it was evident we had learned a few good lessons:

Lesson #1

We were very fortunate! At Hohenfels, they had detonated an anti-tank mine under a 5-ton truck for the whole class to watch. In my mind's eye, I can still see the truck tumbling through the air — blown end over end by the explosion. Anti-tank mines were common all over the theater and usually accompany anti-personnel mines around roads. Had the security vehicle struck an “anti-tank” mine, the occupants



of the vehicle would have died; and we would have suffered serious injury (if not death) as our vehicle was only a HMMWV's length away from the explosion. Living life on such a thin thread as this has poor career potential!

Lesson #2

The Air Force and Army had spent a lot of money sending us to Hohenfels. We were provided with knowledge gained from years of past experiences and failed to use it. I have heard that intelli-

gence is a collection of facts, and that wisdom is the proper application of those facts. We learned from this experience that the opposite of wisdom is stupidity, and it almost cost us our lives.

Lesson #3

A lesson the flying community has learned from hard experience is that disaster is not rank conscious. It doesn't matter if you're an aircraft commander, student pilot, battalion commander, or a Private. When a safety violation is obvious, for whatever reason or circumstance, it is the duty of all those involved to point it out and

assist in any way possible to prevent a mishap. I should have spoken up!

Lesson #4

Here is one we see time and again in the flying world. We got in a hurry to get to the destination and allowed time constraints to get in the way of safety. Instead of taking the time to back up on the road, the decision was to violate the rules and leave the road surface.

Lesson #5

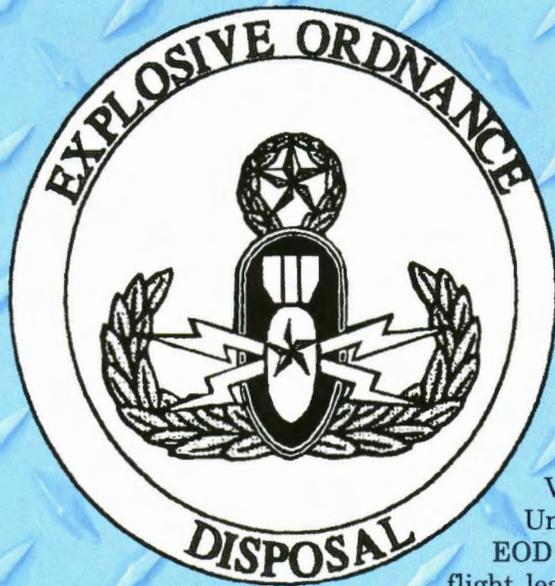
Remember to determine which courses of action will best accomplish the mission with an acceptable level of risk. Had we done a better job in reviewing the hazards and the level of risk associated with each hazard, we might have selected a different travel route. For example, since the Air Force vehicle was the most vulnerable vehicle in the convoy, extra care could have been exercised to reduce the threat.

Lesson #6

Complacency is an insidious killer. When a person's state of conscious attention is reduced due to an attitude of overconfidence or undermotivation, the potential for an unsafe situation to arise increases dramatically. For instance, we all knew Bosnia was a dangerous place. When we first got down range, everyone was on the lookout for mines, snipers, and booby-traps. However, as the weeks turned into months, we all began to take less notice of our surroundings. Don't let the complacency bug bite you — it hurts.

In summary, let me say that there's a price to pay for not properly managing risks. This applies to everything we do, both on and off duty. Unfortunately, the cost of a mishap is oftentimes very high. Pencil whipping a risk assessment can cost you your life or the lives of others, so take the time to make smart risk management decisions. Successful risk management is key to preserving our combat dominance. It takes a focused effort on our part, but the results are worth it — and our mission depends on it. If you don't take risk management seriously, and you enjoy taking short cuts, you may find yourself “turning toward tragedy.” ■

Monthly Awards



UNIT SAFETY AWARD OF DISTINCTION

*EOD Flight
99 CES, 99 WG
Nellis AFB NV*

The 99 CES EOD Flight is to be commended for their superior performance in support of the Federal Bureau of Investigation (FBI) and local civilian authorities during the recent anthrax scare in the Las Vegas area. When a known terrorist was suspected of transporting a biological weapon of mass destruction into the Las Vegas area, the FBI quickly contacted Nellis AFB for support. Understanding the severe threat posed by a biological weapon, the Nellis EOD team was alerted and briefed on the known information. The EOD flight leadership recalled their teams from various missions and quickly generated an initial response force to assist with the emergency. Follow-on support teams were identified and placed on stand-by. In the early evening hours of 19 Feb 98, the initial response team deployed to the FBI forward command post to coordinate their actions with the FBI's assault team. During this meeting, the team was briefed that the suspects may have broken one or more of the vials of suspected agent in the trunk of the car. The biological agent in question was thought to be military grade anthrax, a deadly microtoxin. During the initial planning phase, the EOD team contributed valuable information to the FBI about booby-traps and the specifics about the anthrax virus which greatly assisted the FBI in formulating their assault and arrest plan. Once the arrest plan was finalized, the EOD team developed a plan to quickly safe potential booby-traps and secure any suspected microtoxins before they could be released into the environment. Once the FBI assault team arrested the suspects, the Nellis EOD team moved forward and took control of the scene. Donning self-contained breathing apparatuses and protective clothing, the team swiftly moved in to assess the vehicle for potential hazards. Using hand entry techniques, the team quickly determined the vehicle was free of booby-traps and was safe from explosive hazards. During their assessment, they discovered what appeared to be a broken vial in the trunk of the car. Assuming and fearing the worst, the EOD team leader ordered the perimeter expanded to prevent accidental exposure to civilian bystanders who were beginning to gather around the site. At this point, the team regrouped and quickly modified their plan to include packaging the car which was now feared to be contained with anthrax. The EOD team professionally wrapped the suspected vehicle in several layers of plastic to ensure any potential hazard would remain contained. Now, late in the night, the EOD team supervised the safe transportation of the suspected vehicle and anthrax vials to Nellis AFB and was relieved by a follow-on support team. EOD remained with the vehicle until a team from the FBI crime laboratory could arrive to take possession of the suspected items. The quick and decisive action of the Nellis EOD flight won praise from the FBI Special Agent In-Charge of the Las Vegas office and were instrumental in alleviating the fears of hundreds of thousands of citizens throughout the Las Vegas area.

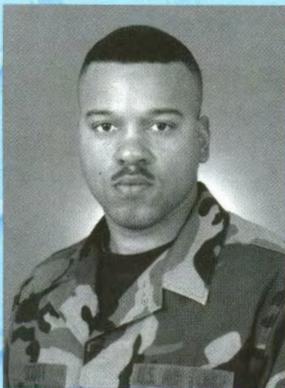


PILOT SAFETY AWARD OF DISTINCTION

*Lt Col Jeffrey S. Tice
198 FS
Muniz ANG Base PR*

Lt Col Tice was performing an Operational Check Flight (OCF) sortie on an F-16A due to a Time Change Technical Order (TCTO) on the egress system resulting in an extended down period. As he completed weapons attack functional checks, he noticed an abnormally high fuel flow reading. Wisely deciding to terminate the mission at that point, he was in the process of returning to San Juan when the engine flamed out without warning. Col Tice quickly located the nearest suitable emergency field,

Borinquen Airfield, approximately 20 NM away. While maneuvering the jet towards the field at 12,000 feet, he quickly slowed to best glide AOA and began running the flameout landing checklist. Col Tice had to make a very quick analysis of his energy state. Because of a non-standard OCF configuration (two external wing fuel tanks) and his proximity to local populated areas, he elected to retain the external fuel tanks. Because Borinquen is an uncontrolled, joint civilian/Coast Guard facility, he had to manually switch to the local VHF frequency, announce his condition and intentions then perform clearing turns to avoid civilian traffic. Now below 5,000 feet, he elected not to attempt a re-start and devote his full attention to landing the aircraft. Col Tice performed a flawless dead-stick landing on the runway and successfully stopped the aircraft on the runway. He then completed the necessary checklist steps and egressed the aircraft. The elapsed time from his first abnormal fuel flow indication to the full stop dead-stick landing was less than 4 minutes. His rapid and timely reactions to a potentially life-threatening situation saved a valuable Air Force asset and prevented any civilian property damage. Post-accident investigation revealed no usable fuel left in the aircraft, a broken fuel clamp, and a severed main fuel line to the engine.



FLIGHT LINE SAFETY AWARD OF DISTINCTION

*SSgt Trenton L. Scott
27 CRS, 27 FW
Cannon AFB NM*

While inspecting the engine oil chip detector after completing the engine operational test on engine serial number 509211, SSgt Scott discovered an unusual amount of metal slivers and chips on the detector. Sgt Scott immediately notified the wing's General Electric personnel to analyze the wear metal. General Electric's personnel requested the metal particles be sent to Tinker AFB for further analysis. Depot personnel stated that the wear metal was code 4130 non-detrimental wear metal and to drain and flush

the engine oil system and return the engine to service. Not feeling comfortable with this, Sgt Scott performed another operational test of the engine and again evaluated the chip detector which again showed metal slivers and chips. Sgt Scott then directed another drain and flush of the engine oil system with a thorough cleaning of the engine gearbox. After completing another operational test of the engine, the chip detector once again showed chips on the detector, although this time the metal chips were within limits. Sgt Scott felt the engine required further evaluation because of the amount of wear metal showing up on the detector in such a short period of time. After persuading engine backshop supervision and General Electric personnel to examine the engine further, particularly the engine gearbox area, the gearbox was removed and thoroughly inspected. Engine backshop personnel discovered that the gearbox bevel gear to the radial shaft spline area was worn nearly to the point of disconnection. After inspecting the damage, General Electric personnel stated that the engine would have failed if flown on its next flight. Sgt Scott's initiative and integrity prevented the loss of a valuable combat aircraft and the potential loss of life or serious injury to a valuable Air Combat Command aircrew member.



