THE MOBILITY FORUM

THE MAGAZINE OF AIR MOBILITY COMMAND | **WINTER 2013/2014**

AMC/CC: Innovation *vs* Invention

18 AF/CC AND AF/SE TALK SAFETY

THE MOBILITY FORUM

Volume 22, No. 4
Winter 2013/2014

The Mobility Forum (TMF) is published four times a year by the Director of Safety, Air Mobility Command, Scott AFB, IL. The contents are informative and not regulatory or directive. Viewpoints expressed are those of the authors and do not necessarily reflect the policy of AMC, USAF, or any DoD agency.

Contributions: Please email articles and photos to info@schatzpublishing.com, fax to (580) 628-2011 or mail to Schatz Publishing, 11950 W. Highland Ave., Blackwell, OK 74631. For questions call (580) 628-4607. The editors reserve the right to make editorial changes to manuscripts.

Photos with a DE denote digitally enhanced photo.

Subscriptions: GPO U.S. Government Printing Office: 2011-645-263. For sale by the superintendent of Documents, U.S. Government Printing Office. Internet: bookstore.gpo.gov. Phone: toll free (866) 512-1800; DC area (202) 512-1800. Fax: (202) 512-2104. Mail: Stop IDCC, Washington, DC 20402-0001.

AMC RP 91-2. Dist: X

ISSN 1067-8999

Find the most current edition of *The Mobility Forum* on AMCs homepage: http://www.amc.af.mil/ or at http://www.amc.af.mil/mobilityforum.asp

Comments/Feedback: mobilityforum@us.af.mil

IN THIS ISSUE

ON THE COVER

An Airman from the 451st Expeditionary Logistics Readiness Squadron aerial port flight transfers pallets to a C-17A Globemaster III for an airdrop out of Kandahar Airfield, Afghanistan.

USAF Photo by MSgt Ben Bloker

REGULAR FEATURES

SOCIAL MEDIA

Stay up-to-date on happenings around AMC via these outlets.

www.facebook.com/theofficialairmobilitycommand

www.twitter.com/airmobilitycmd

www.youtube.com/MobilityAirman

www.flickr.com/photos/MobilityAirmen

www.amc.af.mil/rss/TopStoriesByTab.asp?tabId=112943

Innovation VS Invention

By GEN PAUL J. SELVA
Commander, Air Mobility Command

This past October marked our twelfth year of sustained combat operations in Afghanistan. During more than a decade of war, you've proven you are part of the best trained and equipped Air Force the world has ever known. You've attained that distinction by doing things right. Doing things right includes following a disciplined approach to executing your mission such as following checklists, established procedures, policies, and guidance. However, as your commander, I challenge you not just to do things right, but to do the right things, a more difficult, but absolutely essential element of military service. Doing the right things includes making informed, deliberate decisions as we seek ways to improve mission execution. Put another way, I challenge you to work with your first line supervisors, non-commissioned officers, senior noncommissioned officers, and commanders to find new, better, more efficient ways to execute our mission. Accept only the risks you are empowered to accept, but work aggressively to find efficiency and eliminate inefficiency.

Earlier this fall during the Air Force Association's Air and Space Conference, General Welsh asked what keeps me up at night. My answer was simple: "Invention versus Innovation." My greatest worry is that, after 12 years of continuous combat operations, some Airmen have become accustomed to accepting invention as the approved way of doing business. Mishap investigation boards frequently cite inattention, complacency, and poor judgment as causal factors in accidents. The first two can get you into a bind; unfortunately poor judgment often follows as Airmen believe they need to create a new way out of trouble. Ultimately, executing tasks in a non-standard fashion or executing unapproved or "on-the-fly" techniques presents a real risk to our Airmen, our resources, and our mission.

