



The Combat **EDGE**

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THE SAFETY SPECTRUM

**Commander's Call
from Coast to Coast**

The Combat EDGE

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CHIEFS OF SAFETY SPEAK OUT...

This issue of *The Combat Edge* magazine is a special edition. It offers Chiefs of Safety an opportunity to present their concerns and insights into preserving lives and equipment, which ultimately preserves combat capability for America. Within these pages, COMACC, myself, and Numbered Air Force (NAF) Chiefs of Safety have put their ideas to pen. General Jumper does more than support safety; he is the consummate safety advocate. He ensures his commanders at all levels carry the safety torch to the far reaches of the command.

COMACC addresses several important issues in his article. He puts a target on safety, and since safety goes hand in hand with the mission, we must keep safety in our sights. Following basic rules and managing individual risk will eliminate many of our fatal mishaps. He challenges us to hit the bulls-eye of safety in FY 2001.

It's interesting to note that virtually all the Chiefs of Safety talk about some form of risk management. I think we're all tired of seeing our fellow ACC members involved in fatal mishaps that could have easily been avoided. I can hear an outcry in these articles for people to think about risks prior to their actions. Most mishaps can be avoided by simply asking a few questions, such as, "Could I get injured doing this? Could my actions cause serious injury? How can I avoid a mishap?" That's risk management in its simplest form, except for one last step — take action to live!

As you read the articles in this issue, keep in mind that the words are from the heart. Chiefs of Safety agonize over the injuries and fatalities that occur during their watch. I know I take it personally when a young airman dies in a preventable mishap. I always ask myself, "How could I have prevented this mishap? Was there a way I could have reached this person with a safety warning?" Normally, someone in the chain has indeed carried a mishap prevention message to the individual, and risk management has been discussed and emphasized. For example, we all know to wear seat belts, yet sometimes people choose not to buckle up. That action is a willful choice not to use good risk management. Making sure that we are all proactive, aware and using good risk management is an outstanding safety target for all of us in FY 2001!

Col. Greg "Vader" Alston
ACC Chief of Safety



Target Safety

*By General John P. Jumper
Air Combat Command, Commander
Langley AFB, Va.*

Fiscal Year 2000 was a strong year for ACC safety as we experienced the fewest lost aircraft, and more importantly, had one of the lowest numbers of lost lives in the command's history. This tells me we're doing most things right. However, there's nothing good about losing even one life; nothing good about losing even one aircraft. Constant awareness of hazards and adherence to basic principles will keep safety in our sight picture and lead to even better performance.

Flying and fixing airplanes are the two most important things we do, and safety is key to accomplishing both — truly a tough challenge, requiring constant focus on risk management and overall mishap prevention. We accept the fact that some risk is necessary to accomplish

our mission. Our duties are often highly technical, where trained professionals maintain and fix extremely complex aircraft. We fly complicated missions in large force packages containing multiple aircraft types, at night and in adverse weather. Security Forces operate in the dark of night over rough terrain in all types of weather. The list goes on, but the message is the same: in our risky environments, we must stay focused on the task at hand and be aware of the hazards.

We're entrusted by our nation with irreplaceable lives and equipment. It's unacceptable to lose a life, crash an aircraft, or destroy a national asset because someone

failed to follow basic operating rules. Yet in the majority of our fatal mishaps, that's exactly what happened. Keep in mind that most basic rules and fundamentals were written to prevent previous mishaps from happening again.

We all learned basic rules of flying and fixing airplanes early in our careers — we should never shy away from re-emphasizing them. These basic principles need to be foundations upon which we build more advanced maneuvers and techniques. If the foundation weakens, tragedy results. Last year we experienced several flight mishaps caused by aircrews not following the basic tenets of airmanship and discipline. Simple adherence to the rules could have prevented these mishaps.

Lapses of judgment were also noted in the area of ground safety. We had too many ground fatalities — some of the

basics overlooked in these unfortunate mishaps included not wearing seat belts, not wearing a helmet on a motorcycle, and engaging in water activities without a life vest. If these fellow airmen had simply followed the basic rules they were taught, they'd still be with us today.

The Air Force provides excellent training that begins and ends with basic procedures. Continuation training must not forget these basics, but build on them. This is critical when the operations tempo is high. At such times, when personal stress is at a peak, we must rely on the basics for orderly and safe operations. Staying on target with safety does not mean simplifying your operations to only do the basics; it means keeping the basics in your crosscheck and building your advanced procedures on a strong procedural and safety foundation.

To keep safety in our sight picture requires emphasis on the basics by leadership at all levels. Working together, ACC can have an even safer year in FY 2001. ■

"... in our risky environments, we must stay focused on the task at hand and be aware of the hazards."

Team Safety

*By Col. Greg Alston
ACC Chief of Safety
Langley AFB, Va.*



The quarterback gives directions in the huddle, breaks, and steps up to the line. He looks over the defense, makes an audible call to his team, stoops to the center, calls a single “hut,” and gets the ball on a quick snap. He drops back to pass, and watches as events unfold. The offensive tight end on the left side smashes into the defense, taking down an outside rusher trying to sneak around the corner. The fullback cuts down a linebacker trying to blitz. The left guard pulls out of the line and hustles to the right side and cross-blocks a rushing defender. Meanwhile, the halfback fakes a blocking attempt and steps toward the quarterback, who sneakily hands him the ball. The halfback charges toward the line, cuts behind the cross-blocking guard, and zig-zags through the backfield to gain 20 yards before he’s finally tackled. A successful play, a first down, and 20 yards closer to the goal.

Well, I must say, the above example is not a highlight of my favorite football

team (which will remain nameless), where the fullback would miss the blitz, and the linebacker would rudely sack the quarterback... but that’s a whole other story. However, the above example does point out the importance of teamwork. Each member of the team is critical to the overall success. It’s the same in your mission. Bombs don’t hit a target and wheels don’t turn unless the whole team is trained, equipped and mentally ready for the task. Since mission and safety are inseparable, safety is no different. Each member of the Air Force, from the highest ranking official to the newest recruit, must be on the same play page. We all must be trained in safety, wear the appropriate safety equipment, and be mentally ready to achieve our parts of the mission.

I’ve been in the safety business for 10 years. I have given briefings, written articles, and prepared “items of interest” for commanders on various aspects of “who” is important to the safety process. I must’ve stated a hundred times that the commander is the number-one safety the

officer in any unit. I've highlighted the importance of mid-level supervisors who are on the scene. I've stressed how peers and friends can help the safety process with reminders on hazards and other safety considerations. In the past year, I have tried to drive home the importance of individuals taking care of themselves with personal risk management – after all, most of our ACC members are killed or injured alone, when no one else is present to remind them to use a seat belt or helmet. As I jump back and forth from commander to supervisor to peer to the individual, I can't escape a simple truth... it takes a whole team effort to ensure team safety. A breakdown of the above example of a successful football team may reinforce the team concept in safety.

THE COACH

I didn't mention the coach in my football scenario, but he is an important element. He embodies the philosophies of the senior managers and team owner, who set the overall tone. The coach instills the philosophies and work ethic into the team, gives them the training, conditioning, equipment, and mindset necessary to win.

For a wing in ACC, the wing commander can be compared to the coach when it comes to the mission and safety. The wing commander will take COMACC's and the NAF commanders' safety philosophies to his or her wing. The commander will incorporate safety guidance from the NAF, ACC and the Air Force. It is the commander who ensures his or her people are trained in safety, know risk management, are aware of hazards, and have the appropriate supervision and equipment to do their jobs safely.

THE QUARTERBACK

The quarterback is the on-scene supervisor, who makes the calls, changes the play at the line if necessary, and watches as the play unfolds. In reality, quarterbacks are also coaches; they know if a

lineman needs more training. A quarterback can instruct a fullback to move faster, or pause longer, to make the play happen as planned. Quarterbacks must be great leaders, and know everything about the game so they can instruct, mentor and lead with credibility.

The quarterback is the squadron commander. This is where the action is... in the squadron. Every squadron needs to be dynamic, flexible and always ready. In all cases, training is fundamental to the success in play execution. The squadron commander makes sure everyone in the squadron knows the importance of their jobs, and how to do their jobs safely. He or she ensures people are trained in the proper use of personal protective equipment, that they know procedures, and know how to safely accomplish the mission. In the end, it's the squadron commander who is responsible for ensuring everyone knows his or her job, and makes sure they actually use the protective equipment. It's the commander who calls the audible to change a task to fit the experience level of each person. Ultimately, the team may win with an astute commander, or may fall apart if the commander isn't at the top of his or her game.

