

THE

Air Mobility Command's Magazine

May/June 2003

MOBILITY FORUM

**Cultivating
the Safety
Culture**

**Buying
into Safety**

**2002
Weather
Awards**

**Safety Office
of the Year**



THE MOBILITY FORUM

May/June 2003

Volume 12 No. 3

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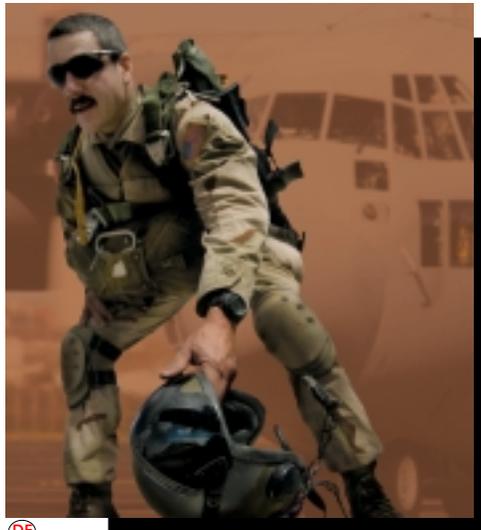
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About The Cover...



"That others may live", a pararescue man attached to the 410th Air Expeditionary Wing picks up his helmet before boarding a C-130 for a static jump from 800 feet on Friday, February 28, 2003 at an undisclosed location in support of Operation Enduring Freedom. Pararescue's mission is the recovery of downed aircrew members and/or isolated personnel. Using a C-130 to jump provides pararescue the fastest way to get to the distressed and provide them with medical attention, protection, and survival.

Original photo by SSgt. Jeremy Lock

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REGULAR FEATURES



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The reporting from Iraq continues to amaze the world audience. All US air mobility assets are fully engaged deploying our military forces, sustaining them, and accomplishing critical military missions. We are now operating from captured airfields. By the time you read this, I expect more Air Mobility records will be set.



Amazingly, we have accomplished these feats with quiet professionalism and an outstanding safety record. My hat's off to all the aircrew, maintainers, and support personnel who, day-in and day-out, accomplish their mission despite rough weather, frequent missile warnings, and other distractions.

We should guard against complacency as we continue this record-breaking work. Some people have noted the ORM assessment for their missions seem to consistently place their planned operation as high risk. One could conclude that ORM doesn't matter when we are in combat, as we're going to do the mission anyway. I see the problem in another light. The ORM high-risk assessment should lead to several key actions. The crew should explore ways to mitigate the risk and, working with supervision, re-validate the mission requirement in light of the risk.

One key aspect of operations in a high-risk environment is following the rules. In most cases, these rules were developed to reduce the risk of the operation. Breaking the rules or cutting corners always increases risk. A good analogy is speeding and rapid lane changes on an interstate highway. An individual may get to his or her destination slightly faster, but these actions increase the risk to both the speeder and vehicles near the speeder. There are similar actions in mobility operations. Familiarity with a task or an area of operations may lead to too rapid checklist review, critical missed steps and sometimes a mishap.

We in Air Mobility Command have worked hard to fend off complacency. Our attention to detail and professionalism have quietly broken record after record for sustained global mobility. As we prepare to redeploy the force home, we need to keep our focus. When an operation is risky, communicate with your supervision. If the risk is justified and accepted, pay extra special attention to the details and don't add more risk to the mission by skirting the rules.

And always, be safe out there.

Col Bean

Error Management and the Reduction of Approach and Landing Accidents

By: Maj H. Scott Spindler
HQ AMC/SEF

Military and commercial air operations share a common threat. The approach and landing phase of flight is one of the most hazardous segments of every sortie. In 1996, the United Kingdom's Accident Analysis Group reviewed 621 fatal accidents that occurred between 1980 and early 1996. Of these 621 fatal accidents, 287 events occurred in the approach and landing phase. More alarming is the potential growth rate seen in these 287 accidents. From 1980 to 1988, there were approximately 12 accidents each year, but from 1989 through 1996 the rate increased to nearly 17 accidents annually. Tragically, these 287 accidents accounted for nearly 7,200 deaths, increasing 6% each year. If these trends continue, Western built and operated turbojet and turboprop companies can expect 23 Approach and Landing Accidents (ALA) in the year 2010, claiming 495 lives. (Flight Safety Digest, 1998, p. 12).

Obviously, these statistics do not include military operations, but the threat is just as great. Although recently there have been no deaths associated with AMC operations in the approach and landing

phase, the C-17 has been involved in several incidents in recent years. Smaller aircraft are just as susceptible. Last year, AMC lost a C-21A aircraft and two crewmembers during a training sortie at Ellsworth AFB SD, while conducting approach training. The threat is real, ominous and can't be overlooked. An extreme and sustained operations tempo to austere locations, often at night and in marginal weather, is a basic element common to some AMC sorties. The ALA threat increases when considering combat operations, mission pressures and other pressing issues AMC crews face while "hacking" the mission.

Using effective error management principles is key to reducing risk and preventing approach and landing accidents. In the 287 fatal accidents mentioned earlier, there were causal factors (events instrumental in the mishap chain of events that led to the accident), which could have been averted had error management practices been properly implemented. Human errors are typically associated with mishap causal factors. While it would be ideal to demand error-free operational performance, this isn't realistic; after all, "to err is human." Typically, where humans and

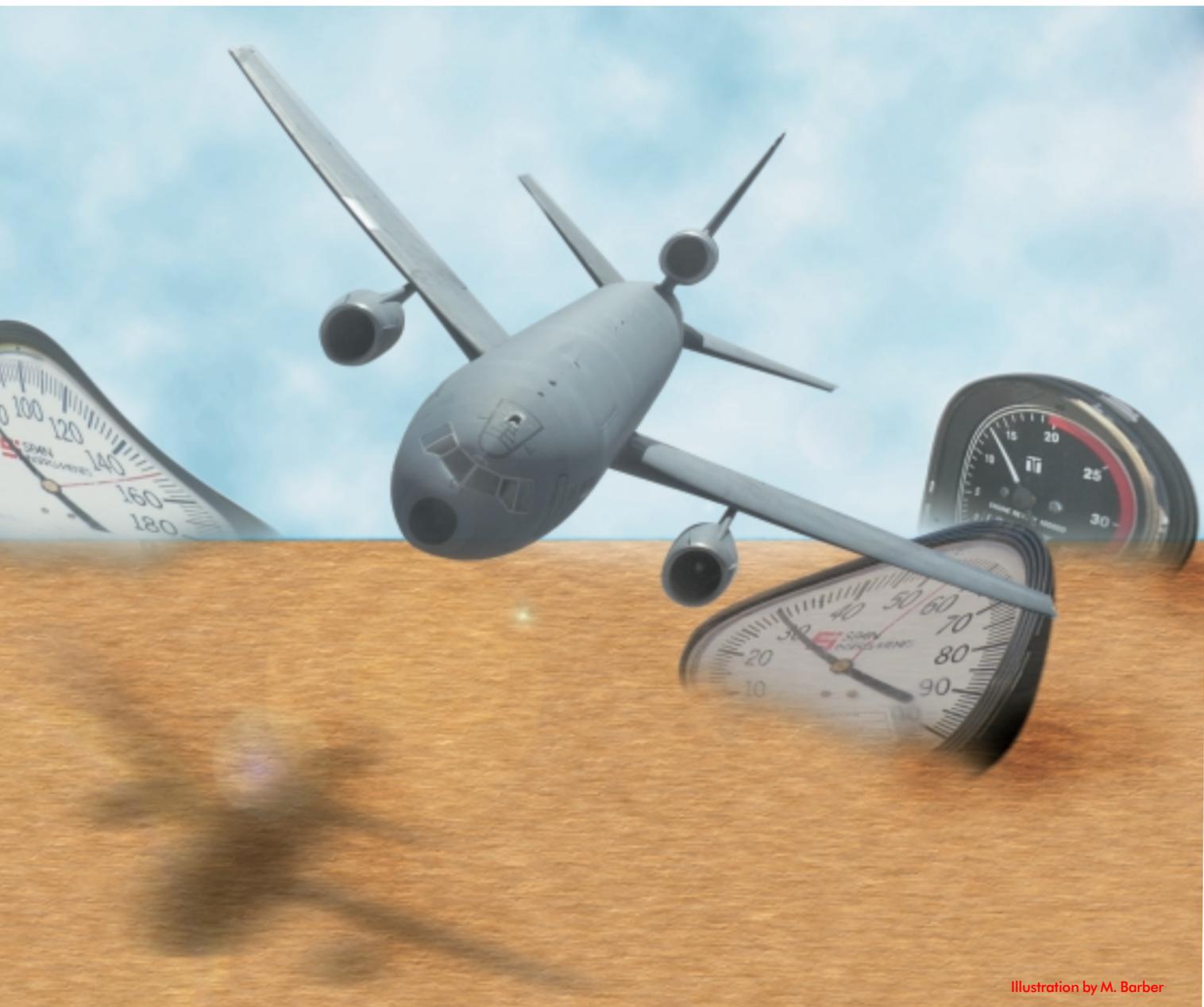


Illustration by M. Barber

technology closely interface, errors are a common by-product.

Understanding and accepting that errors will occur, it is critical for the aviation team to effectively manage these errors in order to overcome the ALA menace. This is done by improving technology, developing relevant training processes, and executing missions using clear and relevant Standard Operating Procedures (SOP). This focused approach is typically directed toward improving the performance of front-line personnel—pilots, maintenance technicians, ramp crews, and air traffic controllers. “Error management strategies increase system tolerance to errors and help make errors evident before they cause damage”

(Flight Safety Digest, 1999, p. 21).

Error management can be visualized as a multi-layered protective barrier system where each layer is designed to help trap mistakes and avoid damaging error consequences. The more protective layers built into a process, the more likely the process will function safely even when errors are introduced. Figure 1 depicts a typical multi-layered protective system common to all AMC flight operations (the order the barriers are listed is immaterial). Potential limitations present at any given time during a sortie, to include the approach and landing phase, are listed above each barrier. Needless to say, this is not an all-inclusive list and limitations will change depending

on the task at hand. The size of the hole in the barrier represents the cumulative effect of the limitations listed above the barrier. A barrier with more limitations has a larger hole, making it more likely an error could slip through the barrier.

Once errors occur, an effective multi-layered system will ultimately trap or deflect the error as shown in Figure 2. Errors may penetrate one or two layers, but a sound protective system will eventually trap the error before it breaks through the entire system.

Experienced crewmembers and effective crews don’t try to avoid committing errors at all cost, but they do attempt to monitor and control the important errors in priority

order. These crews are skilled at distinguishing between consequential errors and benign ones, balancing attention and alertness, vigilance and workload, automation and hands-on proficiency.

A close examination of the individual layers illustrated in Figures 1 and 2 shows two “Personal Readiness” barriers. Adding supplementary layers to the process improves safety. In this case, the extra barrier represents an additional crewmember. One of the most important characteristics to remember concerning human error is that once a person commits an error, it is unlikely that person will catch (trap) their mistake; other crewmembers are more likely to catch the error. “Therefore, redundancy in the cockpit is a strong defense to ensure errors are trapped” (“Flight Safety Foundation News”, 1999). For AMC operations, adding a third pilot to a two-pilot crew improves flight deck redundancy. In this case, redundancy is a helpful by-product of overcoming extended duty day mission requirements.

Sandwiching Crew Resource Management (CRM) between the Personal Readiness barriers is an important element in the error management process and is critical to the balancing act mentioned earlier. In order to get the most from the flight crew team, the aircraft commander must effectively develop an environment

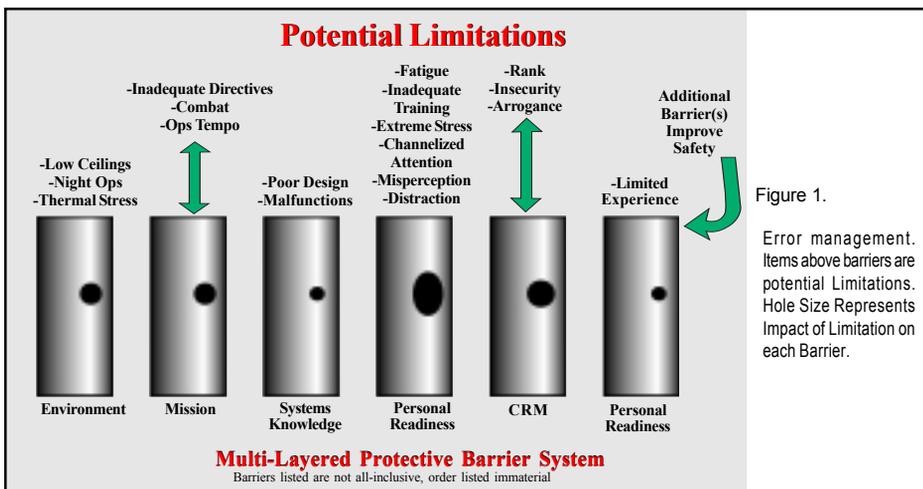


Figure 2.

Error Management. Effective Multi-Layered Protective Barrier System

its critical elements, contains a compromised multi-layered system where the hole in each layer grows large enough to weaken it, providing an unfettered path for the mistake to pass through as seen in Figure 3.

A Southwest Airlines landing accident at Burbank CA in March 2000 is a good example of error management gone awry. An accident recap from Professional Pilot magazine (Dec 2002) summarized the mishap sequence. The Boeing 737-300 departed Las Vegas more than 2 hours behind schedule (**mission**). Approaching Burbank, the crew obtained the ATIS, which reported winds 260 degrees at 18, gusting to 26 kts. The crew planned and briefed the arrival to runway 33, but 8 minutes from

fast, and then was handed off to tower for the visual approach (**error**). The crew used speed brakes to slow the aircraft and attempted to establish proper landing configuration. The first officer (FO) recognized a higher than normal ground speed but did not voice his concern to the captain (**CRM**). At 180 kts, the captain called for landing flaps but the aircraft was 22 kts above the landing flap speed so the FO did not extend the flaps beyond 30 degrees (**systems knowledge / application**). A 20-knot tailwind combined with poor radar vectors prevented the crew from establishing the proper landing configuration until after touchdown (**environment**).

