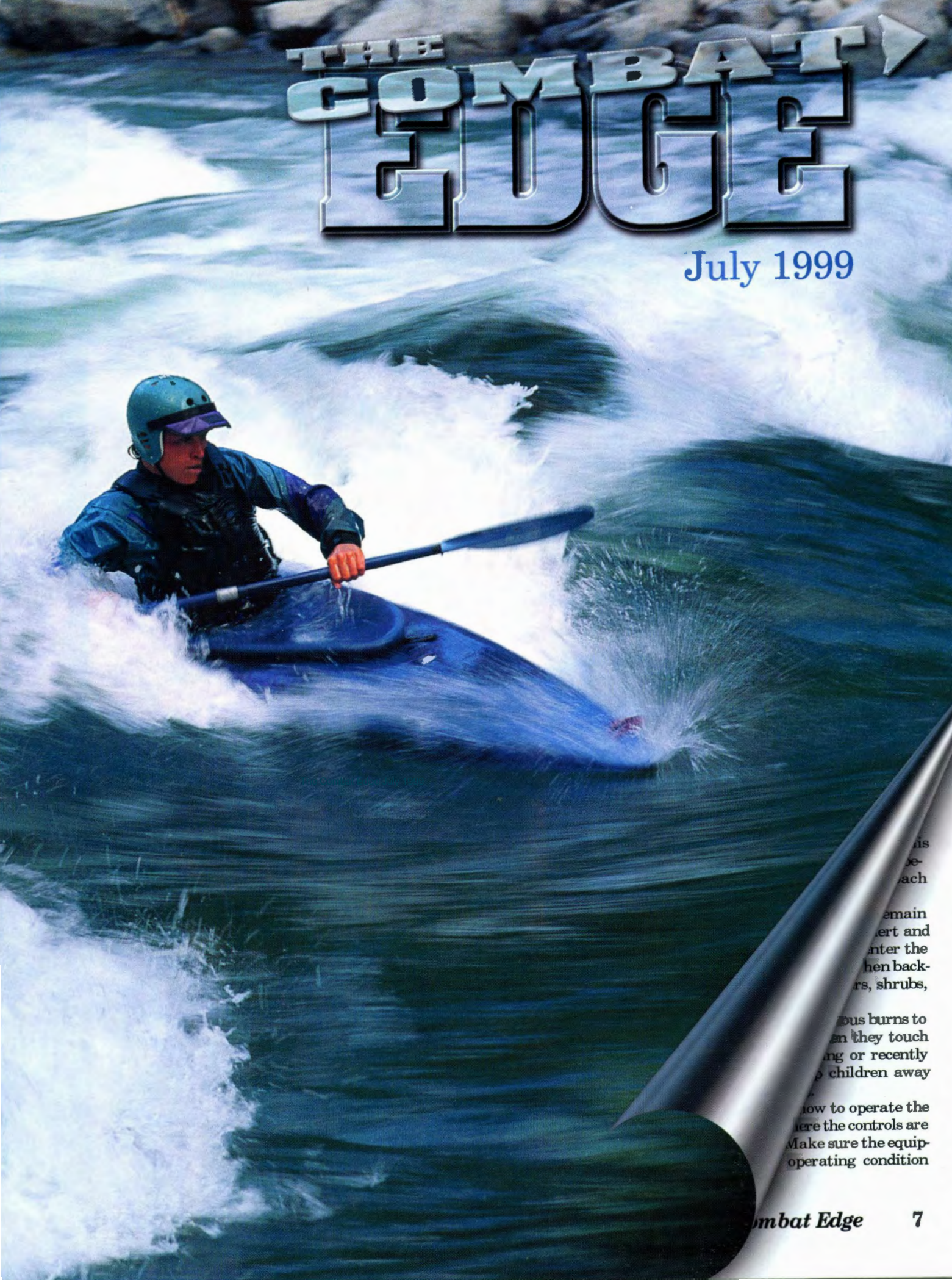


THE COMBAT EDGE

July 1999



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The Combat EDGE

Volume 8 Issue 2

July 1999

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Air Combat Command's Mishap Prevention Magazine



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 Denotes images digitally manipulated.

Accent on Safety

“Boy, I really screwed up this time.” Unfortunately, being human, at one time or another, we will all get the opportunity to think that thought. Occasionally, some very visual, and sometimes painful, reminders of just how thoroughly true the statement might be will accompany the thought. On the other hand, there’ll be those times when the Fates had their backs turned and we’ll be able to laugh the thought off with a nervous chuckle and a new pair of underwear. The more vain of us may even try to attribute our good fortune to some innately superior skills, swelling evermore an already inflated ego. But, thankfully, there are precious few of us who will so suppress the true circumstances as to completely deny our own culpability. And, where we have the opportunity to achieve real greatness is in what we do once we’ve recognized and admitted our errors.

Let’s be honest, none of us **LIKES** admitting we screwed up. Certainly, we don’t like having tales of our misdeeds spread far and wide for all to know. The Air Force is filled with achievement-oriented people who pride themselves in the exemplary professionalism they demonstrate nearly 100 percent of the time. It’s no surprise that we don’t like talking about our occasional “Oops!” But it is in that telling that we do gain our greatness. Not only do we spread the knowledge that might prevent another’s painful lesson, but we earn immeasurable respect for our honesty, integrity, and our sense of “just doing what’s right.”

Our feature article in this issue is about integrity. It’s about speaking up when it’s the right thing to do, even if it may mean embarrassment. It’s about putting a greater good ahead of personal or even unit reputation. Integrity — it’s probably been the most crucial ingredient in making the Air Force’s safety record one of continuous progress in reducing our total mishap experience.

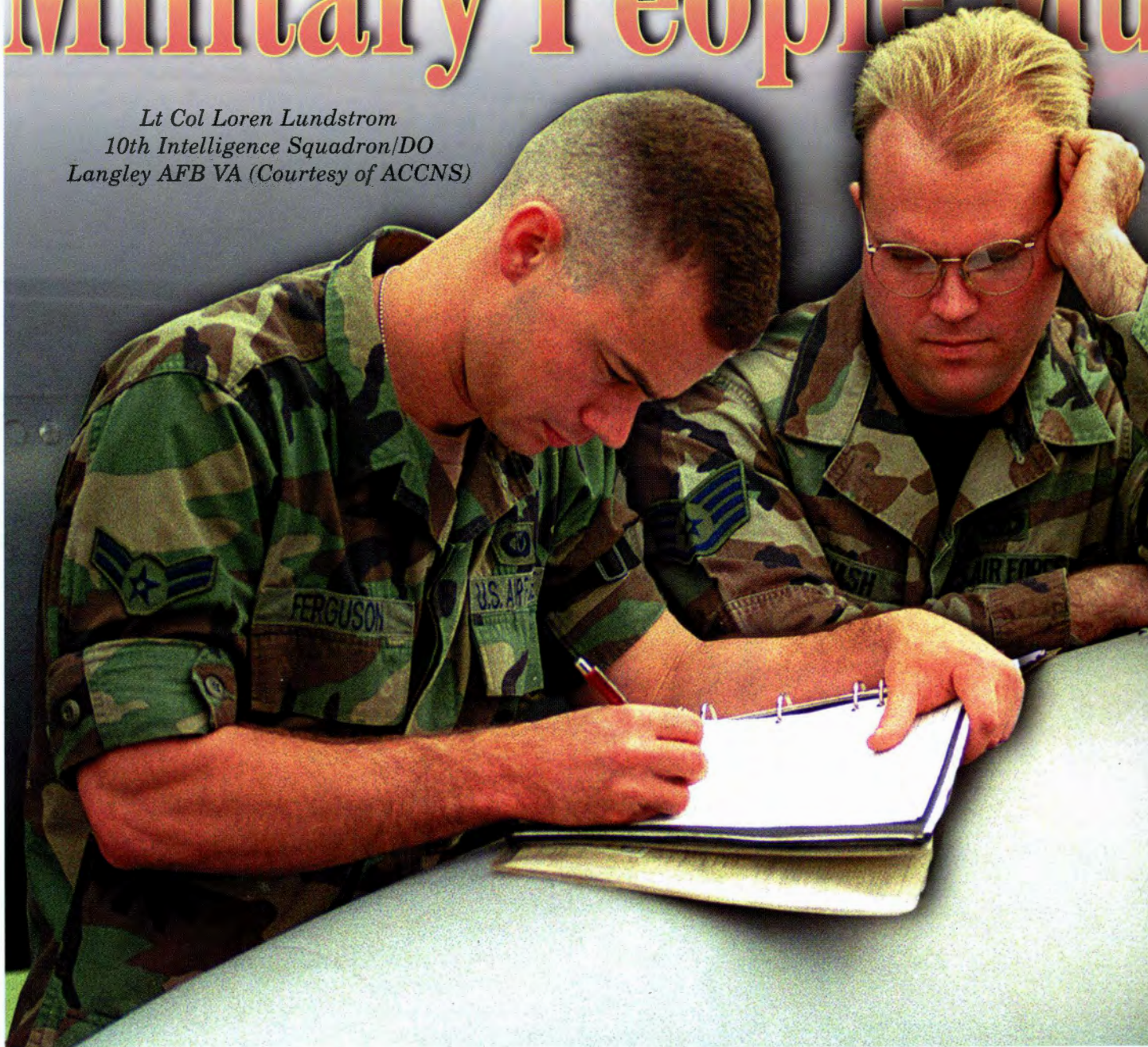
Not only is integrity one of our core values, it’s a core behavior that we just can’t live without. The Air Force is an immensely complex operation that absolutely depends on our trusting one another.

Thanks to integrity... we can and do trust one another, and so we fly, fight, and win.

*Y’all take care, and keep safe -
Colonel Turk Marshall
Chief of Safety*

Military People Mu

*Lt Col Loren Lundstrom
10th Intelligence Squadron/DO
Langley AFB VA (Courtesy of ACCNS)*



The United States military is under attack, and the enemy is rapidly gaining ground. The attacks are stealthy and multi-tiered; hitting at every level from our top leadership down. These attacks began gradually, perhaps so gradual that many did not even notice they had begun. It hits quickly and then retreats

until it is forgotten, only to return again, stronger with each attack. The enemy in question isn't Serbia or Iraq — the enemy I refer to is the attack on honesty and integrity in the military.

The majority of Americans share a respect for certain fundamental character traits — honesty tops the list. While the American

public expects the military to teach and maintain high standards for our troops, our membership is drawn from that same public. In addition, military members increasingly live among and interact with the general public. Naturally, everyone is influenced by the values of those around them. In the military, however, we

st Protect Integrity

Does integrity have a direct link to safety? Imagine this if you will. A member of the QA Office stops by to witness an on-going maintenance operation you are responsible for. The inspector asks if you gave the crew a Pre-Task Safety Briefing prior to commencing the operation. Your

response was, "Yes, Sir. I did." In reality, however, you lied to QA; you did no such thing, and you continue on with the maintenance operation. As a result of your lack of integrity, you are continuing to place the safety of your entire crew in jeopardy. Should a mishap occur, no plan would be in place to help protect the lives of your crew or preserve costly Air Force equipment. Asking the question again, "Does integrity have a direct link to safety?" Answer: You bet it does!

-Ed

must be careful not to allow ourselves to be influenced by some of the more negative behaviors found acceptable in an increasingly permissive society where "situational ethics" has become more of a practice than an exception.

There's a famous experiment where some students put a frog in a container of water and began to

heat the water slowly. The water finally reached the boiling point, yet the frog never attempted to jump out. Why? Because the changes in the environment were so subtle that the frog didn't notice them until it was too late.

"How does this apply to me?" you might ask. It applies to all of us each and every time we buckle under a challenge to our integrity — "white lies" to appease a boss who demands an immediate response, twisting survey results to make them look more favorable than they actually are, telling someone you sent in the paperwork a week ago when it's still sitting on your desk.