THE FULLBACK....

THE GUARD....

THE HALFBACK....

These folks are a combination of mid-level supervisors and individuals who are in the trenches making the plays. The veteran guard knows how to pull to the right and cross-block a rusher. He teaches other guards, and also shares his experience and wisdom with the running backs. The fullback is in his last year in the NFL, he sees the blitz as he has for 11 years, he takes down the rushing linebacker, and he explains how it's done to the young new fullback who is watching from the bench — constant training. The young halfback gets the ball, remembers the coach's words on how to cut back through the line, and vividly recalls

quarterback's constant reminders to wait for the pulling guard to make his block. He then, with an individual effort, carries the ball with a combination of talent and training — the result is a 20-yard gain.

Chances are, you are one of these folks — the guard, fullback (old or new), or the halfback with the task of carrying the ball. In any case, you have a combination of training and experience to do the job, and you know how to do it safely. If you're a rookie, you have safety instructions from the coach (wing commander), immediate guidance and oversight from the quarterback (squadron commander), and words of wisdom from the old guard and fullback (master sergeant, Fighter Weapons School graduate, or crusty old major). If you are the instructor pilot, master sergeant or other mid-level supervisor, you are also often called upon to perform as an individual, where you are personally responsible for your own performance and safety. While you may be the teacher, you are also an individual performer.

Much training goes on at this level. Task accomplishment, procedures and safety are instilled and reinforced daily in the squadrons. Not only are the squadrons shaped into efficient teams, but individual habit patterns are formed. Supervisors must be vigilant on how habits are being shaped, and how their co-supervisors are mentoring the young folks. Are people being allowed to cut corners, blow off training, or scoff at protective equipment? You've heard the saying "monkey see, monkey do." You can carry it a step further by saying "airman see, airman do," or "lieutenant see, lieutenant do." Young folks are observant, and "you" are shaping their futures. While a mishap can happen even in good squadrons, if mid-level supervisors emphasize safe accomplishment of the mission, the squadron stands an excellent chance of avoiding a fatal mishap.

THE ROOKIE

Ah yes, the rookie — perhaps the most important person on the team. The rookie is the "now" and the "tomorrow" of the

team. We've all heard about "rookie mistakes," but we've also seen the old veteran get injured, and now the entire team is relying on the rookie to save the day. You cannot ensure total success without a properly trained and mentally ready rookie.

In ACC the rookie is the new recruit — the 2nd lieutenant, the 3-level, the person who has never been "there," wherever "there" is. The rookie may be called upon at any moment to drive the fuel truck or crew a jet for a quick turn. Is he or she ready? Are they aware of risks and safety procedures? That person is important to your success now, and he or she "is" your tomorrow. "You" are shaping their safety habits. I can't stress enough how important it is to instill operational and personal risk management as part of their crosschecks at the earliest opportunity.

WINNING THE GAME

We win the game through mission accomplishment without a fatality, injury or lost asset. This is why safety is an integral part of mission accomplishment. We are in a risky business, and the odds are we will experience mishaps. That is why it is so important that each of us be a team member when it comes to safety. Whether you are calling the plays, carrying the ball, shaping the rookies, or reminding the veterans of the hazards, you are a valuable member of the safety team.

Please remember this important point; you are an important member of the Air Combat Command team, even if you're alone, and no matter where you are or where you go. Personal risk management must be ever present, whether you are on or off the job. If you don't wear a seat belt while on vacation, you're putting the entire team at risk. Our mission is to provide forces. If you are unavailable because of an injury, or worse, then the mission was not accomplished. Most important is your own safety and well being, but never forget that you are part of a team... ACC Team Safety. ■

The Driving Forces of Youth

*By Col. Fred P. Clark
8th Air Force Chief of Safety
Barksdale AFB, La.*



Because I said so! At least this was the explanation that my father gave me for staying out of danger when I was younger. No explanation... just because. I didn't understand that answer, but I knew it was for my own good and I certainly wasn't going to challenge it. However, today's youth seems to thrive on challenge — especially when they are driving.

It is a well-known fact that young drivers, characterized as being between the ages of 16-25, have by far the highest fatality rate of any age group. On a per population basis, these drivers have a fatality rate, based on vehicle miles traveled, four times greater than the comparable rate for older drivers. A significant factor in their elevated fatality rate is the frequency with which they engage in risky driving behaviors. So what can supervisors do to keep these young people from hurting themselves or others when they are driving both on and off duty?

In an effort to reduce the likelihood of an automobile accident by young drivers,

the National Highway Traffic Safety Administration (NHTSA) has begun a program of research, as indicated in the paper **Matching Traffic Safety Strategies to Youth Characteristics: A Literature Review of Cognitive Development**, by David W. Eby, Ph.D., and Lisa J. Molnar, M.H.S.A. This program is designed to better understand the factors related to risk-taking for drivers younger than age 25. A special focus of this program is to develop more effective traffic safety programs and messages.

It should come as no surprise that factors affecting risk-taking include memory, attitude, perception, peers, and the environment. It also is understood that risky driving is the outcome of decisions that are made by choice. To that end, let's see what influences drivers and how we, as supervisors, can capitalize on their decision processes.

Initial attempts to communicate right from wrong driving behavior are usually done through messages that are published, e-mailed, or given orally to airmen by the

unit's Safety Division. Most traffic safety messages are designed to either change how people think about an issue or to change their behavior. If the verbal ability of the reader is not accounted for in the message, then in all likelihood the message will not be understood and will have no effect on improving traffic safety behavior. Therefore, supervisors must understand how airmen learn before they can construct a good safety message.

Learning is characterized by a relatively permanent change in behavior as a result of reflexes, good or bad experiences, and observations. The simplest kind of learning involves the association between reflexes and a source of stimulus, such as a red light. There are three factors that predominantly influence learning: (1) the number of times an event is seen; (2) the amount of time between seeing the event last; and (3) the intensity of the response to the event. Reflex, such as an emotional verbal response to the red light, is the simplest form of learning. In good or bad experiences, if the outcome is positive, then the action is likely to be repeated. In contrast, if the outcome is negative, the action is less likely to be repeated. Finally, observations allow drivers to vicariously benefit from the experiences of others. In this manner, drivers can learn the consequences of both appropriate and inappropriate behavior.

Unfortunately, many people only appraise risk when making decisions about uncertain events and situations. All too often the normal day-to-day tasks, such as driving to and from work, are taken for granted because young drivers lack experience. Young drivers tend to perceive less risk in specific accident scenarios than do older drivers, and are much poorer at identifying driving hazards. Older drivers have a greater knowledge about the world because they have been there and done that, so they have developed specific strategies for dealing with potentially dangerous situations. So how do we motivate the young driver to assess risk? Without the benefit of experience, people will not change without a motive for doing so.

Because attitudes are learned, they can be changed. Attitudes that we think about all the time, such as "seat belts save lives," come quickly and easily to mind for most drivers. These kinds of attitudes influence our percep-

tions of events and are therefore more closely tied to our behaviors. The role of direct experience appears to be especially important. For example, it is more likely that knowing someone personally who drove drunk and died in a car crash will affect our attitude and behavior than reading about crash statistics in the newspaper. But the number of young drivers who have had such direct experiences is small (although, unfortunately, that number is quickly growing).

Many studies have shown that young drivers tend to see themselves as less likely to be in a mishap than others in their own age group. Most of these people judge the chances of being in an accident to be greater when they are passengers than when they are driving the vehicle. Perceived control of a vehicle is an important factor in the assessment of risk for younger drivers. More importantly, having access to a vehicle is high on the young driver's list of things they must have, and that, of course, is a desire that supervisors can and must exploit. Since perceptions are obviously difficult to change in younger drivers, here is where motivation comes in. Get caught speeding, not wearing your seat belt, driving under the influence... LOSE your driving privileges. Without experience to guide them, consequences can help younger drivers understand why safe driving is important to them personally.

One final point... a major influence on risky driving behavior is the rules by which a person lives. Individuals play an active role in their own development, which is often referred to as one's morals. Moral development is stimulated by the provision of role-taking opportunities. Education and continued interaction with peers, supervisors and family will stimulate moral development.