GROUND SAFETY AWARD OF DISTINCTION

*SrA Tami J. Anderson
366 RANS, 366 WG
Mt Home AFB ID*

SrA Anderson was performing her first day of mobility augmentee duties on the Cargo Deployment Load Team with 10 other teammates from the 266th Range Squadron. The second 40K Loader of the shift was positioned to load five 10,000 pound pallets into a C-17, aircraft and she chocked its wheels to secure it in place. She stood by while five of her teammates removed the pallet stop holding back the first pallet and rolled it onto the aircraft safely. The second pallet was more difficult to position once it was rolled onto the aircraft track. The five team members concentrated on pushing the pallet toward the front of the aircraft. At that instant, the third pallet in line broke loose of its pallet stop on the K Loader and began rolling 20 feet toward the team attending to the second pallet. She shouted to warn them, two of the team members reacted quick enough and were able to get out of the way. The three others could not escape. She quickly and instinctively put up a pallet stop in the K Loader track to slam the 10,000 pound runaway pallet to a halt before it had a chance to crush three bodies and damage the aircraft. Her fellow team members were very grateful. The three would not have escaped injury had Amn Anderson not reacted by putting the pallet stop in place. Her action brought the 5-ton runaway pallet to an immediate halt, saving three team members from being crushed between the pallets and preventing damage to the aircraft.



CREW CHIEF AWARD OF DISTINCTION

*SSgt Jeffery A. Armstrong
421 FS, 388 FW
Hill AFB UT*

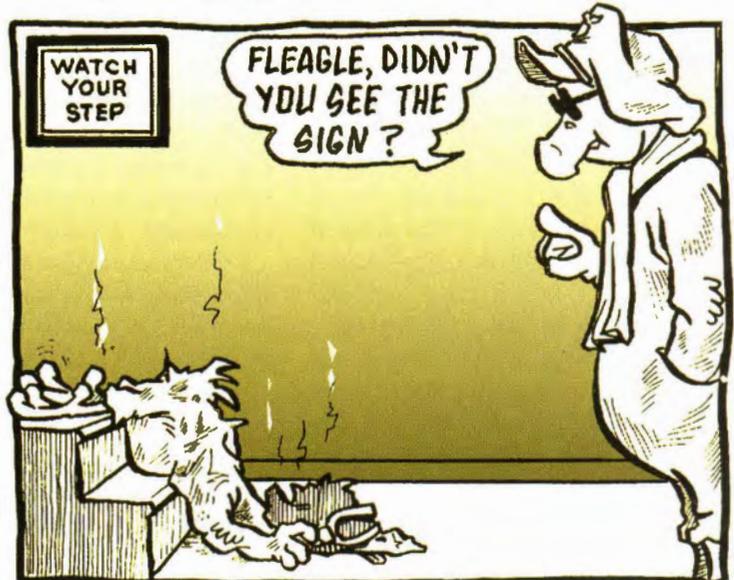
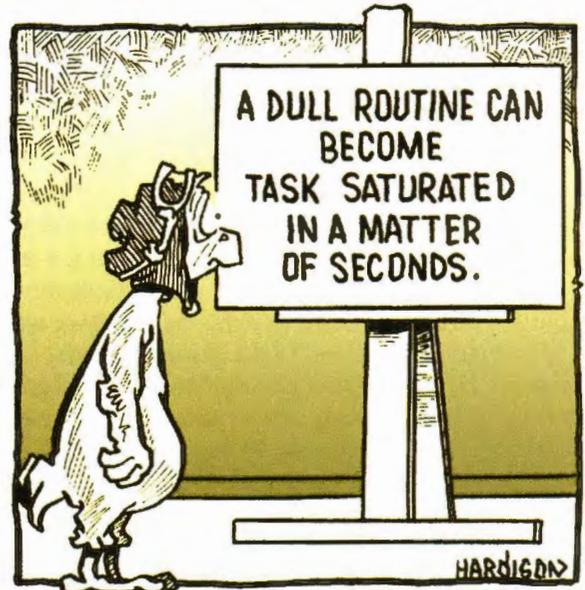
On 22 Dec 97, SSgt Armstrong was performing the launch of an F-16C aircraft, tail number 88-0449. After completing the flight control bit check and trim check portion for the launch, Sgt Armstrong noticed the trailing edge surfaces of the horizontal stabilizers were not even. The right stabilizer trailing edge was approximately 4 inches higher than the left. After notifying the pilot of the discrepancy and confirming that all control surfaces were in the neutral position, the launch was aborted and the pilot was sent to the spare aircraft. While troubleshooting the fault, it was discovered that the right stabilizer measured at 5 inches below the neutral mark. In accordance with T.O. 1F-16CG-2-27JG-00-1 this measurement falls within the input parameters for a full right roll stick input, even though the stick was in the neutral position. The horizontal stabilizer was re-rigged and the aircraft was returned to service. Sgt Armstrong's keen attention to detail and outstanding troubleshooting skills prevented the launch of this aircraft, thus averting the possible uncommanded right roll during takeoff rotation. Had this occurred, the possible catastrophic result could have been the loss of the pilot's life and a multi-million dollar combat asset.

AIRCREW SAFETY AWARD OF DISTINCTION

*Maj Craig L. Anfinsen, Maj Doug High
334 FS, 4 FW
Seymour Johnson AFB NC*

Major Anfinsen and Major High were flying an F-15E Strike Eagle on a surface attack tactics sortie as part of a formal training course on simulated long range force employment from Seymour Johnson AFB NC to Avon Park Gunnery Range FL. The training mission proceeded as planned until the IP to target run. While ingressing at 500 knots and 500-700 feet AGL, a large bird struck the canopy. Despite extreme wind and noise, the pilot climbed, slowed down, and called a knock-it-off. The pilot relayed his condition to the WSO without intercom by moving the stick and throttles. As the pilot assessed the situation, he was unsure of the condition of the WSO and decided an emergency landing at MacDill Auxiliary Field at Avon Park was the best course of action. The pilot knew he had 8,000 feet of runway with cables. He started dumping fuel to reduce weight. The crew continued to accomplish all pre-landing checks comm out. The WSO was able to establish navigation steering to MacDill and the Auxiliary Field. He was unable to use any of the four CRTs due to bird debris, but he was able to stay positionally aware and perform his duties through the Up Front Control despite having to duck out of the wind blast. Maj Anfinsen's wingman quickly rejoined to chase, assessed the damage, and stated the WSO was giving a thumbs up. As he configured to land, he encountered an unexplainable flutter and elected to hold additional airspeed. Maj Anfinsen and his wingman coordinated with the Emergency Crews at Auxiliary Field and with the Avon Park Ranger. Maj Anfinsen flew a flawless approach, lowered the hook after he passed the approach end cable, unsure how much the remaining fuel and the 2,000 lbs of heavyweight training ordnance would increase his landing roll. Only 7 minutes had transpired from bird impact to landing. There was considerable damage to the cockpit and ejection seats. The aircrew was unsure of the stability of the canopy and ejection seats and elected to open the canopy and carefully exit the aircraft. The aircrew's confidence, knowledge, and superior aviation skills were key to saving a critical Air Force combat aircraft. The investigation revealed extensive damage to the aircraft. The aircraft's canopy was two-thirds gone, the front cockpit ejection seat pitot tubes were damaged, the left external wing tank was dented, the left anti-collision light was destroyed, multiple impacts were on the left wing and left vertical stab. Additionally, there was a hole in the aft cockpit bulkhead and the leading edge of the right intake ramp had been sucked down the engine causing extensive damage to the right engine. The quick analysis and actions by Maj Anfinsen and Maj High saved the Air Force an F-15E and valuable combat assets.





Weapons Safety

and the

MSgt Abel Hernandez, HQ ACC/IGIL-S, Langley AFB VA

The day has finally arrived. The IG team lands, and you are ready to give them a show like they have never seen before. Ammo pride and excellence radiates from all the people who have been practicing the past 3 months. You keep telling them the last four Operational Readiness Exercises (OREs) are money in the bank, and the Operational Readiness Inspection (ORI) will be much easier than the scenarios your own Special Assistant for Plans (CVX) concocts.

The rock has been painted five times, your people are geared up with enthusiasm, and you have looked over your records and documents for the last time. Everything is ready for the inspection to begin.

The wing inbrief goes well. The inspectors come to the munitions storage area, shake hands, and are ready for your combat munitions plan (CMP) brief. After a dazzling and well planned layout of how you will make the mission with munitions, the IG team offers a few words prior to the beginning of the inspection. The IG explains they look at all facets of the munitions ORI effort — with key emphasis on enthusiasm, teamwork, hustle, and safety.

Although a unit may be well-practiced and polished, safety is one thing that must be inherent in all aspects of daily operations ... especially an ORI. If safety is not an integral part of day-to-day operations, it certainly will not be evident during an ORI. Remember, we fight

like we train; and the ORI is the rated demonstration of how you would conduct that fight.

Typically, munitions breakout, buildup, and delivery teams are moving with practiced efficiency. Technically accurate munitions are delivered well ahead of mission requirements, and Ammo is usually well on the way to leading the wing toward that coveted Outstanding rating. What could go wrong?

Throughout the past 9 months, spanning seven ORIs, there has been a marked rise in unsafe practices during inspections. Although crews were enthusiastic and expedient, many left out basic fundamentals of safety.