Over the course of the past year, we've had nine Class A mishaps. As a result, we've lost nine Airmen—five on-duty and four off-duty. These are men and women we will never get back. In some of these mishaps, the Airmen involved perceived a sense of urgency not justified by the situation, incorrectly weighed risk versus reward leading to the acceptance of risk they were not empowered to accept, and ultimately made decisions characterized by development of new, untested, "on-the-fly" techniques with devastating consequences. So, put simply, I am concerned that we have Airmen "inventing" new, untested procedures, placing themselves and their fellow Airmen at risk when it isn't necessary.

This year, Gen Welsh released our Air Force's Vision, *World's Greatest Air Force – Powered by Airmen, Fueled by Innovation*. In conducting your daily activities you should feel empowered to be innovators. Innovation is a deliberate process of seeking ways to do things more effectively and efficiently through informed decision making and within the margin of safety provided by Air Force policies and guidance. We need innovators, not inventors. There is a critical difference between innovation and invention. As you might have surmised, I consider invention to be creation on-the-fly—an uninformed, last minute, hurried choice that often conflicts with or willfully violates established procedures. We need all Airmen to critically evaluate their assigned tasks and missions and engage their leadership if they have a better way to get the job done.

As with most intellectual discussions, it's useful to look to a clear example for clarification. Innovation can occur anywhere as two Airmen recently proved with the KC-135. Staff Sergeants Alex Aguayo and Michael Rogers from the 6th Maintenance Squadron at MacDill AFB, FL improved an anti-corrosive paint process for KC-135 wheels. Until now, KC-135 wheels were painted and cured one side at a time—a process requiring 26 hours. Confident there was a better way, these aircraft metal technicians designed and built a 360-degree plane rotation turn table wheel stand that allows both sides of the wheel to be painted at the same time. Their design cuts a time-intensive painting and curing process in half! I believe their new design will become a KC-135 fleet benchmark very soon. These Airmen knew their jobs and guiding regulations through and through, but found a more efficient and effective way to get the work done. If Airmen can find innovations within a 57-year old airframe and established procedures, I am confident more Airmen will find innovations within everything we do.

The Air Force needs you to be innovators. My message to you as the professional, seasoned, or aspiring experts in your craft is to always understand and adhere to AFI and TO guidance. Speak up when you need help or see room for improvement in any process. Don't invent, innovate. In this time of fiscal uncertainty, our Air Force must be able to provide capabilities our nation can afford. We need to continue to seek innovations and savings where feasible. You are the key to that process and to the continued success of our Air Force and our nation. Be safe. We cannot afford to squander our most precious resource—you!

SPEED, SAFETY, SUCCESS *Through Leadership*

By LT GEN DARREN W. MCDEW
Commander, 18th Air Force

Those of us who have sworn to support and defend our Nation understand that someday we may be called upon to make the ultimate sacrifice. We accept and understand that responsibility as an acknowledged risk in service to our country. However, that doesn't mean we are allowed to be careless with our lives or those of our fellow Airmen.

This year we've had a series of safety mishaps that have been related to lapses in focus, judgment, and discipline. Some of these mishaps have been fatal. I view this first and foremost as a leadership issue: it demonstrates a lack of focus on risk management, operations safety, training, and standards. We, as leaders, must adjust the focus.

It saddens me to lose any Airman—but especially when it is to a mishap that could have been avoided. We have the power to do better, but it requires a collective commitment to bring about real change. Until then, mishaps will continue with aircraft and equipment needlessly damaged and our fellow Airmen hurt or killed.

Many people will look for solutions by adding new processes, procedures, or instructions.

> "The solution to our challenges is simple: give our Air Force the strong leadership it needs."

However, the real solution is a time-tested remedy: leadership. If you have a problem with standards—apply more leadership. Have a problem with unit morale? Apply more leadership. Seeing a negative safety trend? Apply more leadership! Leadership is a medicine best applied liberally, regularly, and in person. Be bold in its application.

As leaders, we also understand that we will always face unexpected events, both natural and manmade, that drive a call from our Nation which can only be answered by Mobility Airmen. In responding to that call, we accept some inherent risk; we simply cannot be successful without doing so. In the mobility world, mission success often depends on a rapid response. But that doesn't mean we skip steps or ignore standards. Do the mission right!