Although my father is no longer here to guide me, his wisdom, like the wisdom of so many other parents and supervisors, will always be with me. Because you are a supervisor for our young airmen, you are in the spotlight. And you should be. The actions you take, the thoughts you speak, and the intentions you convey all go toward shaping their behavior. If you are to positively affect their risky driving behaviors, and ensure they are available to perform the mission of your wing, then you must do one thing... lead by example! ■

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PS Form 3526, October 1999 (Reverse)

Do the Right Thing

*By Col. Dan Costantini
9th Air Force and Central Command Forces
Chief of Safety, Shaw AFB, S.C.*



Here are a few thoughts from your new Chief of Safety for 9AF and USCENTAF. I recently "got off the boat" from Europe, and, after spending only a few days at 9AF HQ, I found myself at A-10 requalification school in "Cajun Land" — Barksdale AFB, Louisiana. As an aircrew member it's great to be back in the cockpit, and as a "Safety guy" it's good working again with both active Air Force and Guard and Reserve units, in the U.S. and in the desert area of responsibility (AOR).

First, a little background on yours truly. As a mature aviator (i.e., old guy) I have been around a while, having spent half of my career in Europe, Saudi, and Korea, respectively. I flew in DESERT STORM as a Weasel driver, worked as chief of plans in the air operations center (AOC) over Kosovo during ALLIED FORCE, saw many "300 ft and 1 mile" days in Germany, and "worked the language" with Korean forward air controllers. I also "pounded sand" for many months in Saudi and Turkey on those endless post-war peacekeeping missions only a few years ago.

When I met my new boss, Lt. Gen. Wald

(9AF/CC), he spoke with me about safety and how it fits into the mission that we have in the Air Force. In essence, he gave me the message you see at the top of this article. It struck me that if we follow that advice in the performance of our own particular jobs in the Air Force, we will undoubtedly save lives, equipment, money, and reduce personnel injuries both on and off duty. We've all heard those hackneyed expressions, "Fly Safe" or "Be Safe out there," from our supervisors or commanders and, for the most part, we all said "sure" and went about our business as we knew best. No one really "flies safe" or "is safe out there;" we really just do the right thing!

Think about it, whether you're wrench-bending on an F-16 or KC-135, stepping out the door on a Red Flag mission, or rebuilding an engine in the motor pool garage, none of you say to yourselves, "Hey, I'm going to do this safely today." What we really do is follow tech orders, air-to-air rules of engagement (ROE), or the shop manual, as we have been taught. It's as simple as following the rules or tech instructions for the task at hand, isn't it? Well, not really! First, as Clint Eastwood said

way back in the old days, "A man (woman) has to know his (her) limitations!" Following the TOs or the ROEs is a great first step IF we are qualified for the task. If we don't have currency or adequate training beforehand, then we are definitely putting other people, our equipment, and ourselves at risk. Hey, you're not really "doing the right thing" if it's been a really long time since you've flown that mission, or repaired that engine part without some kind of refresher review, are you? Whether you're just coming back from leave/temporary duty, changing from night to day shift, or whatever, make sure your boss knows your limitations for that day. We as supervisors must ensure that we don't place our folks on the line, in a position for which they are technically qualified, but not truly proficient.

Rule #1, concerning the following of TOs and rules, is **DON'T TAKE SHORTCUTS!** If the shortcut was a good idea, it would already be part of the TO or shop manual. Often it seems that your commander or boss wants everything done today, and that you've only got two hands to do a task that requires four. But "do the right thing," and follow the TOs and ROEs. If you don't, it will kill someone, sooner or later. I know it, and you know it. There isn't a senior commander out there that will "look the other way" and support not following TOs or ROEs. All of them would call a "knock-it-off" if one of their airmen said, "we are doing something dangerous or risky here." That's where we get the concept of operational risk management (ORM). We assess the risks of the job versus the payoff and make the tough decision of whether to "press on" or abort the mission.

How well we "do the right thing" is also affected by fatigue. We have all been there; just being plain dog-tired from too much work and not enough time off. You airmen in the AOR only know too well what I'm talking about. There you are in Saudi or a similar garden spot, working 12-hour shifts, six days a week, with temperatures in the 100s, doing the same tasks day in and day out. Even if there isn't going to be any let-up soon on these work conditions, you can still "do the right thing." Don't burn the candle at both ends. Sure, it's fun to party after a long day, but only getting a few hours sleep before having to report to work

the next day is going to be tough. Your "little gray cells" will not be functioning properly and your performance efficiency will be significantly reduced. Research has shown that your brain power will be reduced by 20 percent after having been awake for 20 hours consecutively, not to mention having worked during that time. I don't know about you, but I need all the gray cells I have every time I strap into a jet or climb behind the steering wheel. So take care of yourselves first. Get some sleep. You need it whether you think so or not. If you're one of those folks that brags about "getting by" on a few hours of sleep a night, you're wrong. Sooner or later, long-term fatigue will catch up with you and you'll start making mistakes. Supervisors must look out for unit fatigue and make the tough decision to "stand down" for a period of time, if necessary. Co-workers need to look out for their buddies and recognize signs of fatigue. Channeled attention, small mistakes, and slow-reaction times are some of the signs of fatigue. "Do the right thing;" stop the mission or task and reassess the risks of continuing.

You may be trying to follow the TOs or shop manuals, but when you're "dragging it," you may never notice that you just missed a step. That is usually the first link in the accident chain. Remember that the vast majority of accidents are a result of "operator error." In this day and age of not having enough people to do the job, and of being deployed all over the world for long periods of time, we are setting ourselves up for fatigue-related accidents every day. "Doing the right thing" is the **ONLY** way to complete the mission **AND** keep us all in one piece.

I've talked and talked about how safe operations will surely follow if you "do the right thing." It means following the instructions and doing the best job you can, even when the boss isn't looking! If your task and performance can withstand the scrutiny of a mishap investigation, then you can rest assured you have "done the right thing." I would like to leave you with one last thought. Ask yourself this, "If the commander was flying on my wing or working on my weapons reloading crew, would he/she approve of my work?" If you can honestly say yes to that question, you're **"DOING THE RIGHT THING."** ■

ORM & PRM

*By Col. Ted Thompson
12th Air Force Chief of Safety
Davis-Monthan AFB, Ariz.*



I have heard that Operational Risk Management (ORM) is a lot of different things. Everything from plain common sense, to a form of crew/cockpit resource management, to another program dressed up in safety clothes. The truth is that it is a little bit of the first two items, but it is, most definitely, not a program. The bottom line is that ORM is a decision-making process. It does not matter whether you are the Chief of Staff determining the priorities for the Air Force, a Joint Force Air Component Commander planning an air campaign to meet a commander-in-chief's theater objectives, a fighter pilot about to roll in on a line of tanks advancing toward friendly forces, an airlift crew about to start an approach into a strange airfield at night in marginal weather, a crew chief about to begin work getting his jet ready for a sortie, a finance technician auditing a travel voucher, a spouse putting the children in the car for a short trip to the base exchange, or an off-duty airman about to get in the water on a SCUBA diving trip — you have risks and benefits to assess and weigh. ORM is a process to help you do that, and it applies to virtually every decision you

make. Granted, not every decision has life or death consequences, but every decision has consequences, and ORM applies to help you sort through those. Each of us must consider what it is that we are trying to accomplish and the risks necessary to successfully accomplishing that task.

In the summer of 1996 I had just finished “jet camp” at Tyndall and was settling in as the new 53rd Wing Chief of Safety and flying operational test missions at Eglin AFB. My wing commander called me into his office and gave me the marching order to get the wing out front in implementing ORM. Fortunately, there were folks in the wing who knew what ORM was all about. We looked at our wing's operational test and evaluation planning process and determined it was a good candidate to begin applying the ORM process. Up to that time, the wing's test plans did not have a safety review until the plan was essentially complete, printed, and ready for the wing commander's signature of approval. A couple of test plans were rejected only a few days before the test start dates because the late safety review found unmitigated risks in the plan. Better late

than never for a safety review, but this was expensive, inefficient, and there had to be a better way.

To improve the review process, we gathered a group of wing folks and developed an extensive matrix of risk factors and controls for test project managers to consider as they worked through their planning process. We assigned a safety professional at the start of the planning process to help project managers work through the matrix. These matrices were a part of the 6-step ORM process to identify the hazards and consider controls and they produced a number, which we believed would provide a risk gauge for project managers and commanders to consider.