The captain remembered hearing the GPWS sink rate alerter but did not feel the need to take action (**personal readiness, captain**). Company SOPs required the crew to make altitude, airspeed, and sink rate calls passing 1000’ AGL, and radio altimeter calls at 100 ft intervals starting at 500 ft AGL, but the CVR did not record any altitude reports during the final approach (**personal readiness, FO / CRM**).

The aircraft touched down at 182 kts with the flaps at 30 degrees. Landing flaps were set when the airspeed reached 145 kts and thrust reversers deployed 5 seconds after touchdown (**personal readiness, captain / FO**). The aircraft penetrated a blast fence and airport perimeter wall then came to a stop near a gas station. All passengers and crew successfully egressed the aircraft.

The National Transportation Safety Board (NTSB) “determined the average flight path angle was 7 degrees from 3,000 ft until flare, an average vertical speed of 2,200 fpm and speeds between 200 and 182 kts. The landing flare began at 170 ft AGL and lasted 9 second before touchdown at 182 kts.

conductive to optimum crew performance. Sound CRM optimizes crew performance and ineffective CRM degrades it, weakening the entire protective barrier system.

Accidents occur when all the protective barriers are compromised, allowing an error to penetrate the entire system unchecked. Every mishap sequence, if broken down into

landing, the crew received information “Papa,” which reported surface winds at 6 kts. Air Traffic Control (ATC) directed the crew to expect the ILS to Rwy 8 (6,072 ft available) (**mission**).

During vectors to final, ATC instructed the crew to maintain 230 kts or greater for sequencing. The aircraft was kept high and

Average ground speed was 195 kts, and the aircraft traveled 3,000 ft during the flare, touching down 2,150 ft beyond the threshold” (Professional Pilot, 2002, p. 24).

The NTSB concluded the “probable cause was the crew’s excessive airspeed and flight path angle during the approach and landing and their failure to abort the approach when stabilized approach criteria were not met.... The NTSB [also] concluded the [ATC] positioned the airplane too high, too fast and too close to the runway threshold” (Professional Pilot, 2002, p 24).

Obviously, there were several things working against the crew as they approached for landing. Ultimately, every layer within the protective system was compromised. Air Traffic Control’s poor vector to final, putting the aircraft high, fast and close to the runway was the error that set the mishap sequence in motion as depicted in Figure 4.

For this article, limitations were subjectively placed above each barriers and their placement could be debated extensively. Where the limitations are listed is not the point. The diagrams and accident analysis emphasize potential consequences from the cumulative effects of bad decisions, poor performance and inherent risks associated with “normal” operations.

There are many ways to manage errors. US Airways developed the “ABCs of Error Management” to help their personnel remember and use error management principles in all company activities (Sumwalt, 2002).

1. “A” stands for “Acknowledge.”

Acknowledge that humans are error prone and some activities are more conducive to errors than others. It is important to use ORM tools to identify risky events and take appropriate actions, which reduce error potential to an acceptable level.

2. “B” represents “Barriers.”

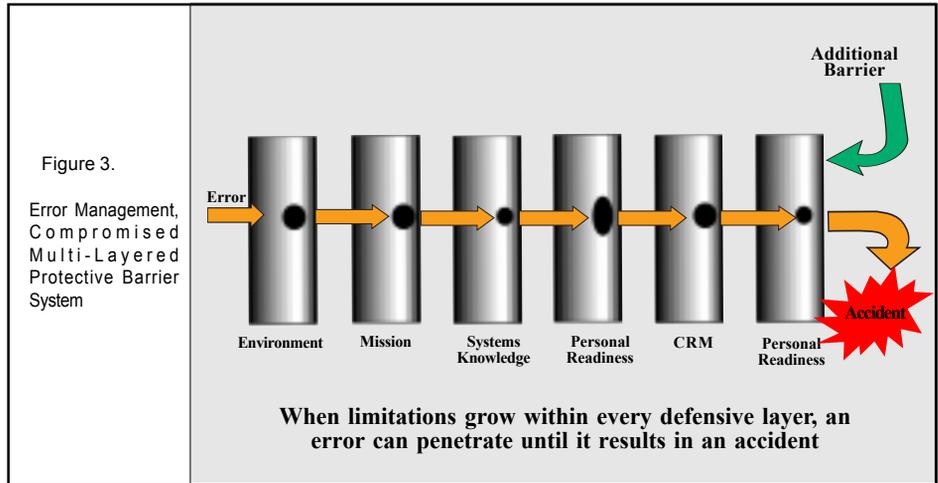
Personnel must build in redundancies and tailor activities to effectively manage workload.

3. “C” is for “Communication.”

It is important to discuss the known risks as well as to establish an action plan for the unexpected.

4. The first “s” represents “SOPs.”

Simply put, know and follow the rules. SPINs, ACOs, flight manuals and Major Weapons

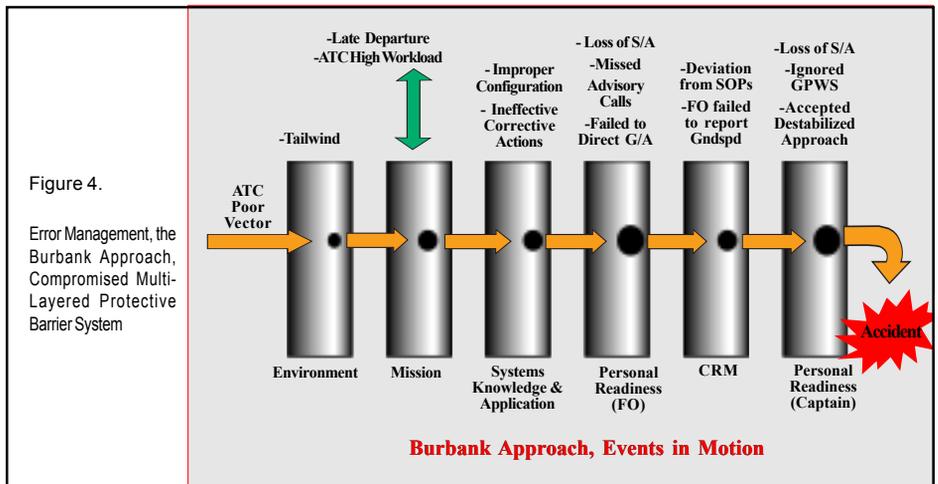


System operating instructions are designed to keep Air Force assets safe. Proper internal and external crew coordination is essential when deviating from these directives.

5. The second “s” stands for “Sensible.” Most crew mistakes that lead to accidents involve poorly thought out actions.

The key to effective error management is application—build several protective layers into every process and ensure each

layer is as strong as possible. Obviously, there are no perfect barriers; given the right circumstances any protective layer can be penetrated. Everyone involved in the Mobility mission should apply these methods to ensure operations are conducted safely and effectively. Many safety reports are tragically humorous; after all, “you can’t fix stupid.” We can’t afford to be stupid; we must be sensible. Follow the “ABCs;” employ effective error management and be safe.



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101 Critical Days of **SUMMER**

The Choice is Yours!

By P.S. Harris



If you had the chance to save the life of your buddy by turning down a few extra beers at a party, would you?

If you had the chance to save your child by taking just 15 extra minutes before leaving for vacation, would you do it?

If you had the chance to save your own life by postponing that phone call just ten minutes, would the trade seem a bargain?

“Of course,” you say with certainty. “Anyone would!”

Yet each summer, someone neglects to take an extra 15 minutes to make certain they have the proper safety equipment (flotation devices, first aid kit, sun screen, sunglasses, etc.), and review safety rules with their family before leaving on summer vacation. Each summer, someone allows themselves or others to drink excessively at summer parties and then attempts to drive home. Each summer, someone gets distracted while driving by making a cell phone call, which could easily be postponed. And each summer, someone decides the speed limit doesn’t apply to him or her and drives faster than the vehicle or the oncoming driver can handle.

Each year the period from the first weekend before Memorial Day through Labor Day is designated as the “101 Critical Days of Summer” and safety campaigns are launched throughout the Air Force. The

“Critical Days” campaign began in the early 1970s as a way to reduce the large number of Air Force off-duty fatalities in the summer months. The campaign was largely successful in the 1990s. Air Force statistics show that fatalities in off-duty mishaps in 1999 had been reduced to 15, down from 46 in 1988. However, the number began to rise again in 2000 and was back up to 28 in 2002. The greatest number of mishaps involves motor vehicle use. Thirteen of the nineteen fatalities in 2000 were related to private motor vehicles. The vast majority of those motor vehicle accidents are related to “human factors.” In other words, they were preventable. The second biggest killer, according to the Air Force, was open water mishaps. Nine Air Force members died in drowning incidents in fiscal year 1998. Again, most of those accidents were preventable.

Why, with all of the safety information available today, do off-duty accidents still continue to occur every summer? For most of us, the reason may be because we simply don’t believe that the accidents will happen to us...that the child that dies while swimming will not be our child...that the friend that dies while driving drunk will not be our friend because OUR friend can handle the drinking...and that the one little phone call will not hurt because we have always been able to handle driving distractions. Yet each time we do any of these activities without taking safety precautions, we increase the chances that next time it WILL be OUR child, OUR friend, or ourselves.

This year, remember that safety is a personal responsibility. It is up to YOU to take responsibility for the safety of your family, your friends and yourself.

This year, when you and your family drive, make it your responsibility to:

- Slow down! It is better to arrive late than not to arrive at all!
- Buckle up! Wearing seat belts is one of the best things you can do to ensure the safety of your family.
- Pay attention! You have a much better chance of avoiding an accident if you can anticipate problems in time to take action.
- Look carefully for oncoming traffic when pulling into a street from an alley, street or driveway.

- Check for traffic in the passing lane before pulling out to pass.
- Look back for oncoming cars before pulling out of a parking space.
- Take proper evasive action. Don’t pump the brakes of an ABS system. Don’t over-correct steering when attempting to avoid an accident.
- Make sure there are no distractions when you drive. Pull to the side of the road to make a cell phone call or to find and change tapes, cds or radio stations.
- Make sure you don’t assume the other driver knows what you are doing or what he himself is doing.

This year, when you and your family head for the water, make it your responsibility to:

- Make sure neither you nor a family member swims alone. Always make sure you swim with a buddy and swim in a controlled area that is monitored by a lifeguard.
- Check the water before diving for other swimmers or hidden obstacles
- Know your swimming ability and that of your family. Don’t swim in waters that have a current that is stronger than your ability to swim. If in doubt, don’t swim in the area!
- Use the 50-50-50 rule. You have a 50% chance of swimming fifty yards in 50 degree water.
- Check the weather if you are boating and remain alert for changing weather conditions.

- Always have one personal flotation device for each person on your boat...and wear it!
- Make sure your boat is not overloaded. Know the limitations of your boat!
- Make sure you have the proper safety equipment aboard, including a fully-stocked first aid kit.
- Attend a Coast Guard-approved boater safety course and follow the rules you learn.
- Always let a responsible person know where you are going and when you will return.



Whatever activity you undertake this summer, remember it is your responsibility to keep yourself and your family safe. This summer, think about what you could lose - the life of a member of your family, the life of a friend or your own life. **It is your choice!**

This year, if your family is going out of town on vacation and you are planning to stay at a motel or hotel, make it your responsibility to:

- Not travel into unfamiliar areas alone, especially at night.
- Make sure your motel or hotel has a sprinkler system.
- Stay in a hotel room near exits on the lower floors.
- Make sure you stay in a room which has windows that open and lock and doors that have deadbolt locks and peepholes which allow you to verify visitors before you open a door.
- Know the fire escape route.
- Enter by the entrance that has the best lighting (usually the main lobby).

3rd Place Photo

SMSgt Joseph Ricco
"News from Home"
Category: Military Life



Contest Winners



"Armed and Dangerous"
MSgt Jerrard Mack
Category: Recreation

"Water Break"
SSgt Jason Schaap
Category: Aircraft



22 Air Refueling Wing Awarded Safety Office of the Year

by Moira K. Wiley





The team at the 22nd Air Refueling Wing Safety Office at McConnell Air Force Base, Kansas, works diligently every year at safety. Their hard work has paid off with another nod as Air Mobility Command's Safety Office of the Year for 2002; the unit also received the prestigious award in 2000. What's the secret of their success? Teamwork!

"I've been blessed with some really talented people and it has made my job a whole lot easier," said Bernice Padilla, McConnell AFB's Chief of Ground/Weapons Safety. "There's always such a team effort here at McConnell. We all try to help each other out the best that we can in every area and we always work together as a team in the office. If someone is short some people and there's something that we can do, then we do it for them. Even though we may not be an expert in the other person's field, if we know when someone's gone, then we just try to pick up those duties the best we can."

"I think our success can really be attributed to an outstanding team effort," she said, "along with having really good support from our Wing Commander and all of the other commanders here. They all support the safety program very well. We have their backing and we know we can go forward with things that need to be done and we're going to get their okay and their help. That's a big plus and again makes our job so much easier."

The unit's safety focus fully supports all National Defense objectives at home and abroad with 57 KC-135 stratotankers, incorporating active duty, associate reserve and Singaporean detachment crew forces. With a base community consisting of over 10,000 military and civilian personnel and families, "Team McConnell" is dedicated to distinguishing their base as one of the safest in the world. Rated as the best based on their Flight, Ground and Weapons Safety Programs and their rock solid Operational Risk Management (ORM) Program, the unit was successful once again in receiving some well-deserved recognition.

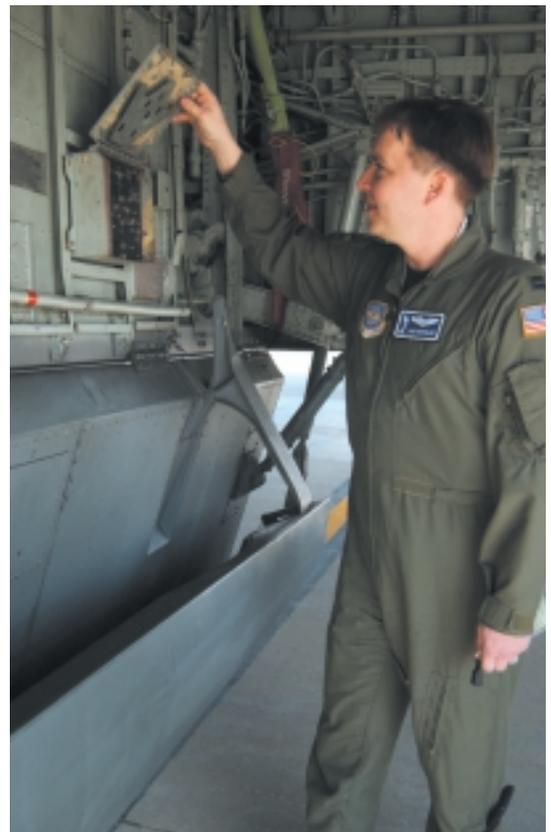
Part of the reason McConnell was nominated for the 2002 Safety Office of the Year award was their outstanding safety record with no Class A flight mishaps the entire year; something they've also managed to accomplish throughout the unit's eight-year history. Padilla believes that teamwork and their ORM program helped them reach this admirable level.