They start out innocent enough, but they heat the water a little more with each incident. Before we know it, our goose (or frog) is cooked! And when the average military member feels they must lie to get by, something is terribly wrong. I once read, "If you have to do the wrong thing to stay on the team, then you are on the wrong team!"

We must ensure we get the right people on the Air Force team. Who would want to join an Air Force with low standards? We continue to need the best and brightest in today's military. It must not become a place that disregards honesty and integrity. What can we do? Professional military education continues to include instruction on values and ethics. Pay attention to that instruction, take it to heart, and make integrity a part of your personal value system.

It is the responsibility of each and every service man or woman to

maintain their integrity, setting a standard which their subordinates, peers, and superiors can emulate. Honesty begets trust, and trust is the foundation upon which our military was built. The American public trusts us to defend them. Subordinates trust their leaders to deal with them honestly and look out for their interests. Leaders trust their subordinates to do what they are asked, and to do it to the best of their abilities.

In this era of situational ethics, it is becoming easy to forget our responsibility for personal actions and dedication to the guiding principles stated in the Code of Conduct. In particular, Article VI states: "I will never forget that I am an American, fighting for freedom, responsible for my actions, and dedicated to the principles which made my country free. I will trust in my God and in the United States of America." While the Code was written primarily as a guide for prisoners of war, its intent applies amply to all military members.

At a time when the American people need moral and ethical direction, the military must stand out like a beacon to which the public can gauge its course. After all, our membership comes from that public. And when someone asks the question, "Why did you join the military?," it would be nice for future service men and women to honestly be able to say, "Because the military represents the best of what America has to offer."

In closing, let me ask you, "Where does the counterattack begin in this war against our honor and integrity?" I believe it begins with you and me. ■

Kids: 0, Mowers: 800

*Courtesy of the U.S. Consumer Product Safety Commission
Office of Information and Public Affairs
Washington, DC*

**"More than 800 young children
get run over or backed over by
riding mowers each year."**



The U.S. Consumer Product Safety Commission (CPSC) reminds consumers to practice safety and common sense when working in their yards and gardens this summer. About 230,000 people each year are treated in hospital emergency rooms for injuries relating to various lawn and garden tools.

Each year, about 75 people are killed and about 20,000 are injured on or near riding lawnmowers and garden tractors. One out of every five deaths involves a child. CPSC estimates that most of the deaths to children occurred when a child was in the path of a moving mower. "No parent wants their child to be one of these statistics," said CPSC Chairman Ann Brown. "Young children move quickly and are attracted to mowing activity, but they don't understand the dangers it poses. Parents should keep young children away from any outdoor power equipment."

The CPSC safety standard for walk-behind mowers has substantially reduced the number of mower injuries. In addition, CPSC has worked with industry on a standard for riding mowers to stop the blade if the rider gets off or falls off the seat.

Lawn and Garden Care Child Safety Precautions

CPSC advises consumers to learn about the hazards of each piece of equipment, and take the following precautions to prevent injuries to children and themselves from lawn and garden equipment:

- Children should never be in the yard while you're mowing, and they should never ride on the mower. More than 800 young children get run over or backed

over by riding mowers each year. This happens when children fall while being given rides or when they approach the operating mower.

- Never assume children will remain where you last saw them. Be alert and turn off the mower if children enter the mowing area. Use extra care when backing up or going around corners, shrubs, trees, or other obstacles.

- Many children suffer serious burns to their hands and arms when they touch the hot muffler of running or recently running engines. Keep children away from power equipment.

- Be sure you know how to operate the equipment. Know where the controls are and what they do. Make sure the equipment is in proper operating condition and guards or other safety devices have not been removed or disabled.

- Dress appropriately for the job. This includes: sturdy shoes with slip-resistant rubber soles, long pants and long-sleeved shirts, close-fitting clothes, eye protection, heavy gloves, hearing protection when needed, and no jewelry, which can get caught in moving parts.

- Before mowing, walk around the area in which you will be working to remove any objects like sticks, glass, metal, wire, stones, and string that could cause injury or damage equipment. Nails and wire are the most hazardous objects thrown by mowers and are capable of killing bystanders.

- Never work with electric power tools in wet or damp conditions. For protection against electrocution, use a ground fault circuit interrupter (GFCI). GFCIs

come in several models, including portable plug-in types and as part of some extension cords.

- Be sure that extension cords are in good condition, are rated for outdoor use, and are the proper gauge for the electrical current capacity of the tool.

- Before making adjustments or clearing jams near moving parts, unplug electric tools and disconnect spark plug wires on gasoline-powered tools.

- Be sure that power tools are turned off and made inoperable if they must be left unattended. This will help prevent use by children.

- Handle gasoline carefully. Remember never to fill gas tanks while machinery is operating or when equipment is still hot. Do not fuel equipment indoors. Wipe up spills. Store gas in an approved container away from the house. Finally, never smoke or use any type of flame around gasoline.

How to Contact the CPSC

The U.S. Consumer Product Safety Commission protects the public from unreasonable risk of injury or death from 15,000 types of consumer products under the agency's jurisdiction. To report a dangerous product or a product-related injury and for information on CPSC's fax-on-demand service, call CPSC's hotline at (800) 638-2772 or CPSC's teletypewriter at (800) 638-8270. To order a press release through fax-on-demand, call (301) 504-0051 from the handset of your fax machine and enter the release number. Consumers can obtain this release and recall information at CPSC's web site at <http://www.cpsc.gov>. Consumers can report product hazards to info@cpsc.gov. ■

Flight Leads vs. Flight Leadership

Major Jack Patterson, HQ PACAF/DO TV, Hickam AFB HI

The old adage from propeller days is, "A superior aviator uses his superior judgment to avoid putting himself in situations where he has to rely on his superior aviation skills to get him out."

You jammed on the FLUG (Flight Lead Upgrade) program, with only one "red bordered" grade sheet in 11 rides. You just finished the flight certification ride with the Ops O, and everything went smooth as silk. Weather great, red air cooperative, and the bombs were on target, on time. Congratulations, you're a flight lead. Ready to take the point, both in peacetime and in war. But are you really ready?

On paper, you are. In reality, chances are you're probably not. Before you get all bowed up about that statement, neither was I when

I was there, nor are most flight leads. This is not an indictment of your abilities as the world's greatest fighter pilot, only on your experience level. You have watched from the wing of both good and bad flight leads and hopefully learned from both. You've sat back and first said of flight leads - "I can do that" - then later said, "I can do that better." Now you've led about a dozen rides under the supervision of the unit instructors. Big Deal! I have news for you, Steven F. Canyon: your FLUG program has just begun.

If you're the typical fresh flight lead, you can sort and target your

flight's radars fairly well. But now you get to keep track of what's going on not just in your own cockpit... but in four. Who's low on gas? Who's out of their block? Which wingman is struggling just to hang on by his fingernails — much less find the target from a pop and hit it without hitting the ground or another member of the flight? You'd better be ready. You're the flight lead now. Somewhere in your tenure as a wingman, you've probably diverted at least once. Now you get the thrill of running a four-ship divert in the weather for the young(er) wingman who is 10 miles behind you and low on gas. Better still, soon you'll get the opportunity to decide what to do when your low-time wingman gets disoriented with feet wet at night in the weather. Do you keep him with you on the wing and hope he doesn't hit you, give him the lead and hope he doesn't screw you both up, or direct him to go lost wingman and hope he can recover solo? Welcome to the point. Oh by the way, you haven't even gotten to the combat decisions yet.

Our ranks are thinning, and as they do our experience levels in almost every unit are heading south. This should not be news to anyone, but the subtle affects of across-the-board drops in experience are not always obvious until it bites. This is especially true in the fighter community. Flight leads are upgrading at a lower experience level, but that is only the beginning. The Supervisor of Flying (SOF) in the tower is likely to have just completed FLUG only slightly ahead of you — not a lot of help there. The Flight Commander that scheduled the lineup and the Top 3 that supervised the changes have a better than even chance of being on their first tour in your particular airframe, hav-

ing recently gone through a training course from a dead weapons system or even a heavy. Your wingmen, number 3, and even your adversaries have less experience than the same mission 5 years ago. On top of all this, the maintainers that are working your fighter are undergoing a similar or worse decrease in experience levels as well. These combine to reduce the overall strength of the system in ways that are not quantifiable, but they're there nonetheless.

The point is not to downplay your accomplishment. Becoming a flight lead is a giant step, and you are on the point because that is where you belong. Nor is it to imply you were not held to the same demanding standards that those who went before you were held to — you would not have graduated the program if you couldn't meet the standards. The point is to let you know that you're not done learning yet, and there are a lot of facets of today's Air Force that are stacking up against you. The old adage from propeller days is, "A superior aviator uses his superior judgment to avoid putting himself in situations where he has to rely on his superior aviation skills to get him out." My generation used the Clint Eastwood line: "A man's got to know his limitations." Just because you have the diploma does not mean you know it all, and many of the tests you may be facing soon are pass-fail. The new flight leads are not getting the extra year or more of seasoning on the wing that they used to, and the silver-tipped Assistant Deputy for Operations (ADO) does not have the experience level to catch a lot of the gotcha's they used to. The SOF in the tower is only slightly

ahead of you in the program, so he hasn't seen it all either. The bottom line is that your safety nets are there, but the holes are a bit bigger than they used to be. You, as the guy on the point, have to build in the safety pad yourself.

Knowledge is primary. Everybody spends time in the safe, and even the lowest lieutenants I see can build an AIM-9 Sidewinder out of a beer can and baking soda. But don't forget the basics in your quest for higher weapons and tactics knowledge. Dash-one knowledge, the in-flight guide, and Volume 3 are the cornerstones. Most of the guidance in these are there because somebody tooled it up previously. If you can avoid the mistakes of those that have gone before, you're halfway home. Don't be bashful about asking questions, both from the old craniums and the newbies as well. I'm not glorifying alcohol, but the squadron bar is there for a reason — you can often learn as much there (if you listen) than at many debriefs. Chances are there are two or three different techniques or tactics for every situation, whether it is how to handle a weather divert or a short lead trail.

Learning from the mistakes and successes of others is a lot less painful than learning from your own errors, and chances are that somebody in the squadron has already made the mistake that you're about to. Whether it's in the safe, at the bar, weapons academics, or on the ride to work, keep digging for the knowledge. Because in terms that the Generation X-ers may understand, the truth is out there. Until you find it, though, take a note from those who went before — know your limitations, and you'll have a lot higher probability of living to develop your flight leadership and become a true flight lead. ■

Monthly Awards

AIRCREW SAFETY AWARD OF DISTINCTION

*Capt Michael Barnett, Capt Joseph Mathis, Capt James Dunn, Capt Steven Hayes
1Lt Charles Drouillard
20 BS, 2 BW, Barksdale AFB LA*

While en route to IR-178 in their B-52H, the crew of Jambo 26 overheard a garbled emergency transmission on guard frequency. Shortly thereafter, they monitored an Emergency Locator Transmitter (ELT) followed by a distress call from Circle 01. The crew of Circle 01 bailed out of their F-16D in the Pecos MOA and were using their emergency radio set in an attempt to contact any airborne aircraft. After hearing the transmission, the crew of Jambo 26 immediately terminated their training activity and coordinated with Albuquerque Center for vectors into the Pecos MOA where they made contact with the downed aircrew. Both crewmembers ejected safely; however, one suffered from a broken ankle. Time was of the essence because of the crew's remote location. The immobilizing injury made the impending desert nightfall a formidable obstacle. Jambo 26 immediately passed the necessary information to Albuquerque Center, and the Cannon Supervisor of Flying (SOF) then proceeded to locate the exact coordinates of the downed crew.