During evaluations, the munitions IG team tries to meet every munitions person involved in the ORI. What better way to afford unit personnel an opportunity to show their trade. Breakout, buildup, and delivery operations comprise 50 percent of the munitions rating, the other 50 percent being accountability. We observe an operation from start to completion. During the observation, we look for technical proficiency, serviceability of tools/equipment, and safety.

If something goes wrong, it may have been wrong for the past year or more. Let me give you some common examples of what I'm talking about:

- Line crews do not have crew books.
- Line crews are not aware of the location of their vehicle checkout forms.

- Line crews do not have fire extinguishers.
- Personnel are not certified on equipment they are operating.
- Personnel do not have training in technical areas they are responsible for.
- Personnel leave the engine in an explosive-loaded vehicle running and unattended.
- Personnel involved in buildup operations do not have safety equipment or safety toe boots.
- Personnel are unfamiliar with correct grounding procedures in munitions operations.
- Personnel are unfamiliar with equipment involved in operations.
- Crew chiefs brief removal of jewelry, but fail to enforce removal.
- Personnel operate equipment without technical data or procedures at the work location.
- Known discrepancies are ignored and not documented.
- Required hearing protection is not enforced.
- High pressure cylinders are not secure during charging operations.

... and the list goes on.

In many cases, the bombs or missiles did get to the line well ahead of requirements — but they did so at the expense of safety. Safety, more than anything else, will change a perfect evaluation into something far less rewarding. Remember, the bottom line is safety; and the lack of it is a show stopper.

Fortunately, the IG will halt operations, brief the crew and flight, and avert a mishap or injury. But who will do that for you on a day-to-day basis? Let's not forget that the IG comes to validate your procedures. Ask yourself this question, "Do the personnel in my unit consistently follow established procedures?" If they don't, they won't do it during an ORI either.

There's always room for improvement; so here are a few suggestions to refine your pro-

cesses. First, I suggest Senior NCOs within the flight watch an operation from start to finish. Follow a line crew to the flight line, check their forms, extinguishers, and flight line certification. Evaluate a bomb or missile build with a critical eye toward briefings, personal protective gear, and crew chief responsibilities. Second, have another shop chief or someone from flight supervision come watch your people in action. Get feedback from someone who is not assigned to the

shop. We all know the saying, "Too close to the forest to see the trees." An outsider's look at one of your operations can make a big difference.

Safety and the ORI go hand-in-hand. Practice it now; and when the IG team watches your operations, you will look as good as that rock you painted five times. In reality, we aren't concerned about the painted rock. However, we do care about your mission and that it is accomplished safely.

See you soon! ■

Weapons Safety Stats

ACC Losses for FY 98 (1 Oct 97 - 30 Jun 98)

Number of Weapons Mishaps / Dollar Losses			
	Class A	Class B	Class C
8 AF	None	None	\$105K 
9 AF*	None	None	\$246K 
12 AF	None	None	None
AWFC	\$2.75M 	\$650K 	\$441K  
TOTAL	1 / \$2.75M	2 / \$650K	9 / \$792K

Weapons Facilities - None
Nuclear Facilities - None

* Includes all Class C mishaps in CENTAF AOR
 ** Cost of most recent mishap(s) not yet available



Class A - Fatality; 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 \$10,000 and \$200,000

Fighting with the Dragon

High Altitude Physiology and the U-2

1Lt Ryan W. Maresh
9th Physiology Support Squadron
Beale AFB CA

4

Somewhere in the world right now, a lone U-2 pilot circles the skies. Monitoring the aircraft and sensor systems at over 70,000 feet for 9 hours or more, the pilot is secluded from all other activities in the world below him. Working in complete isolation, the only sound he hears is that of his own breathing. Suddenly, without warning, a canopy seal blows and the cabin altitude instantly ascends above Flight Level (FL) 700. The cumbersome space suit being worn by the pilot is now fully pressurized and prevents his near certain death. Being snatched away from the open jaws of death, the pilot sits gratefully silent. His startled mind quickly returns to the point-by-point detailed work carried out by the aerospace physiology technicians at his home base unit. These guardians of life are responsible for

ensuring the space suit's many inlet and outlet valves and support systems are functioning properly prior to the Dragon Lady's takeoff. Only moments from death in his "fight with the dragon," the pilot's life is saved ... all because of the dedication and proficiency of the aerospace physiology technicians in testing, retesting, checking, and rechecking of the space suit and associated support equipment.

As a physical environment, space begins around 125 miles above the earth; but as a physiological environment, it begins at 50,000 feet — the space equivalent zone. Flying in this zone requires the protection of a full pressure suit to protect from the high altitude hazards of hypoxia, decompression sickness, Armstrong's Line, and extreme cold. It is these threats

— where regular life support equipment is unable to sustain life — that add a new element to pilot safety. The physiological support equipment the pilot wears creates an environment he sits in for 9+ hours. It minimizes the impact (both physically and physiologically) of flying at extreme altitudes.

Hypoxia

While in flight, the pilot's "cocoon" provides him with 100% oxygen at all times — even during an ejection. The pressure suit prevents hypoxia that would be present at the normal U-2 cabin altitude of 29,500 feet. Hypoxia is caused by a lack of oxygen reaching the bodily tissues. The symptoms of hypoxia include blurred or tunnel vision, dizziness, slow reaction time, as well as poor muscle coordination. Without a full pressure suit to provide supplemental oxygen, the pilot

has 30 to 60 seconds before becoming incapacitated.

Decompression Sickness

In addition to preventing hypoxia, the 100% oxygen provided to the pilot at least 1 hour before take-off as well as during flight decreases the high probability of getting decompression sickness by eliminating most of the nitrogen from the aviator's body. Decompression sickness — or the "bends" — occurs when bubbles of nitrogen develop in a person's blood and tissues. This happens after a rapid reduction in surrounding pressure, is exhibited by pain in the joints, and has the potential of being fatal. As most pilots can remember from their physiology training, decompression sickness can ruin your day.

Armstrong's Line

The next threat that the space suit protects pilots from is Armstrong's Line. Have you ever noticed that water boils at a higher temperature at sea level than it does in the Colorado Rockies? Well, at 63,000 feet in the sky, water boils at 98.6 degrees Fahrenheit — that's right, body temperature! In fact, at FL 630, atmospheric pressure equals the water pressure in your body. As a result, without a pressure suit to protect the pilot in the event of cabin pressurization loss, the water in the aviator's body would escape as a gas thereby causing damage to tissues and blocking blood flow. Both tend to make for a "very bad day." In this scenario, the air trapped inside the pressure suit protects the pilot from decompression. Therefore, as the cabin altitude goes from FL 295 to FL 700+, the pressure inside the suit increases to maintain a physiological altitude of 35,000 feet — much better than FL 700.

Extreme Cold

The last high altitude hazard that the space suit protects against is extreme cold. At operational altitudes, the air temperature is 70 degrees below zero. The suit pre-

vents hypothermia, frostbite, and keeps your eyeballs from freezing in the event you eject or lose cabin heat.

The Physiological Toll

Despite all this protection, flying at extreme altitudes still takes a toll physiologically. For example, flying in a full pressure suit can be likened to doing your job on the ground in full chem gear. Imagine doing that every time you go to work for up to 10 hours or more at a time. Heat build-up in the suit due to physical activity — especially during taxi, pattern work, and landing — can be rapid and incapacitating. Discomfort, profuse sweating, fatigue, dizziness, and decreased situational awareness make flying the U-2 even more "interesting." Remember, with the pressure suit on, you can't wipe the sweat off your face or even scratch your nose.

Dehydration is a constant threat due to breathing dry aviator's oxygen for extended periods of time and the sweating associated with wearing a sealed rubber suit. Since going 9+ hours without drinking also compounds physiological problems, fluid intake is vital. All normal physiological maintenance activities — eating, drinking, urination — are complicated in the suit and can increase the stress and fatigue already associated with fly-

ing. For instance, during a 10-hour car trip, you can at least stop your vehicle, get out and stretch, and answer the call of nature.

The U-2 can be a difficult aircraft to fly, and the suit adds one more system that can be a distracter. With decreased visual field of view due to the helmet and aircraft design, landing requires a second U-2 pilot (the mobile officer) to help bring the mission pilot down. Crew coordination [i.e., Crew Resource Management (CRM) type stuff] is critical to a successful landing after dealing with the hazards discussed earlier and other mission hazards. A breakdown in teamwork significantly compromises flight safety and can have catastrophic results.

"Life Vest" of the Skies

The full pressure suit truly stands between life and death for the U-2 aviator. It is the "life vest" of the skies. To ensure absolute safety, every screw, bolt, nut, seam, thread, and system gets inspected each time before the aircraft flies. High altitude physiological and life support training associated with the U-2 space suit are vital to protecting the pilot. Every time a Dragon Lady takes off, the life-sustaining physiological equipment enables the pilot to successfully accomplish the mission and come home safely. ■

SrA Victoria Babcock and SrA Claire Foenig (9th PSPTS technicians) are helping Col James Hunt (9 OG/CC) put the torso harness over the U-2's full pressure space suit.



ASK ORVILLE!