"Again, I think you'd have to look at the very good safety program that exists in all the flying squadrons," Padilla said, concerning their safety record. "We have four flying squadrons here, they all use ORM and I think that

this combination of a strong safety program and good flight safety officers who work with the squadrons really contributed to this record. I think all of this, together with how they keep the safety issue flowing all the time, worked to help us attain that."

McConnell's ORM program also made a big impact on their winning AMC's Safety Office of the Year in 2000. The unit has continued to use ORM in every aspect of their operations and they continue to make improvements upon their program each year. The program "gets people to stop and think about what they are doing before they do it, thus avoiding accidents." The proactive program has been implemented so that each person is what the unit's leaders call "ORM oriented," and it affects everything they do.

The unit's personnel are encouraged to use ORM both on and off duty with complete Commander involvement and support of the program. The ORM program was essential in the creation of an in-depth Squadron Commander's Guide to Safety Leadership and ORM; and was the cornerstone of the unit's successful base air show and open house,



with an attendance of 120,000. Risk management techniques were used in planning for crowd/traffic flow, parking of vehicles and aircraft and for security measures during the event.

Another program that made an impact, both in the 2000 and 2002, was an OSHA specific program called the Confined Space Program.

“We just completely revamped the Confined Space Program again and brought it up to a much higher standard,” said Padilla. “I’m very proud of that. Much of the credit for this outstanding program goes to MSgt Nolan Rayne who is currently assigned to another installation.”

This program was specifically cited as part of the reason the unit was nominated for the 2002 award. The Confined Space Program Team not only totally revamped the program, they also implemented structured lesson plans and detailed master entry permits that far exceed the requirements of AFOSH Std 91-25. With 1,418 identified spaces, the program saves lives on every entry.

The team continued its excellent Ground Safety record, completing the year with no Class A on-duty ground mishaps. A 50% reduction in Class C on-duty mishaps, no reportable civilian injuries, an 18% reduction in Class C off-duty mishaps and no



reportable Air Force vehicle mishaps with 419 vehicles and over one million miles traveled safely are examples of the unit’s stellar year.

In addition to the Confined Space program, there are many other programs the base actively participates in annually, including their seat belt program and DUI

prevention, affecting people on and off-duty. Other OSHA specific programs such as the lock out/tag out program deals with anyone working with energized and non-energized electricity and the importance of wearing protective equipment when they should.

“We have a strong seat belt program,” said Padilla. “We really keep tabs on that. The Wing Commander [Col. Michelle Johnson] is a big supporter of that program; she believes in seat belts. It’s one of her programs, but it’s been a program here for many, many years.”

The unit spearheaded an aggressive seat belt program in 2002. The team conducted monthly seat belt checks—the core of trend analysis that defines the program’s success—garnering a total of 2,924 private motor vehicles and 325 government vehicles spot checked. The results were used as one of twelve primary metrics (100% required) determining whether the base populace earns a monthly “Goal Day.” With over 27,000 registered vehicles on base, they have a 99.8% usage rate.

“We also have our 101 Critical Days of Summer and the 40 Festive Days programs,” Padilla said. “The 40 Festive Days program is a big program that deals completely with holiday safety. It starts with the Thanksgiving holiday and runs through Christmas and New Year’s Day.”

In regards to the 101 Critical Days of Summer, McConnell orchestrated a highly successful mishap prevention campaign for 2002, customizing safety briefings taken to each unit—focused on PMV fatalities—with a targeted age of 18-26. They also created and distributed a defensive driving presentation to all units, which was mandatory for all personnel. The results were “superb,” according to their nomination sheet, with no Class A/B mishaps and a reduction of Class C mishaps by 14% over the previous year.

Their illustrious Ground Safety program is evenly matched with their Flight Safety program, with a number of its own successful programs and different elements to deal with such as weather.

“Here in Kansas, we have different kinds of weather throughout the year, so we have a strong Weather Safety program,” Padilla



said. “Because we are subject to tornadoes, pretty severe thunderstorms, lightning and snow and ice in the wintertime, it’s completely a seasonal thing. Our seasonal campaign really helps us key in on these issues.”

These weather issues can dramatically affect what the flight crews do, but the weather didn’t stop them from racking up a record breaking 21,268 hours on CONUS/OCONUS missions flown by their wing aircraft. Team McConnell was also a key participant in multiple missions in diverse worldwide locations, “epitomizing Global Reach missions on operational deployments,” including Operations SOUTHERN and NORTHERN WATCH. During the award period, the 22nd Air Refueling Wing’s aircraft off-loaded over 50 million pounds of fuel to multinational receiver aircraft, transported over 6,400 passengers, and safely delivered over 1,800 short-tons of cargo all around the world.

Another aggressive Flight Safety program, their Mid-Air Collision Avoidance (MACA) Program, is designed to educate the civilian pilot population in an extremely dense air traffic environment. With 50 airports within a 30-mile radius of McConnell, they were one of the first AMC units to publish the MACA pamphlet on the Internet. This enables local civilian

airports and pilots to have access to detailed information daily, to be kept abreast of the latest changes and to avoid HATRs. McConnell's MACA Program has been an important one for the unit for some time. The unit was recognized during the year 2000 for coordinating with the local community to assist in a revision of the Wichita Area MACA Pamphlet, detailing military aircraft operations, associated hazards and midair collision avoidance techniques.

"We also have a strong Weapons Safety Program," said Padilla. "I believe this is because I have an outstanding Weapons Safety Manager. What we're trying to do is get our ground-folks as much weapons safety training as we can, so that when they deploy they're going to be familiar with weapons safety. It was one of the programs we wanted to bring online, to provide as much training as possible, so when they do have to go overseas they've got that knowledge with them."

In regards to weapons safety, the unit was recognized for not having any Class A, B, C, D or High Accident Potential mishaps in weapons/explosives for the year. The unit's pioneering style of explosives safety site planning removed three compensatory control measures. These included converting the newly constructed B-1 live load ramp to a state-of-the-art hot cargo pad and the demolition of barricades to allow the parking of C-5, C-17 and C-141, which was previously restricted. Plus, the unit had zero discrepancies found during their HQ ANGRC evaluation.

The success of their program has led to

the 22 ARW Weapons Safety Office often being requested by name to augment command weapons safety staffs. They've filled critical vacancies at the Mcghee-Tyson ANGB and instructed explosives safety courses; deployed personnel to six Homeland Defense alert sites where they validated capabilities and assessed risk; and deployed personnel for six weeks to Andrews AFB, ANG Readiness Center following the September 11 attacks where they assisted in short-notice set-up of Air Defense alert units at several USAF and ANG bases.

Team McConnell keeps racking up the kudos on a job well done, so will they try to continue this streak and go for another Safety Office of the Year award?

"We always try to win every year," Padilla said. "Now, of course, we've been operating with people being gone. So, what we're going to stress this year is that we're going to continue to do all the things we've always done to the best of our ability regardless of how many people we have left in the office. I strongly believe in going forward with as much as you possibly can—especially your really important programs—regardless of whether you have a full house or half a house or whatever you have to work with. So, that's one thing we will all be pressing throughout the coming year."



"You kind of have to put on a lot of different hats to keep everything going and that's what we've been sharing in the office. Everybody is carrying a little bit more load than what they were before, but we're getting by, which all goes back to teamwork. This team effort is why everything works so well in this office, because we do rely on each other and we do work with each other so well. This is all a plus and a blessing."

Other awards the unit won this past year included the USA of Flight Safety Plaque and the Systems of Cooperation Among the Air Forces of the Americas (SICOFAA) trophy.

"We've already received the SICOFAA trophy," said Padilla. "Once it was presented to us, it was put on display over at the Wing Headquarters. We've been nominated for this award before, and even received it on another occasion, but it's been a few years ago."

The comprehensive results speak for themselves with McConnell's mishap rates declining while overall Air Force rates increased. Team McConnell plans to continue with their successful programs and will undoubtedly meet, and exceed, all their safety expectations in the coming year, and beyond.



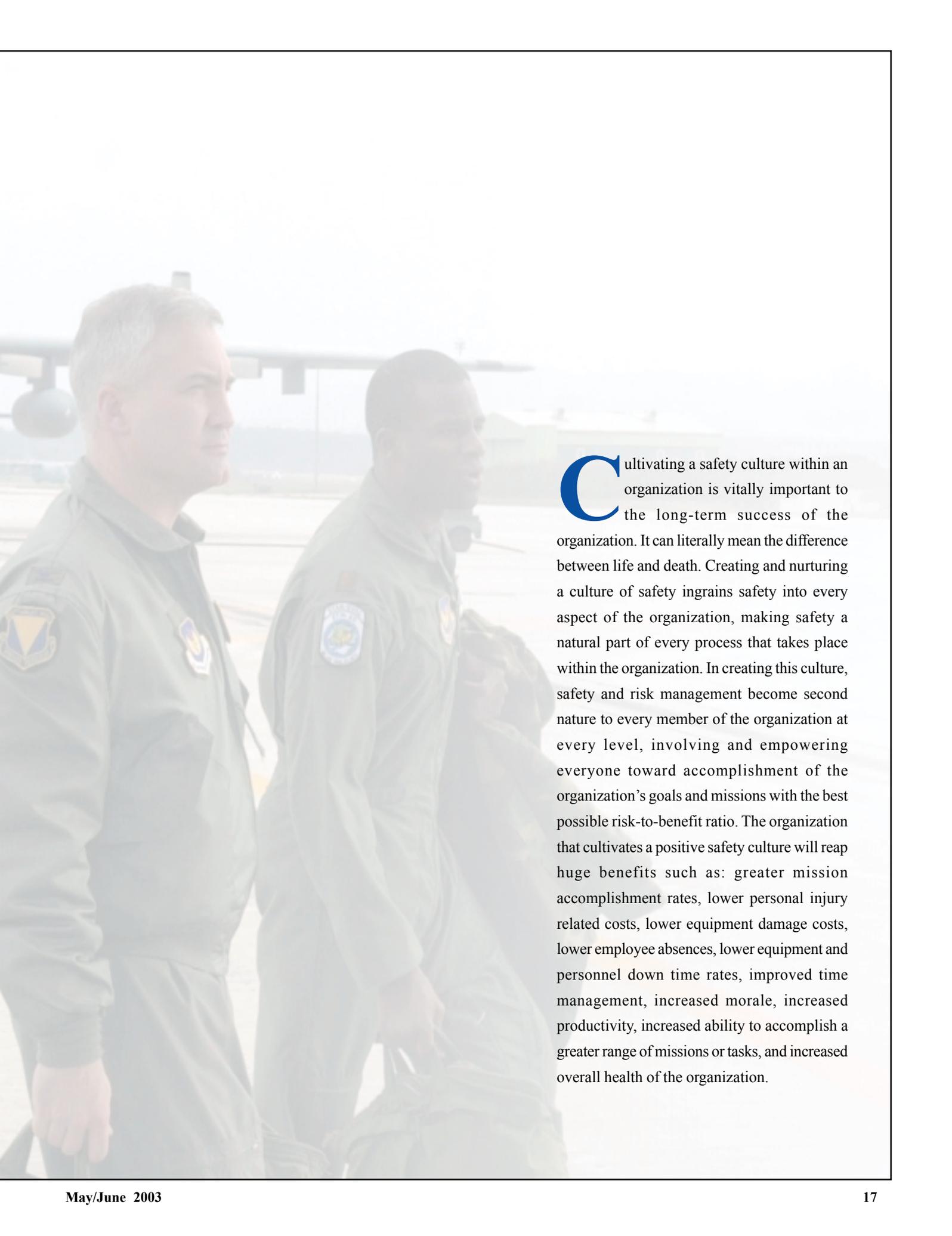


Cultivating the Safety Culture

Tech. Sgt Jim Yokom, KC-135 boom operator, talks to his receivers prior to conducting an aerial refueling over Afghanistan on March 17, 2003.
Original Photo by SSgt. Cherie Thurlby

By: TSgt Russ Halsema
Chief of Safety, 732 AMS/SE
Elmendorf AFB, AK

DE



Cultivating a safety culture within an organization is vitally important to the long-term success of the organization. It can literally mean the difference between life and death. Creating and nurturing a culture of safety ingrains safety into every aspect of the organization, making safety a natural part of every process that takes place within the organization. In creating this culture, safety and risk management become second nature to every member of the organization at every level, involving and empowering everyone toward accomplishment of the organization's goals and missions with the best possible risk-to-benefit ratio. The organization that cultivates a positive safety culture will reap huge benefits such as: greater mission accomplishment rates, lower personal injury related costs, lower equipment damage costs, lower employee absences, lower equipment and personnel down time rates, improved time management, increased morale, increased productivity, increased ability to accomplish a greater range of missions or tasks, and increased overall health of the organization.

All of this sounds great but what is a “Safety Culture” and how does an organization develop and cultivate it? The culture of an organization consists of the characteristics, beliefs, feelings, attitudes, and accepted norms for behavior of the members of the organization. An organizational Safety Culture can then be defined as the characteristics of safe behavior that are accepted as the norm within the organization based on the feelings, attitudes, and beliefs held about safety by its members. This definition brings some key points to mind about safety culture.

1. Safety culture is about everyone in the organization maintaining a good, safety focused attitude.
2. Safety must be the highest priority for everyone in the organization from management all the way through to the newest employee.
3. Safety must be a core value held by the organization.
4. Safety must not stagnate; it must be continually assessed and change with the demands placed on the organization.
5. Safety culture is a constant assessment of hazards, events, and issues that impact an organization by all levels

of employees in order for appropriate safety focused actions to be taken by the appropriate level of authority.