We need you to take care of each other. We can't afford for you to become complacent or a statistic. When we lose focus we expose ourselves and our Wingmen to unnecessary risk. The solution to our challenges is simple: give our Air Force the strong leadership it needs. Help us strengthen our culture of excellence. You not only hold the keys but also carry the responsibility to build tomorrow's Air Force and posture it for success.

It is a heavy responsibility … but it is one that your Wingmen, your leaders, and America is counting on you to exercise well. The implication to all of this is simple: our success depends on bold leaders who aren't afraid to take intelligent risks to make things better.

I'd ask you to consider how your ideas and innovations can positively impact our enterprise. Motivate others to find a better way to do business. I believe to my core that you are the most talented, knowledgeable, and operationally-ready Air Force we've had in our history. It's not the aircraft, money, or infrastructure that makes our Air Force strong—it's you!

Holiday/Winter Safety Campaign Underway

By COL PAUL MURPHY
Director of Safety

COMMANDERS, DIRECTORS, AND CHIEFS,

The AF Holiday/Winter Safety Campaign will run from 22 November 2013 to 2 January 2014, focusing on travel and seasonal activities commonly associated with this time of year. HQ AMC will extend the time period by three additional weeks based on historical trends of significant mishaps towards the end of January. Our campaign will run 22 November to 25 January.

The theme this year is "SAFE-n-SOUND, All Year Round" and will consist of weekly modules highlighting safety tips and ideas to combat common mishap-causing activities. While AMC did not lose any Airmen during the holiday period last year, the AF as a whole lost eight Airmen from 15 Nov 12 to 30 Jan 13. Four of those fatalities and three permanent disabilities were the result of motor vehicle operations.

The material for the campaign has been loaded to the AMC/SE SharePoint Site: **https://cs3.eis.af.mil/sites/OO-SE-AM-16/default.aspx**

Click on the 2013 Holiday/Winter Campaign caption/logo on the right hand side of the screen. There are many briefings and videos provided for your use.

THIS YEAR'S THEMES ARE:

Week 1	22 Nov	The Long and Winding Road
Week 2	29 Nov	Christmas Lights
Week 3	6 Dec	Super Skier's Last Race
Week 4	13 Dec	I Just Want to Celebrate
Week 5	20 Dec	Ice Ice Baby
Week 6	27 Dec	Cold Weather Blues
Week 7	4 Jan	Back to Work and Tired
Week 8	11 Jan	Distractions
Week 9	18 Jan	Dangers of Short Daylight Hours

Aside from the numerous slips and falls experienced each year at our bases located in colder climates, be especially vigilant in environments that present the potential for more serious mishaps.

The information can be used at staff meetings, Roll Calls, Guard Mount, and other information-sharing venues to heighten awareness of the risks our Airmen and their families face during this season. Don't limit your briefing efforts to the materials grouped in each week. Sort through the info for something that meets your needs.

Ensure your efforts include addressing on-duty safety. Aside from the numerous slips and falls experienced each year at our bases located in colder climates, be especially vigilant in environments that present the potential for more serious mishaps. We lost two AMC Airmen to on-duty mishaps last winter and another sustained a permanent partial injury. I urge each commander and supervisor to approach all tasks using sound risk management principles. The lives of our Airmen and their families are too important!

Please direct any questions pertaining to the campaign to HQ AMC/SEG at DSN 779-0940 or amc.seg@us.af.mil.

Very respectfully,
Murph

Learning From Others

By TSGT RAY JOHNSON
HQ AMC ASAP Program Manager

TO ERR IS HUMAN. It is a familiar phrase that we have all heard before. No matter how much we prepare, failures are inevitable; we are human after all. What is important is that we learn from our mistakes and help others learn from them, as well, so they do not recur in the future. AMC's Aviation Safety Action Program (ASAP) does just that—it encourages crews to get the word out about threats, errors, unsafe conditions, and lessons learned. Among the most prominent ASAP lessons is the importance of monitoring the aircraft and VVM (verbalize, verify, and monitor) procedures.