Due to the desert environment, they were unable to see Circle 01's flares. However, after receiving a description of the terrain features, the radar navigator, Capt Mathis, located the terrain and the navigator, Capt Dunn, directed the Aircraft Commander,

Capt Barnett, towards the river valley near Circle 01's location. Capt Barnett initiated a descent to an altitude which would make the "BUFF" more visible. The downed aircrew was able to see the B-52 on their first pass up the river valley. After conduct-

ing a classic search-and-rescue-vectoring maneuver, the navigators marked Circle 01's exact coordinates. The copilot, 1Lt Drouillard, passed the information to Albuquerque Center and the Cannon SOF a mere 25 minutes after initial contact with Circle 01. After a few more passes over the coordinates, the safety observer, Capt

Hayes, was able to visually identify the downed aircrew's position. With 8 hours of loiter time, the crew remained on station and in constant radio contact with Circle 01 until they were located by ground personnel. Due to their immediate implementation of search-and-rescue techniques, Circle 01 was picked up by ground personnel just 25 minutes after passing their coordinates to the appropriate agencies.

Once the downed airmen were recovered, Jambo 26 exited the MOA and completed their scheduled mission. The efficiency with which the crew of Jambo 26 conducted the successful search-and-rescue of a downed aircrew reflects tremendously on their professionalism and situational awareness.



PILOT SAFETY AWARD OF DISTINCTION

Maj Kent Yohe, 442 FW, Whiteman AFB MO

While returning from a routine training mission in his A-10A, Maj Yohe was flying as the wingman in a two-ship flight. As part of the flight plan, he pitched-out into an overhead pattern. Descending into the final turn, he noticed the aircraft was not slowing down as expected, leading to a slight overshoot. After further reducing the throttle just prior to touching down, he noticed a yaw and realized the left engine was still at 850 degrees, near maximum setting. Suspecting an engine compressor stall, Maj Yohe decided to land the aircraft and deal with the problem on the ground. After touchdown, he noticed the left engine RPM near maximum also. The aircraft then began to drift to the right side of the runway. Maj Yohe applied full left rudder and wheel brakes to maintain directional control and employed the speedbrakes to slow the aircraft. Declaring an emergency, he rechecked both throttles in idle and looked at the engine gauges. Confirming the left engine was still at maximum settings, Maj Yohe pulled the left throttle off to shut down the engine. The engine remained at maximum power set-



tings. Meanwhile, Maj Yohe struggled to maintain left wheel braking. The aircraft was now approximately 4,000 feet down the runway and still at a high rate of speed. Maj Yohe pulled the left fire handle to turn off the engine fuel supply and the engine shut down. The aircraft finally came to rest with less than 2,000 feet remaining on the wet runway. The flight lead, hearing the radio call for the emergency, looked back and noticed waist-high flames covering the left wheel. Pushing the power up, the flight lead cleared the runway expeditiously. Noticing heavy smoke and flames from the left wheel and tire, Maj Yohe performed an emergency ground egress while fire fighters extinguished the blaze. Aircraft damage was limited to the wheel and tire area. Maintenance investigation revealed the left throttle cable had broken aft of the cockpit bulkhead making it impossible to reduce power on the left engine. Maj Yohe's outstanding airmanship, flying skills, and decisive actions during this serious emergency resulted in ensuring not only his safety but also the preservation of this valuable combat aircraft.

FLIGHT LINE SAFETY AWARD OF DISTINCTION

TSgt Michael W. Prevost, 334 FS, 4 FW, Seymour Johnson AFB NC

TSgt Prevost, 334th Fighter Squadron Specialist Flight Expediter, was standing by as the last two squadron F-15E Strike Eagles prepared to taxi. He noticed something drop off aircraft 86-0187's left wing. No one from the launch crew of the aircraft had observed the danger, so he immediately drove to the spot to assess the situation. He realized as he got closer that the object had been the captive AIM-9 missile's seeker head lens assembly unit. It blew free of the guidance unit shattering just forward of the left engine inlet. Recognizing that the broken glass posed an immediate foreign object threat to the aircraft and created a danger for ground personnel due to possible



mercury contamination, he positioned his truck in front of the chocked aircraft and directed the aircrew to shut down the engines. Once the aircraft was shut down, he notified the Maintenance Operations Center of the incident and assisted in evacuating personnel from the area, enabling munitions personnel to secure the damaged missile. Sgt Prevost's quick thinking and decisive actions prevented possible ingestion of glass by the aircraft's engines and certain serious damage to the training missile had the aircraft actually taxied and flown. Thanks to his prompt actions, no personnel were injured and mercury contamination was not present.

CREW CHIEF SAFETY AWARD OF DISTINCTION

SrA Joseph L. Moore, 77 FS, 20 FW, Shaw AFB SC

SrA Moore was performing end-of-runway (EOR) duties as the "B" man. His main function in the team was to give the base assigned F-16CJ aircraft a last safety once-over prior to take-off. He started with a routine day at EOR until aircraft 91-1356 taxied in for arming and inspection. Amn Moore's keen eyes immediately noticed something out of place at the tail end of the aircraft. Upon closer inspection, he verified a foreign object wedged in between the engine's exhaust nozzle outer flap (turkey feathers) and the augmentor liner. At this point, Amn Moore's training and experience kicked in and he quickly chocked the aircraft and went back to look at the object. He stopped the weapons personnel from arming the jet and up-channeled the information to the EOR "A" man and EOR supervisor. The "A" man connected the communication cord to the aircraft, informed the pilot of



the situation, and told him that he would have to return to his parking spot. Meanwhile, Amn Moore tried to remove the stuck object, but to no avail. Following Amn Moore's instructions, the pilot taxied safely back to his original parking spot and shut down.

After the foreign object was dislodged and removed, it was identified as the securing pin for an angle of attack probe cover. Amn Moore's astute attention to detail, quick thinking, and focused concentration in a highly dynamic and dangerous environment such as EOR, led to the discovery of a major safety of flight condition that went undetected through three sets of eyes prior to launch. His actions and rapid assessment of the situation prevented the high potential of a catastrophic loss of an F-16CJ aircraft and, above all, loss of life.

WEAPONS SAFETY AWARD OF DISTINCTION

SrA Benjamin R. Modrell, 366 EMS, 366 WG, Mt Home AFB ID



SrA Modrell was assisting the 389th Fighter Squadron in removing an M61A1 20MM gun system from an F-16CJ aircraft. Upon removal of the gun, Amn Modrell was observing from the ground and a co-worker was on the aircraft wing when the gun struck the co-worker in the head and knocked him over backwards. Seeing this, Amn Modrell ran towards the wing and caught the co-worker as he was falling backwards and head first off the aircraft. Amn Modrell eased him to the ground, placed him in the truck, and took him to the emergency room. In the truck, Amn Modrell found an Ability To Survive and Operate (ATSO) flag, which he used to apply direct pressure to the cut on the co-worker's head where the gun hit him. Amn Modrell's efforts saved his co-worker from possible head, neck, and back injuries which could have been caused from hitting the ground.

GROUND SAFETY AWARD OF DISTINCTION

TSgt Stephen W. Goad, 333 FS, 4 FW, Seymour Johnson AFB NC

TSgt Goad's leadership and personal involvement has enabled the squadron to maintain a rock-solid Ground Safety Program despite the changing character of the squadron. He personally ensures everyone, from the newest airman to the commander, is briefed on the most current safety issues. After taking over, Sgt Goad recognized the relative youth of squadron airmen. He implemented an awareness program starting with a personal briefing to every new member and continuing this awareness by active participation in shop briefs and focusing the topics toward younger individuals. He developed the Safety Awareness Team that involves junior ranking personnel who meet every month to discuss safety issues. This junior ranking group brings safety to the line airman and helps internalize Sgt Goad's focus of 100 percent awareness, concentration on family, and on-the-job efficiency while at the same time helping the squadron leadership remain aware of the safety concerns from all levels.

Sgt Goad is actively involved in every aspect of ground safety. He built the squadron Operational Risk Management (ORM) program including study guides for work centers and developed an ORM tracking program using the Consolidated Aircraft Maintenance System—an accomplishment wing Safety recognized as a 4th Fighter Wing benchmark. Within 30 days, he achieved 100 percent contact. To improve squadron compliance with safety regulations, he doubled seat belt and spot inspections. He also developed an innovative mishap tracking system that vastly improves tracking trends and high interest items—a program lauded by wing Safety. He is active with the Airman Against Drunk Driving and has



set up fundraisers for this organization. The results speak for themselves. His personal attention to spreading the safety message and dedication to the squadron resulted in a 15 percent decrease in squadron mishaps on and off base and a 50 percent decrease in reportable mishaps.

He also implemented a Cardio Pulmonary Resuscitation (CPR) instructor program which guarantees squadron members have the training to save lives. With this program, he has increased the cadre of CPR trained individuals from 3 to 100. His error-free documentation and cross-reference system reflect the excellence and high standards leaders

have come to expect from him. He handles all supervisor safety training and quickly eliminated a backlog of 25 people. His close working relationship with the commander allows full understanding of the commander's focus and provides the commander with an accurate picture of the squadron.

During the past two wing level graded inspections, he has garnered only "Outstanding" ratings with commendable and benchmark items for each year. In 1997, he earned an "Outstanding Performer" commendation.

He took the initiative to integrate lessons from flight and weapons safety into his ground program. He is in regular contact with the Flight Safety Officer and Weapons NCO, consistently providing valuable crosstalk to all sides. His leadership, experience, and assistance contributed to those squadron programs also earning "Outstanding" ratings from wing inspections.

His dynamic leadership and aggressive promotion of safety issues and practices at all levels is the key to the 333 FS's highly successful program.



The deadly tornado that swept through Oklahoma City on 3 May 1999 was the largest one ever recorded in Oklahoma's history — it was 1 mile wide and left a path of destruction 25 miles long. Lt Stan Paregien, public affairs officer for the 507th Air Refueling Wing, surveys the widespread damage just across the street from Tinker AFB.

Tornado

*Excerpted from **Talking About Disaster: Guide for Standard Messages.**
Produced by the National Disaster Education Coalition, Washington, D.C., 1999.*

Why talk about tornadoes?

Tornadoes have been reported in every state; and though they generally occur during spring and summer, they can happen any time of the year. While tornadoes can occur at any time of the day or night, they are most likely to occur between 3:00 and 9:00 p.m. There are no areas immune to tornadoes; they have been reported in mountains and valleys, over deserts and swamps, from the Gulf Coast into Canada, in Hawaii, and even Alaska. Regardless of the location or time of year, if conditions are right... a tornado can happen.

Over 1,000 tornadoes are reported annually nationwide; and as our tornado detection systems improve, more are being reported each year. However, sometimes tornadoes will develop in areas in which no tornado

watch or warning is in effect, so stay alert for changing weather conditions.

What are tornadoes, and what causes them?

A tornado is a violently rotating column of air extending from a thunderstorm to the ground. The most violent tornadoes have rotating winds of 250 miles per hour or more. They are capable of causing extreme destruction, including uprooting trees and well-made structures, and turning normally harmless objects into deadly missiles. Most tornadoes are just a few dozen yards wide and only briefly touch down, but highly destructive violent tornadoes may carve out paths over a mile wide and more than 50 miles long. Although violent tornadoes comprise only 2 percent of all tornadoes, they are responsible for

nearly 70 percent of tornado-related fatalities.

Tornadoes develop from severe thunderstorms in warm, moist, unstable air along and ahead of cold fronts. Such thunderstorms also may generate large hail and damaging winds. When intense springtime storm systems produce large, persistent areas that support tornado development, major outbreaks can occur. During the late spring, tornadic thunderstorms can develop in the southern High Plains along a "dry line," the interface between warm, moist air to the east and hot, dry air to the west. From the Front Range of the Rocky Mountains southward into the Texas Panhandle, slope flow of unstable air can cause tornadic thunderstorms to develop. While generally smaller and not as frequent,

tornadoes occurring west of the Rocky Mountains of the United States also cause damage and threaten lives annually.

Landfalling tropical storms and hurricanes also generate tornadoes. Such tornadoes are most common to the right and ahead of the storm path or the storm center as it comes ashore. In 1967, Hurricane Beulah produced 148 tornadoes as it made landfall in south Texas.