Developing a safety culture within any organization is not an easy task. It is not something that can be done by running a checklist once a week or by delegating. Developing a safety culture within an organization is an exercise in skilled leadership, psychology, communication, and perseverance. While there is no well-planned roadmap or sure-fire method for developing a good safety culture within an organization, there are some of the key

elements that have been proven to work well.

1. Set the standard. Management at all levels must set the standard. This is particularly important for senior leadership; they must set the standard they want to become the norm of behavior for everyone in the organization. It means more than just lip service to safety and risk management. This means they must adopt the feelings, beliefs, and attitudes they want to become the norm for the organization. They must demonstrate these behaviors and utilize the

an inspection system, must already have well-established norms within the organization. A sound safety program is the foundation of a good safety culture.

3. Atmosphere of education. The organization must be focused on learning. It must see every new challenge, failure, shortcoming, or mistake as an opportunity to learn. This includes determining the root causes for every mishap no matter how minor to fully understand and act on the lessons learned. The organization must analyze and apply these lessons to everyday operations and share the information with other organizations. This atmosphere of education and learning must be fostered at all levels.

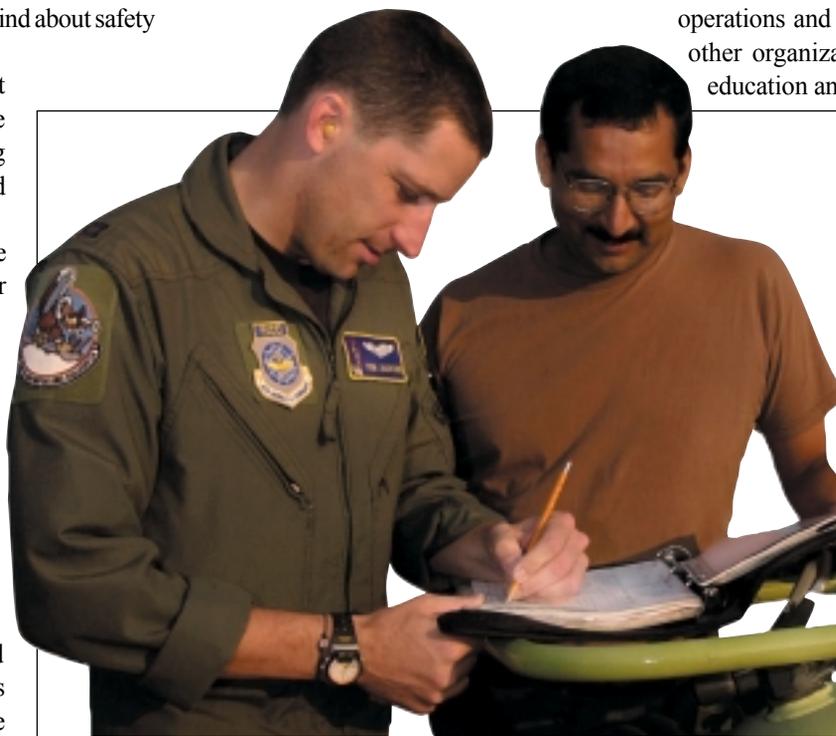
4. Recognition.

Recognition for promoting safety or use of risk management should be given freely and on the spot. Monthly or quarterly recognition has its place for providing EPR, OPR, and awards package bullets but it should not be the focus or only type of awards given. On the spot awards — even a handshake and a thank you from a supervisor — will go a long way in promoting the culture of safety within the organization. Additionally, the recognition and the reason for the recognition should be

made public. An article in a monthly organizational newsletter could cover several events that warranted recognition during the month.

5. Punish as a last resort. Punishment is detrimental to the long-term success of promoting a good safety culture and should only be used as a last resort. There are and always will be situations that warrant punishment but even these situations should be analyzed for positive lessons that can be shared within the organization.

6. Buy in. Every member of the organization must buy into safety and risk



Capt. Tom P. Jackson, KC-135E Stratotanker pilot, signs off maintenance aircraft log book while Master Sgt. Phil G. Becerra, looks on.

Photo by TSgt. James E. Lotz

tools of risk management in a public manner, i.e., lead by example. Management must become the goal they want to achieve by setting the tone of the culture they want to create.

2. Sound Safety Program. One of the building blocks of a good organizational safety culture is a sound, solid safety program. This means all regulatory safety program elements are fully developed and well established. Everything, including mishap reporting and investigation, employee training, policies, procedures, personal protective equipment, hazard reporting and

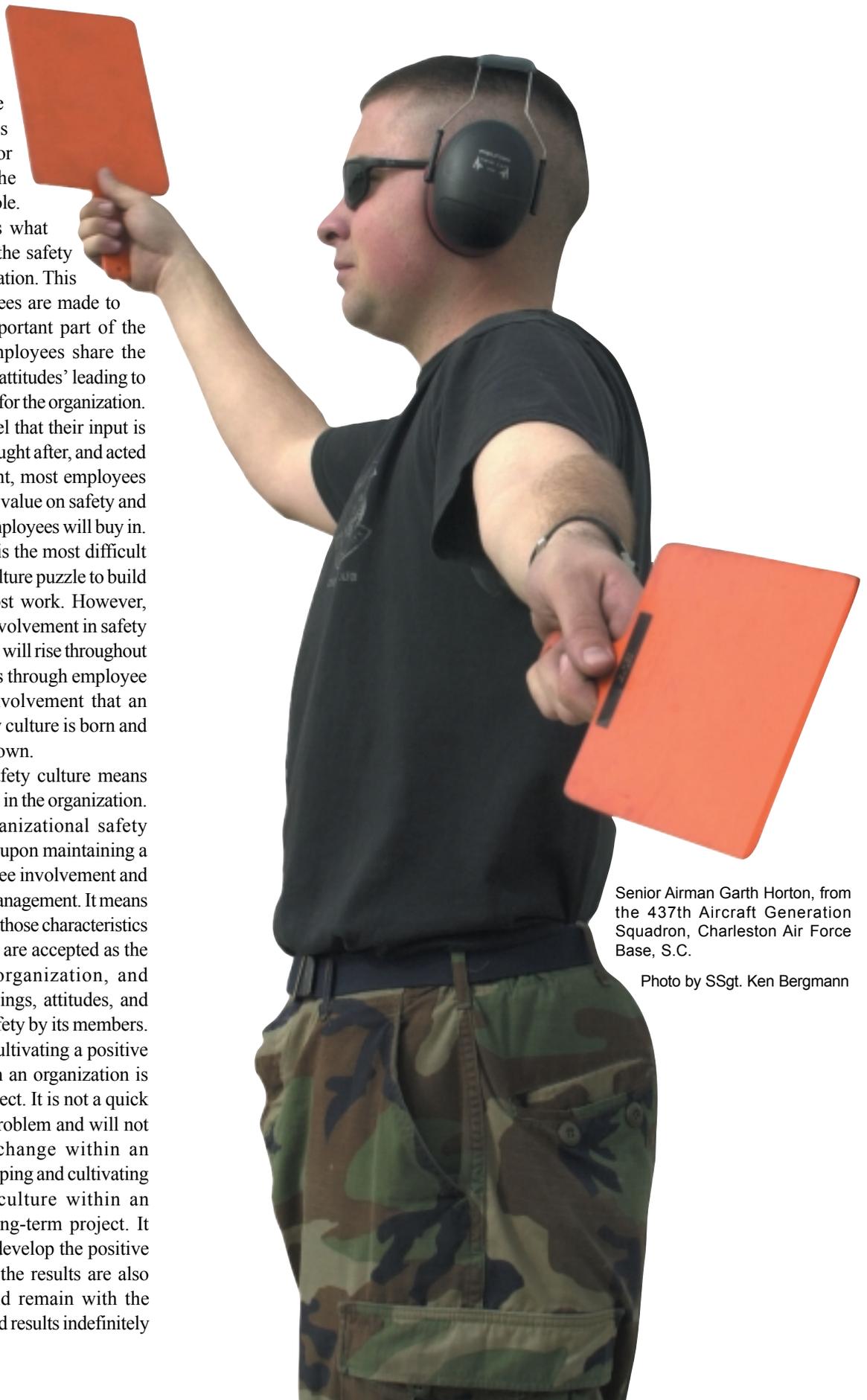
management. They must place a personal value on using risk management and the safety of operations for themselves and for others as well as the organization as a whole.

Employee buy in is what will make or break the safety culture of an organization. This is where all employees are made to feel they are an important part of the team, where the employees share the feelings, beliefs, and attitudes' leading to the norm of behavior for the organization. When employees feel that their input is valued, respected, sought after, and acted upon by management, most employees will place a personal value on safety and risk management; employees will buy in.

Employee buy in is the most difficult piece of the safety culture puzzle to build and requires the most work. However, once it is obtained involvement in safety and risk management will rise throughout the organization. It is through employee participation and involvement that an organizational safety culture is born and takes on a life of its own.

Cultivating the safety culture means promoting its growth in the organization. Growth of the organizational safety culture is dependent upon maintaining a high level of employee involvement and commitment from management. It means maintaining focus on those characteristics of safe behavior that are accepted as the norm within the organization, and maintaining the feelings, attitudes, and beliefs held about safety by its members.

Developing and cultivating a positive safety culture within an organization is not a short-term project. It is not a quick fix to a short-term problem and will not result in a rapid change within an organization. Developing and cultivating a positive safety culture within an organization is a long-term project. It could take years to develop the positive culture desired, but the results are also long term and could remain with the organization and yield results indefinitely if properly nurtured.



Senior Airman Garth Horton, from the 437th Aircraft Generation Squadron, Charleston Air Force Base, S.C.

Photo by SSgt. Ken Bergmann

KC-135



Stratotanker



• **Primary function:** The KC-135 Stratotanker's principal mission is air refueling. • **Speed:** 530 mph - 30,000ft • **Dimensions:**

130ft, 10in **Length:** 136ft, 3in **Height:** 41ft, 8in • **Range:** 1,500 miles • **History:** Between 1965 and 1973 in Southeast Asia in 1973, SAC tankers flew about 195,000 sorties, made nearly 814,000 refuelings, and offloaded almost 9 billion pounds of fuel.

A unique refueling mission on May 31, 1967, epitomizes the skill, determination, and heroism of the tanker crews. A KC-135 crew was alerted to refuel a pair of Air Force F-104 fighters on a support mission. While refueling the F-104s, the KC-135 crew was informed that two Navy KA-3 tankers, desperately short of fuel, were on the way to their tanker. Both KA-3s had fuel they could transfer but could not use themselves. After receiving a partial load, the F-104s stayed with the KC-135 to defend it against possible MiG attacks while it refueled the Navy aircraft.

The first Navy tanker took on a minimum of fuel then broke off to allow the second KA-3 to hook up. Then, two Navy F-8s were vectored to the KC-135 for emergency refueling. One F-8 was so low on fuel, the pilot could not wait for the second KA-3 to complete refueling. The Navy pilot hooked up to the KA-3 that still was taking on fuel from the KC-135. That is believed to have been the first tri-level refueling ever. While the dual transfer was in progress, the first KA-3 passed fuel to the second F-8, then returned to the KC-135 to complete its own refueling.

For this remarkable series of refuelings that saved eight aircraft and their crews, the crew was awarded the Mackay Trophy for the most meritorious Air Force flight of the year. In a sense, that award honored the hundreds of tanker crews that served with little acclaim during the eight years of tanker operations in the war.

Clear and Present

DANGER

By SSgt Curtis Keel, 377th Mission Support Group Explosive Ordnance Disposal Unit Kirtland Air Force Base, N.M. (Reprinted courtesy of Torch)

Expert advice on how to avoid becoming the next victim of a package bomb



A suspicious package — a box, roughly the size of a television, sat outside the office door of the chapel.

“It doesn’t weigh very much,” the deployed base chaplain said about the suspect package we’d been called to inspect.

The on-scene commander stared at him with a “How could you possibly know that?” look.

A bit embarrassed, the chaplain continued, “I, uh, had to move it to get the door open to call and notify the law enforcement desk.”

Fortunately for our chaplain, the item turned out to be a hoax.

After that we figured he was on better than average terms with the “big guy.” So we explosive ordnance disposal technicians made an effort to stand next to him whenever the disaster control group was called out. Hopefully, some salvation would rub off, or in the worst case, we could ride the updraft.

This was commonly referred to as plan “B.” Plan “A” required a more interactive approach, namely our presence in close proximity to the device, a situation that takes a little time and a lot of preparation.

While you are waiting for EOD to arrive to deal with a suspect package, it’s helpful to know what to do.

Here I Come to Save the Day

It’s a widely held misconception that EOD will suddenly SWOOP down from the sky like Captain Marvel and simply by our presence prevent a detonation. The closest I ever came to any swooping was to safety pin a bath towel around my neck and jump from my tree house onto an old mattress. And that foolish trick earned me a bloody nose, some cracked ribs and rolling laughter from my cousins.

We never attempted to stop any detonations as kids (much to the relief of my parents). It wasn’t until I attended EOD school that I learned they occur on a molecular level.

Despite 12 years of experience I’ll be the first to admit that my presence alone has never stopped one. Barring the appearance of a super hero at the next suspect package, the only person who can keep you from harm initially is you.

Master of the Obvious

Knowing what to do is critical to surviving first contact. Be familiar with what does and doesn’t belong in your work area. Any container left unattended or labeled “Death to American capitalist pigs” should be considered suspicious.

Quickly ask for everyone's attention. Inquire if anyone owns or recognizes the item. If all you get is the glossy-eyed zombie stare, then it's time to take action. Don't waste a lot of time searching for an owner. If one isn't found in the first few minutes, start your procedures.

For those of you who can use your X-ray vision to assess the interior of the item or render the explosive contents inert, you can stop reading right here. Mere mortals like me will have to deal with it the hard way.

I'm Nobody's Fool

The number one problem is the person who doesn't want to sound the alarm for fear of looking foolish or becoming the butt of some joke. This usually leads the individual to investigate the item more closely.

I once had a guy call me up and say that he'd found a grenade. He described it as looking like a "doorknob." When we pulled it out of the mud, it was a doorknob.

Sure he could have saved us a trip by digging it out first, but what if it had been a dud fired grenade? "We are sorry to inform you Mrs. Jones, but your husband is now a pink mist."

Since the area was less than a quarter mile from an old grenade range, it was a good call on his part.