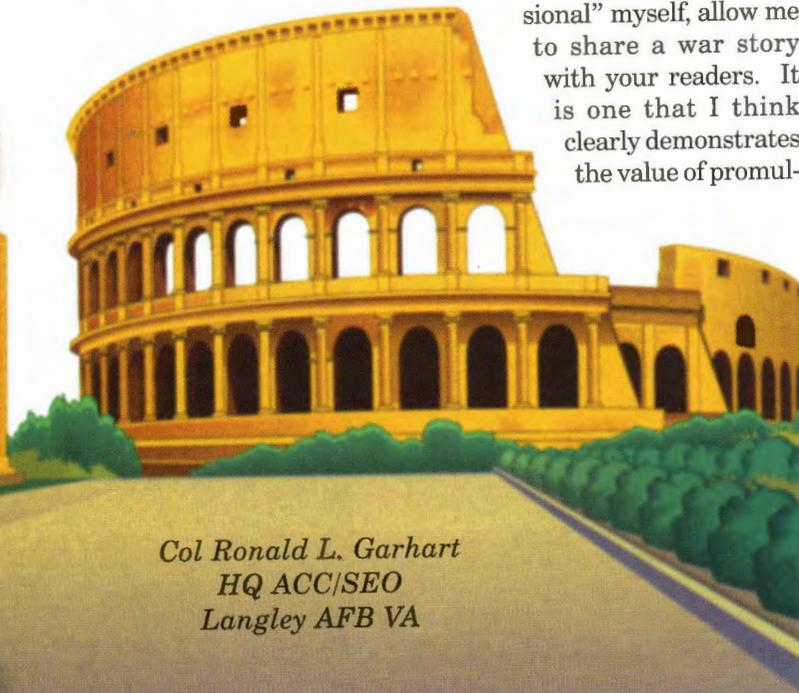
Orville received an interesting letter this month. As the host of Jeopardy would say – “Sorry contestant, you didn’t put that in the form of a question.” So Orville was presented with the dilemma of whether to print ... or not to print. Survey saaaayyyys – go for it. Captain Kirk Kehrley writes us from 8th Air Force:

Dear Orville:

A recent logistics article I read declared, “The goal of change is to create more efficiency and streamline organizations and processes.” However, due to faulty process design or poor implementation, change often decreases efficiency and is unsuccessful ... an argument I’ve heard why we should not implement Operational Risk Management (ORM). This is similar in principle to the observations made by the Roman courtier, Petronius Arbiter, back in 210 B.C.: “We trained hard ... but it seemed that every time we

would begin to form up into teams, we would be reorganized ... I was to learn later in life that we tend to meet any new situation by reorganizing; and a wonderful method it can be for creating the illusion of progress while producing confusion, inefficiency, and demoralization.”

Many of our finest performers question the wisdom of introducing ORM at this time in our Air Force. Others vehemently argue that ORM is for trained safety professionals, not for Air Force personnel at large; you know, “Let the safety officers do it, that’s what they get paid for.” Well, as a “trained safety professional” myself, allow me to share a war story with your readers. It is one that I think clearly demonstrates the value of promul-



Col Ronald L. Garhart
HQ ACC/SEO
Langley AFB VA

gating ORM to every member of ACC, from the highest levels of command leadership to the newest member on the team.

I had the opportunity to spend a week in a maintenance exchange program with the Hungarian Air Force. A senior crew chief and I went to Kecskemet Air Base, Hungary, to brief our Hungarian counterparts on how the USAF's maintenance system operates. The difference in our aircraft technologies was evident from the onset. But the biggest difference was the responsibility that our Air Force places on all individuals, especially our enlisted force. Our Hungarian hosts were amazed that the Technical Sergeant with me was so knowledgeable. There were a few yawns during my presentation — but during my enlisted partner's brief, every eye stared intently upon him. I soon understood why as we toured the Hungarians' maintenance facilities. Hungarian enlisted mechanics do not get the degree of responsibility our enlisted people get. Typically, only officers perform maintenance in the Hungarian Air Force. Our liaison, a Hungarian colonel, remarked during the visit that, "American soldiers all know their jobs, where they fit into the operation, and they are proud of their positions and knowledgeable of what is happening."

An evolutionary difference between our Air Forces is the trust, responsibility, and expectations we put on our enlisted corps. This simply doesn't happen in the Hungarian Air Force. In the USAF, you are en-

couraged to voice your ideas and concerns. We all have experiences that leadership draws upon daily to identify hazards that may jeopardize mission success. When asked about the level of risk for a given task or operation in which I have little experience or knowledge, I tell people that I rely heavily on those with risk experience (i.e., my NCOs and Airmen). My subordinates expect me to ask their opinion on a subject they are experts in; and in the same manner, my superiors expect that I will advise them in areas where I have experience. Sounds like common sense, huh? Hmmm ... using the experiences of others to pass along important information on hazards and risks — sounds like ORM to me!

Our Air Force culture is familiar with change and can readily accept and apply the principles of Operational Risk Management. Unfortunately, many people believe ORM is just another program that leadership thought up. Many think it has a limited life span and will go away sooner or later. They stubbornly say, "I am not going to change the way I do my business!" Or they may blindly declare, "Hey, my style worked for me; and it will work for those that follow me!" However, they fail to remember that our Air Force continues to adapt to America's changing security needs; and ORM is a vehicle to help manage the risks associated with the changes we are experiencing. Remember, we are the greatest Air Force in the world; and this is because we have used new

emerging technologies and ideas from Air Force people at all levels to grow and change. Let's not forget that ORM enables every Air Force member to manage hazards and risks inherent in our changing Air Force in a common sense, systematic way.

-Captain Kirk Kehrley

Kirk:

You hit the nail on the head and managed to bring tears of pride to old Orville's eyes at the same time. You are hereby invited to join me on the ORM "soap box" anytime you desire. To deploy ORM to safety professionals and a few other well placed individuals would certainly help, but it would be little more than passing platitudes compared to what is waiting to be accomplished when ORM is practiced by every member of ACC.

Because we train and rely on every member of the team is precisely why ORM can be extraordinarily effective in the United States Air Force. You may be waiting a long time if you are expecting Orville to visit your unit to identify and eliminate potential mishaps. In fact, you will likely be waiting even longer if you think that Orville possesses the skills and knowledge to devise effective control measures to fight through those "risk barriers" (i.e., those hazards and associated risks) that are keeping you from attaining that next level of performance — that is, the level of performance required to give you the edge in our next conflict.

ORM is good stuff, but it is most effective when leveraged by every member of your organization.

Keep those cards and letters flying in,

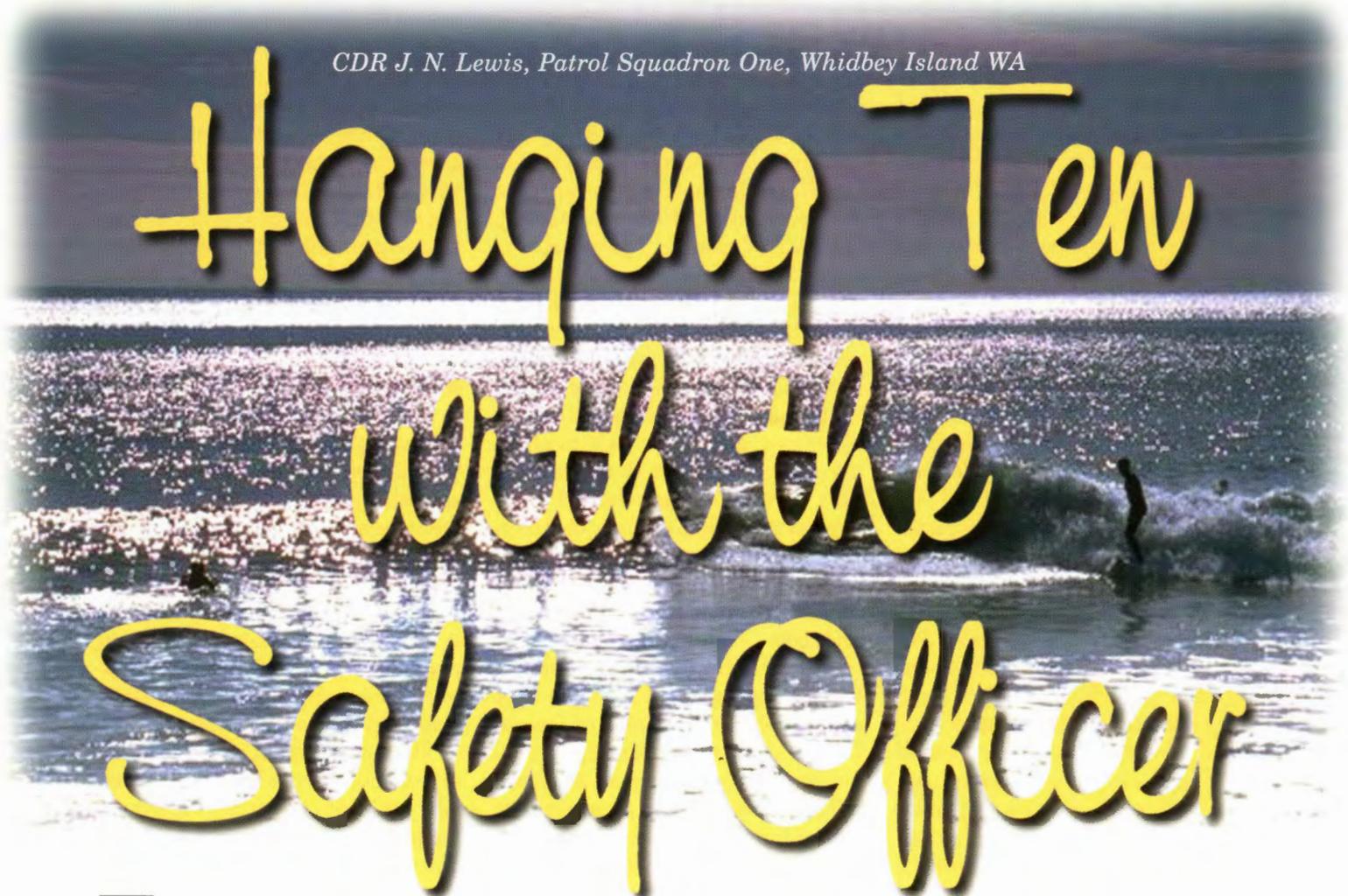
Orville R. Mudd
ORM Dogfight Veteran
ACC Office of Safety