While tornadoes can be highly destructive and are potentially deadly, timely precautions can save lives and reduce property damage. During active weather, stay alert of the forecast by listening to radio or television or by using a National Oceanic and Atmospheric Administration (NOAA) Weather Radio.

Awareness Information

A National Weather Service (NWS) WATCH is a message indicating that conditions favor the occurrence of a certain type of hazardous weather. For example, a severe thunderstorm watch means that a severe thunderstorm is expected in the next 6 hours or so within

an area approximately 120 to 150 miles wide and 300 to 400 miles long (36,000 to 60,000 square miles). The NWS Storm Prediction Center issues such watches. Local NWS forecast offices issue other watches (flash flood, winter weather, etc.) 12 to 36 hours in advance of a possible hazardous weather or flooding event. Each local forecast office usually covers a state or a portion of a state.

An NWS WARNING indicates that a hazardous event is occurring or is

imminent in about 30 minutes to an hour. Local NWS forecast offices issue warnings on a county-by-county basis.

Tornadoes may appear nearly transparent until dust and debris are picked up. Stay alert for high winds even if you do not "see" a tornado.

Tornadoes often occur when it is not raining. In fact, in the Great Plains and other semiarid regions, that scenario is the rule rather than the exception. Tornadoes are associated with a powerful updraft, so rain does not fall in or next to a

states. In the western United States, waterspouts occur with cold late fall or late winter storms, during a time when you least expect tornado development. Waterspouts, which are tornadoes over a body of water, occasionally move inland becoming tornadoes and causing damage and injuries.

Damage happens when wind gets inside a home through a broken window, door, or damaged roof. Keep windows closed. Houses do not explode due to air pressure differences. Stay away from windows during severe storms. Flying debris could shatter the glass and cause injury.

It used to be advised to go to the southwest corner for safety; however, the southwest corner of a house is no safer than any other corner. Historical information has shown that any corner on the lowest level away from windows is as safe as any other corner. If tornado winds enter the room, debris has a tendency to collect in corners. When selecting a tornado "safe place," look for a place on the lowest level and away from windows, preferably

in a small room (closet or bathroom) in the center of the house. Closer walls will help provide more support to the roof, and each wall between you and the outside will provide further protection.

Folklore passed down through the generations used to advise opening windows in case of a tornado because air pressure differences would cause a house to explode. This information is not true. Air pressure differences in a



The day after — Brett and Tamara Steward with their two daughters returned to what used to be the site of their home in Oklahoma City. The twister that ripped through their housing area completely leveled homes, uprooted trees, and tossed automobiles around like little toys.

tornado. Very large hail, however, does fall in the immediate area of the tornado. In humid environments, rain often tends to wrap around the tornado, being pulled from the main precipitation area around the outside of the rotating updraft. The rain could make it difficult to see the tornado.

Waterspouts are weak tornadoes that form over warm water and are most common along the Gulf Coast and southeastern

tornado are not strong enough to cause a house to explode; houses are damaged by the violent winds associated with a tornado and from the debris blown at high velocities by tornado winds.

Folklore also used to advise that if you are driving and a tornado is suspected or sighted, you should turn and drive at right angles to the storm. This advice is not recommended because tornadoes do not necessarily travel in straight lines; you cannot always tell the direction the storm is coming from; the road you turn onto may curve and



Inexplicable — even though the family kitchen remains standing with typical household items still on their shelves, the roof and walls of this Oklahoma City home were completely sheared off and spewed out as loose debris in the surrounding area.

head into the storm, rather than away from it; and there may be more than one tornado associated with a strong storm system, but you may not see it because visibility is diminished by heavy rain and wind-blown debris. The safest thing to do is go to a nearby sturdy building and go inside to an area on the lowest level, without windows. If a sturdy building is not available, then get out of the vehicle and lay down in a low spot on the ground not subject to flooding, protecting the head and neck.

What to Tell Children...

Find safe places in your home and classroom. Make sure these places are away from windows and tall furniture that could tip over. In your safe place, get under something sturdy, or use a large, hardcover book to help protect your head and neck from flying or falling objects. Locate safe places outside in case you are not able to go inside. Frequently, children in schools are told to move to the inner hallways away from windows. Children need to know that a tornado safe place is not the same as a fire meeting place.

Wherever you are, if you hear or see a tornado coming, take cover right away. Tornadoes can move quickly, blowing objects at very high speeds, even if they are a distance away. Protect yourself from flying debris by taking cover immediately.

If you're in a house or apartment building and a tornado threatens, go to the lowest level — a basement or storm cellar, if possible. Once on the lowest level, go to the middle of the building away from windows, into a bathroom or closet if possible. The safest place to be is under the ground, or as low to the ground as possible, and away from all windows. If you have a basement, make it your safe place. If you do not have a basement, consider an interior hallway or room on the lowest floor. Putting as many walls as you can between you and the outside will provide additional protection. Make sure there are no windows or glass doors in your safe place, and keep this place uncluttered.

Get under something sturdy, such as a heavy table; hold on and stay there until the danger has passed. Being under something heavy will help protect you from falling objects. If tornado wind enters the room and the object moves, holding on with one hand will help you move with it, keeping you protected.

Use your other arm and hand to protect your head and neck from falling or flying objects. Your head and neck are more easily susceptible to severe/life threatening injuries than other parts of your body. Protect them as much as you can.

If you're outside in a car or in a mobile home, go immediately to the basement of a nearby sturdy building. Sturdy buildings are the safest place to be. Tornado winds can blow large objects, including cars, hundreds of feet away. Tornadoes can change direction quickly and can lift up a car or truck and toss it through the air. Never try to out-drive a tornado. Mobile homes are particularly vulnerable. A mobile home can overturn very easily even if precautions have been taken to tie down the unit.

If there is no building nearby, lie flat in a low spot. Use your arms and hands to protect your head. Tornadoes cause a lot of debris to be blown at very high speeds, and you can be hurt by this debris if it hits you. Dangerous flying debris can be blown under highway overpasses and bridges, or weaker overpasses and bridges could be destroyed. You will be safer lying flat in a low-lying area where wind and debris will blow above you. Tornadoes come from severe thunderstorms, which can produce a lot of rain. If you see quickly rising water or floodwater coming towards you, move to another spot.

Plan for a Tornado

Develop a Family Disaster Plan. Tornado-specific planning should include the following:

Learn about your tornado risk.

While severe tornadoes are more frequent in the Plains States, tornadoes have happened in every state. Contact your local emergency management office, local National Weather Service office, or American Red Cross chapter for more information on tornadoes.

Pick a safe place in your home where family members could gather during a tornado.

The safest place to be is underground, or as low to the ground as possible, and away from all windows. If you have a basement, make it your safe place. If you do not have a basement, consider an interior hallway or room on the lowest floor. Putting as many walls as you can between you and the outside will provide additional protection. Less than 2 percent of all tornadoes are powerful enough to completely destroy a sturdy building. Make sure there are no windows

or glass doors in your safe place and keep this place uncluttered.

Consider having your tornado safe place reinforced. Additional reinforcement will add more protection from the damaging effects of tornado winds.

If you are in a high-rise building, pick a place in a hallway in the center of the building. You may not have enough time to go to the lowest floor. Center hallways are often structurally the most reinforced part of a building.

If you live in a mobile home, choose a safe place in a nearby sturdy building. A sturdy building provides greater protection. If your mobile home park has a designated shelter, make it your safe place. Mobile homes are much more vulnerable to strong winds than site-built structures. Prior to 1994, most manufactured homes were not designed to withstand even moderate winds.

Discuss how you would be warned of an approaching tornado. Different communities have different ways of providing warnings.

ities have different ways of providing warnings. Many communities have sirens intended for outdoor warning purposes. Use a NOAA Weather Radio with a tone-alert feature to keep you aware of watches and warnings while you are indoors.

Conduct periodic tornado drills, so everyone remembers what to do when a tornado is approaching. Practice having everyone in the family go to your designated area in response to a tornado threat. Practicing your plan makes the appropriate response more of a reaction, requiring less thinking time during an actual emergency situation.

Check with your work and your children's schools and day care centers to learn tornado emergency plans. Every building has different safe places. It is important to know where they are and how to get there in an emergency.

Discuss tornadoes with your family. Everyone should know what to do in case all family members are not together. Discussing disaster ahead of time helps reduce fear and lets everyone know how to respond during



A solitary chair remains standing in the midst of total destruction. An estimated 1,500 homes were destroyed by the Category F-5 tornado that swept through Oklahoma City with winds clocked at more than 250 miles per hour.

Many communities have sirens intended for outdoor warning purposes. Use a NOAA Weather Radio with a tone-alert feature to keep you aware of watches and warnings while you are indoors. Learn about your community's warning system. Make sure all family members know the name of the county or parish where you live or are traveling, because tornado watches and warnings are issued for a county or parish by name.

Learn about your community's warning system. Different commu-

a tornado.

A Final Word

A tornado can strike quickly and can cause unbelievable amounts of disaster. Nevertheless, families can cope well with such a tragedy by preparing in advance and working together as a team. Knowing what to do ahead of time (i.e., disaster preparedness planning) is a family's best protection in preparing for a tornado. On top of that, it's a family responsibility! ■

TEMPLATE

Col James L. Stanley
HQ ACC/SEO
Langley AFB VA

for Success

Success comes in many shapes and sizes, and there are very few templates to ensure its accomplishment. Not all of us will invest in the next Microsoft corporation... discover a cure for an untreatable disease... or graduate #1 from an Ivy League law school. Nevertheless, success is critical to our line of work. You then ask, "If only we had a tool to maximize our chances of succeeding."

Well, step right up and listen closely! The new ACC Form 167, "Operational Risk Management (ORM) Worksheet," was just approved by COMACC, is on the street, and is available for your use. It is displayed on the ACC Electronic Publications Library Web Page (<http://www.acc.af.mil/public/accpubs/forms.html>) and is your "template for success." It provides the user an easy-to-use tool that will help you execute the Air Force 6-step ORM process. It assists you in (1) Identifying the Hazard, (2) Assessing the Risk, (3) Analyzing Control Measures, (4) Making Control Decisions, (5) Implementing Risk Controls, and lastly (6) Supervising and Reviewing.

Since there are many facets to the ORM process, this new form is not to be considered a "cure all" for Risk Management. However, it still has great value because it captures the essence of risk management and is a simple-to-use, comprehensive worksheet that will easily guide the user through each step of the ORM process. Therefore, before using the worksheet, the user must be familiar with the basic principles of ORM. The primary locations to "bone-up" on the ORM process can be found at the following sites on the World-Wide-Web:

- **ACC Office of Safety (ACC/SE) Web Page** (<http://wwwmil.acc.af.mil/se>): Contains the following useful ORM information: (1) a copy of the ACC Risk Management Guide (which consolidates a multitude of risk management information into a concise, simple-to-read handout), and (2) the ACC Implementation Program Orientation Briefing (which outlines the basic concepts of ACC's ORM program).

- **ACC Training Support Squadron (ACC/TRSS) Web Site** (<http://wwwmil.acc.af.mil/trss/LearningCenter/ORMv30/ormstart.htm>): Provides Web site access for downloading software for

operating the ACC ORM computer based interactive training course.

- **AFI 91-213, "Operational Risk Management Program"** (<http://afpubs.hq.af.mil/elec-products/pubpages/91-pubs.stm>): Establishes the requirement for developing and managing tailored, mission specific, operational risk management programs throughout the Air Force.

- **ACC Supplement to AFI 91-213, "Operational Risk Management Program,"** (<http://www.acc.af.mil/public/accpubs/pubs/91series/91021300.pdf>): Authorizes the use of ACC Form 167 (ACC ORM Worksheet) for standardization and use throughout ACC.