The first two test projects to which we applied this matrix were very different in nature. One was a test of the AIM-120C Advanced Medium Range Air-to-Air Missile (AMRAAM) involving live fire of missiles. The second test was essentially a computer simulation in field conditions involving new hardware and software to help locate and target theater ballistic missiles (TBM). The test involved piggybacking off of flying operations supporting a larger exercise and participation with elements from the AF, Navy, Army, and Marine Corps. One would expect the live missile test would be more risky. We were surprised when the matrix produced a higher number for the TBM test, making it apparently more risky, and we obviously were very interested in why that would occur. We found that the risks for the AMRAAM test were well understood, the test would follow well-known procedures, and there were many risk mitigation controls in place. The risks to people and equipment were well controlled and the major factor in mission success was the test item itself. The TBM test, on the other hand, had many variables for which we were unsure which proper risk mitigation controls would work. There were risks to mission success in using new software and hardware in a joint service environment. The new procedures in place to move information were untested. The beauty of our review process was that it was focused on mission accomplishment, not just on the potential to hurt people or break things.

The AF's 6-step process is a valuable tool for planning new missions, new tests, deployments, and other similar events where there were many risk factors and there is sufficient time to conduct an extensive analysis. The 6-step process does not work as well for routine tasks, such as normal flying operations, maintenance activities, security forces patrols, etc. There had to be a simpler way to apply ORM to these routine tasks. Several wing safety offices came up with simplified processes for their people to use on a daily basis. ACC/SE collated these simplified processes into the 3-step process referred to as ACT — Analyze risks, Consider solutions, and Take appropriate action. This is an excellent process that works well for individuals and organizations in analyzing routine tasks and non-routine tasks that must be accomplished quickly.

We do not see many mishaps involving problems with supervision, such as putting the wrong people on the job or lack of guidance to complete the task. Most mishaps are occurring as a result of breakdowns in accomplishing individual tasks. Our folks are taking shortcuts, not following technical orders explicitly, failing to take correct precautions, and making bad decisions. These breakdowns in risk management are avoidable. Occasionally, our folks underestimate the risk. Too often our folks know the risks, but overestimate their ability to control them. ORM is not a process to rule out accomplishing risky tasks or activities. It is a process to help us accomplish those tasks safely. We have to accept the responsibility to apply the process to all of our activities — to make good decisions.

There are times for individuals to use the 6-step process for their activities, such as setting up a vacation, particularly one involving risky activities such as SCUBA diving or hunting. We need to take the time to make sure we understand all the risks and our abilities to handle them. When time does not permit us to use the 6-step process, we need to apply the simplified ACT process. No matter which ORM process is used, we must apply risk management and ask ourselves how we would explain the consequences of our actions. Making good risk management decisions is the challenge for each of us. ■

Got Game?

*By Lt. Col. Peter Cipperly
Air Warfare Center Chief of Safety
Nellis AFB, Nev.*



It's great to be stationed in Vegas, but living here is nothing like being TDY here. The best flying in the world is here, but, of course, that doesn't come without a cost. To get the most out of it you have to come prepared to put in a lot. When you come to Las Vegas for Red Flag, Air Warrior, operational test support, Nuclear Weapons System Evaluation Program (WSEP), Joint Expeditionary Force Experiment (JEFX), Roving Sands, Weapons School support, or a unit guidance, apportionment and targeting (GAT) to put bombs on target, there is an extra ante required to play in the "big game." The combination of a fabulous threat array, dedicated adversaries, large open mountainous range, live weapons, and large force packaging instills a culture that demands personal performance. As the "bros" down in the squadron say, "when you go up-range, you'd better be sure to bring your gym

bag," because on the Nellis ranges everyone has game. While the major activities at Nellis are not competitions, coming to Nellis brings the pressure to ensure you, your unit, and your weapon system "look good in the shower." I want to take this opportunity to talk personally to you, the reader, about your responsibilities to be ready for deployed employment.

There is a lot of exciting flying here at Nellis. I want to focus on what you need to do to be ready to come out here and survive the challenges. The lessons we need to learn are not how to survive the "Ultimate Game," but how to survive the ultimate challenge — your next conflict. I want to challenge you, the new co-pilot, wingman, flight lead, weapon systems officer, person just off the staff, and every other position on the aviation team to take the responsibility to fill up your gym bag so you can take care of yourself and be a valuable member of the combat team.

There is an awful lot written about ORM and how we should be applying it to everything we do. As Chief of Safety for the Air Warfare Center, I encourage you to get people trained to make all those good "common sense" decisions utilizing any one of the various ORM models. We certainly use them at Nellis. Limiting Flags to two weeks for any one person is certainly an ORM decision. It is based on stressing you out and pumping you up to simulate those first 10 combat missions, but then not risking maintaining that level as the benefit has already been achieved. While there is a lot of motion on the ORM train about making wise decisions for your wing, group, squadron, or flight, we are much further away from organizing or putting out guidelines for what some are calling personal risk management (PRM). While it is at the early stages of development, I would like to add my two cents' worth on the subject. Some have already construed PRM to be about protecting yourself by treating oneself as an ORM microcosm, but my view is that PRM is evaluating one's personal responsibility in managing risk, whether it is for oneself, one's family, gang, or whatever group one might be associated with.

My first real lesson in taking that personal responsibility came as a young instructor flying RF-4s at a Maple Flag. Glad to be showing off our unique low altitude, high speed flying, some of the guys in the unit started an informal land speed competition. I was assigned to fly with one of the less experienced pilots and would not let him play those "reindeer games" since we were already having difficulty ingressing without getting unobserved front quarter intercepts. After five days of his whining, though, I finally gave in and said we could give a run for the roses, as long as we made it in and got our targets without getting

intercepted and lived by some fuel limits. We made a clean run through the target area and then put the big 270 on our nose and pushed across the northern border of the area in full after-burner. I was impressed, and after figuring we were probably safe from being run down, I looked inside from the swivel and saw us pushing past 1.2.

All of the sudden I realized that, as tactical an egress as it was, it was exceeding 720 indicated air speed (IAS), well above our 660 IAS centerline tank limit. I realized that we had set the unit record and did that thumb along the map pacing, and figured we must be approaching the limits of our excess fuel. Since I didn't want to get into a discussion on tape about figuring out we were cruising well above our limits, I threw out one of those big hint trial balloons and said, "how's the gas?" We were really communicating well; he said, "plenty." After another minute I just couldn't believe we hadn't hit our continuation fuel yet and asked again, "What is our fuel?" This time the answer was, "fine, coming out of burner now." Part of our fuel plan was that when we hit continuation fuel we would be pulling it back to 480 ground speed (GS), so I interpreted his call to mean that we were on continuation fuel (the old joke about what ASSume meant got very personal after that misinterpretation). I was getting mad at McDonnell Douglas for not putting a fuel gauge in the back of the F-4 once I looked at the map and realized how far west we had gotten.

Next thing I knew, I looked down and saw we were still doing 620 IAS. I knew we were well beyond the possibility of being at continuation fuel, so I asked for him to read me the fuel gauge. He responded with 3.8 (our bingo was 4.3). I immediately yelled break left and head 120 and climb. Unfortunately, we had a

6,000-foot ceiling and an old steam-driven inertial navigation system (INS), which was spinning the wheels about as fast as they could go, crossing all those longitude lines in the northern latitudes. The INS attitude and heading system went into total tumble as soon as we broke left, so we were unable to take advantage of any type of climb to try and match our max range requirements. We were too far north to be picked up by air traffic control (ATC) and, being a good NATO exercise, we were jammed on all of the tactical frequencies.

In between trying frequencies and looking for non-existent references amongst the trees of northern Canada, I started beating myself over the head for being so stupid as to put myself in such a position. I was already rehearsing my explanation to the wing commander of how we were simply idiots for dropping one of his jets in the Canadian woods. Then I realized we were still flying at 480 GS and hadn't climbed up to the bottom of the clouds. Of course, I asked what the *%#\$ we were doing at 480 knots and at 1,500 feet. The guy was a real wizard and told me he didn't want to be out of our block or get intercepted. I guess he thought it was going to be much better to be an actual fuel mort than a training kill.

I finally rose to accept some personal responsibility and told him to shut up, squawk emergency, and I took the jet. I slowed and climbed while not too sarcastically mentioning that getting intercepted would be the best thing that could happen to us so maybe we could get on their wing and get home. As soon as we climbed I got a good glint off Primrose Lake out on the horizon and, having cut off some of the distance from our planned egress point, we were able to recover the jet at the upper end of the gauge

tolerances.

Needless to say, that was the end of the land speed record competition. We later figured out that our super tactical egress dash toward the Yukon was 15 to 45 seconds of fuel burn from being a Class A mishap. While the squadron gave me a fuel can for a going away present, I really was fortunate to leave the squadron with an important lesson about personally taking responsibility for the cheap price of peeled paint on the radome.