If you have any questions or comments regarding ORM, send them to:

"Ask Orville!"
HQ ACC/SEO
175 Sweeney Blvd
Langley AFB VA 23665-2700

DSN 574-8800, Fax DSN 574-8975

Hangin' Ten With the Safety Officer



I recently read an article from a safety publication entitled, "How the Safety Officer Fell Off The Roof." I remember asking myself what kind of bungler would first pull a stunt like that and then compound the mistake by publishing it. Since then, I have reassessed what this brave soul did. In concert with my duty as squadron safety officer, I put away my pride and now offer up my blundering tale for your review ... the working title of which is, "Don't Go Surfing in the Hurricane When the Waves are the Size of City Blocks and Can Snap You in Two Like a Toothpick." I know the title is awkward, but it's very accurate. The surfing experience I'm about to tell you left a lasting impression upon me. In this particular case — speaking from the perspective of a unit safety officer — I exhort you to "do as I say and

not as I do" (i.e., don't try "hangin' ten with the safety officer"). Here's the reason why.

I was on a good deal detachment as Officer-in-Charge (OIC) from Naval Air Station (NAS) Cold-and-Dreary to NAS Warm-and-Sunny. Apart from the improvement in the weather, I had been looking forward to seeing some old friends from my first tour and maybe borrowing a surfboard and getting in a few sessions — flight schedule permitting. I was stationed in Hawaii, where in my humble opinion I mastered the long-board and sorely missed those days of daily surfing (always after normal work hours, of course).

A Harrowing Experience

One of my friends was able to hook me up with a nice 10-foot thruster. I took it out on a calm day, caught a few nice waves, and felt that old skill come back — you

know, ready for anything. I stored the surfboard in my BOQ room, conveniently located near the beach. Now all I needed was some tasty waves to pop up and I could be in the water in mere minutes.

Fortunately, some waves did pop up; or more accurately, rose to astronomical heights and pounded the beach unmercifully. A hurricane was forecast to come our way — a pretty rare occurrence for that area — and the storm surge was predicted to produce some excellent surfing. After work, I grabbed my board and hurried to the beach to check out the action. From the parking lot, I could see the surf breaking and a few riders already out in the lineup ... COWABUNGA! There was one obstacle; a red flag was flying from the lifeguard stand. The beach was closed for swimming. But all hope was not lost.

This time of year, the lifeguards were not on duty on the weekdays; so I reasoned it must have been left up from the previous weekend. Besides, the signs said "Enter at Your Own Risk."

My view from the parking lot was not as impressive as the view from the beach, but the waves still did not appear to be the epic size that all the radio surf reports had called for. The swell looked to be running about 4 feet, with the wave faces about 6 feet as I tried to paddle out.

My first clue that there was something wrong was the effort it was taking to paddle out to the lineup — I wasn't making any progress. After getting blasted back to the beach three or four times, I decided to re-evaluate my desire to surf. A couple of the local surf rats were waxing up and observing my belated progress (and, I'm sure, laughing with me; not at me). I couldn't let them think I was a quitter, so I decided to make one more valiant attempt. Back into the surf I went, and good timing was on my side. There was a momentary break in the swell, and I finally made it out into the lineup. I paddled about 50 yards offshore and turned my board around to take a look at the break and pick my wave. Odd, I thought; the swell is lifting me up high enough to see all the way into the parking lot, it wasn't like this a couple of days ago! After watching a few gargantuan waves pulverize the surf zone, reality set in. This surf was too big for me to handle. The smart play would be to head in and try it another day, maybe in a tropical storm next time instead of an actual hurricane. You know, start small; and then work my way up.

Getting back in presented a new set of problems, however. Now I had to ride into the beach on the same waves I had judged too dan-

gerous to drop in on. Simple, I thought, all I have to do is wait for the kind of lull that allowed me to paddle out, so I bided my time and looked for a break to paddle in on. A small glitch developed in my plan, though. As the storm got closer to the coast, even the lulls were building up to some seriously large waves. After about an hour of biding my time, I was beginning to get cold. The sun was going down; and pretty soon, I had to make a decision. I paddled in as close as I could to get a better look at the break — while still not getting pulled in — when suddenly the decision making process became real simple. I got caught inside; the swell began to break, and I had no choice but to try and ride it in. It would have looked real cool to the guys on shore if I had stood up, made the drop, and surfed the wave in. But survival was on my mind, and I thought the best tactic would be just to hold onto my board and hope the sound of the breaking surf would cover the sound of me screaming. I went over the falls going something near the speed of sound with my surfboard pointed straight down at the earth. Of course, this was a non-standard surfing maneuver. In Hawaii, we used to refer to it as getting "pearled."

The board was torn from my death-grip, and I experienced the feeling of being trapped in a washing machine with a nasty penchant for dismembering its occupants. It was at this point that I rediscovered the flexibility I could achieve when exposed to thousands of pounds of hydraulic force. Imagine my astonishment when I found out that the back of my head could actually touch my posterior! Finally released from the ocean's clutches, I stood up in the inside break covered with seaweed and sand. Fortunately, the leash on my board had

stayed in place, which made the search for my trunks all that much easier. I gathered myself together as best I could, brushed off the larger pieces of seaweed and bravely walked past the small crowd on the beach. Naturally, one of them had to say, "nice ride, brah". Not willing to let that remark pass, I asked when they were going out. Their response: "Are you nuts, we just came out to barbecue; that surf is too dangerous today." I limped back to my car with the smug satisfaction that I had at least tried, even if it was one of the dumbest things I had ever done.

Safety Lesson Learned

There's a moral to my story. Not carrying the safety ethic from work to your home — or recreation — has accounted for many injuries. Every time you take an old sport up again, there is the desire to start at the same level of skill you had at the end of the last season. Unfortunately, nature doesn't support that. I realize now that some value does come from near death experiences. From this one I learned (as trite as it sounds) that a person should never go surfing in a hurricane ... or any large swell for that matter, particularly if you are out of practice. I try to apply this lesson to other things I used to be good at but do not regularly practice anymore. Since this experience, I learned not to try the double diamond slope the first time off the lift. Guess how? I keep hoping wisdom will start coming with age and not from physically painful lessons that require the application of heating pads and aspirin. On a more positive note, my wife saw this nerve-racking experience as an excellent opportunity to put my surfboard collection in our next garage sale; this year, I may not argue. Hmm, now where did I leave that mountain bike ... ■

You Are About to Enter . . .

The Privileged Zone

Lt Col Ezequiel Parrilla Jr HQ ACC/SEF Langley AFB VA

*Lt Col Ezequiel Parrilla, Jr.
HQ ACC/SEF
Langley AFB VA*

A hard-working staff type finds some respite while reading about the less than sterling performance of one of his peers: "Now that was pretty stupid ... I can't believe the guy did that! I better send this to my buddy at base X. He'll get a kick out of reading this safety report. Let's see ... forward ... name ... send. Now let's see what other critical staff work I need to do today."

What is wrong with this picture? Well, easy e-mail access has helped in speeding up coordination processes and saved lots of trees by reducing paperwork; but it also creates problems when we get "caught in the moment" by misusing it to send privileged information. For example, not too long ago we cringed at the sight of an F-15 "privileged use" safety report published on the internet. We need to guard against the possibility of another one making its way to the net. As with many other problems, lack of knowledge is a factor in protecting privileged information. Although we are required to review the facts about privilege once a year, we need to guard against it becoming little more than a "I can tell you, but then I'll have to kill you" exercise.

What is privileged info?

According to AFI 91-204, "Safety Investigations and Reports," privileged info is information exempt by law from disclosure outside the Air Force safety community. It includes:

- *Board findings, conclusions, causes, recommendations, and how they came to them.* This is found in the Safety Investigation Board (SIB) Report, Tab T.

- *Witness statements.* These statements can also be placed under the privilege umbrella. Safety investigators can offer witnesses and contractors safety privilege for their statements. Not all witness statements, however, have to be privileged. For instance, if Farmer Joe saw the airplane crash, there is probably no need to offer privilege to him in order to get the information.

- *Computer generated video tape simulations or simulator reenactments made specifically for the SIB.* These simulations can indicate the board's deliberative process. In some cases, the board may need to include data into the simulation based on their professional judgment; access to these recreations would compromise their deliberative process.

Why do we have it?

We need the safety privilege in order to quickly gather information about mishaps. The safety privilege allows individuals — especially those directly involved in a mishap — to say what happened without fear of retribution. This helps in quickly identifying any safety of flight problems and allows us to take action before another mishap occurs. It also allows us to make the call on whether the ability to perform our mission has been affected, making this a national defense issue.

Anytime you see statements such as, "The safety board said ..." or "The safety investigation revealed ..." etc., warning bells should go off in your mind to let you know that you are more than likely looking at privileged information and need to treat it accordingly. Take a good look at the data. Does it include specifics that identify the mishap? Does it include information that lets you see how the board came to a conclusion?