- **AFPAM 91-215, "Operational Risk Management (ORM) Guidelines and Tools"** (<http://afpubs.hq.af.mil/elec-products/pubpages/91-pubs.stm>): Provides the definitions, guidelines, procedures, and tools for the integration and execution of ORM as well as a comprehensive overview discussion of ORM.

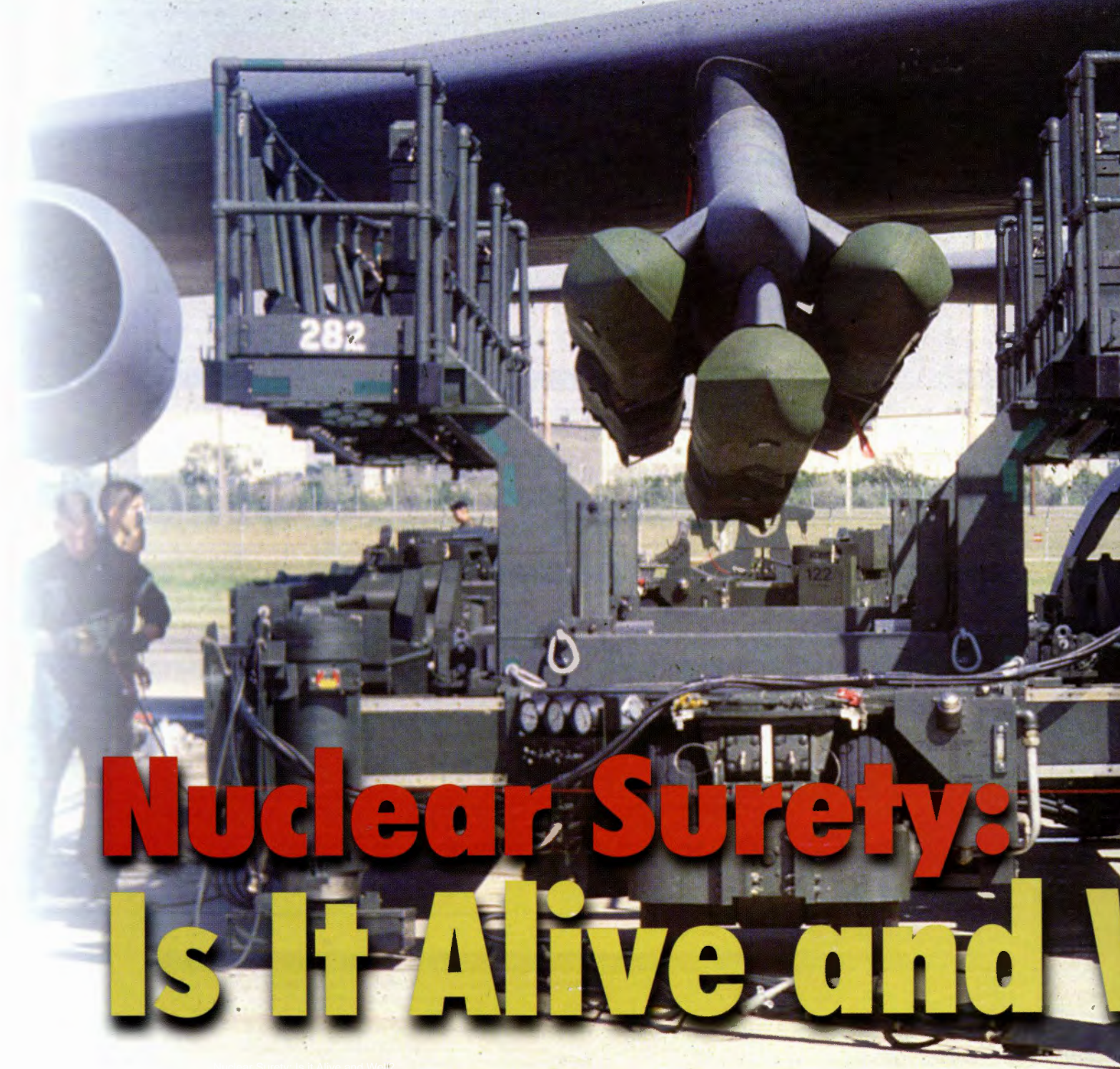
Now that you have the tool necessary (i.e., ACC Form 167) to determine if a level of risk is acceptable... it's up to you to use it.

In order to keep ORM relevant, timely, and interesting, we would like you to send us an article describing your ORM success story. Tell us about instances where ORM worked for you in identifying and mitigating risks in the flight, weapons, or ground safety arenas. Don't assume that what you have done to reduce risk is common knowledge to everyone else in Air Combat Command. There are a lot of good ORM ideas being used on a daily basis in the field, and these thoughts can serve as an excellent reminder for some of us or provide new risk management insights from which others can learn. Send your inputs regarding ORM to:

HQ ACC/SEO
175 Sweeney Blvd
Langley AFB VA 23665-2700
DSN 574-8800, Comm (757) 764-8800
Fax DSN 574-8975
E-mail: james.stanley@langley.af.mil

ACC OPERATIONAL RISK MANAGEMENT (ORM) WORKSHEET										DATE
EVENT					POC NAME & GRADE					
STEP 1. IDENTIFY THE HAZARD <i>(Enter only ONE hazard in the space below)</i>										
CAUSE(S) RELATED TO		Man		Media		Machine		Management		
EFFECT OF HAZARD		Mission Degradation		Injury		Illness		Death		Other
STEP 2. ASSESS THE RISK										
USE THIS MATRIX TO DETERMINE RISK LEVELS		PROBABILITY								
		Frequent		Likely		Occasional		Seldom		Unlikely
		A		B		C		D		E
SEVERITY	CATASTROPHIC	I	1	EXTREMELY	2	4	5	9		
	CRITICAL	II	3	HIGH	6	7	10	14		
	MODERATE	III	8		11	MEDIUM	12	15	16	
	NEGLIGIBLE	IV	13		17		18	19	LOW	20
Annotate Risk Levels Below		RISK LEVELS								
RISK LEVELS :		Extremely High		High		Medium		Low		Number
STEP 3. ANALYZE CONTROL MEASURES <i>(Consult AFPAM 91-215, Section E, then move to Step 4)</i>										
MACRO Risk Control Options		Reject	Avoid	Delay	Transfer	Spread	Compensate	*Reduce		
*Risk Control Options <i>(Reduce)</i>		Engineer	Guard	Improve Task Design	Limit Exposure	Selection of Personnel	Train & Educate	Reduce Effects	Rehabilitate	
STEP 4. MAKE CONTROL DECISIONS <i>(Explain how you intend on controlling the risk below)</i>										
ACC RISK LEVEL AND DECISION LEVEL MATRIX										
RISK LEVEL		DECISION LEVEL								
EXTREMELY HIGH (EH) EH-1		COMACC OR DESIGNEE <i>(i.e., NAF/CC, CV, etc.)</i>								
EH-2 & EH-3		MAJCOM FUNCTIONAL 2-DIGIT								
HIGH (H) H-4 & H-5		WING/CC								
H-6, H-7 & H-8		GROUP/CC								
MEDIUM (M) M-9 to M-13		SQ/CC <i>(Delegated no lower than Senior Sq Ops/MX Supervisor on duty)</i>								
LOW (L) L-14 & L-15		2ND LEVEL SUPERVISOR <i>(i.e., Shift Supervisor, Sq Top Three, Wing SOF, etc.)</i>								
L-16 to L-20		1ST LEVEL SUPERVISOR <i>(i.e. Immediate Task Supervisor, Flight Lead, Team Leader, etc.)</i>								
Annotate Control Measure Selected <i>(In Step 3 above)</i> and Explain Rationale In Space Below										
CONTROL MEASURE SELECTED										
*F YOU CHOSE TO REDUCE YOU MUST ANNOTATE METHOD OF REDUCTION										
STEP 5. IMPLEMENT RISK CONTROLS <i>(Explain Implementation Strategy)</i>										
SELECTED RISK MEASURES		OPR <i>(Agency or Person Responsible to take action)</i>			IMPLEMENTATION TIMELINE		SUPPORT REQUIREMENTS <i>(Identify Resources Needed to Fully Implement Action; i.e. Funding, Equipment., etc.)</i>			
ADDITIONAL COMMENTS										
STEP 6. SUPERVISE AND REVIEW <i>(Explain processes to ensure supervision of the effectiveness and adequacy of the implementation of the risk controls you have selected. Consider: How the operation will be monitored and the process reviewed for effectiveness/adequacy. Solicit feedback from all involved.)</i>										
ADDITIONAL COMMENTS										
*PRINTED NAME/GRADE/POSITION					SIGNATURE				DATE	
*LEVEL OF ACCEPTANCE MUST BE EQUIVALENT TO THAT SPECIFIED IN THE ACC RISK LEVEL AND DECISION LEVEL MATRIX <i>(See Step 4 Above)</i>										

ACC 167, MAY 99 (EF)



Nuclear Surety: Is It Alive and Well

MSgt Curtis Northrop, HQ ACC/IGIL-B, Langley AFB VA

Have we forgotten nuclear surety? Are we all doing our part to make sure our unit's nuclear surety stays in focus?

Are We Doing Our Part?

Is Nuclear Surety alive and well in today's Air Force? Do you wonder like I do, "What ever happened to basic Nuclear Surety 101?" During the days of the Cold War, we studied doctrine, trained, and practiced our nuclear weapons procedures and surety to maintain our proficiency/safety in nuclear op-



erations. Where has our nuclear surety proficiency gone — have we allowed current events and the high operations tempo of worldwide operational deployments to shift our attention away from our nuclear mission? Have we forgotten nuclear surety? Are we all doing our part to make sure our unit's nuclear surety stays in focus?

In my opinion, over the past few

sion requirements on a daily basis? I challenge each and every one of you to maintain a proper focus on nuclear surety and look at the “whole picture.” Your active participation in the Air Force nuclear surety program is very important — you make the difference! In closing with this thought in mind, seriously consider the following challenging questions: “Are you sure the current tech data and Air Force Instructions are adequate to meet all Air Force nuclear surety requirements? When was the last time you submitted a change to clarify or improve your tech data?” Come on folks, let's take stock of where we are, re-group, and keep nuclear surety and safety a top priority. Maintain a constant state of alertness and readiness — our nuclear mission depends on it! ■

years we have seen the nuclear mission become second to the conventional mission. Let's face it; our day-to-day focus is flying and generating conventional weapons. Due to the heavy workload and lack of adequate manning that continuously plagues our units, nuclear issues are often put on the backburner... that is, until it's time to prepare for the next nuclear inspection. Every few months we take a break from our conventional operations and break out the nukes; then (hopefully) we get it right. Once again, in my opinion, our nuclear experience and proficiency levels are lower than what we had during the Cold War. We need to be sure that we get it right; and we need to get it right, especially now... more than ever!

Nuclear Training Doctrine

How about our “Nuclear Training Doctrine”? You know, our statement of officially sanctioned beliefs and training principles that describe and guide the proper handling and use of nuclear weapons. Where are those processes that we have come to trust and understand, based on our experience to date? We should be teaching this doctrine to all of our troops as a common frame of reference on the best ways to ensure the safety, surety, and reliability of our nuclear forces. This prepares us for future uncertainties and, combined with our basic shared core values, provides a set of common understandings that we can use for decision-making in the future.

I remember back in the late '70s and early '80s when we were focused on training our people to look at the “whole picture” when dealing with nukes. Training was not just aimed at doing our jobs; it focused on helping others do theirs, as well. We were trained to look at things with a cautious, careful, and technical eye. We didn't use blinders to look only at our specific tech data requirements, but we looked at the entire process (i.e., the whole picture). If something was out of the norm, you would stop and ask yourself, “Is this acceptable? Should I get another opinion?”