While I was at Safety school, an aerospace psychologist got into a brief discussion of the effectiveness of crew resource management (CRM) training. His contention was that, as we look back at CRM labeled mishaps, we need to consider whether it was CRM training that was at issue or maybe it was our choice of crewmembers. It may be more of a "who works well with others" situation than a decision about a proper experience mix (obviously my experience was a little thin in creating optimum CRM on that Canadian Dash). Even worse, some of the aggressive attitudes that we purposely choose when selecting aircrew may themselves be inhibitors to effective CRM. In fact, we all have personality traits that work against us when it comes to working well with at least some others. I was crewed with someone I did not get along with personally and had failed to accept my responsibility. The key to PRM is that we must each look at ourselves honestly to accept all of our responsibilities, even when we get the honor of flying with people we may not get along with on a personal level. Additionally, as supervisors or flight leaders, we must demand that those people who work for us or are in our flight accept their responsibilities. Finally, we must demand from our peers and supervisors that they accept their responsibilities. Of all of these, the most

difficult is the honest evaluation of one's self to ensure you are accepting all of your responsibilities. You must remember that you haven't truly accepted your responsibilities until you act upon them. CRM will not work until each member of the flight or crew takes personal responsibility for his or her assigned roles and duties.

I was lucky. Before you deploy to Nellis or off to your next Air Expeditionary Force (AEF) commitment, you need to accept that personal responsibility. The complexity of our jets and missions today make it much easier to miss the small indicators that things are not going as planned. A few years ago, when we first tried to come to grips with how to implement ORM into operations, we started by applying it on the personal level. Some might remember the "Individual Readiness to Fly" program. Like many programs, it was good on intent and poor in development and execution. Asking people if they were ready to fly as one of the briefing items was obviously a lip service measure.

The idea of demanding that everyone make a personal evaluation prior to flying was good. The only other time I had seen people asked to evaluate their preparation was in a Standard & Evaluation Flight Examination (SEFE) brief. That question was not just asked to see if you had a good night's sleep. In reality, you were supposed to give any alibis before stepping for your check-ride. If you thought you had not been properly trained in your upgrade or not given enough proficiency or if poor scheduling had kept you from being able to effectively mission plan, then the SEFE could delay the check. We don't want people to accept the failures of the system. We can't forget to ask ourselves those same questions before every flight. We need to be asking the flight commander to put us

in for types of sorties we think we need work on. We need to look at weekly schedules and figure out what books we need to get into to prepare for upcoming flights. We need to start compartmentalizing our time when the schedule is up the day prior to ensure we put in the right effort for the sortie and focus on the mission, from mission planning through debrief, without undue interference from additional duties or family problems.

As our experience levels in the squadron continue to drop, we all have to step up to the plate and take responsibility to ensure safe and effective execution. This is very important for all the field-graders fresh off the staff, who aren't given the time to regain proficiency or get re-immersed into the books, yet are the bulk of the "experience" in our squadrons. There are numerous programs in place to take up all our "spare" time, such as Law of Armed Conflict (LOAC) or protecting the president briefings, our third "do you understand TRICARE brief," and a hundred other things like surveys, professional military education, and master's classes.

We need to figure out when we can spend time in the Dash 1 or Dash 34. We can't lose sight of the fact that knowing 3-1 and electronic warfare or early warning (EW) handbooks are what is going to save our lives.

Taking on your personal responsibility day-to-day and week-to-week is how you can step to a sortie and be "ready to fly." Remember that you have not accepted responsibility until you act. By being prepared for your day-to-day sorties at home you will be ready to deploy and employ, whether it's here at Nellis or your next contingency. I look forward to you all coming out to the Nellis ranges. Just be sure you act today to start filling up your "gym bag." ■

Prepare for the Worst

*By Lt. Col. Denny A. Peeples
1st Air Force Chief of Safety
Tyndall AFB, Fla.*



“Prepare for the worst thing that could happen and you’ll never be disappointed... you’ll always be ready for what Murphy may throw your way.” This was told to me in undergraduate pilot training by an old, not bold, fighter pilot (thank you Boudy), and I never forgot it. I took the advice to heart throughout my flying career (insert obligatory knock on wood) and always attempted to be prepared mentally for the worst thing that might happen in my jet.

Configuring the F-15E (or any plane) at night in the weather was somewhat disorienting. The landing light reflected off the surrounding clouds/fog, intensified the visual obscuration and hindered the search for the runway environment necessary to make a safe landing. I had played the “what if” game enough so that the one night in England when Murphy’s Law was heading my way and I “HAD TO LAND” on a minimum weather approach, I executed my “worst case” game plan. I requested that the approach/runway lights be turned up to their extremes and the tower controller keep his hand on the switch. I didn’t turn my landing light on until minimums, when I saw those bright lights through the night ground fog. I

turned my landing light on and then requested the tower controller to decrease the runway light intensity so I wouldn’t get disoriented when I actually touched down. It worked. Down safely. I never had any desire to do that again. I don’t recommend that technique for anyone else, but I was thankful that I was prepared mentally for the absolute worst scenario.

The philosophy naturally extended itself to driving, and I often thought about the “worst case” scenarios as I commuted daily to work. I read my share of serious car accidents that were caused by people falling asleep at the wheel, coming awake as the car departed the surface, overcorrecting, and rolling the car at high speed. Fortunately, I listened to my sage instructor and was prepared mentally many years later for my encounter with that exact situation. Driving up to Virginia from a family reunion in South Carolina, I guaranteed my wife, Susi, that I could handle the early morning departure so we would arrive in Northern Virginia outside of the rush hour.

I remember looking around our family van and seeing everyone dozing as the sun brightened the eastern sky. I promptly fell

asleep while roaring down I-95N at 75 mph, like Chevy Chase in National Lampoon's "Vacation." God bless the highway designers that put those rough strips near the edge of the shoulder. I woke up as our "Griswold family van" went four-wheeling. I experienced the terror as adrenaline kicked in and I realized my entire family was fast becoming a statistic. Somehow, though, my mental foreshadowing kicked in and I actually paused to remember the answer to my question, "What would I do?" I accepted the bone jarring off-road situation for a potato or two, let my thoughts go past the "Oh No !!!" stage, then slowly eased the van back onto the road surface. No overcorrecting, no rolling. Of course, I couldn't totally get away with the SNAFU, and in family lore my kids refer to this experience as "the time Daddy tried to kill us."

There were many things that I did wrong that day: not enough sleep, "push-home-itis," out of whack circadian rhythms, and poor personal risk management (PRM). Despite Murphy stalking us in my mistake-prone chain of events, being prepared mentally for the worst alternative was the key that saved me from a horrible crash. Learning from previous accidents and playing the scenario out in my mind prepared me to react somewhat rationally, despite adrenaline coursing through my veins.

My family was house-boating on Lake Powell, Arizona, and enjoying skiing (or for me, falling) in a private cove surrounded by spectacular towering cliffs. We had the cove to ourselves until another houseboat towed in a couple of jet skis. Susi was driving the boat and I was the safety observer, watching my sister-in-law, Lauren, ski. As fate would have it, just as she fell, the jet skis came roaring her way in order to jump the wake we had produced. They didn't see her in the water with her ski. Susi and I yelled and waved the ski flag at the teenagers and, as they looked at us, one ran right over her. Lauren, in her life vest, tried to dive below the jet skis and barely made it. She resurfaced hysterical and screaming, but not bloody. A lot of confusion and yelling instantaneously erupted in the once pristine canyon cove. I, in a fine fighter pilot "do-something-NOW-even-if-it-is-wrong

fashion," jumped into the lake to try to assist Lauren. Note to self: boats travel faster than swimmers. While Susi drove the boat over to Lauren to assist her I was left, literally, in her wake, 100 yards behind. I felt like an idiot, and added to the problems as Susi then had to come pick me up too. I was a BIG help in a time of crisis.







To make a bad safety story worse, there was no communication via radios or cell phones because of the canyon walls. Park rangers were more than an hour away via boat and, HAD the injuries been life threatening, we would have been in a very tough situation. Despite being a trained, experienced, safety professional, I simply wasn't prepared mentally for the worst possible situation. I was slapped in the face with the reality that I hadn't taken my "be prepared for the worst" philosophy to the next logical step of applying it to everyday situations, not just driving jets or cars.