Proper Handling of Safety Privileged Information

We need to make sure that privileged information is labeled and treated correctly per AFI 91-204. It is not a good idea to take a "when

in doubt, label it privileged" approach. This gives the impression that we are using privilege to hide information. When labeling a document, use the "full privileged use" statement prescribed in 91-204:

"For Official Use Only. This contains privileged safety information. Unauthorized use or disclosure can subject you to criminal prosecution, termination or employment, civil liability, or other adverse actions. See AFI 91-204, Chapter 1, for restrictions. Destroy in accordance with AFMAN 37-139 [Records Disposition Schedule] when no longer needed for mishap prevention purposes."

Keep hard copies secure. Do not leave reports where they can be read by people without a need to see them. We use e-mail daily to staff privileged information. You can send it on base through regular e-mail; however, the rules change when sending privileged information off base. IAW 91-204, safety messages going off base must be compressed and passworded. Technically, you can e-mail the password also; but that is still not a good idea (i.e., if someone had access to the first e-mail, they probably can access the one with the password). The best thing to do is to use another means for transmitting the password.

Do not e-mail privileged information to an address you are not familiar with. Moreover, be very careful when using e-mail addresses obtained from the global directory. Who are the individual addressees at the site? Some offices include several individuals as recipients in an office address. This may include contractors or other individuals who do not have a need to see privileged information.

Right now, there are no prohibitions against faxing privileged information; but this is something that needs to be handled carefully. **Always** call before faxing it to ensure the document will not be laying in a general office area with uncontrolled access. Once you send it, call back to verify receipt.

AFI 91-204 gives a list of people who can use privileged information. This includes (when necessary for mishap prevention):

- Commanders
- Safety Officers
- Air Force Safety Center Personnel
- Support Staff
- Aircrews
- Maintenance and Logistics Staff
- Contractors (Limited)
- Air National Guard and Reserve
- Other U.S. Military Services

As you can see, there is actually a rather large number of people who could have access to privileged information. The key qualifier is whether they need access for mishap prevention responsibilities. This must not be treated as "Nice to have information." If you do not have a need to know for mishap prevention purposes, you are not authorized access.

You cannot use privileged information to punish someone, nor can it be used as a part of a litigations/claims process. In the same manner, you also cannot use this information to reward someone. AFI 91-204 lists the following prohibited uses:

- Disciplinary Actions
- Adverse Administrative Actions
- Determining Pecuniary Liability
- Claims

- Litigation
- Contract Disputes
- Other Non-Mishap Prevention Purposes

Actions such as temporary decertification or removal from instructor orders are not seen as Adverse Administrative Action, but rather as a mishap prevention action to ensure the individual is trained before resuming duties.

Contractors

Contractors are being used for more and more training aspects. In order for training to be effective, it is necessary in many instances to provide them with privileged information. Before providing them with this data, ensure all the contractors that will have access to the information have read and signed the statement in AFI 91-204. This statement outlines contractor responsibilities in using and safeguarding privileged information. And before you start handing out privileged data, it must be sanitized by a safety individual.

Penalties for Unauthorized Disclosure

The UCMJ's Article 92 and AFI 91-204 mention penalties such as confinement for 2 years, dismissal or dishonorable discharge, forfeiture of pay and allowances, and reduction to lowest grade for unauthorized disclosure. Both as an organization and as individuals, we stand to lose one of the pillars of mishap prevention if we do not properly guard privileged information. We cannot apply selective enforcement and expect the courts to support us.

Always stay on guard when handling privileged information. You owe it to your fellow airmen, but you also owe it to yourself. FLY SAFE. ■

Dehydration and Heat



*Captain Daniel P. Clark
7 ACCS/DOV
Offutt AFB NE*

Although summertime brings a welcome reprieve from the health hazards associated with winter, a recent incident in our squadron revealed that it too has its own risks. The 7th Airborne Command Control Squadron at Offutt AFB NE is tasked with supporting the nuclear deterrent role of United States Strategic Command. Personnel sitting ground alert for

Strategic Command's Airborne Command Post must be able to react at a moment's notice when the klaxon sounds.

Every aviator knows that the flight line environment magnifies weather to its extreme, and that day was no exception. After a combined day in the office and on the jet, the alert crew headed across base to participate in a softball tournament. The sun languished

high in the sky, the heat of the afternoon sizzled, and the humidity was oppressive. Several innings of fierce competition came to an abrupt end when the klaxon sounded. Hats, bats, and gloves falling to the field behind them, the crews rushed for the vehicles, turned on the lights and sirens, and raced to the aircraft. It was the "weekly mover," a periodic exercise designed to monitor the alert

Stress

Piling into the
“buttoned-up” EC-135
LOOKING GLASS,
the crew was
immediately
overwhelmed by the
heat of the enclosed
cabin — easily in the
triple digits.

medical assistance. The crewmember was taken to the hospital, treated for heat exhaustion, and released.

Environmental heat had affected our radio operator, but could have affected everyone on board. Investigating this mishap, I discovered that there are four main heat disorders: heat syncope, heat cramps, heat exhaustion, and heat stroke. Heat syncope and heat cramps can be treated by rest in the shade, cooling, and drinking plenty of fluids. Heat exhaustion and heat stroke are serious problems which can quickly become medical emergencies if not treated quickly. These situations occur, as in this instance, after prolonged exposure to heat or strenuous physical activity in hot and humid weather. Very often, the individual afflicted isn't even thirsty. As in most things, prevention of these problems is the best treatment; and in hot weather the most common causal factor is dehydration.

Dehydration is typified by many minor symptoms which include headaches, dizziness, fatigue, and feeling uncomfortable. As previously discussed, dehydration is a sign of potential heat stress, where

symptoms become much more significant. Unfortunately, the sensation of thirst occurs only after you have become dehydrated.

Flying is conducive to dehydration. Under normal circumstances, without exercise, the body will lose three to four pints of water every day from breathing, sweating, and urinating. Medical professionals call this “insensible fluid loss” because we have no control over the amount we lose. This loss is compounded by the effects of being in a pressurized cockpit, which quickly becomes an arid environment after takeoff. The tendency for fliers to grab a caffeinated soda, coffee, or tea (which are all diuretics) soon into the flight, serves to exacerbate the problem.

The most serious danger exists when you climb into the jet already dehydrated. Having a hangover is a common cause of fluid depletion, since alcohol is a diuretic and will continue to affect the body long after blood alcohol is zero. As mentioned earlier, coffee is also a diuretic and tea is even worse. Clearly, working or exercising in hot conditions prior to flying is not a good idea; it will result in increased sweat loss and leave your body dehydrated before you even get on the plane. Failing to drink enough water before the flight may also begin the process of dehydration.

Prevention of dehydration is simple; drink lots of water, especially before a flight. Also, bring along a water bottle from which you can continuously sip. Avoid diuretics. Finally, don't wait until you feel thirsty to drink; by then you will already be behind the “power curve.” So, the next time you anticipate getting a little hot under the collar, be sure you're well prepared. Prevention of heat stress and dehydration can't harm the mission; curing them can! ■



force's readiness at random times. Piling into the “buttoned-up” EC-135 LOOKING GLASS, the crew was immediately overwhelmed by the heat of the enclosed cabin — easily in the triple digits. The flight crew started engines, taxied, and simulated takeoff. Upon recovery to the parking spot, a radio operator became unresponsive and appeared to be catatonic. The aircraft commander coordinated for

The Short End

Mr. Ricke A. Moore, 15 ABW/SE, Hickam AFB HI

Hundreds of men, women, and children die needlessly every year due to guns being misfired. The stories that you hear are unbelievable, and you wonder to yourself ... how can this happen? Well, here are a couple of examples:

- A police officer was cleaning his weapon when it discharged and shot him in the hand.

- A young 10-year-old boy was playing with his friend and pointed a .357 magnum at his friend's face and pulled the trigger. The 10-year-old blew the top front half of his friend's face off.

- A 38-year-old female had an asthma attack during the night and reached under the pillow to get her atomizer. However, she also kept a loaded .38 caliber pistol under her pillow. Yep, you guessed it, she grabbed the wrong item. She shot herself in the jaw and put a bullet through the bedroom wall.

- Several months ago, an 8-year-old boy handed one of his third grade friends at school a 9mm automatic pistol that his mother had forgotten to take out of his backpack. The mother forgot she had placed the weapon inside one of the pockets of the backpack the night before when she went to work.

These are just a few examples of improper care and use in the handling of guns. Because of

carelessness, indifference, and lack of forethought, scores of innocent people die each year unnecessarily in gun related mishaps. People need to use good judgment when looking into buying, owning, and using a gun.