Keep a Proper Focus on Nuclear Surety

Can we afford not to take the extra step when dealing with nuclear weapons? No, we can't! Even if the chance of failure is small, the results are catastrophic, and we need to pay special attention to the process. How many other infractions are currently going unnoticed as we seek to fulfill our unit's nuclear mis-

GROUND SAFETY AWARD OF THE QUARTER



TSgt Steven C. Vanstee, 20 OSS, 20 FW, Shaw AFB SC

TSgt Vanstee's impact on the 20th Operations Support Squadron Ground Safety Program has been immeasurable. His overall attention to detail and ceaseless efforts to stress sound safety and maintenance practices are evident by the results of past safety inspections. His safety knowledge ensures a safe working environment while maintaining one of the highest range utilization rates in Air Combat Command.

Sgt Vanstee developed a proactive spot inspection program, which has been extremely effective in eliminating potential hazards and ensuring all safety program requirements are met. He formulated and implemented safety assessment reference checklists that reduced spot inspection discrepancies by over 95 percent. Problem areas and corrective action is tracked to ensure discrepancies remained corrected. A computer-generated trend analysis graph is sent to all work centers for education and mishap prevention purposes and briefing all personnel. Significant improvements in the ground safety program were immediately noted.

He completely revised Job Safety Training (JST) Guides for each work section within the Electronic Warfare Range for implementation of risk management principles and new equipment. In addition to the general Range JST, each work section has a specific JST Guide tailored to the section. Safety documentation procedures are outstanding, and he has consistently implemented all squadron safety initiatives within his comprehensive program. Job safety training is further enhanced by development of a Safety Program Operating Instruction (OI), Phase I Study Guide, Radiation Hazard Control OI, and Lock Out/Tag Out OI.

Sgt Vanstee procured emergency equipment and developed emergency procedure checklists for the five recently established remote radar sites. The quick response checklists include maps and phone numbers to the nearest hospital and police department for each site. Each vehicle contains a safety board or emergency kit for first aid. The emergency procedure checklists and safety equipment were instrumental in getting quick emergency treatment when a member was seriously injured at the remote manning site.

He was also instrumental in the unit receiving no discrepancies during the ACC Range Operations staff assistance visit. The operations section was complimented on the high quality, professional manner it operates and on the process it uses to train and document training on new radar operators. The inspectors took safety-training materials along to implement into all ACC range electronic combat operations training programs.

Sgt Vanstee established an AF Form 55 documentation-training guide that ensures proper documentation. This training guide was the key to the AF Form 55 documentation being commended for being error-free during the last three annual safety inspections.

He developed and implemented an enhanced site intercommunication setup that provides constant monitoring of both assigned frequencies and ensured that the site responded quickly to all incoming requests for airspace use. The new communications system greatly reduces walking distances for the site operators while enhancing aircrew training.







Our FY 98 annual safety inspection once again highlighted his superb accomplishments. He was identified as an "Exceptional Performer" and his safety boards, Job Safety Training Guides, and Operating Instructions were noted as benchmark items.

Ground Safety Award of the Quarter

Weapons Safety Stats



ACC Losses for FY 99

(1 Oct 98 - 1 Jun 99)

Number of Weapons Mishaps / Dollar Losses			
	Class A	Class B	Class C
8 AF	None	None	None
9 AF*	None	None	1/\$20K 
12 AF	None	None	None
AWFC	1/975K 	2/\$1.09M  	2/\$81K  
TOTAL	1/975K	2/\$1.09M	3/\$101K

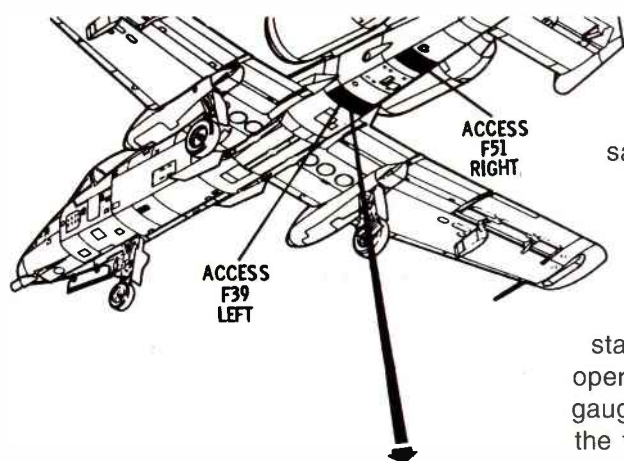
Weapons Fatalities - None
Nuclear Mishaps - None

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

 = Missile Mishap
 = Explosive Mishap

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

When Zero Don't Mean Nothin'



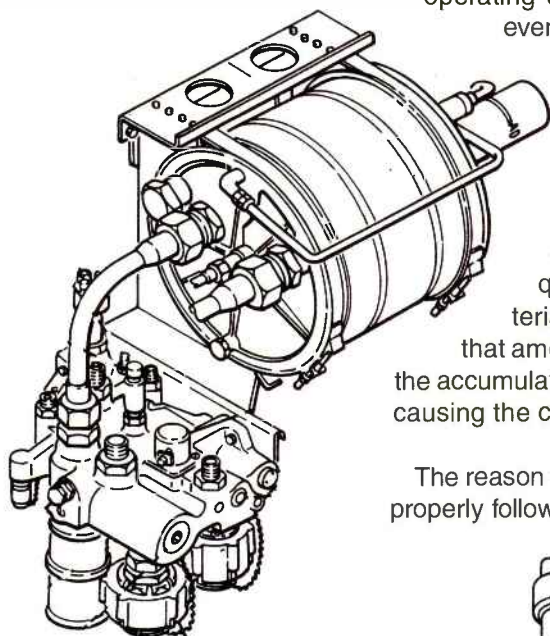
No matter how many times you have performed a task, you should still refer to the Technical Order (T.O.). The necessity for having this rule was recently demonstrated by one of our airmen. Here's a brief description of the story and the safety lesson learned.

An A-10 bootstrap hydraulic accumulator was connected to a hydraulic test stand for functional check. The accumulator was attached correctly, and power was properly applied to the test stand. The T.O. required the accumulator to be pressurized at 6,000 psi static pressure. The high-pressure pump was turned on and began to operate normally. However, as the pump began its operation, the pressure gauge was showing no increase in pressurization. The airman in control of the test stand observed the anomaly, but he allowed the pump to keep operating anyway. He was waiting to see if the accumulator would eventually reflect the normal rise in pressure. But that's when it happened... KA-BOOM!

Yup, you guessed it; the accumulator blew up! Why? Well, as required in the T.O., the high-pressure static gauge valve was not opened during the initial setup procedure. Therefore, the pressure being applied to the accumulator was not being displayed. The accumulator required testing at 6,000 psi; and, for safety purposes, the material used in manufacturing the item was designed to hold twice that amount. So, even though the pressure gauge was reading zero, the accumulator actually had in excess of 12,000 psi applied to it — thereby causing the cylinder to burst. Fortunately, nobody was injured.

The reason this mishap occurred was because the test stand T.O. was not properly followed during the initial setup procedure. If the operator had followed the steps outlined in the T.O., the pressure gauge would have accurately reflected the rising pressure,

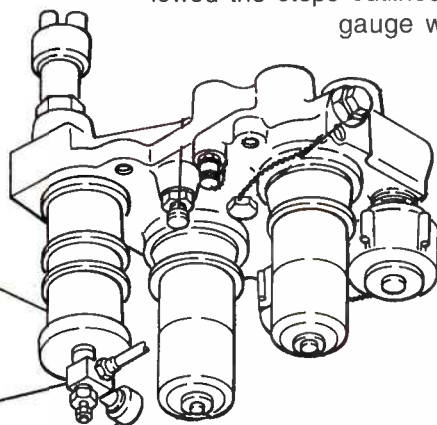
and the operator would have been able to determine when to safely conclude the test. The moral of this story is, "Use your T.O. — step by step — every time!" The life you save may be your own. ■



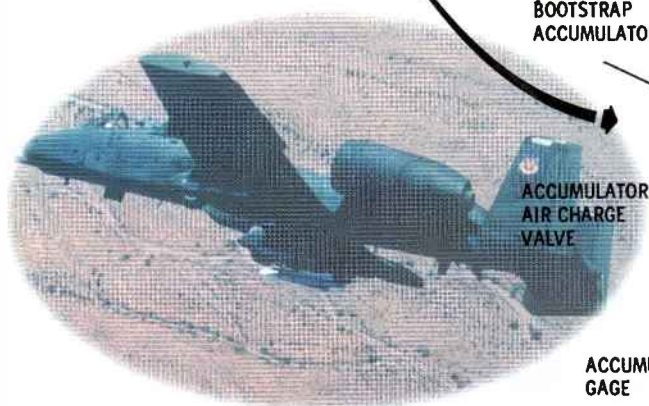
BOOTSTRAP
ACCUMULATOR

ACCUMULATOR
AIR CHARGE
VALVE

ACCUMULATOR
GAGE



Hydraulic System Component Location



USE OR LOSE!

Compliance is the Key

Have you ever heard the story about the airman who blew off one of his hands... even though he was following his technical manual step-by-step according to established procedure? No? Well, neither have I. But with the dramatic increase in operations tempo that has engulfed the armed forces in the last 7 years, it has become all the more imperative that everyone involved in maintaining highly technical weapon systems abides by the appropriate technical manual. Failure to do so not only puts you and your fellow maintainers at risk, but also those operating the equipment being maintained. The sad thing is that almost all job-related mishaps are preventable, and these type of incidents fall into a single category — failure to adhere to established procedures as outlined in the technical manual.

During my 15 years of military service, I have seen the “fat” days of the Cold War era evolve into the present where each of the services are now very lean and struggling to meet their many commitments. If we are going to continue to operate safely under these current circumstances, we need to ensure that we are accomplishing our work as outlined in the technical manuals. Compliance with the technical data is key to preventing mishaps while directly contributing to mission success.

A Momentary Lapse in Concentration

Unfortunately, in the haste to perform the mission, the margin for error starts to wear thin. All it takes is a momentary loss of concentration,

poor judgment, or just simply not paying attention to details. In most cases, you hope that you discover the mistake before you are done. However, when a mistake does occur, the job is now going to take at least twice the amount of time to accomplish. Unfortunately, sometimes these deviations can have a much more serious impact.

For instance, while performing a system maintenance checkout on an A-10 aircraft, an electronic countermeasure (ECM) technician — distracted by an A-10 demonstration team flying overhead — skipped over a step in his maintenance manual. This particular step was a warning to ensure that an ECM system circuit breaker was pulled and secured with a lockout device. When he reached in and flipped a switch, five flares ejected one at a time from a wing dispenser on the aircraft and bounced their merry little way down the ramp. As bad as that was, two bounced in between the aircraft’s main landing gear strut and tire, catching the tire and aircraft on fire. Another bounced over to an A-10 aircraft parked nearby igniting its nose gear tire on fire; the other two bounced around aimlessly down the ramp until finally fizzling out. Quick action by those nearby were able to get the fires put out and save both aircraft from burning to the ground. This momentary lapse of concentration almost cost the Air Force two aircraft as well as the life of an airman.