I'm different today and, call me crazy, but don't call me unprepared. Personal risk management is the "buzzword du jour," and it isn't rocket science. I view risk management proactively as risk preparation, and it isn't difficult to implement in your day-to-day life, with everyone in the family participating. My kids actually enjoy our family games of "what if"? What if Mommy fell down the stairs, she's hurt, there's blood on the tile floor, and she can't talk to you. What do you do? Call 911, then the neighbors? What do you tell the nice person at 911? Phone number, address. What if an alarm wakes you up at night? First of all, wake up your brother, who will sleep through a smoke alarm blaring above his head, and then yell loudly for help, get out of the house, and meet by the mailbox. What if one of your friends falls in the pool? Yell for help; don't jump in to help. What if your sister bounces out of the boat and you are the only one who sees her? Man overboard drill. Point at her, keep her in sight and yell. What if you catch on fire? Stop, drop, and roll. The topics are endless and the discussions that flow are certainly thought-provoking and usually educational. The "what if" games help keep our safety juices flowing at home, and prepare my family mentally for the worst situations fate can throw our way. We're prepared. Are you? ■

Weapons Safety Stats

ACC Losses for FY 00

(1 Oct 99 - 1 Sep 00)

Number of Weapons Mishaps / Dollar Losses*			
	Class A	Class B	Class C
8 AF	None	None	
9 AF	None	None	None
12 AF	None	None	None
AWFC	\$20.8M 	\$4.3M  x 10	
TOTAL	2 / \$20.8M	10 / \$5.1M	3 / \$260K
Weapons Fatalities - None Nuclear Mishaps - None		* 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			



MONTHLY AWARDS

PILOT SAFETY AWARD OF DISTINCTION

Capt. Dieter E. Bareihs
79th Fighter Squadron, 20th Fighter Wing
Shaw AFB, S.C.



During a recent 2v2 flight lead upgrade sortie, Capt. Bareihs was flying as instructor and number two of a two-ship of F-16CJs, employing in the defensive counter air (DCA) role. While resetting their combat air patrol (CAP) between engagements, Capt. Bareihs' aircraft experienced an engine malfunction, resulting in an "auto-transfer" to the secondary (SEC) mode of engine operation. After a "knock-it-off" radio call, Capt. Bareihs and his wingmen began to work the emergency and recovery to the nearest suitable field. Once achieving a one-to-one glide ratio to the nearest airfield (IAW T.O. F-16CJ-1CL), Capt. Bareihs began to assess the engine problem to ascertain the condition of his aircraft. While modulating the power in a clean configuration, he noticed a slight binding in the throttle. As the jet responded to inputs, he

concluded that the engine was operating normally in the SEC mode. Once on final approach, Capt. Bareihs perceived that a problem still existed with engine operation.

With the landing gear down, the jet would not slow to a safe landing speed. This, coupled with uncorrelated engine instrument indications and engine response, confirmed abnormal engine operation in the secondary mode. Capt. Bareihs smartly discontinued the approach and maneuvered his jet to a "high key" position over the field in order to recover the aircraft in the event the engine ceased operating entirely. After manipulating the throttle in the full range of travel, Capt. Bareihs reported to his wingmen that he suspected a broken throttle linkage. When the GE-129 engine is operating abnormally following an "auto-transfer" to SEC, the emergency procedure calls for momentarily switching the engine control switch to SEC and then back to primary (PRI) in order to reset electronic control to the engine. When Capt. Bareihs accomplished this step, the engine immediately began responding correctly, but still with noticeable binding in the throttle housing.

Capt. Bareihs flew a flawless approach and landing to a field with no cables in a heavyweight aircraft with a serious engine malfunction. Once clear of the runway, Shaw AFB maintenance personnel confirmed the broken throttle linkage, shut down the aircraft, and terminated the emergency. Capt. Bareihs' situation highlights three areas with respect to aircraft emergencies: 1) Never rush to land before you or the aircraft are ready (a bad situation could become worse in a hurry); 2) Use all resources available — Capt. Bareihs had three other flight members to coordinate with and take inputs from; and, 3) always back up emergency actions by referring to the checklist. There is no substitute for systems knowledge and checklist discipline. Capt. Bareihs took a complex, non-standard emergency and made it simple and safe, thus saving a valuable Air Force combat asset and preventing possible loss of life.

AIRCREW SAFETY AWARD OF DISTINCTION

*Flt. Lt. Paul J. Simmons, Capt. Craig G. Hunnicutt, Maj. Steven E. Willis
333rd Fighter Squadron, 4th Fighter Wing
Seymour Johnson AFB, N.C.*



Lt. Simmons and Capt. Hunnicutt were conducting 2v2 intercepts off the coast of North Carolina as part of Lt. Simmons' formal course training in the F-15E Strike Eagle. They had terminated a successful engagement and were attempting to rejoin with lead when their aircraft started vibrating severely. Capt. Hunnicutt immediately directed a turn toward land and a reduction in power to slow the

aircraft. Both quickly assessed that the bottom half of the right rudder had departed the aircraft. Additionally, the right vertical stabilizer was fluctuating wildly, causing severe vibrations and questionable aircraft control. As the aircraft slowed through 350 knots indicated airspeed (KIAS), the vibration became so severe that Lt. Simmons increased power to maintain control. Both aircrew were concerned about a possible ejection over the ocean in windy conditions and with high waves. Lt. Simmons declared an emergency with air traffic control while Capt. Hunnicutt coordinated actions with the Seymour-Johnson supervisor of flying (SOF). He advised the SOF, Maj. Willis, that they would need clear airspace over land and a conference HOTEL procedure with the Boeing engineers in St. Louis. Maj. Willis quickly cleared the ECHO military operating area and connected with Boeing engineers. Lt. Simmons and Capt. Hunnicutt held in an unpopulated portion of the airspace and prepared for possible ejection. With Maj. Willis relaying instructions from the Boeing engineers in St. Louis, the aircrew ran the appropriate checklist procedures and found them to have no effect on the controllability of the aircraft. Slowing the aircraft enough to make a safe approach and landing became the primary concern. With all options exhausted and prepared for ejection, they followed the engineers' instructions and reduced airspeed. Slowing through 300 KIAS, the vertical stab flutter increased dramatically, severely damaging the entire aft end of the aircraft. At 260 KIAS, the flutter became manageable enough that the aircrew felt they could safely attempt an approach to land. Lt. Simmons flew a straight-in approach to a flawless landing. Post flight inspection revealed severe damage to the right vertical and right horizontal stabilizers due to excessive vibration. The right rudder was totally destroyed.

Lt. Simmons and Capt. Hunnicutt's superior airmanship and cool reaction in an extremely dangerous flight situation, coupled with Maj. Willis' superb coordination as SOF, prevented potential civilian death or destruction of property and averted the loss of an F-15E Strike Eagle valued at \$54 million.

UNIT SAFETY AWARD OF DISTINCTION

*5th Maintenance Squadron, 5th Munitions Combat AGE Team
Minot AFB, N.D.*



The 5th Bomb Wing's Munitions Support Squadron's Combat Aerospace Ground Equipment (AGE) Team (MUNS CAT) expertly maintains 24 nuclear certified MHU-196/M and 7 MHU-173/M munitions handling trailers (MHTs). The CAT is also responsible for the maintenance of 58 pieces of AGE supporting the weapons storage area's nuclear mission. The MUNS CAT is credited with expertly diagnosing a brake engagement problem on the MHU-196 MHT. The problem specifically involved the 196/M MHT brake system engagement lag time of 4-6 seconds after the operator commanded the trailer to stop. If gone undetected, the MHT may

have possibly experienced an uncommanded trailer movement, resulting in major equipment and weapons damage or serious personnel injury.

Upon this finding, the CAT leader promptly initiated "Dull Sword" safety reporting and immediately informed the HQ ACC Command AGE functional manager. He coordinated a next-day joint field team visit for technical and maintenance assistance from the depot's equipment specialist (ES), item manager (IM), and AGE liaison, as well as the 196/M MHT manufacturer. The MUNS CAT, along with depot technical representatives and the wing's Weapons Safety Office, determined the best approach to find a cause rested with the most recent technical order (TO) changes associated with the MHT air braking system. The MUNS CAT uncovered a change to TO 11N-5103-2, mandated more than 18 months ago, to convert from MIL 7808 compressor oil to MIL 7870 compressor oil during scheduled inspections.

The CAT gathered all pertinent physical evidence, to include unserviceable brake system parts and Sample Oil Analysis Program (SOAP) reports of the trailer's air compressor oil and tow vehicle air compressor oil. They discovered that an additional factor in this incident included a new SV22, air brake system solenoid valve. This valve was replaced on several trailers due to a previous 196/M-brake system incident. These replacement valves were from a new manufacturer. The MUNS CAT, in conjunction with the depot representatives, determined that the root cause of this incident was the fact that the rubber O-rings inside the new SV22 were incompatible with MIL 7870 oil. This incompatibility caused the rubber O-rings in the new SV22 to swell, resulting in a delayed brake engagement.