Macho, Macho Man

In defiance of all common sense, there are those people who insist on checking it out on their own.

We have a gentleman (who thinks he is McGyver) at my home station who has used his pocketknife to slit open suspect packages. He then poured the contents at the commander's feet while proclaiming loudly, "See it's nothing. Those EOD guys are just wasting time." He did all this based solely on the fact that K-9 didn't "alert" on the package! For those not familiar with the details of force protection, K-9 units are detection assets, not diagnostic tools. They find devices following a threat or while conducting routine or random searches called "sweeps." If the dog "alerts" you call EOD. However, dogs can't smell all types of explosives, so you still have to call EOD even if the dog doesn't "alert."

Once an item is labeled a suspect package, the burden is to prove conclusively that it's not dangerous.

Stop Touching Me

Seeing is believing. Putting your hands on the item isn't going to make it more real or cause knowledge of its true nature to leap

into your brain.

If you poke at an old drunk long enough, he will get up and kick the daylights out of you. Explosives are no different. Whether by design, deterioration or poor quality, explosive items are often extremely sensitive to movement. Even the slightest motion can be enough to trigger some fusing.

Clever terrorists will often choose to hide their device in something that will draw attention. Pornography is a popular choice.

Cry Wolf

So you found something that doesn't belong, and no one in the area claims it. You could run around in circles screaming incoherently. Or you could bust into tears admitting to any number of indiscretions. Or you could simply curl up in a ball chanting, "Game over, man, game over."

Of course, you could try this. Notify the law enforcement desk and calmly evacuate the immediate area. Be prepared to give the basics, including a point of contact that security forces can ask for on scene. This should be someone who can describe the item and can give information on the status of personnel in the immediate area.

Emergency response will decide on evacuation requirements. Remember. "If you find it, they will come."

One Grenade Could Get You All

People will want to congregate around the item or sneak a peek from the doorway. If they answered no to the question "Is this your purple Barney backpack in the hallway?" do they really need to come look at it to make sure?

Evacuate personnel in adjacent offices to the item. Exit the office using side doors or windows on the ground floor. If you have to go past the device to get out, go in single file quickly and orderly. Avoid groups that might bump the item. Distance is your first level of protection with explosives. It's free, so get plenty of it.

What's the Frequency, Kenneth?

Well if you didn't go near it, and you didn't touch it, you're almost home.

The next thing to keep in mind is ordnance items and improvised devices can be sensitive to radio transmissions. Don't use your cell phone, radio or two-way pager within 25 feet of the item. It could cause a detonation — known in the bomb biz as "getting your fool head blown off."

Emergency vehicle mounted radios have

strong signals, and they will need to establish where it's safe to transmit.

Run and Hide

The second level of protection is to take cover. This is a fairly simple concept. If you can see the bomb, it can see you. Just because YOU are 501 feet away and the fragments are only expected to go 500 feet doesn't mean a chunk won't go 502 feet. Get something solid between you and the bomb, such as walls, vehicles or your supervisor. Stay there until YOU are given the all clear.

When it's over, don't get complacent. Just because it happened 10 times and turned out to be nothing doesn't mean the next one won't be real.



Just the Facts Please

The average improvised bomb is less than 5 pounds net explosive weight. The human body can't withstand overpressure above 3 pounds per square inch. Using a "K-factor" (a logarithm value used for calculating the distance from a detonation that a given overpressure will exist for a known amount and type of explosive material), we can estimate that everyone within 20 feet will die. Personnel within 75 feet will suffer hearing damage and injuries from flying debris. Anyone within 250 feet may suffer temporary hearing loss.

With an average rate of detonation velocity of 21,000 feet per second, it will happen very quickly.

If this is too much reality for you, I suggest you go see "Behind Enemy Lines," where if YOU run fast enough and jump far enough you can successfully navigate a field of bounding anti-personnel mines. Those living in the real world, however, should take this advice to heart.

2002



Annual Weather Award Winners

**OUTSTANDING WEATHER
OPERATIONS SUPPORT
COMPANY GRADE OFFICER
OF THE YEAR**

Captain Jeffrey C. Jarry
15th Operational Weather Squadron
Scott AFB Illinois

**OUTSTANDING WEATHER
OPERATIONS SUPPORT
SENIOR NCO OF THE YEAR**

MSgt Steven P. Whitehead
15th Operational Weather Squadron
Scott AFB Illinois

**OUTSTANDING WEATHER
OPERATIONS SUPPORT
NCO OF THE YEAR**

TSgt Wes B. Robinson
437th Operations Support Squadron
Charleston AFB South Carolina

**OUTSTANDING WEATHER
OPERATIONS SUPPORT
AIRMAN OF THE YEAR**

SrA Lucas C. Menebroker
43d Operations Support Squadron
Pope AFB North Carolina

**OUTSTANDING WEATHER
OPERATIONS SUPPORT
CIVILIAN OF THE YEAR**

Ms. Allison N. Hammond
15th Operational Weather Squadron
Scott AFB Illinois

**OUTSTANDING STAFF
WEATHER SUPPORT
OFFICER OF THE YEAR**

Captain Robb M. Randall
15th Operational Weather Squadron
Scott AFB Illinois

**OUTSTANDING STAFF
WEATHER SUPPORT
SENIOR NCO OF THE YEAR**

SMSgt Alfredo Dominguez III
15th Operational Weather Squadron
Scott AFB Illinois

**OUTSTANDING WEATHER
STATION OF THE YEAR**

319th Operations Support Squadron
Weather Flight
Grand Forks AFB North Dakota

Buying into Safety

By P.S. Harris

Have I Got a Deal for You!

Dear Safety Officer:

Have I got a deal for you!

In the next nine months, you could save enough money to pay for the purchase of a brand new C-17 transport!

With one eye on your meager budget, you ask, "How?"

According to the Air Force report, *Safety Analysis: FY93 to FY02*, 243 Air Force aircraft worth a staggering \$6.23 billion were lost in Flight Class A mishaps over the 10-year reporting period. Even more tragic were the 310 fatalities that occurred in the same period. This translates to approximately \$52 million a month in aircraft losses and \$3 million in personnel losses.

Based on this, if a safety campaign you have introduced reduces Flight Class A mishaps by 50%, within six months your efforts will have saved the Air Force approximately \$234 million.

The cost of a new C-17 cargo transport? \$220 million, according to the General Accounting Office (*GAO/NSIAD-97-88*).

And, if that same safety campaign reduces personnel losses by 50%, then not only have you

saved the cost of replacing that pilot, but you will have saved a family the heartache of losing a loved one.

The cost in time and money to train a pilot? According to a 1999 GAO report on Military Personnel (*GAO/NSIAD-99-211*) under ideal conditions, it takes the Department of Defense approximately 1 1/2 to 2 1/2 years, depending on the type of aircraft, to produce a fully trained, operational pilot. In that same report, the Air Force estimates a "training cost of slightly more than \$1 million to get a pilot through initial training and another \$2 million to get him through flight lead/aircraft commander qualifications."

And saving a family the heartache of losing a loved one? Priceless.

So you have created a great multi-media safety campaign. Everyone agrees on the importance and the timeliness of the message. But is anybody listening?

According to General John P Jumper, USAF Chief of Staff in his report, *FY02*



Safety Performance, 2002 was the worst year for flight safety since 1992. There were 35 Class A flight mishaps and 22 fatalities. “That is one Class A (a Class A mishap involves the destruction of an aircraft, a fatality or permanent total disability or total mishap cost of \$1 million or more) flight mishap every 10 days. In addition to the unacceptable loss of life,

we destroyed ***almost a squadron of aircraft*** worth roughly \$820 million dollars.”

In addition to the Flight Class A losses, the Air Force *Safety Analysis* reports \$346 million in direct personnel values and property losses in Ground Class A mishaps between fiscal year 1993 and fiscal year 2003. This is an average of 8 on-duty and

63 off-duty fatalities per year.

According to General Jumper, 91 airmen were lost and 9 others disabled in preventable ground mishaps in 2001. “While we cannot begin to calculate the incredible pain and suffering this creates for the victim’s families and friends,” Jumper says, “this translates into the loss of 561 years of operational experience -

experience our nation desperately needs.” It also means that our country lost nearly as many people through Flight and Ground Class A mishaps in 2001 as we did as combat casualties in Operation Desert Storm (we lost 146).

One common theme that runs through these statistics is that the majority of the flight and ground mishaps are preventable. According to General Jumper, human factors were cited as the primary cause in two-thirds of the Class A mishaps in fiscal year 2002. The Air Force Safety Analysis found that 68% of the off-duty accidents between fiscal year 1993 and fiscal year 2002 involved motor vehicles, and roughly 2/3 of those were due to poor judgment.

Statistics like these which highlight the large percentage of preventable accidents make it easy to imagine that your repeated safety messages have fallen on deaf ears. Has familiarity bred inattention? Or have your safety messages become like commercials or jingles that find us parroting the words but no longer registering the message? In today’s environment, your audience is bombarded by all kinds of information. According to Patrick Means, author of *Men’s Secret Wars*, the average adult is bombarded by 560 advertising messages a day. Adults can store about 75 of these a day. In addition, adults absorb another 20-30 thousand words per day from newspapers, magazines, books and television.

So how are you going to pay for that C-17? How can you repeat a message that is vitally important over and over again, yet make sure your audience is paying attention? And in the midst of a media overload, how do you conduct a safety campaign that has an impact on safety statistics? You have, no doubt, realized that your safety campaigns are nothing more than marketing campaigns and the safety message is an advertising message looking for a consumer audience. Marketing strategy, like the safety message itself, may be familiar, but like the message, it bears repeating.

1 Repetition

Remember that repetition is the key to “top of the mind awareness.” Top of the mind awareness is a marketing term that measures the effectiveness of a message. If you have “top of the mind awareness,” your brand is the first one that comes to mind when a consumer has a need in your category. In the case of your safety message, you want your message to be the first thing that comes to mind when an airman is going through a checklist, repairing vital equipment or confronting an emergency.



2 Messages

Think of new ways to repeat an old message. Your audience has been hearing about safety do’s and don’ts in one form or another for years. Sometimes they may be so sure of what will be said and how it will be said that they listen with only “half a brain.” In addition, you are competing with the hundreds of messages your audience sees every day. But it may be that one time you present the same message in a new and innovative way that someone’s attention may be sparked. Or it may be the 300th time that the message is repeated that it finally “clicks.”

3 Media

Find new media outlets and advanced technological avenues to communicate with your target audience. Major General Kenneth Hess, in an interview in the *Winter 2003 Road & Rec*, declares “Our target is the 18-25 year olds...and we need a lot more target study to determine the best way to communicate with them through our training programs.” General John Jumper adds, “The number of on duty deaths doubled in 2002 from 2001 and 83 lives were lost in off duty incidents - 71 in private motor vehicle accidents. 70% of those involved were 18-25 years old.” How do you communicate safety messages to a group that grew up on MTV, computers and video games? This is a generation that is always expecting something faster and smarter. Delivering a faster and smarter message is your challenge.

4 Sources

Take advantage of every informational source you can find. Magazines such as *The Mobility Forum* can be great sources of new ideas, as well as great places to inform your audience. In addition, read the magazines your audience is reading. Watch the programs your audience is watching. Read every study on your target audience you can find. The more you know about your audience, the more ideas you can generate to reach them.

5

Peers

Spread the message through their peers. According to the *Business Owner's Toolkit*, word-of-mouth is the single most effective form of marketing. A word or two of caution about a safety issue from a peer will be more effective than most safety campaigns. Major General Hess stresses the importance of peers in safety: "We are finding that the peer is an important member of the safety team. It is not uncommon during the post-mishap analysis to find out that lots of people were aware of risky behavior long before it resulted in a mishap. But nobody felt it was his or her job to try and change the behavior. In order for a commander to have an effective safety program, he/she needs to write down their policy and expectations, the supervisors need to execute at the point of attack every day, and peers need to help peers to be safe as an integral part of safety. Remember, the mishap rate is the ultimate lagging indicator of problems that have been long ignored."

6

Personalize

Personalize your message. The 18-25 year-old young adult category has been labeled by marketing professionals as "The New Cynics" as well as "Generation Y." Charles D. Schewe, a professor of Marketing at the University of Massachusetts, notes that this generation "craves real and personal experiences instead of hype." In order to get their attention, you have to answer the question: "What's in it for me?" Getting past their natural cynicism and their "It only happens to other people" and the "I'm ten feet tall and bulletproof" attitudes can be difficult. Most young adults will ignore a general warning about what can happen to a nameless, faceless someone if he/she does not follow proper safety procedures but they will listen when you bring it home — when you make it personal and specific. The message? This and that specific consequence *will* happen to *you*, your best buddy or your neighbor if *you* don't follow these explicit procedures. This may be especially effective when told by other young adults who have experienced those negative consequences.



How will you know if you have reached your audience? After all, you will seldom hear about the accident that doesn't happen...the car crash that never occurs because the participants decided not to drink...the plane that did not crash because the maintenance tech decided to check that engine just one more time...the pilot that lived because that same maintenance tech took the responsibility to go the "extra mile." You may never know the specific instances when your message has prevented an accident. If you are lucky you may hear about individual stories long after the fact. You will know you have succeeded when you notice reductions in flight and ground mishaps, however small or large. When mishap rates drop, you know your audience "buys" your message. And if your audience "buys" your message, you may be able to buy that C-17 after all!



Don't Let Beer DROWN Your Career



By A1C Johnny Thompson
31st Aircraft Maintenance Squadron

Airman struggles with the aftermath of getting a DUI

On April 27, I got a DUI (driving under the influence) charge. I started my evening by drinking with some people in the dorms for a going away party. I later went to a local club off base for an hour or so and left about 2:30 a.m. It was raining hard and I was halfway home when I ran through a water puddle. My car veered to the right. I overcorrected to the left and my car flipped over three times and ended up on the other side of the road in a field upside down.

All I could think about was my wife and kids. I was trapped inside my car, the power was off and for a minute I thought my windows were rolled up. I realized the back window on the passenger side was down and I was able to crawl out.

Thank God I didn't have a scratch on me. I remember someone telling me his friend had a similar accident...he wasn't so lucky.

Since I was under the influence of alcohol, my reflexes were slow. My blood alcohol content was .20 — more than two times the

legal limit.