Emergency Procedures

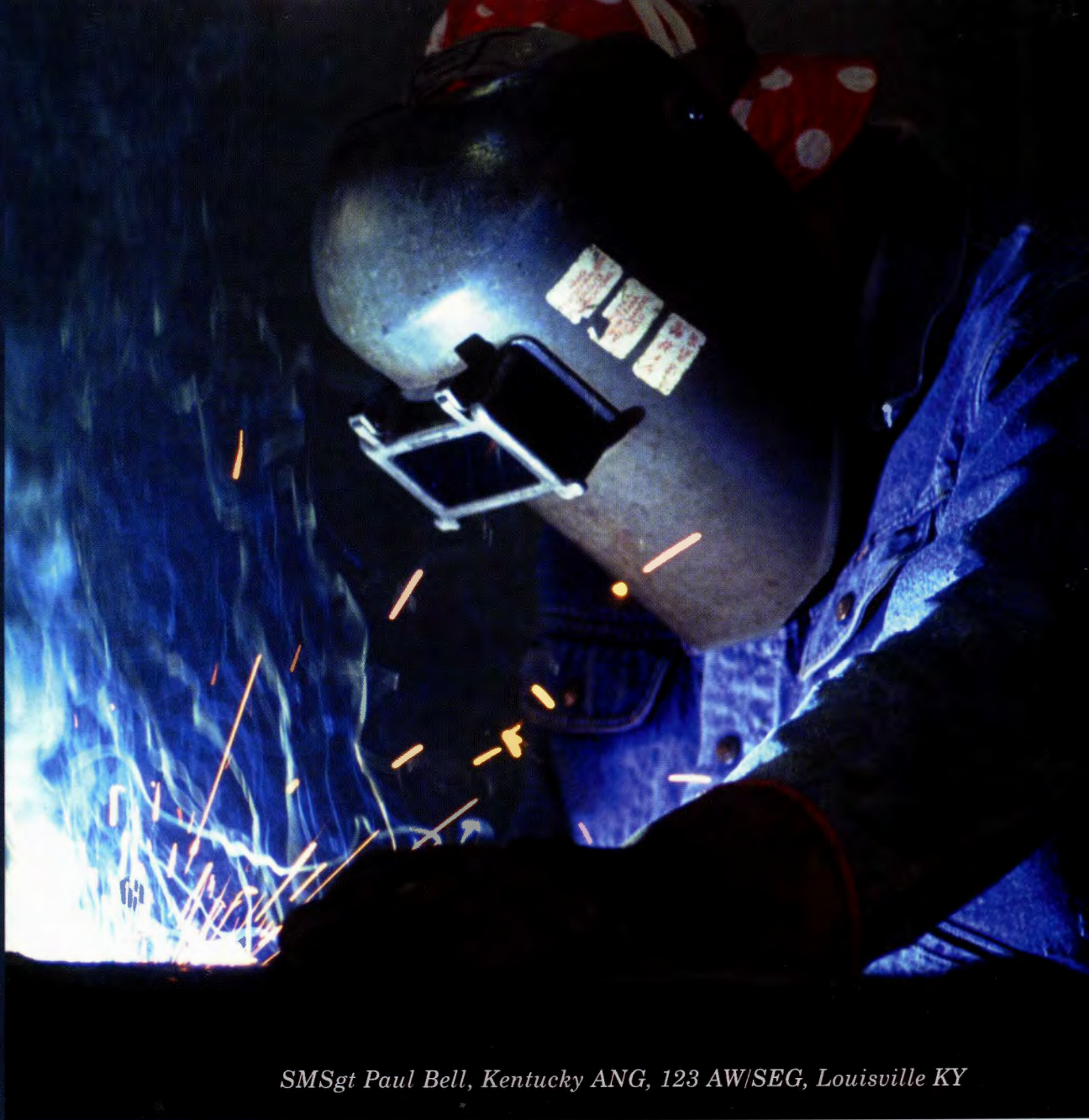
On another occasion, I was witness to a most unusual spectacle. A maintenance run was being performed on

a C-130 aircraft. As I was watching the operation, all four engines were taken to the max power setting. Then all of a sudden, the crew entrance door flew wide open! The four members of the engine maintenance crew came running out to a point at least 300 feet forward of the nose of the aircraft. As soon as I saw everyone egress the aircraft, I realized there was a ground emergency. A generator control panel that had caught on fire filled the flight deck with smoke and caused the emergency egress. But there was another problem — all four engines were still running at max power! In their haste to exit the aircraft, they failed to execute the proper emergency procedures and shut down the engines. Realizing what had happened, they ran back to the aircraft and shut down all four engines.

You Can Make a Difference!

These two incidents demonstrate just how easy it is to become distracted and overlook important information in a technical manual. Failure to follow proper technical manuals can damage equipment and get someone killed. Not only do the lives of you and your co-workers depend on compliance with technical orders, but the lives of the equipment operators do as well. You may feel that using safety glasses while cutting safety wire might be a nuisance, but think how much of a tragedy it would be to lose sight in one eye... if you’re even that fortunate. By adhering to the technical manual, you will prevent injury, save lives, and avoid damage to valuable equipment. **Use that tech data — our lives and mission depend on it!** ■

...UNTIL ONE BLEW UP IN HIS FACE



SMSgt Paul Bell, Kentucky ANG, 123 AW/SEG, Louisville KY

... he continued to use this procedure (unsafe as it was) to take dents out of gas tanks... that is, until one blew up in his face!

We're Adults, Not Kindergarten Kids!

While surfing the World Wide Web recently, I came upon a site that has a forum for questions and answers about restoration of garden tractors. The question was asked about how to remove rust and other contaminants from the inside of a gas tank. One of the methods given was to put gasoline with a certain length of chain into the tank and to slosh it around. In theory, the gasoline would act as a cleaning solvent, and the chain would break loose any rust and scale inside the tank. The process con-

cluded with dumping out the contents of the tank and pressing on from there.

In response to this suggestion, another individual wisely pointed out that steel rubbing against steel has a very good possibility of creating sparks. Thus, there would be considerable risk of an explosion resulting from a spark igniting the gasoline. (As I read this, I thought about how fortunate the method-giver had been not to have first-hand experience of this type of catastrophe.) The responder explained that he was a teacher of forty 4-H students. He went on to say that he taught his students to think through a task before they did it and then do it in a safe manner. (Note: Sounds like he's a believer in risk management, doesn't it?) Nevertheless, the teacher's comment prompted a response from a third individual on the web.

The person said that "he believed in safety and all that stuff," but felt he could still clean the inside of a gas tank with a chain by simply adding a little water to the tank which would help keep the possibility for generating sparks at a low level. He followed this up by stating that he "... never had a problem cleaning tanks this way before." In conclusion, he said, "After all, we on this forum are adults, not kindergarten kids!"

Sooner or Later, It'll Catch Up With You!

Folks, this is the kind of mentality and mindset that gets people hurt. Being an adult does not keep anyone from getting hurt - especially if his or her actions are unsafe. Just because an individual gets by without having a mishap by doing something unsafe once, **it doesn't mean it won't catch up**

with him later at some point in time. For example, I used to have a friend that ran an automobile body shop several years ago. One time, I watched him take the dent out of the gas tank of an automobile using an acetylene torch. He ran water into the tank to flush out most of the fumes, dumped the water, stuck the flame from the torch in the filler neck, and POOF... the dent popped out! He said, "I've done it like this a hundred times before...yes sir, it always works for me this way." With these series of successes, he continued to use this procedure (unsafe as it was) to take dents out of gas tanks... that is, **until one blew up in his face!** (Note: Sounds like risk management was missing here, doesn't it?) As terrible as this mishap was, there is still a positive safety lesson to be learned as a result of the incident... and that is "When you continue to participate in an unnecessary activity of great risk (i.e., one where the risk far outweighs the benefits), sooner or later it'll catch up with you; and when it does, it can be very, very costly."

Get the Job Done... Safely!

So, what's the moral to my story? Simply stated, it's this: "Use Operational Risk Management (ORM)!" Over the past few years, we've all had the opportunity to become acquainted with following USAF Six-Step ORM Process.

(1) Identify the hazards - Identify the potential sources of danger which cause risk.

(2) Assess the risks - Determine which of the hazards present the greatest risk.

(3) Analyze risk control measures - Determine what controls

can be implemented to counter the assessed risks.

(4) Make control decisions - Determine which courses of action will best accomplish the mission with an acceptable level of risk.

(5) Risk control implementation - Implement the controls and the courses of action decided on in the previous step.

(6) Supervise and review - Monitor the operation for effectiveness of the controls and changes (i.e., follow-up to evaluate and adjust risk management decision and controls as necessary).

In our business, our goal is mission success while minimizing mishaps. However, with our current and projected deployment levels, some work areas are short-handed. With fewer people available to carry out the day-to-day tasks, the stage is set for a mishap to happen. But we have a tool to help us get the job done safely, and that tool is ORM. Therefore, individuals at every level must understand risk management concepts and apply them to their part of the mission.

Start Using ORM Today!

ORM applies to all our activities in life (both on and off duty), and it helps us make smart risk-related decisions daily. My friend who was taking the dent out of a gas tank really didn't think about the potential hazards associated with what he was about to do. He took an unnecessary risk that simply was not worth taking. How about you? Are you going to use ORM in carrying out your job, or are you going to wait *until it blows up in your face*? In this case, there's only one right answer — start using ORM today! ■

During the summer, an increasing number of people head to the beaches on weekends. As a result, water safety becomes more of an issue. I would like to pass on this true story from one of our Incirlik members who recently had an incident at a local beach. I trust that we may all learn from his experience. Please read it, and think about it the next time you're heading to the seashore. Also, discuss the article with your family and friends who might be accompanying you on your trip to the beach.

Thanks.

Maj William Smith

Former 39th Wing Chief of Safety

Preliminary Note from the

Author: *I was involved in a very dangerous swimming incident recently - not only did I almost drown, but four other individuals almost perished as well. As you read this article, I hope you take the safety message to heart and learn from it by means of the printed page, rather than by the way I did — through painful, personal experience. Read on to find out what happened on that relaxing (so I thought) summer day at the beach.*

A Beautiful Day at the Beach

It was about 4:00 in the afternoon on a beautiful, summer day at the beach on the coastline of the Mediterranean Sea. There were six in our group: my Turkish wife (Berin) and I, her brother (Hasan, 32 years old), her sister (Hatice, age 36), and her sister's two daughters (Ebru and Ece, ages 14 and 9, respectively). We were having the time of our lives swimming and playing around at the beach. After already having been there for several hours that day — and the bulk of the time swimming offshore — we were beginning to get very tired.

I didn't think I was very far from the beach when I swam out, but that

was about 2 hours earlier. Over that time period, I had drifted out and quite a distance down the shoreline away from everyone else. I really don't consider myself an excellent swimmer. I took one swim class at age 18, but that was 20 years ago. I left that class knowing only how to do the side stroke and backstroke. After already being tired from the busy day's activities, I was struggling to swim back to shore; the more I tried to use the only two swim strokes I knew how to do, the more tired I became. In fact, when I finally got to the point I could put my feet on the

sand, I was very exhausted. In this condition, I slowly started to walk in, bobbing my head to stay above the surface. After a few minutes, the water was finally at my knees; it was at this time that I heard my wife, Berin, shout my name.

A Beautiful Day Turns Bad

When I turned to look at her, I could tell she must have been shouting for quite a while. I couldn't see her clearly, but her voice had that certain tone and volume that told me she was extremely scared. She was shouting in Turkish, except for my name.

*TSgt Rob Martinez
39 CES/CEX
Incirlik AB, Turkey*



**FUN IN
TURNS**
It could hap



THE SUN DEADLY: open to you!

I immediately turned and started running (then swimming) out to her. Berin had a tire tube that she had been floating on; but she was now holding on to the side of the tube and trying to swim. When I got to her, she stopped splashing and started shouting... "Help them! Why won't anyone help them?"

Holding onto the inner tube with one hand, she was pointing with the other toward Ece, her youngest niece. Ece was panicking in the water; she was screaming uncontrollably and was tightly clenched onto the neck and chin area of Berin's brother

(Hasan). Her terrified grasp around his neck was awfully tight. As a result, Hasan was having difficulty breathing and staying afloat with the panic stricken little girl. Berin's sister and other niece (Hatice and Ebru) were just feet away from Hasan and Ece in the water. Though they themselves were not in danger of drowning, they were very tired and were frantically swinging their arms to get my attention to help out in the situation. Realizing that my wife was not a strong swimmer and never had any experience in assisting anyone who was overcome by panic while swim-

ming in the water, I told her to swim back toward shore while I took the inner tube and headed out to help rescue Ece.