The wing's MUNS CAT was instrumental in composing and verifying the subsequent time compliance technical order (TCTO). They completed the labor-intensive TCTO, which consisted of completely flushing and cleaning all brake airlines, compressor motors, and re-installing the original compressor oil, MIL 7808. They accomplished this task in four and a half days on the wing's fleet of 24 trailers, which was five and a half days less than the standard of 10 days. Their MHT maintenance practices set the standard in ACC. This CAT's consistent lean forward, can-do attitude ensures that the Air Force inventory of nuclear certified munitions handling trailers remain operational, safe, and ready to use at a moment's notice to support our nation's nuclear deterrence.

CREW CHIEF SAFETY AWARD OF DISTINCTION

*Airman 1st Class Christopher J. Dow
336th Fighter Squadron, 4th Fighter Wing
Seymour Johnson AFB, N.C.*



Amn. Dow is assigned as assistant dedicated crew chief for day shift. His normal duties include, but are not limited to, aircraft preparation for flight, aircraft inspections, and required servicing for the squadron's normal daily flying schedule. Amn. Dow was assigned to work on aircraft 89-0231, which had recently returned from program depot maintenance (DEPOT). He prepared the aircraft for the first flight of the day by accomplishing a final walk-around inspection. During this inspection he went above and beyond normal procedures by detecting an improperly installed scissors link assembly bolt on the nose landing gear strut. The detection of the improperly installed bolt was a superb find by Amn. Dow. This bolt is a critical component of the landing gear assembly. If undetected, the bolt could have backed out and fell off, with possible ingestion into the aircraft engine, and causing the nose landing gear strut to collapse. Amn. Dow immediately notified the flight line expeditor and production superintendent after discovering this discrepancy. The following investigation revealed that no maintenance was performed on this assembly since returning to home station from DEPOT. His quick response gave the repair and reclamation technicians enough time to reinstall the bolt correctly, perform all operational checks, and return the aircraft to service in minimal time. His outstanding inspection techniques and unparalleled attention to detail averted a possible mishap and loss of life.

Reminder

***Annual awards time is just around the corner.
Don't miss your chance to be recognized.
Get your nominations in NOW!***

***Due Dates: USAF – 15 Nov
ACC – 1 Dec***

FLIGHT LINE SAFETY AWARD OF DISTINCTION

*Staff Sgt. Brian S. Adcock, Senior Airman Harold W. Armet,
and Airmen 1st Class Allen J. Brown and Kiela L. Kaniecki
77th Bomb Squadron, 28th Bomb Wing, Ellsworth AFB, S.D.*



Sgt. Adcock and Airmen Armet, Brown and Kaniecki were servicing oxygen on a B-1B loaded with MK-82 500-pound munitions parked on Spot 70 of the flight line. During the procedure, a rupture occurred inside the intensifier unit on the oxygen cart. The mixture of gaseous oxygen and nitrogen caused an eruption of flame and molten metal flying toward the aircraft. Without hesitation, Amn. Brown grabbed a 150-pound halon fire extinguisher to douse the flames. At the same time, Amn. Armet, who was in the cockpit, quickly shut off the servicing hose attached to the aircraft after hearing the explosion and seeing smoke.

Reacting quickly, Sgt. Adcock and Amn. Kaniecki immediately evacuated everyone from inside the aircraft and moved the oxygen cart. Once away from the aircraft, Sgt. Adcock depressurized the cart by shutting off the supply bottle and moved the entire crew to a safe distance. Using their common sense and what they were taught during ground safety training, the crew prevented a near catastrophe and saved two valuable Air Force assets — their aircraft and their lives.

GROUND SAFETY AWARD OF DISTINCTION

*2SG Timothy Chee Chung Gay
428th Fighter Squadron, 27th Fighter Wing
Cannon AFB, N.M.*



On 4 May 2000, 2SG Timothy Gay was performing a safety time compliance technical order (TCTO) 2J-F100229(III)-534 on aircraft 97-0118. The TCTO requires an inspection of the engine fourth-stage turbine air-sealing ring assembly. After performing the inspection on the air-sealing ring assembly, 2SG Gay proceeded to inspect the third-stage turbine rotor blades, a task not required by the TCTO. In the course of this additional inspection, he noticed a curl at the blade platform root area. Upon further investigation, 2SG Gay determined that the blade curl is not allowed by the technical order. If the defect had gone unnoticed, the third-stage rotor blade may have liberated, causing the engine turbine to disintegrate with potentially catastrophic results for a single-engine aircraft. 2SG Gay's professionalism and close attention to detail prevented a possible Class A mishap.

GROUND SAFETY AWARD OF THE QUARTER

*Tech. Sgt. Kenneth W. Heath
28th Supply Squadron, 28th Fighter Wing
Ellsworth AFB, S.D.*



Sgt. Heath has done an amazing job as the unit safety representative (USR) for the 162 men and women of the 28th Supply Squadron. He vastly improved a mediocre unit safety program, while managing a supply warehouse containing 812 avionics-unique line items worth \$10 million, and supervising two military personnel. Extensive computer skills and an innovative streak led Sgt. Heath to create a dazzling interactive safety Web page that contains links to a plethora of useful information about general safety concerns, recalls, pictures and videos of safety mishaps, and relevant safety publications and regulations. Weekly updates make the page interesting and current, and keep the entire squadron in tune with safety issues. His detailed "101 Critical Days of Summer" program was lauded by base Ground Safety officials as the benchmark for the wing. Recently, the site has focused on water safety, and the very real dangers that thunderstorms and tornadoes pose in the Black Hills region. He provides valuable information in a fun and easily accessible format.

Utilizing his remarkable computer knowledge, Sgt. Heath devised a simple database to replace the manual ACC Form 164, Mishap Reporting, which has been implemented wing-wide. Data entered via the computer is automatically forwarded for review and inputs, then sent to base Safety officials; no more tracking down the next person in line. His efforts decreased processing time from seven days to less than one day. The database also tracks seat belt survey results, and provides instant base-wide access to statistical data. Again, working to save the Air Force time, he coordinated with Air Force Materiel Command (AFMC) Safety personnel to obtain a copy of their computer-based supervisor safety training program, to replace the 3-hour long manual course that is now mandated. He is currently transfiguring it for review by the Ellsworth Safety Office and possible implementation ACC-wide.

Not one to rest, he developed a standardized training class. He conducts and documents this safety training for all flight and section safety representatives. His dedication to safety also led him to attend the ACC Ground Safety Program Management Course designed for 1SO safety personnel, where he earned an unbeatable 100 percent on the last test and received two Community College of the Air Force (CCAF) credits. Continually working with base Safety, he researched, inventoried, and coordinated with various units to remove a defective \$.90 O-ring from base stock. This defective O-ring was installed in B-1B fuel vent manifolds and subsequently caused fuel leaks that not only grounded the aircraft, but cost the Air Force \$86,000 to correct the problem.

Sgt. Heath was instrumental in Base Safety Day 2000, conducting seat belt checks, posting flyers, and inspecting squadron safety. He identified and corrected 21 safety violations, 18 of which were related to electrical safety. His efforts prevented potential fires and electrical shock injuries. Sgt. Heath's computer expertise, training classes, and outstanding relationship with base Safety have streamlined many processes, and improved overall safety in the 28th Supply Squadron and throughout the wing.

Ground Safety Award of the Quarter

Farewell to Our Fearless Reader...

Senior Editor Ron Smith

By The Combat Edge staff
HQ ACC Safety, Langley AFB, Va.

AU REVOIR

Integrity. Service before self. Excellence in all we do. Long before the Air Force penned these phrases as its core values, they were words that well described *The Combat Edge's* senior editor and chief of the publications branch — Mr. Ronald Smith.

The staff of *The Combat Edge* magazine now have the arduous task of saying goodbye to Mr. Smith, realizing that a mere “thank you” and fond “farewell” can in no way be sufficient to someone who has selflessly given more than 32 years of service.

Born in Boone, Iowa, and raised in Seattle, Washington, Ron started his graphics career with private industry. His tenure with Boeing Company, where he illustrated B-52 technical publications, was interrupted about midpoint by an active-duty tour in France with the U.S. Army. The highlight of this tour was when he met his wife, Claudette. Once back in the States, he soon found himself at Kennedy Space Center, Florida, engulfed in the excitement of the Apollo Space Program. Shortly after America made its cosmic first “small step for man,” Ron made his own giant leap into the Civil Service system, where he spent his initial five years working at the Pentagon in Air Staff and Plans Graphics. He and his family then moved to Langley AFB, where he spent the next 13 years “behind locked doors” as HQ Tactical Air Command’s Chief of Intelligence Graphics.