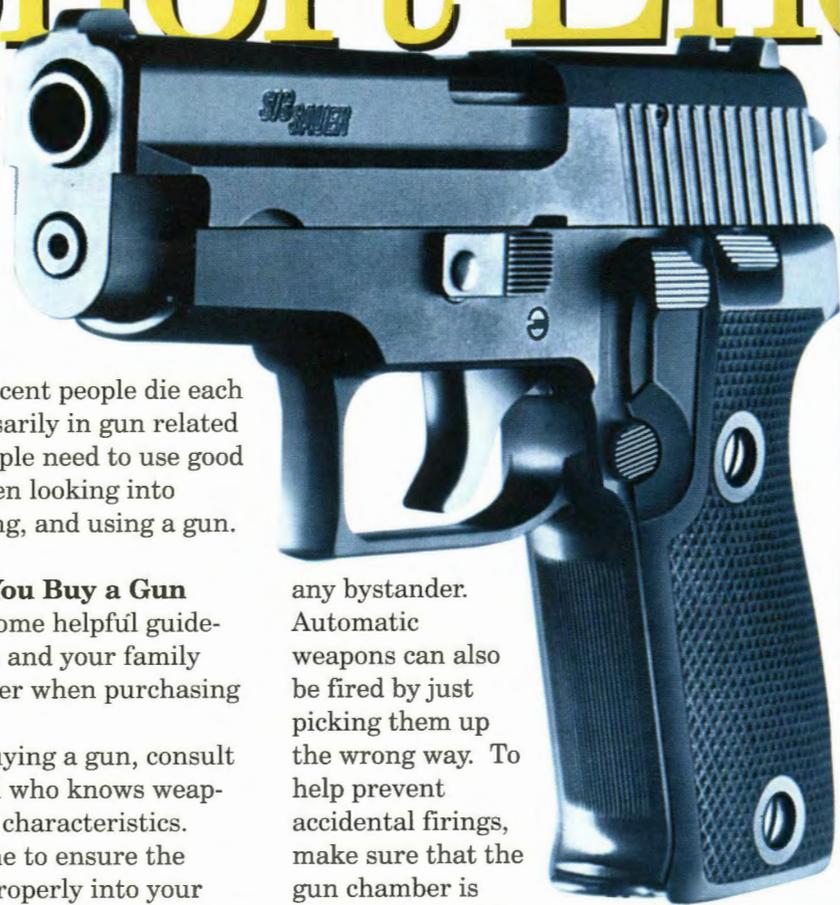
When You Buy a Gun

Here are some helpful guidelines that you and your family should consider when purchasing a firearm:

- Before buying a gun, consult a professional who knows weapons and their characteristics. Also, take time to ensure the weapon fits properly into your hand so that you will not have any difficulty handling it in a safe manner.

- Go through the right procedures when purchasing the weapon; fill out the paperwork required by law. Go through the waiting period, and pick it up.

- Before the gun is ever loaded or fired, you should attend a gun class. This class will teach you everything you need to know about the particular gun you just purchased. Every weapon is different and needs to be handled in a particular way. For example, a revolver can be dropped; and it should not discharge (i.e., the trigger must be pulled in order to fire it). On the other hand, if an automatic weapon is dropped, it can discharge and seriously injure



any bystander. Automatic weapons can also be fired by just picking them up the wrong way. To help prevent accidental firings, make sure that the gun chamber is empty. Gun safety classes will teach you all of this — how to clean and care for your gun, how to properly fire it, and above all ... you will be taught all of the safety features.

When You Bring the Gun Home

After you purchase a firearm and bring it home, here are some important things to remember:

- Keep the gun unloaded when stored.

- If it must be loaded, then lock it up. Furthermore, it is always a good practice to use a trigger lock, especially if you have children in your home.

- If the weapon is an automatic, remove the clip, keep it stored in a separate area, and clear the chamber.

d of the Barrel

- Always make sure the gun is in the "safety" position so that the trigger cannot be pulled inadvertently.

- Make sure the gun is unloaded before cleaning it; check the cylinders or chamber visually. (Note: Don't ever point the gun toward your face by looking down the barrel.)

- Always assume that the weapon is "loaded," and handle it as if it is.

- When carrying or handling a gun, never point it at anyone.

- Do not keep any weapon under a pillow or anywhere in or on a bed.

- Do not tell people that you have a weapon or where you keep it stored.

- Take the gun to a certified firing range on a regular basis, and practice shooting it. By doing this, you will maintain proficiency and stay acquainted with firearm safety and handling procedures.

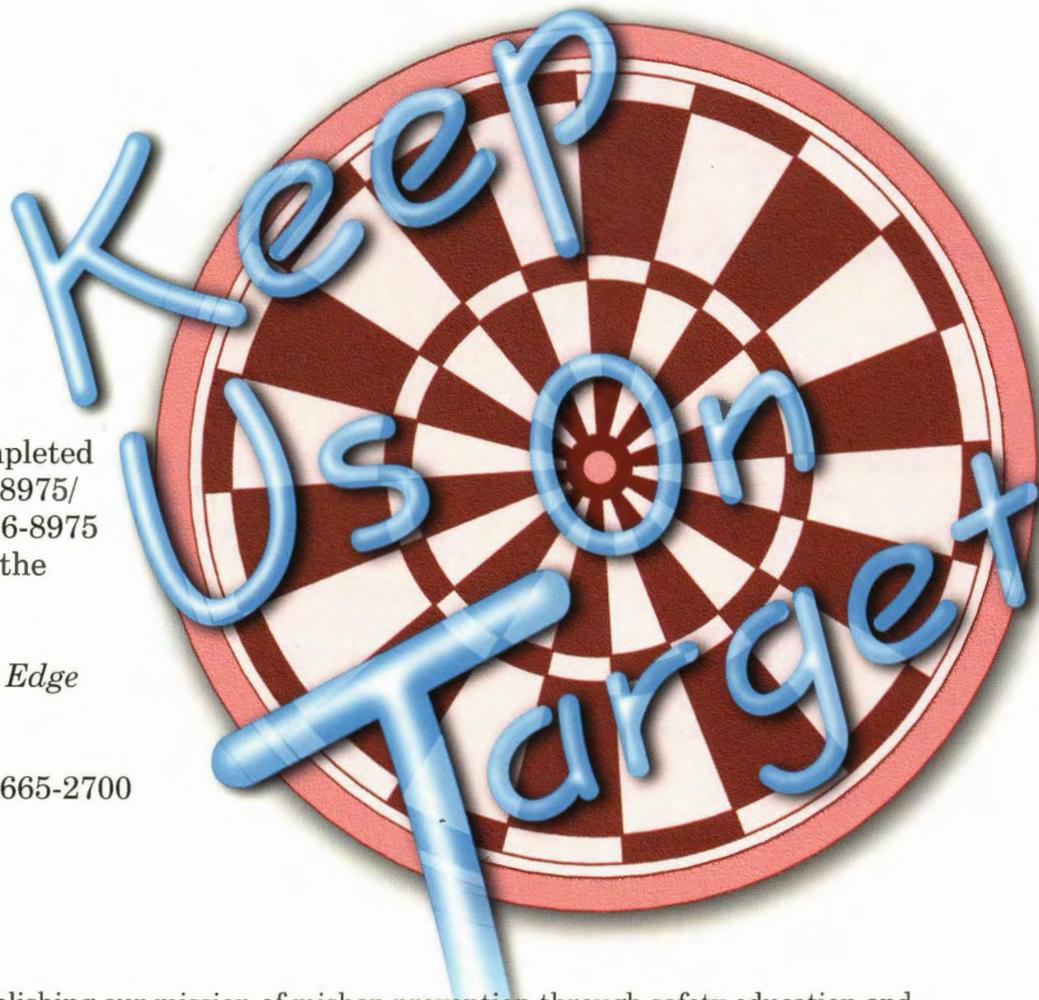
In summary, remember that life is too precious to be cut short needlessly due to inadequate firearm safety. Always use common sense and never accept unnecessary risks when handling guns or other weapons. If you have any questions about the care and handling of any weapon, ask for help from a responsible source (e.g., base security forces, your local law enforcement agency, or other professional organizations that are knowledgeable about firearm safety). ■

Security Force Comments:

The author has provided us with excellent gun safety tips for living at home. In building upon this, let me add a few more pointers for your review: (1) Never assume anything about your children when firearms are involved. Don't assume they're not knowledgeable, curious, or strong enough to pull the trigger; and never assume they won't find the weapon. (2) If self-protection is the reason for your firearm, you better have a good grasp of your legal rights as a citizen (or military member) in protecting yourself. When you find yourself in a potential shooting situation, you had better have done your homework well ahead of time regarding what you can and cannot do. The consequences of an accidental firing or the misapplication of deadly force are disastrous and irreversible. Contact your local legal office and civil authorities for further information.

Regarding possession and transportation of firearms on a military installation, paragraph 5.1.1 of AFI 31-209, "The Air Force Resource Protection Program," and the ACC Supplement require the following: (1) Possession and transportation of firearms on base must comply with all federal, state, and local laws. (2) Possession of firearms is specifically prohibited in dormitories and transient living quarters. The Security Forces (SF) Armory is designated as the Privately Owned Weapons repository for these personnel. (Note: The installation commander determines locally whether military housing residents may keep firearms in the SF Armory. However, any weapon maintained in a government facility — to include Military Family Housing — must be registered via AF Form 1314, "Firearms Registration." The decision as to whether the commander allows use of the SF Armory is usually documented in the local supplement to AFI 31-209.) When transporting weapons, you must ensure they are unloaded and placed in the trunk of the vehicle. They may be transported on base for the purpose of transportation to and from: (1) authorized storage facilities, (2) purchase or sale, (3) at collector display events, (4) game hunting, and (5) authorized sporting events requiring their use. ■

*MSgt H. Layton Clark
HQ ACC/SFOF
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Please fax your completed survey to DSN 574-8975/commercial (757)726-8975 or mail the form to the following address:

Editor, *The Combat Edge*
HQ ACC/SEP
175 Sweeney Blvd
Langley AFB VA 23665-2700

While accomplishing our mission of mishap prevention through safety education and awareness, we are constantly striving to improve the quality of *The Combat Edge* magazine. Our goal is to help everyone benefit from safety lessons learned through the printed page rather than from painful personal experience or tragedy. As a result, the ACC Office of Safety is dedicated to providing command personnel with the best flight, weapons, and ground safety information possible. To “Keep Us On Target,” we need your help! We want “your” feedback concerning ACC’s mishap prevention magazine. After all, *The Combat Edge* is really “your” publication.