As I pursued the screaming little girl, the main words I remember streaming through my mind were "Kick, kick, kick..." I was trying to muster up every last bit of energy I had in my body to reach her as she continued to cry out for help. With both of my arms outstretched, I was pushing the tire tube as fast as I could toward them. I remember thinking that this situation wasn't like the tire tube race I was in at the base pool. This was the real thing where the lives of precious loved ones were hanging in the balance; I was scared to death.

"Cabuk! Cabuk!! Cabuk!!!"

As I got closer to them, I could still hear Ece screaming. There were no intelligible words at first, just screams. As I got closer to her, I could hear her Turkish words now — "Cabuk! Cabuk!! Cabuk!!!" which means "Hurry!" As I looked up to correct the direction of my approach, they were all in my view. Ece still had one arm around her uncle's head, and Ebru was waving at me. "Cabuk!" Ece yelled. "Cabuk! Cabuk!!" I do not remember anyone ever asking me for help with such intensity like she did. Ece was in desperate need of help, and there was a certain sound in her voice and look in her eyes that was impossible to misunderstand. I continued to swim directly toward her. After swimming in the water for a few more moments, I looked up again and saw my brother-in-law struggling up from under the water. His eyes had a look of desperation, and he wasn't even able to shout. He kept on going under, under, and under again before I reached them.

I didn't know if there were too many of us to all hold onto the tire at once. I made sure Ece grabbed the inner tube first. Then the others grabbed hold. I was so tired. When I could take hold again, I remember

thinking to myself, "Oh, God. Please let it hold us all afloat." I was so scared. I started to kick again now. I kicked and kicked and kicked.

Lifting my head up, I could see the shore now. I didn't know the Turkish word for help (I now know it's pronounced "M-dot"), so I just screamed "Help!" in English. I hope I never have to yell like that again. I yelled as much as I could and as loud as I could. After a little while, I was making eye contact with people in the distance now. I could see their heads turn and look. I could see a man standing at a distance just staring at me. In fact, he looked "right" at me. At our time of great need, no one came, no one shouted back, and no one helped. I began to wonder where my wife was and if she had made it back safely to shore and to get help... I prayed all the more.

As we all continued to paddle toward shore, I then began to hear another sound of splashing water somewhere besides us. I wanted to stop, but I was too tired to look. Suddenly there was a man in the water next to me helping to push the tube toward shore. With my strength just about all gone, I could tell I wasn't doing much to help in moving the tire now; so I stopped kicking. A brief moment later, a woman was standing in front of the tube taking Ece into her arms. My wife and others then arrived and were helping Ebru, Hatice, and Hasan. I was so thankful to see such wonderful hands of comfort.

When I finally got to the beach, I collapsed. I tried to vomit some of the water I had swallowed, but I was too tired to even do that. I couldn't move. I just lied down there until I had the energy to walk again. We all sat in silent shock for a long while. Everyone else was still going about their business on the beach as if nothing had happened. We left for home shortly afterward.

Safety Lessons Learned

In this article, I went into great detail because I wanted you to get a good glimpse of what happened. This situation was real, and I hope writing about it really helps someone. My hope is that someone — anyone — will learn from my brush with death. It is an experience that I do not wish upon anyone. This is what I learned.

1. Never, never go past your limit. Remember that swimming out from shore is not the same as swimming back to shore. Return to shore before you get tired. Safety experts recommend stopping for 10-15 minutes for every hour you drive on the highway. We should take the same precautions when we are swimming. Get out of the water and take a break; don't push yourself beyond your limit. You may want to take a break from your job over the weekend, but safety for you and your family can never take a break.

2. Keep control of your group. According to Turkish customs, family comes before all else. The bulk of Americans — regardless of social strata or income — also feel the same way. When swimming at the beach, know where all members of your family/group are at all times (especially children); and use the buddy system. In other words, stick together.

3. Do what you can to help people in emergency situations. When you see someone in need, do what you can to help them. If you can't help them directly yourself, get someone who can. Take personal responsibility to assist those in need of help.

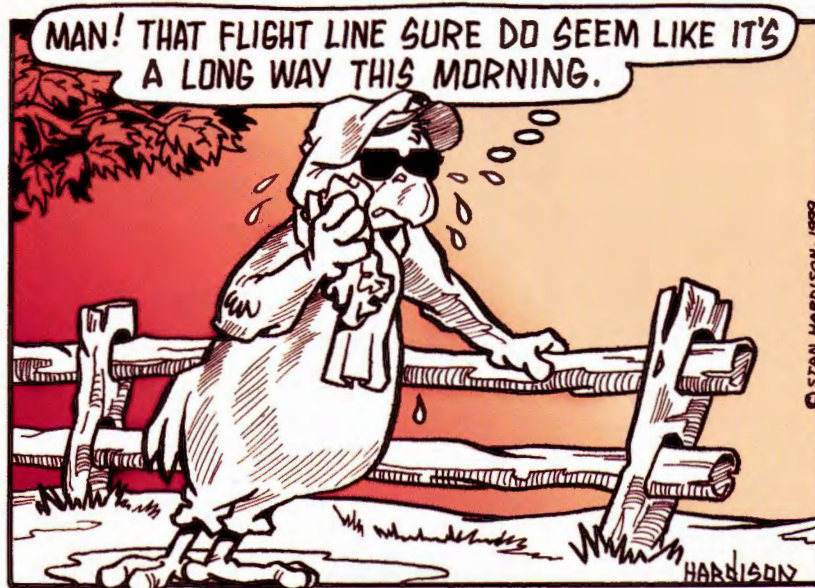
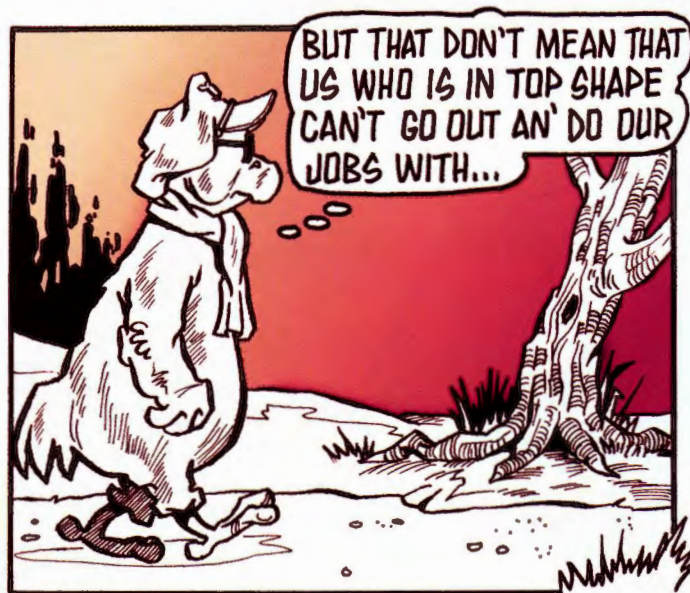
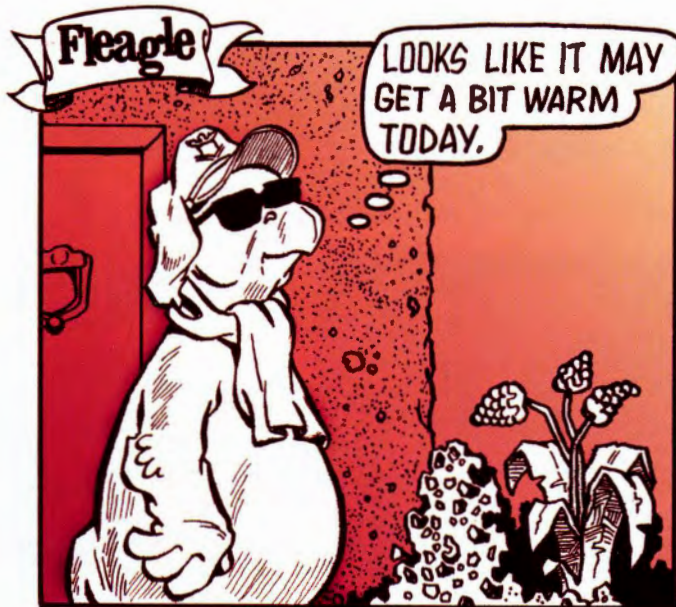
4. Don't ever underestimate the value of lifeguards. How we justified in our minds to go swimming in an area where there were no lifeguards present, I'll never know. To

ignore the value of lifeguards while swimming (especially with young children) is imprudent and unwise. Since many beaches don't have lifeguards or security personnel to help out in emergency situations, we rationalize that it is still okay to go swimming deep into the water without ever having any type of emergency responder available. To assume that the presence of other people on the beach is sufficient for lifeguard protection is a bad assumption; the individuals may not be physically able (or even willing) to help rescue you if you run into a problem in the water.

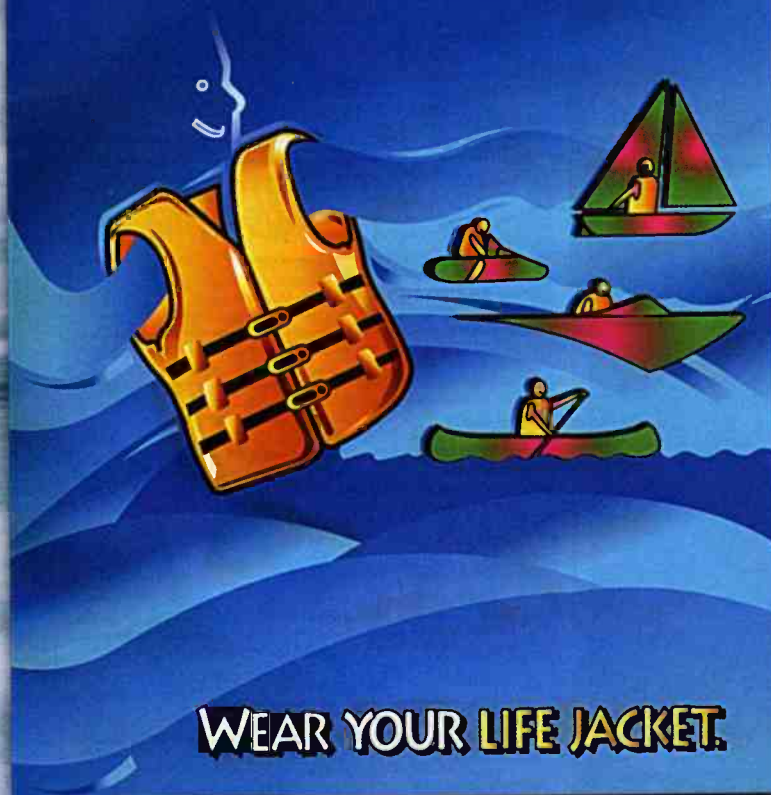
5. Plan for contingencies with your family. Before your outing, play a game of "what if" with your family. Identify what hazards exist, assess the risks involved, and analyze them by evaluating what you can do to control those risks. As a family, decide and implement what courses of action will lower your risks (e.g., for me, that means taking another swim class). Finally, monitor the activity for effectiveness of the controls you have established, and make any adjustments as necessary. (Sounds a little like Operational Risk Management (ORM), huh?) Let me tell you; after this experience, we spent many hours going over what we did and what we should do in the future to make sure we never get into that type of situation ever again. That's smart risk management, isn't it? That's ORM!

A Final Word

Once again, I wrote all this down so someone else can learn from it in the future. Hopefully, the words I've shared will help others. Although I hope there never is a need, just remember that "It could happen to you." So what's the *sine qua non*? Well, it's simply this — "Swim smart from the start!" ■



BOAT SMART FROM THE START.



WEAR YOUR LIFE JACKET.

Recreational boating casualties are the second leading cause of transportation-related fatalities after automobile accidents.

- In 1997, 819 people died in recreational boating fatalities.
- There were more than 8,000 reported recreational boating accidents.
- Seven out of 10 people who died in boating related accidents drowned.
- Nine out of 10 reported drowning victims were not wearing a life jacket.