Ron’s career with the magazine started as the art director for *TAC ATTACK* in September 1990. When Tactical Air Command and Strategic Air Command consolidated in 1992 to form Air Combat Command, he spearheaded

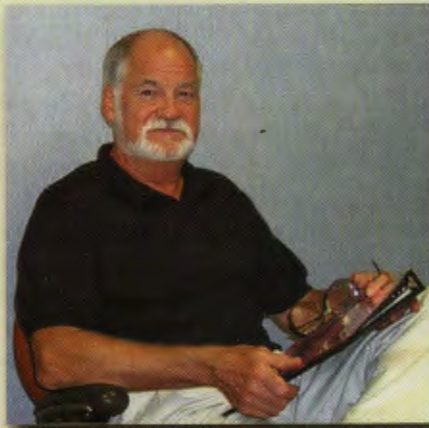
the launch of a new command mishap prevention publication, *The Combat Edge*. His outstanding artistic and creative ability, mastery of art media, and ability to manage and operate under pressure have shaped, molded and developed the magazine into today’s world-class, full-color publication.

In the midst of hectic deadlines, chaotic schedules, and contract negotiations, it has been Ron’s calming influence and imperturbable demeanor that kept us all on track. Ron has striven to provide something for everyone in each issue of *The Combat Edge* by selecting an appropriate variety of articles. These were appropriate to the dangers of each season, covered hot Air Force Safety issues, gave readers a real-world view of flight, ground

and weapons mishaps through numerous “there I was” articles, including lessons learned by their authors, introduced and explained new Safety programs and policies, and innumerable other aspects.

In addition to a long and exceptional career in the Civil Service, Ron also retired from the Air Force Reserves in 1997, where he worked as a French linguist/interrogator/debriefer for the 67th Intelligence Wing at Kelly AFB, Texas.

Though we know that we must find someone to fill Ron’s position at the magazine, we know that he, as a person, is irreplaceable. It is therefore with heavy hearts that we bid adieu to Ron and wish him and his wife, Claudette, a very happy, long awaited retirement. Bonne chance, et Dieu vous garde! (Good luck and Godspeed, for those of us who don’t speak French!) ■



Halloween Fire Safety

To protect children participating in Halloween activities from fire and burn injuries, experts at the non-profit National Fire Protection Association (NFPA) say to plan ahead. "Taking simple fire safety precautions, like making sure fabrics for costumes and decorative materials are flame resistant, can prevent fires," says Meri-K Appy, NFPA assistant vice president for public education. "Using candles greatly increases the chance of fire, so we encourage people to use flashlights to light pumpkins and for other spooky effects."

Decorations for special events, most often involving candles, account for an annual average of 800 home fires, causing nearly \$4 million in direct property damage, according to NFPA. Additionally, in the United States, more than 100 people die each year as a result of their clothing becoming ignited.

Halloween can be a fun celebration, but children should be closely supervised and their costumes made with fire safety in mind.

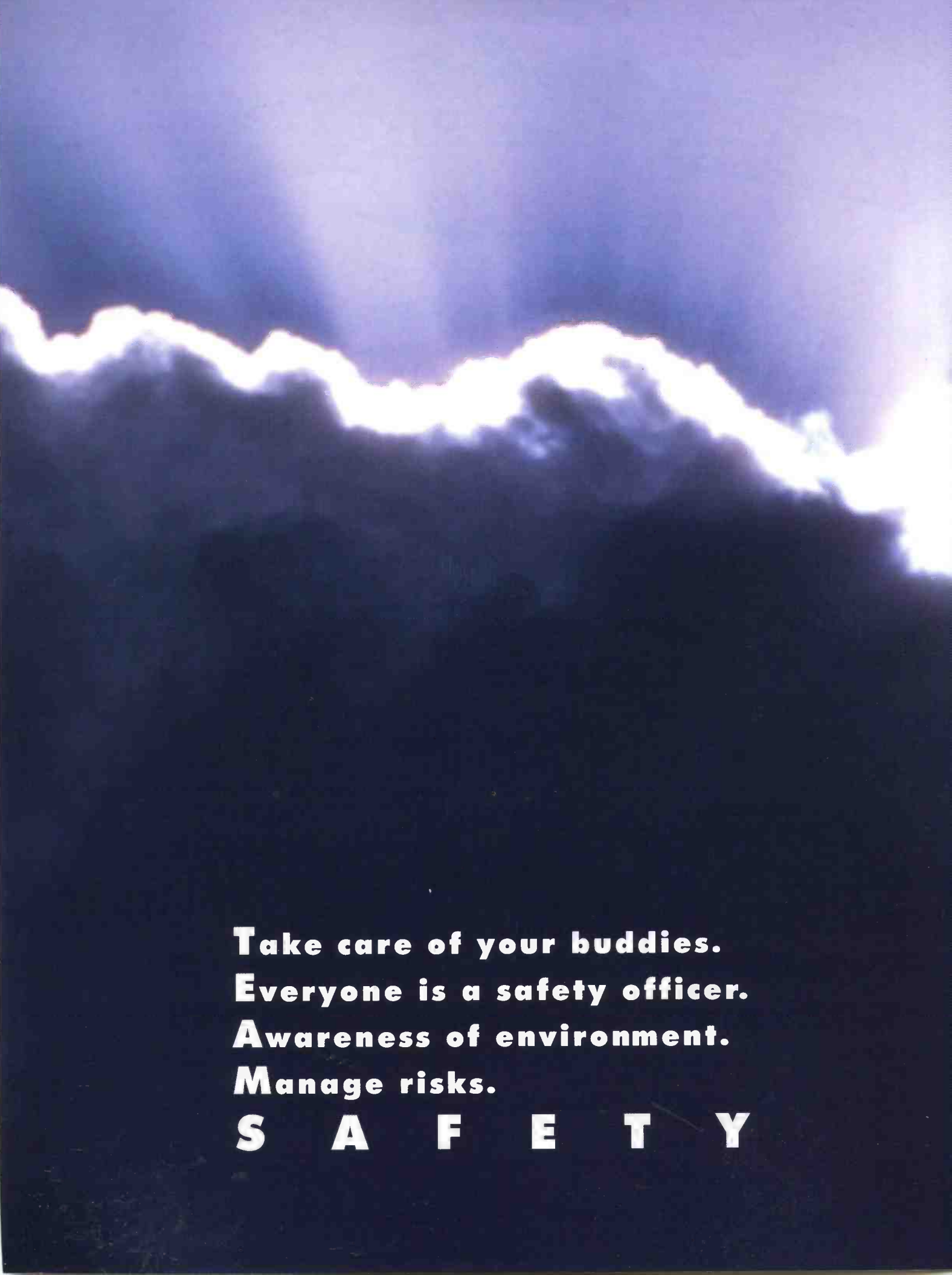


The NFPA suggests the following guidelines for a safer Halloween:

- Purchase only those costumes, wigs, and props labeled as flame resistant or retardant. When creating a costume, plan carefully to ensure that it won't easily ignite if it comes in contact with heat or flame. Costumes should be made without billowing or long trailing features that present a higher risk of ignition. Avoid highly flammable fabrics and accessories.
- When planning party decorations, bear in mind that dried flowers and cornstalks are highly flammable. Keep crepe paper and other decorations well away from all heat sources, including light bulbs, heaters, etc. Decorating with candles should be avoided. Pumpkins can be safely illuminated with small, inexpensive flashlights. When decorating, remember to keep exits clear. Be sure children are supervised at all times.
- With a little creativity, using flashlights instead of candles or torch lights to decorate walkways and yards is highly effective in creating a festive atmosphere, and it's much safer for trick-or-treaters.
- Instruct children to stay away from open flames or other heat sources. Be sure each child knows the **stop, drop, and roll** technique in the event their clothing catches fire. (Stop immediately, drop to the ground covering your face with your hands, and roll over and over to extinguish the flames.) Instruct children who are attending parties at others' homes to locate the exits and plan how they would get out in an emergency.
- Provide children with lightweight flashlights to carry for lighting or as part of their costume instead of candles.

"Planning ahead can help make this Halloween a fire-safe one," says Ms. Appy. For additional information on fire and burn prevention, contact your local fire department. ■

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National Fire Protection Association
Quincy MA 02269*



**Take care of your buddies.
Everyone is a safety officer.
Awareness of environment.
Manage risks.**

S A F E T Y