> "Upon landing, the crew realized the difference between the altimeter reading and actual field elevation. After recalling the events and listening to ATIS again, the crew realized that the controller had reported the altimeter setting in MB. The phrase "millibars" was not used, and since the reported figure was below 1000 millibars, the crew's "confirmation bias" led to their setting the altimeter in inches. The interpretation error resulted in an incorrect altimeter setting that led to the aircraft being 500 feet lower than indicated ..." ASAP 583

Since its inception in 2009, AMC's ASAP office has received numerous reports like the one just described from crews. In fact, altitude deviations are the number one submission for ASAP, making up over 16 percent of all reports submitted. These reports cover a wide range of circumstances. Some include leveling off at the wrong altitude while others point to altimeter errors resulting in aircraft altitude deviations, some of which occurred in threatening mountainous terrain. Crew vigilance and effective VVM procedures can trap these errors—just one crewmember noticing and announcing such discrepancies will stop the error chain.

> "We were cleared for an intermediate level off at FL270. Passing through FL260, both pilots acknowledge by stating passing 260 for 270 set and armed. Both pilots momentarily diverted attention from the instruments and then the PF recognized the aircraft approaching FL280. The PF noticed the AP had advanced to capture mode but didn't level off at the preset altitude." ASAP 459

By now, we are all familiar with what monitoring is and what the duties of the pilot monitoring are. Our culture reinforces it through the teaching of CRM/TEM and the principles of VVM. We must use this skill every day in our flying duties. However, mistakes happen and these

The rarity of failures in highly automated cockpits presents a hazard because humans are inherently poor monitors for rare events—we tend to recognize patterns and expect them to continue.

examples are situations that others may have encountered. They are also completely avoidable situations. In the latter case, the pilots set the automation and watched the aircraft begin the maneuver. Other flying priorities distracted them from monitoring the aircraft to ensure it captured the correct altitude. In the former, the pilots allowed their expectations to drive their decisions and missed indicators that could have pointed out their error. Both ASAPs are good examples of why continual monitoring of the aircraft is so important.

Despite us appreciating the importance of strong monitoring skills, it is important to take a step back and maintain a healthy amount of suspicion to keep us alert. System automation has brought many benefits to aviation. We've seen improvements in safety, reliability, and efficiency, but automation has also led to an increased risk of complacency. Many of our more experienced pilots may remember a time when system failures were commonplace and they were used to expecting them, but newer pilots are coming into the field at a time when the opposite is true. Modern automation systems are highly reliable, increasingly user friendly, and easy to operate. The rarity of failures in highly automated cockpits presents a hazard because humans are inherently poor monitors for rare events—we tend to recognize patterns and expect them to continue. When the pattern is interrupted, our natural biases cause us to ignore the conflict and focus on our expectations, which too often leads to poor handling of the situation or missing the discrepancy altogether. In this next example, the aircraft leveled off as the crew expected, but they missed that it was at the wrong altitude.

Lt Col Matthew Enfield and Capt Kevin Thomas, both 92d Operations Support Squadron pilots, control a KC-135 Stratotanker from the cockpit above Oregon.

USAF PHOTO BY A1C JANELLE PATIÑO

"... we were told to climb to FL330. As the aircraft approached FL320 it leveled off even though our MCP (Mode Control Panel) was programmed with FL330. Our FMC was programmed with FL320 as the cruise altitude. I had the autopilot coupled to the FMC, was flying in VNAV, and adjusting airspeed to meet mission timing. After cruising at FL320 for approximately 5-10 minutes, ATC asked us if we were supposed to be at FL330. We said yes and immediately climbed to FL330." ASAP 332

ASAP submissions demonstrate that despite their increased reliability, automated systems and our human interaction with them is not without fallibility. We can make flying operations safer by self-identifying and reporting these unsafe conditions via ASAP so others may benefit. Knowledge of the condition aids in preventing similar incidents with other crews. Ultimately, it provides the opportunity to make an inherently dangerous operation safer for us all.