How can you help us? It’s simple — just complete the attached survey form and forward it to us by fax, regular mail, or through official mail channels (i.e., your local Base Information Transfer Center [BITC]). Rest assured, we read each and every survey that comes in from our readers and seriously consider all suggestions that are made. We know how busy you are in today’s high ops tempo environment, but please take a few moments to tell us how we can do a better job of serving you. We value your comments. By providing us with your valuable input, you will be helping us steer the future direction of *The Combat Edge*. Remember, your input is the one that can make a difference!

Thanks for your time!
- Ed.

PS. - Don’t have a stamp? Just give the survey to your local, friendly Safety Office. They’ll get it to us. And oh — by the way — while you’re at it, how about sending us that draft of the safety article you’ve been working on.

1998 Reader Survey for *The Combat Edge*

(Check off or fill in all items that apply)

1. **Branch of Service** - Air Force ___ Army ___ Navy ___ Marines ___ Other ___
2. **Years in Service** - Less than 2 ___ 2-5 ___ 6-10 ___ 11-15 ___ 16-20 ___ 21+ ___ N/A ___
3. **Position** - Enlisted ___ Officer ___ Civil Service ___ Other ___
4. **Gender** - Female ___ Male ___
5. **How often do you read *The Combat Edge*?**
 - a. Very often (every issue) ___
 - b. Often (most issues) ___
 - c. Sometimes (some issues) ___
 - d. Seldom (very few issues) ___
6. **How do you normally obtain this magazine?**
 - a. Official USAF distribution (PDO) ___
 - b. GPO subscription through direct mail ___
 - c. Library ___
 - d. Co-worker, associate, friend ___
 - e. Other ___
7. **How much of this magazine do you read?**
 - a. All ___
 - b. Most ___
 - c. Some ___
 - d. A little ___
 - e. None ___

We are interested in your assessment of *The Combat Edge* magazine. When choosing an answer, write in the number corresponding to the extent you agree or disagree with each statement.

Strongly Disagree	Disagree	No Opinion	Agree	Strongly Agree
1	2	3	4	5

8. ***The Combat Edge* articles are informative.** ___
9. ***The Combat Edge* articles are interesting.** ___
10. ***The Combat Edge* magazine is useful to me personally.** ___
11. ***The Combat Edge* is an effective mishap prevention tool.** ___

12. **For the areas listed below, please rate each using the following scale:**

Poor	Fair	Satisfactory	Good	Excellent
1	2	3	4	5
Quality of magazine covers ___			Variety of articles ___	
Graphics, layout and design ___			Award write-ups ___	
Article quality ___			Overall attractiveness of magazine ___	
Photographs ___			Contribution to safety education ___	

13. **How would you rate *The Combat Edge* in comparison with other DoD safety publications? (i.e., *Flying Safety, Road & Rec, Mobility Forum, Approach, Torch, Focus*, etc.)**

- a. The best ___
 - b. Better than most ___
 - c. Average ___
 - d. Worse than most ___
 - e. The worst ___
 - f. No opinion ___
14. **Please tell us how you would improve *The Combat Edge*:**
15. **What kinds of articles should we print "more" or "less" of?**

Additional Comments:

FOLD

**Please fax your completed survey to
DSN 574-8975/commercial (757)726-8975
or fold, tape and mail the form to the address below:**

CUT LINE

FOLD

Official Business

**Editor, *The Combat Edge*
HQ ACC/SEP
175 Sweeney Blvd
Langley AFB VA 23665-2700**

The Most Important

BOLDFACE

I Ever Learned

We had been in the gym about 20 minutes when we heard a man yelling for someone to call 911.

*Major Phil Ward
ASC/LUM
Wright-Patterson AFB OH*

As a pilot in the Air Force, I've had to memorize BOLDFACE procedures throughout most of my career. A BOLDFACE action is a set of procedures or corrective actions that must be committed to memory as an "immediate action" to take in an emergency situation. I can still recite the 43 words of the T-37 Spin BOLDFACE after 8 years out of the aircraft. In addition, I can get through the required yearly tests and checkrides with no errors in BOLDFACE — even after 6 years of flying the C-5. I have used BOLDFACE items several times over the past few years; however, recently I had to accomplish the "most important BOLDFACE I ever learned" in my life. Here's the story:

While assigned at Aeronautical Systems Center (ASC) on a career broadening tour, I got into the habit of going to the gym each day (I had the chance to get some blood flowing). On May 14th, my

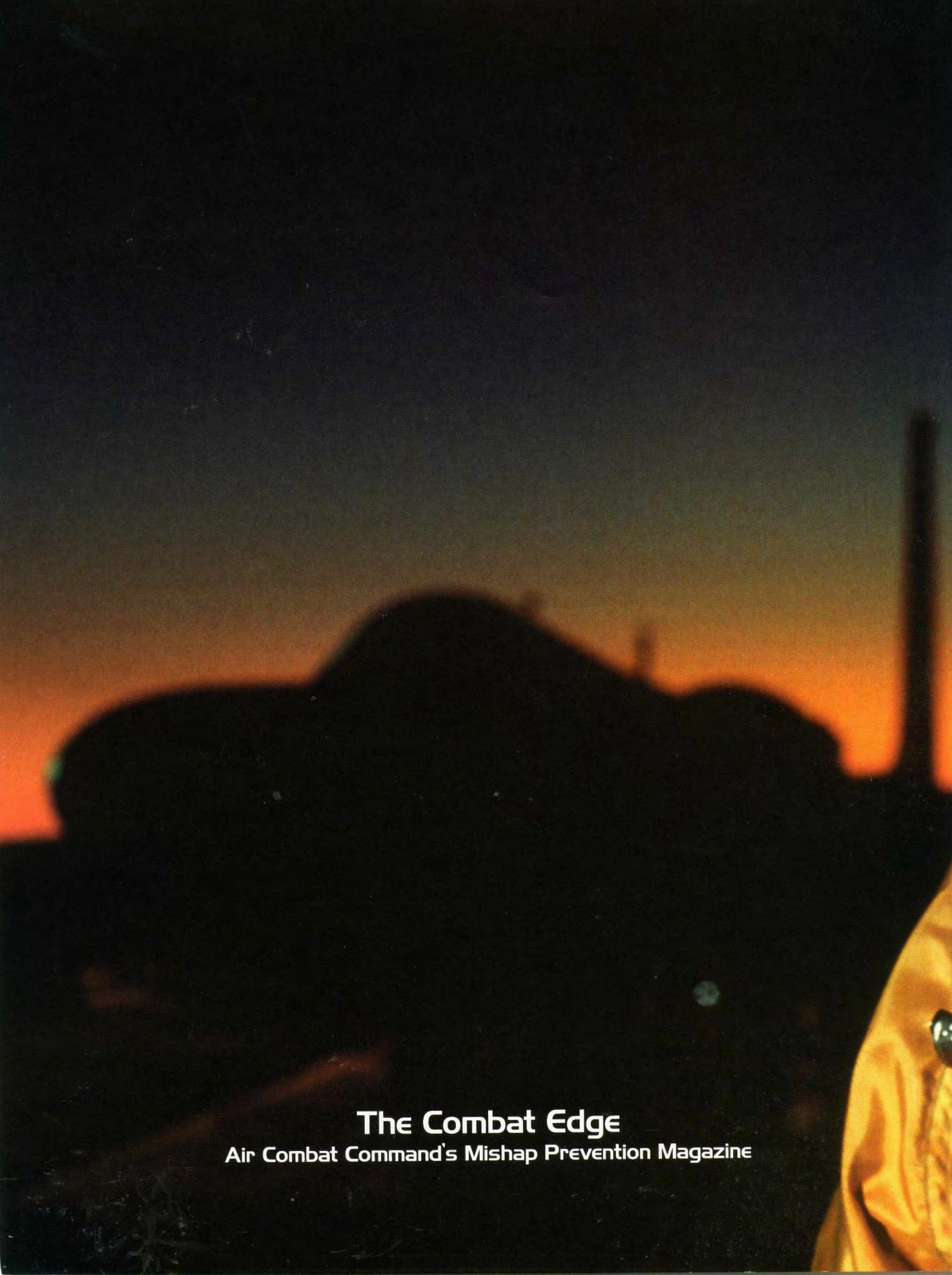
workout partner (Captain John Shafer) and I headed for the Area B Health Club for our usual workout. We had been in the gym about 20 minutes when we heard a man yelling for someone to call 911. In the same sentence, he asked if anyone knew CPR (Cardiopulmonary Resuscitation).

John and I quickly responded to the call for help. While he checked the individual's pulse, I checked for any signs of breathing. Both came up negative. The victim was in full cardiac arrest. John and I were required to accomplish the most important BOLDFACE procedure we had ever been confronted with in our lives; and that was ... CPR!

We commenced lifesaving efforts immediately. John accomplished the chest compressions while I performed mouth-to-mouth resuscitation. We kept this up for approximately 8 to 10 minutes until the ambulance arrived and then a couple more while they prepared the guy for the "big

shock." In cases like this, brain damage can result if immediate action is not taken within a short period of time; so time was of the essence. After a few more minutes, they had a pulse and the guy started breathing on his own again. Off to the hospital they went while we stood there and hoped for the best. The last update we heard was that the gentleman was doing fine.

The point I want to make is simply this: As a pilot, I have been taught that it is unacceptable to not understand emergency situations and take corrective actions. I would like to challenge everyone reading this short article to take the time to learn CPR and commit the procedures to memory as the "most important BOLDFACE you'll ever learn." It's not a question of whether or not you will ever use it so much as what will you do if you are jammed into a situation where you need to have the knowledge ... but don't. Enough said. ■



The Combat Edge
Air Combat Command's Mishap Prevention Magazine