After the accident I really started thinking. Not just about my career, but how my actions affected my family and could have affected the families of others. I couldn't stop asking myself, "Why was I so irresponsible? What if I had died? What if I had hit someone else and what if they had kids in the car? How would my wife explain to my kids what happened and how selfish their father was?"

Right now I'm just trying to get my life back together and be the father, husband and the kind of airman that I should be.

Drinking and driving is very serious. Before you drink and drive, try to think, I mean really think, about yourself, your family, and friends and about others you could have endangered by your actions. Think about the effect it would have on them.

I was lucky. I'm still alive and able to be with my family and tell my story. You might not be so lucky.

That one night changed my life. My

mistake hurt my career and my family. I received an Article 15 and my commander punished me by taking a stripe. I was a senior airman with six years in the military. I now am an airman first class. I was also given 30 days extra duty and a reprimand.

It will take 18 months for me to put senior airman back on and the loss in pay of \$283.80 a month over the next 18 months will add up to about \$5,108.40. Additionally, I lost my driving privileges for a year. I'm lucky, however, because I still have my life, my wife has a husband and my children still have their father.

It will be a long, hard process to keep my career and family in positive shape, but I will do everything I can to get back on my feet. It took an incident like this for me to really think about my life, my family and the lives of others on the road. As a member of the Air Force, I hear the briefings, I see the commercials, and I read the articles about not drinking and driving. But it took an experience like this to realize that it's not worth the risk of driving a vehicle or even getting into a vehicle when the driver has had just one drink.

In my situation, I simply quit drinking. Be responsible, use common sense and listen and learn from my experience. Don't wait until you've crashed, killed somebody and put your career in jeopardy. Don't learn the hard way.

The Mobility Forum

2003

Photo Contest



HOW TO SUBMIT:

1. Cover letter indicating full name, grade, unit, and home address, DSN, and Fax numbers.
2. Minimum/maximum size limitations: 5x7 inches/16x20 inches.
3. Print your name, the title of submission, category entered, commercial phone number, DSN phone number and email address on the back of each submission.
4. Entries must be postmarked not later than 31 October.
5. **Submit to:**

2003 TMF Photo Contest
Schatz Publishing
11950 W. Highland Ave.
Blackwell, OK 74631

RULES:

Note: These rules are different from and take precedence over those posted in AMCI 36-2805, AMC Safety Awards.

1. Entries must be original work. Photographs may be previously published elsewhere, as long as the photographer includes a signed statement confirming that no copyright will be infringed through the use of the photo by The Mobility Forum.
2. Entries incorrectly identified, or failing to conform to the size limits, will not be considered.
3. Entries submitted to this contest will be considered property of AMC Safety and won't be returned.
4. The Mobility Forum reserves the right to deny consideration for entries unsuitable for publication.

CATEGORIES:

1. Aircraft: air refueling, airdrop, maintenance, marshalling, cargo loading, etc.
2. Military Life: Experiences reflecting the military environment.
3. Recreational: Off-duty activities.
4. Entries may be Black & White or Color.

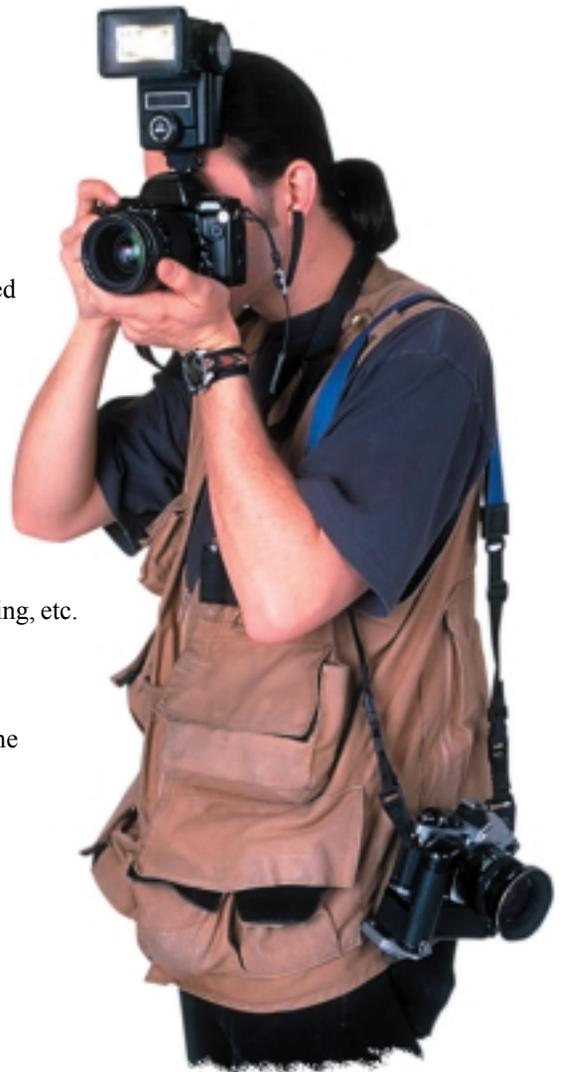
If we receive sufficient nominations in both media, we will divide the categories into Black & White and Color subcategories.

Note: A maximum of three entries per category.

AWARDS:

1. Contestants will receive a maximum of one award per category, and no more than two awards per contest.
2. Winning entries will be published in the January/February and March/April issues.

Questions? Call Schatz Publishing 580-628-4607.



SEVERE WEATHER *is here*

“It was picking up cars
and throwing them
around like
toothpicks...”

By Luke Majors

Sound like a tornado?

In truth, it is an eyewitness account of the number one weather killer in the United States — flooding. But whether the severe weather is flooding, lightening, thunderstorm or a tornado, it is important to know how to deal with any weather emergency safely.

Flooding

Flooding kills more people every year than any other type of severe weather — nearly 143 fatalities. Flash flooding is the most deadly form of flooding. Eighty percent of flash flood deaths are vehicle-related — people driving through rapid water and being swept away. How can water wash a car away?

According to the National Oceanic and Atmospheric Administration’s (NOAA) flood preparedness guide: *Water weighs 62.4 lbs per cubic foot and typically flows at speeds around 12 mph. When a vehicle stalls in the water, the water’s momentum is transferred to the car. For each foot the water rises, 500 lbs. of lateral force is applied on the car. But the biggest factor is buoyancy. For each foot the water rises up the side of the car, the car displaces 1,500 lbs. of water. In effect, the car weighs 1,500 lbs less for each foot the water rises. Two feet of water will carry away most automobiles.* Remember: even if a vehicle is not swept off the road, bridges or culverts hidden beneath the flood waters may be washed away or severely damaged. Anyone who is on foot can be swept away by a mere six inches of rapid water.

To prepare for flooding:

- Do some preparatory work. It is important to know your local flood risk (i.e., which streams and rivers flood easily and which alternate routes to take if they must be avoided).
- You should keep a NOAA Weather Radio on hand, for information and updates about flood watches and warnings.

Flood alerts are defined as:

- Flash Flood Watch** - Flash flooding is possible within the designated WATCH area, be alert.
- Flash Flood Warning** - Flash flooding has been reported or is imminent, take necessary precautions at once.

Besides danger of driving and walking, flooding can endanger your home as well. Make sure you have disaster supplies such as:

- Flashlights and extra batteries
- Portable, battery-operated radio with a NOAA band and extra batteries tuned to a local station, and follow emergency instructions
- First aid kit and manual
- Emergency food and bottled water
- Non-electric can opener
- Essential medicines
- Cash and credit cards
- Sturdy shoes



Digital Illustration by M. Jones

If you know the floodwaters are going to enter your house:

- Turn off all utilities at the main power switch and close the main gas valve if evacuation appears necessary.
- Move valuables, such as papers, furs, jewelry, and clothing to upper floors or higher elevations.
- Fill bathtubs, sinks and plastic soda bottles with clean water. Sanitize the sinks and tubs first by using bleach. Rinse, and then fill with clean water.

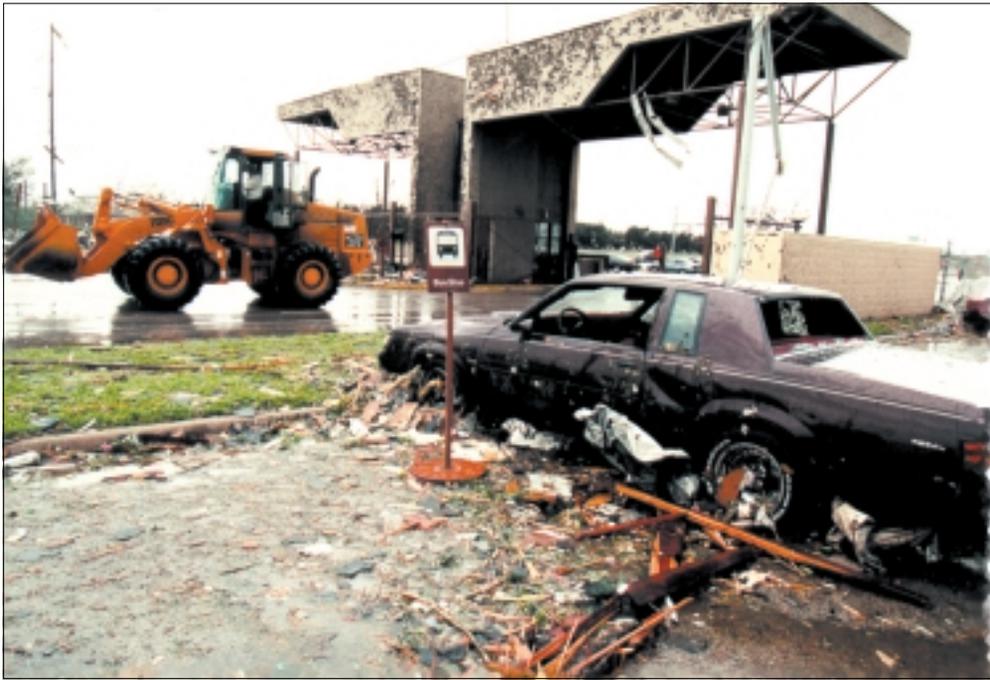
- Bring outdoor possessions, such as lawn furniture, grills and trash cans inside, or tie them down securely.

Remember, if flood waters are rising, don't try to swim your way to safety. Instead, get to a high place and wait for trained rescuers. And even if you are walking in the shallowest of waters, be careful of downed power lines. Water makes an excellent conductor. If the moving water is getting above your ankle, turn around and seek higher ground.

Lightning

Lightning is the number two weather-related killer in the United States (number one if you live in Florida), claiming about 100 lives each year with another 1,000 injuries. Usually these injuries are long term with debilitating problems. The average citizen has a 1 in 300,000 chance of being struck by lightning. The cost of lightning damage is approximately \$5 billion a year, divided between residential fires, the power industry, airlines, forest fires and insurance claims (One claim per 57 flashes).

Lightning can be dangerous and damaging to aircraft. In fact, according to Major P.B. Corn, Air Force Flight Dynamics Lab, more than 50% of military aircraft weather-related in-flight mishaps are caused by lightning. In addition,



A bulldozer makes its way through the **Vance Gate on Tinker AFB, Ok., (Gate 40)** near Sooner Road to begin clean-up efforts.

Several cars and 21 buildings were damaged by a tornado that struck the previous night.

Photo by Dave Faytinger

according to the US Air Force Safety Center in Albuquerque, New Mexico, the US Air Force had direct repair costs of \$1,577,960 during 1988-1996 from lightning damage to aircraft. On the commercial side, lightning adds about \$2 billion annually to airline operating costs. Most aircraft are well shielded against lightning because of their metal airframes. Lightning is conducted around the skin and, in most cases, continues on its way. But as designers move to lightweight composites that don't conduct electricity, there is an increased risk of damage to the aircraft. The most lightning casualties *by far* occur outside in the open:

- ⚡ **45%** of the casualties occur in open fields
- ⚡ **24%** of the casualties occur under trees
- ⚡ **13%** of the casualties occur in the water
- ⚡ **7%** of the casualties are golf related
- ⚡ **6%** of the casualties are related to electronics use (e.g., phones)
- ⚡ **5%** of the casualties are related to farming or heavy equipment usage (e.g., struck on a tractor without a cab)

Note that sport activities have the fastest rising lightning casualty rate. It is important that parents are aware of this and don't "tough the game out" but postpone instead. Remember: no place is safe outside when a storm is approaching. Use the 30/30 rule when you see a storm approaching. When you see the lightning flash, count until you hear the thunder. If it is 30 seconds or less, the thunderstorm is close enough to be dangerous — seek shelter. Wait 30 minutes or so after the lightning flash before leaving the shelter.

Other tips to remember:

When inside:

- Do not use a corded telephone or other electrical appliances.
- Do not take a bath/shower or wash dishes.
- Do not touch metal doors, window frames, or plumbing.
- Interior rooms are better.
- Lightning is electricity and will follow the path of least resistance.

If caught outdoors:

- Go to a safe shelter immediately (such as inside a sturdy building). A hard top automobile with the windows up can also offer fair protection. Remember, it is the metal enclosure of the vehicle that protects you, not the rubber tires.
- If you are boating or swimming, get out of the water immediately and move to a safe shelter away from the water!
- If you are in a wooded area, seek shelter under a thick growth of relatively small trees.
- If you feel your hair standing on end, squat down with only the balls of your feet touching the ground. Do not lie flat!
- Avoid isolated trees or other tall objects, bodies of water, sheds, fences, convertible automobiles, tractors, and motorcycles.

- ⚡ The U.S. has **100,000 Thunderstorms** per year.
- ⚡ The U.S has **20 million cloud to ground lightning flashes** each year.
- ⚡ The Earth has **2000 thunderstorms** at any one time, with **100 strikes of lightning happening per second**.
- ⚡ Without thunderstorms the **earth would lose its electrical charge** in less than one hour.
- ⚡ **Lightning heat exceeds 50,000 degrees F**, which is three times hotter than the surface of the sun.
- ⚡ **Lightning voltage averages 300 million volts.**

Source: 45th Weather Squadron

Severe Thunderstorms

A severe thunderstorm is defined as a thunderstorm containing at least one of the following: 3/4 inch hail, wind gusts in excess of 58 mph, or a tornado.

1. To be safe in a thunderstorm: Get inside a building that will provide you adequate protection from large hail and very strong winds.
2. **Stay away from windows** as these are the weakest part of a house structurally and can easily be broken out by large hail or flying debris.

Tornado Classifications

Tornadoes are classified using the Fujita Wind Damage Scale.

F-0: Winds **40-72 mph**, chimney damage, tree branches broken.

F-1: Winds **73-112 mph**, mobile homes pushed off foundation or overturned.

F-2: Winds **113-157 mph**, considerable damage, mobile homes demolished, trees uprooted.

F-3: Winds **158-205 mph**, roofs and walls torn down, trains overturned, cars thrown.

F-4: Winds **207-260mph**, well-constructed walls leveled.

F-5: Winds **261-318 mph**, homes lifted off foundation and carried considerable distances, autos thrown as far as 100 meters.

Source: FEMA

2nd Lt. Stan Paregien, public affairs officer for the 507th Air Refueling Wing, surveys the widespread tornado damage across the street from Tinker AFB, OK.



Photo by Capt. Rich Curry

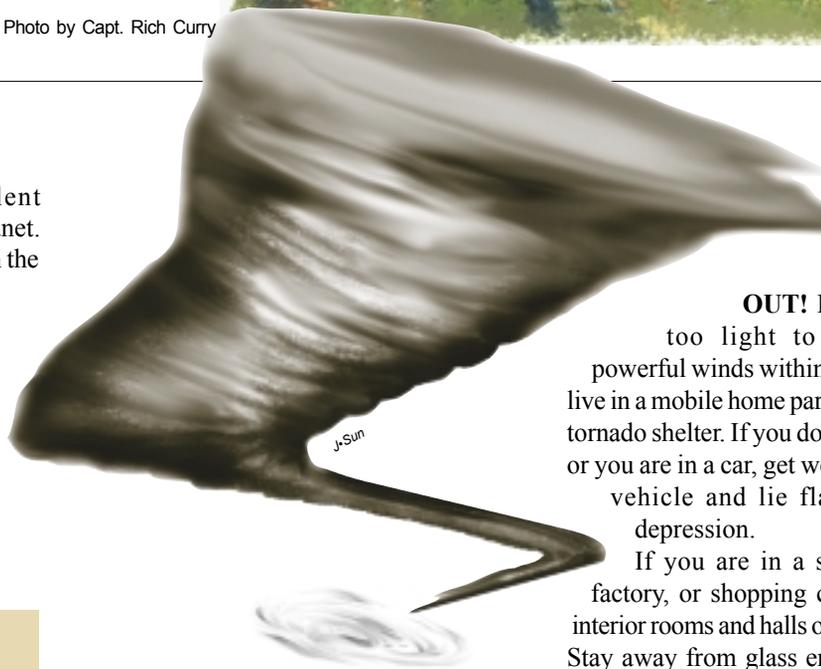
Tornadoes

Tornadoes are the most violent atmospheric phenomenon on the planet. Winds of 200-300 mph can occur with the most violent tornadoes. If you live in south-central Kansas and north-central Oklahoma, you have more tornadoes per square mile than any other place in the world.

Knowing what to do and where to go can save your life. Listed below are alerts issued by the National Weather Service and where you should take shelter.

Tornado Watch - Means that tornadoes are possible in the watch area. This is a good time to brush up on what you would do if a tornado were spotted. You may also want to get some things together to take to your tornado shelter.

Tornado Warning - Means that a tornado has been observed by either radar or by a spotter in the field. It is time to take action immediately! Get to your tornado shelter and stay there until the danger has passed. Do not go outside to try and see or videotape the tornado. This can cost you your life!



Tornado Shelters

The best tornado shelter is an underground shelter such as a basement or a cellar. If you are using a basement, you should go to the center of the room, and get under the stairwell or a heavy piece of furniture such as a pool table or workbench. This will protect you from falling debris.

If your home doesn't have a basement, or you live in an apartment, you should go to the lowest level and get inside a small, interior room. The most important thing is stay clear of windows. Closets and bathrooms are ideal choices. It may be helpful to take some pillows, blankets or even a mattress in the room with you to protect yourself from flying debris.

If you live in a mobile home or find yourself in a car, the safety rule is very

simple: **GET OUT!** Both of these are too light to withstand the powerful winds within a tornado. If you live in a mobile home park, go to the park's tornado shelter. If you don't have a shelter, or you are in a car, get well away from the vehicle and lie flat in a ditch or depression.

If you are in a school, hospital, factory, or shopping center then go to interior rooms and halls on the lowest floor. Stay away from glass enclosed places or areas with wide-span roofs such as auditoriums and warehouses.

During this stormy season (usually March through June for most of the United States), remember to take time to prepare for the season.

You should:

- 👉 Create a disaster kit
- 👉 Conduct work and home drills
- 👉 Be aware - keep an eye to the sky
- 👉 Listen to meteorologists as they post storm information and general forecasts on radio and television broadcasts
- 👉 Purchase a NOAA weather radio which provides an abundance of information on storms as well.

Taking the time to prepare and being alert could mean the difference between being weather-inconvenienced and being injured or worse.



Flying Hour Milestones

14,000 Hours

356 AS, WPAFB, OH
SMSgt Franklin Laning

10,000 Hours

337 AS, Westover ARB, MA
SMSgt Gary R Miller
356 AS, WPAFB, OH
CMSgt Richard Hayes Jr
439 OG, Westover ARB, MA
Lt Col Udo K McGregor

8,500 Hours

302 AW/SE, Peterson AFB, CO
Col Wesley Langland
Lt Col Russell McKeel
MSgt Tom Farley
337 AS, Westover ARB, MA
MSgt Richard W Turpin
940 ARW, Beale AFB, CA
Lt Col Edward C Whalen
CMSgt James Welborn

7,500 Hours

6 ARS, Travis AFB, CA
TSgt Robert Beall
15 AS/CC, Charleston AFB, SC
MSgt George Thompson
TSgt Michael Deehr
185 AS, Will Rogers ANGB, OK
Lt Col Robert S Shafer
302 AW/SE, Peterson AFB, CO
Lt Col Michael Scott Carr
Lt Col William OBrien
314 ARS, Beale AFB, CA
Lt Col James M Degner
Lt Col David L Mitchell
MSgt Brian J O'Rourke
337 AS, Westover ARB, MA
SMSgt Garth O Parker
MSgt Vidyanand Seteram
356 AS, WPAFB, OH
SMSgt Phillip Fernandez

6,500 Hours

3 AS/CC, Dover AFB, DE
MSgt Curtis L Funk
6 ARS, Travis AFB, CA
MSgt Sterling Keller
TSgt Kevin Chapnick
15 AS/CC, Charleston AFB, SC
MSgt Richard Alcoy
MSgt Roger Hilligas
MSgt Ronald Lindner

TSgt Martin Alleyne
TSgt Fredrick Fox
95 AS, Milwaukee, WI
Lt Col James D Webb
CMSgt Gerald L Green
302 AW/SE, Peterson AFB, CO
Lt Col Luke Coker
Lt Col Tom Schmitt
MSgt Michael Benton
314 ARS, Beale AFB, CA
Maj George J Mack
MSgt Frans W Stenken
337 AS, Westover ARB, MA
SMSgt Glenn M Flynn
MSgt Christopher Maille
MSgt Kerry G Saso
356 AS, WPAFB, OH
B Gen Hanferd Moen
CMSgt Joseph Gough
CMSgt Randy Miller
940 ARW, Beale AFB, CA
Lt Col James C Cole

5,000 Hours

3 AS/CC, Dover AFB, DE
TSgt Kelley R McCallum
6 ARS, Travis AFB, CA
Lt Col Michael Mendonca
Flt Lt Tim Cadman
MSgt Jackie Hale
MSgt Greg Warren
TSgt Rob Tabor
6 OG, MacDill AFB, FL
Maj Edward L Icenhour
15 AS/CC, Charleston AFB, SC
Lt Col Robert Holba
Lt Col Richard Lassiter
Maj Michael Canino
Maj Keith Dulaney
Maj Donald Himebaugh
Maj Richard A Sheetz
Maj Jesse Strickland
SMSgt Dana Dibibar
SMSgt Byron Pitcher
18 ARS, McConnell AFB, KS
Lt Col William S Hansel
Lt Col Raymond A Kozak
95 AS, Milwaukee, WI
Maj David C Polacheck
128 ARW/ANG, Milwaukee, WI
SMSgt Steven J Schweiss
179 AW/SE, Mansfield, OH
Col James D Conrad
302 AW/SE, Peterson AFB, CO
Col Richard Moss

Col Michael Sumida
Lt Col Gary Carlton
Lt Col Edward Strickland
Lt Col Luke Thompson
Lt Col Michael Witherspoon
Maj Jeff Flint
SMSgt Pete Lebarre II
SMSgt Frank Miskell
SMSgt Jim Riley
MSgt Jeff Flight
MSgt Bob Mitchell
310 AS, MacDill AFB, FL
Maj J R Howell
314 ARS, Beale AFB, CA
Lt Col John W Adams
Lt Col Ronald P Gray
Lt Col Stephen J Lentz
Lt Col Gerald A Marlatt
Lt Col Albert M Reif
Lt Col David J Tully
Maj Michael P Busse
Maj Lanson C Ross
1Lt Todd A Ruth
SMSgt Robert D Renn
MSgt Michael P Bell
317 AG/SE, Dyess AFB, TX
Lt Col Keith Kaiser
Maj Durwood Stewart
337 AS, Westover ARB, MA
Maj Sean P Regan
SMSgt James M McKelligan
MSgt Tracy Turner
TSgt David A McKemmie
356 AS, WPAFB, OH
Lt Col Steven Johnson
Maj Mark Durant
Maj Kathryn Staiger
MSgt Lottie Wood
439 OG, Westover ARB, MA
Maj Steve Thompson
440 AW, Milwaukee, WI
Col Stanley D King
MSgt Mark Blank
940 ARW, Beale AFB, CA
Col James D Lynd
Lt Col Martin L Read

3,500 Hours

3 AS/CC, Dover AFB, DE
TSgt Arnold V Maas
TSgt Thomas P Vesalga
3 AS/SE, Dover AFB, DE
Maj Eugene F De Paolo
Capt Joseph E Finnegan

Capt Andrew E Travnicek
TSgt Paul W Houde
4 AS, McChord AFB, WA
Lt Col Randall L Long
Lt Col Oscar J Padeway
Lt Col Steven G Rafferty
Maj William D Anderson Jr
Maj Scott A Moore
Maj Steven P Noll
Maj Thomas E Thompson
Capt Joseph A Mastroianni
TSgt Douglas C Larned
SSgt Brian L Chewning
6 ARS, Travis AFB, CA
Maj Donald Anderson
Maj Brian Henley
Maj Keith James
Maj Todd Staudt
Capt John Distefano
Capt Tyler Prevett
TSgt Brian Ennis
TSgt Dan Jorgensen
TSgt Darren Stewart
15 AS/CC, Charleston AFB, SC
Lt Col Richard Anderson
Maj James Hopkins
Maj Dirk Porath
MSgt Scott Wetzel
SSgt Aaron Avery
SSgt Jason Brown
SSgt Alfred Castillo
SSgt Todd Marwine
SSgt Christopher Miller
17 AS/CC, Charleston AFB, SC
SSgt Kevin Collette
SSgt Eric Lawther
18 ARS, McConnell AFB, KS
Maj Brian E Bell
91 ARS, MacDill AFB, FL
SSgt Joe Gellis
92 ARS/CC, Fairchild AFB, WA
Col Randal D Fullhart
93 ARS/CC, Fairchild AFB, WA
Lt Col John J Anduagaarias
Lt Col Bartholomew W Weiss
95 AS, Milwaukee, WI
Maj Douglas J Beck
Maj Patrick R Brien
Maj John G Gorse
Maj Robert S Oates
Maj John S Smigla
Maj Edmond V Stack
Maj Keith T Wesley
MSgt Randall R LaBodda

Milestones

179 AW/SE, Mansfield, OH

Lt Col Gerald A Scrivens

185 AS, Will Rogers ANGB, OK

Lt Col Lloyd D Coker

Lt Michael P Culley

302 AW/SE, Peterson AFB, CO

Lt Col Keith Abbott

Lt Col Wade Prather

Lt Col Theodore Wright

Maj Courtney Arnold

Maj David Banker

Maj P J Depalma

Maj William Graham

Maj Eric Hall

Maj Pat Heflin

Maj Christopher Lemon

Maj Matt Miller

Maj Donald Odom

Maj Freddie Rodriguez

Maj Patrick Ryan

Maj Robert Slaughter

Maj Corey Steinbrink

Maj Brian Talent

Maj Brian Thomas

Maj Jim Travis

Maj Ted Treffiesen

SMSgt Gerald Johnson

MSgt Michael Nakamura

MSgt Jim Rucker

MSgt Frank Velazquez

310 AS, MacDill AFB, FL

Lt Col Keith R Kreeger

314 ARS, Beale AFB, CA

Maj Dale V Bellissimo

Maj Michael R Bergstrom

Maj Timothy G Early

Maj Frank G Fabian

Maj Jeffrey R Franklin

Maj Forrest G Green

Maj John G Hall

Maj Lewis H Harding II

Maj Robert W Hays

Maj Scott R Hinkle

Maj Michael R Hollenbeck

Maj John F Klimmek

Maj Johnathan M Philebaum

Maj Paul V Sheehan

SMSgt Daniel L Quasius

MSgt Margaret M Evans

MSgt Richard M Mecum

TSgt John E Pullen

317 AG/SE, Dyess AFB, TX

Col Steven King

Maj Angel Diaz

337 AS, Westover ARB, MA

Maj William J Bilton

Maj Ian S Coogan

Maj Glenn T Melia

Maj Dana J Packer

Maj Michael V Smith

SMSgt John J Duffy

MSgt Michael Angelastro

MSgt Frank Domenichella

MSgt Andrew J Dupuis

MSgt Thomas G Durkin

MSgt Lawrence Garwacki

MSgt Roland F Greenwood

MSgt Daniel G Hogan

MSgt Richard A Jedry

MSgt Ronald M Jordan

MSgt Raymond M Preis

TSgt David M Benson

356 AS, WPAFB, OH

Maj William Barton

Maj David Marlin

Maj Scott Provost

Capt Matthew Smith

Capt Richard Webster

463 AG, Little Rock AFB, AR

Col Timothy L Hale

Maj Gary Hermann

Maj Darren L Miller

940 ARW, Beale AFB, CA

Col John C Fobian

2,500 Hours

3 AS/CC, Dover AFB, DE

Capt Walter J Jankowski

SSgt Jason A Adkins

3 AS/SE, Dover AFB, DE

Maj Mark A Brown

Maj Mark A Gaubert

Maj Kurt J Kelemen

Maj John T West

Capt Scott C Evers

Capt David A Gauch

Capt Shawn C Underwood

MSgt Robert E Devine

4 AS, McChord AFB, WA

Lt Col David D Blomberg

Lt Col John J Sullivan

Maj Mark A Aown

Maj Paul C Lambertson

Maj John E Vaughn

Capt AnneMarie L Cassidy

Capt Robert J Cook

Capt Marvin L Fisher

Capt Kelly C Kimsey

Capt Jeffery S Merritt

Capt Albert G Miller

Capt Michael J Ramirez

SMSgt Ronald D Pierce

SSgt Brian C Baker

SSgt Shawn D Joy

SSgt Saleem Muncey

SSgt Michael F Patton

SSgt Corey D Reid

SSgt Winston C Tisdale

SSgt Michael V Warner

6 ARS, Travis AFB, CA

Lt Col Kevin Kilb

Maj Tulley Marriott

Maj Ken Moss

Capt Allen Horsens

TSgt John Steggel

SSgt Thomas Barger

SSgt Jayson Brady

SSgt Justin Konicke

6 OG, MacDill AFB, FL

SMSgt Bricker Martin

6 OSS, MacDill AFB, KS

MSgt Jerry Linscott

15 AS/CC, Charleston AFB, SC

Maj Michael Bettner

Capt Robert Hilliard

Capt Edward Kaufman

Capt Daniel Tarleton

SSgt Richard Bennett

SSgt Laura Heggie

SSgt Kenneth Kluge

SSgt Walter Lightburn

SSgt Christopher Pack

A1C Shawn Bristow

17 AS/CC, Charleston AFB, SC

Capt Jason Hover

Capt Brian Wald

SSgt Kenneth Bragg

SSgt Mitch Peters

54 ALF, Scott AFB, IL

Maj Kristopher D Colley

Capt Thomas C Hudnall

91 ARS, MacDill AFB, FL

Capt Carey D Efferson

93 ARS/CC, Fairchild AFB, WA

Lt Col Keith P Ross

Maj Kennis R Nicholls

Capt Mark A Hickman

TSgt Charles H Armstrong

95 AS, Milwaukee, WI

Maj James B Allen

Maj Rolf W Breen

Maj Bradley G Ross

Capt Gregory D Colby

TSgt Richard R Davila

TSgt Robert J Krivanek

SSgt Kevin G Cook

130 AS, Charleston, WV

MSgt Deborah D Turrill

179 AW/SE, Mansfield, OH

Maj Larry Mullen

185 AS, Will Rogers ANGB, OK

Maj Todd M Frost

302 AW/SE, Peterson AFB, CO

Maj Christopher Clay

Maj Terry Isaacson

Maj Mike Lydon

Maj Dan Mullins

Maj James Murphy

Maj Som Chai Odom

Maj Doug Strawbridge

Maj Steven Thompson

Maj Julie Venable

SMSgt Bob Lund

SMSgt Tim Sandon

MSgt Jason Matthies

MSgt Gary Nester

MSgt Andre Nolte

MSgt Kenneth Valdez

310 AS, MacDill AFB, FL

Maj J Dean Metz

Capt Keith A Peloquin

SSgt Sam S Walker

314 ARS, Beale AFB, CA

Maj David R Ackerson

Maj James D Brown

Maj Matthew Frauenfelder

Maj Paul J Janka

Maj Robert M Mazzei

Maj Stephen M Mulich

Maj Danforth C Nguyen

Maj Gerald T Schumacher

Maj Carl V Timm

Maj David I Winters

Maj Barbara L Wyatt

Capt Robert J Horton

Capt William B McBride

Capt Robert N Osborn

Capt John S Wahleithner

MSgt Larry V Naso

317 AG/SE, Dyess AFB, TX

Maj Robert Blagg

Maj Gregory Haynes

Capt Mark Jones

Capt Michael Kratz

Capt Marcus Lewis

Capt Robert Peck

Capt Paul Trujillo

SSgt Jon Malone

Milestones

337 AS, Westover ARB, MA

Maj Jennifer Farrelly
Maj David M Heroux
Maj Matthew D Llodra
Maj Changkun Moon
Maj Vincent A Orlando
Capt Mark T Brule
Capt David M Capuano
Capt Richard A Scheller
Capt Stephen M Taylor
MSgt Jeff K Antuna
MSgt Donald Divincenzo
TSgt Joseph G Fournier
TSgt Shawn M Harris
SSgt Ava M Swedock

356 AS, WPAFB, OH

Maj Patrick Driscoll
MSgt Terry Harlow
TSgt Roberto Garcia
TSgt Robin Morris
TSgt David Petterson

463 AG, Little Rock AFB, AR

Maj Erick H Anderson
Maj Timothy Biltz
Maj Sean Bordenave
Maj James D Dryjanski
Maj Darren L Miller
Maj Mark Polomsky
Capt Jose G Paniagua

1,500 Hours

3 AS/CC, Dover AFB, DE

Capt John F Delahanty
Capt Christopher M Ohlmeyer
Capt Jack M Rembisz
Capt William M Stover
Capt Lane D Thompson
Capt Gregory S Ulrich
MSgt John A Micek
TSgt Alan M Schrenk
TSgt Ron S Vanderhei
SSgt Dean E Ferrer
SSgt Jesus A Munoz

3 AS/SE, Dover AFB, DE

Capt Joseph R Adamski
Capt Brent N Baldwin
Capt Eric N Berg
Capt Ryan C Boyle
Capt Cory F Bulris
Capt Sean T Kelley
Capt Trent M Magyar

Capt Daniel J Mangan

Capt Tim D Voss

1Lt Brock Bentz

1Lt Joey F Greene

SSgt Michael D Fisher

4 AS, McChord AFB, WA

Maj Paul Shevlin

Capt Bradley E Bridges

Capt Jay L Clark

Capt William D Hall

Capt Christopher B Klopping

Capt Christopher M Panush

Capt Christopher D Thompson

1Lt Darin J Kolb

MSgt Jeffrey B Estep

SSgt Derek J Andrews

SSgt Randall S Culver

SSgt Scott A Mills

SSgt Charles A Thompson

SSgt Michael V Warner

A1C Lucas J White

6 ARS, Travis AFB, CA

Capt Ryan Adams

Capt June Cruse

Capt Joe Dingman

Capt John Lee

Capt Jared Paine

Capt Sukit Pananon

Capt Doung Pierre

Capt Darin Reed

Capt Kevin Williams

1Lt Jim Taggart

1Lt Kris Uber

SSgt Dave Eisenbrown

SSgt Ken Lavin

SSgt Jeff Sellon

11 AS, Scott AFB, IL

Capt William K Freeman

Capt Roger C Morin

15 AS/CC, Charleston AFB, SC

Capt Eric Carney

Capt Anthony Carr

Capt Brian Collins

Capt John Cousins

Capt Jimmy Fuller

Capt Timothy Gonyea

Capt Robert Hanovich

Capt David Hill

Capt Dustin Keck

Capt David Owens

Capt Calley Poarch

Capt Gerardo Reyes

Capt John Sedlacek

Capt Joshua Shown

Capt Stephen Snelson

Capt John Thaxton

Capt Richard Weaver

Capt John Zenz

MSgt Patrick Daly

TSgt Michael Getlinger

SSgt John Abate

SSgt Toby Thompson

SSgt Daniel Torgerson

A1C Dustin Chieppa

17 AS/CC, Charleston AFB, SC

Capt G Blane Howell

SSgt Renee Morales

SSgt Jonathan Rabalais

SrA Shaun Brock

SrA Paul Guenther

54 ALF, Scott AFB, IL

Capt William M Evans

Capt Mark P Reimann

84 ALF, Scott AFB, IL

Capt Ryan L Bailey

Capt Lazaro M Costa

Capt Jeffrey S Matre

91 ARS, MacDill AFB, FL

Capt Kenneth M Kroll

93 ARS/CC, Fairchild AFB, WA

Maj Joseph W Murrietta

Maj Scott C Zippwald

Capt Earl Ardales

Capt Marc A Quillen

Capt Gonzalo Reyna

SSgt Charles E Parsons

95 AS, Milwaukee, WI

Maj Timothy J Reynolds

Capt John T Bowen

Capt Todd D Moore

MSgt John L Grutzmacher

TSgt Robert F Sczesny

TSgt Paul H Zenner

SSgt Brett D Brandemuhl

SSgt John W Daniel

SSgt Kelly L Malcik

128 ARW/ANG, Milwaukee, WI

MSgt Donald L Strickland

137 AES, Will Rogers ANGB, OK

TSgt Tracy L Combs

TSgt Robert G Sutton

179 AW/SE, Mansfield, OH

Maj Wil Baulkmon

Maj Gregory Galbato

Capt Scott R McCracken

Capt James McCoy

185 AS, Will Rogers ANGB, OK

Capt Christopher J Cherney

302 AW/SE, Peterson AFB, CO

Capt Tim Pemberton

TSgt Daniel Bird

TSgt Daniel Bumby

TSgt Martin Pier

SSgt Scott Agenbroad

310 AS, MacDill AFB, FL

MSgt Debbie L Chapman

SSgt Sean M Broderick

SSgt Rachel Dukart

314 ARS, Beale AFB, CA

Capt Summer A Fields

Capt John D Tate

1Lt Scott H Gridley

TSgt John C Fill

317 AG/SE, Dyess AFB, TX

Capt Andrew Campbell

Capt Brian Foreman

Capt Thomas Howe

Capt Michael Keefe

Capt Matthew Lockwood

Capt Thad Middleton

Capt Michael Sheldon

TSgt Duane Clapp

356 AS, WPAFB, OH

Capt Brett Manger

Capt Norman Shaw

1Lt Jason Shaffer

MSgt Dennis Lott

TSgt Bret Baker

TSgt Brian Dawes

TSgt Jesse Howard

TSgt Thomas Wilks

375 AES, Scott AFB, IL

SSgt Wesley S Rudisill

463 AG, Little Rock AFB, AR

Maj James E Boddy

Maj Steve Hodge

Maj Jonathon D Raymond

Capt John M Klein

Capt Joshua J Nielson

Capt Kristopher Norwood

Capt Brian S Pitcher



QUICK STOPPERS

When a KC-135R compressor stalls...

It was a beautiful day to fly a local training mission with clear blue skies and a light breeze. The preflight had gone well and the entire crew was looking forward to an uneventful mission in the KC-135. Engine start was also normal until the number one engine exhaust gas temperature (EGT) remained within operating limits but peaked 50 - 60 degrees Celsius higher than the other engines.

As part of the checklist, prior to taxi, the crew of a KC-135R runs up the number one and number four engines, in the chocks, to check the operation of the engine failure assist system (EFAS). In this instance, when the number one throttle was pushed up, the engine failed to accelerate. The N2 gage, indicating turbine speed, began to roll back and the engine stall light illuminated followed by the EGT caution light illuminating as the EGT rose above 900 degrees Celsius. The aircrew shut down the engine in accordance with engine stall procedures. The technical manual also states that if an engine stall occurs during ground operation, shut down the engine and do not attempt restart until maintenance has determined there is no internal engine damage. A restart of the engine under these circumstances is allowed because there are a variety of transient conditions that may cause N2 rollback without damaging the engine.

Maintenance personnel checked the engine for damage and did not find any. Then they pulled the turbine engine monitor system (TEMS) circuit breaker. A TEMS malfunction can cause higher than normal exhaust gas temperatures. Maintenance personnel then cleared the crew to attempt another engine start. After motoring the engine for two minutes to clear unburned fuel and cool the engine, the engine started normally. Run-up of the number one engine during the EFAS check worked normally this time. As the engines were pushed-up to taxi, the N2 gage again began to roll back, the engine stall light illuminated, and the EGT began to rapidly increase. The crew immediately shut down all the engines and turned the aircraft over to maintenance.

Engine teardown revealed the compressor stall was caused by the delamination of a coating on the compressor section of the engine called METCO. This substance damaged the blades and vanes in the compressor section, disrupting the airflow through the engine. The damage occurred in an area of the engine that is challenging to inspect. Even though all parties involved followed the technical data and acted by the book, almost \$400,000 of damage was done to the engine.

Fly Safe.

Save the endangered fire bottle

It has come to the attention of the safety office that innocent fire bottles are being tortured and crushed to death. Specifically, people are running over them with large airplanes. The major weapon system used in these fire bottle murders varies. Sometimes it's a KC-135. Other times it is a KC-10. There are also reports of C-5s, C-130s, and even C-17s being used to smash the living daylight out of these innocent items.

The firebottle is a faithful sentry. It stands a lonely watch near the nose of an aircraft waiting patiently for its call to duty. Through desert heat, snow, or rain it waits in the same place just in case there is a fire on the aircraft. How do we repay this noble tool for its years of service? Aircrews run over it. Unfortunately, it's an easy target. It's big and colorful. Sometimes they are yellow, others are red. Green, tan, and white ones have also been sighted. It always sits in the same place. It doesn't run very fast either.

Now for the really grizzly parts. The 100 pound halon firebottle puts up a good battle but is really no match for an airplane over 1000 times its own weight. The odds are stacked against the fire bottle. It just isn't a fair fight. To use technical terms, it basically gets squished like a grape and then all the Halon leaks out. Occasionally the fire bottle manages to damage the tires or landing gear of the aircraft attacking it, before its untimely demise.

Here is the important part. We need your help to save the firebottles! There are several things aircrew members can do.

They aren't hard and they don't cost money. First, be aware of the natural environment of the firebottle. As mentioned earlier it likes to linger near the nose gear. Usually a uniformed official moves it to a wingtip after engines are started. Be alert for this. If you don't see it moved or can't see it on or near the wingtip ask about it or send someone down to check on it. Remember, only you can save the endangered firebottle.



Potential Threat Alert

Photo by: SSgt. Derrick Goode

U.S. service members from the 340th Expeditionary Air Refueling Squadron, out of Grand Forks, N. D., take shelter under their desks in response to an alert on March 8, 2003. The alert was part of an exercise to keep the troops prepared for the potential threats at this forward-deployed location.