At Eight Miles a Minute!

By MARK ALTENBURG
HQ AMC CRM/TEM Program Director

Arguably, no one knows the complexities and frustrations of air mobility better than AMC's aircrews. While our effectiveness as "mission hackers" is largely due to our vaunted adaptability and flexibility, human factors experts claim these same traits are sometimes the very *reason* for human and, more significantly, aircrew failures. "How can this be?" you astutely ask. How can the traits directly attributable to our successes be, at times, the authors of our disasters? Enter the world of Crew Resource Management (CRM), and Threat and Error Management (TEM) where such a dichotomy must be successfully negotiated at the proverbial "eight miles a minute."

Helping make sense of the constant barrage of threats thrown at aircrews, AMC Ops RAMS provides MDS Aircrew Training Contractors with annual "Topic(s) of the Year" that focus on timely CRM/TEM subjects they can use in developing "real world" simulator courses. Based on a detailed analysis of recent mishaps (or near mishaps), the topics for 2014 are:

- CRM/TEM Lessons Learned Briefing
- Threat and Error Management
- Stabilized Approaches
- Pilot Monitoring—Emphasis On Stabilized Approach Callouts
- Pilot/Aircrew Decision Making and Judgment
- Flight CRM/TEM Debriefing
- ASAP Use

A grizzled aeronaut once groused, "If you can't be an inspiration to others, at least be a dire warning!" The first topic on the list, the CRM/TEM Lessons Learned Briefing, aptly supports this maxim by crisply revisiting CRM and presenting a TEM foundation in advance of the distribution of AMC's Supplement to AFI 11-290 (USAF's CRM/TEM Training Program). This briefing highlights recent mishaps as examples of appropriate (or inappropriate) CRM/TEM application. You can also view this eye-opening briefing at your wing's Safety Office.

Highly endorsed by the FAA, TEM is critical to CRM training. Designed to assist in identifying threats to mission accomplishment as well as effectively managing human error, it provides a framework for analyzing data and assessing errors. It also

identifies factors that contribute to making mistakes and how aircrews manage unpredicted situations. As alluded to earlier, TEM is currently the aviation industry's gold standard for reducing human errors, consequently abating conditions that induce human error mishaps.

You may have misplaced your cherished copy of AFI 11-290 or perhaps lent it to a dear friend, who lost it during a PCS. Either way, you may recall that AFI 11-290 warns of "Threats." *Threats* are events or conditions that normally occur outside the influence of the flight crew but require crew attention and management in order to maintain safety margins. While a listing of threats could be endless, it would surely include bad weather, maintenance or ground crew error, unfamiliar airports, automation events, unexpected missed approaches, systems malfunction, high terrain, ATC, and high traffic density. Threats can also come from the crew (fatigue, complacency, hidden agendas, personal distractions, etc.). AMC's aircrews properly manage threats during every flight, but a mismanaged threat can be—*and has been*—linked to flight crew errors.

Errors are flight crew actions or inactions that: (1) lead to a deviation from crew or organizational intentions or expectations; (2) reduce safety margins; and (3) increase the probability of adverse operational events on the ground or during flight. Flights that occur without an error are rare because aircrews are human, and humans do make mistakes. Consequently, aircrew members need to "trap" (negate) errors through techniques such as VVM (verbalize, verify, and monitor) and cultivate a teamwork mentality to keep errors from putting the aircraft into a UAS.

What the heck is a UAS? Great question! An *Undesired Aircraft State* (UAS) is a deviation in aircraft position, speed or attitude, or incorrect configuration of an aircraft that: (1) results from flight crew error, actions, or inaction; and (2) clearly reduces safety margins. Examples are heading and altitude errors, unnecessarily high or low air speed, a near miss, fuel level below minimums, a long landing, a hard landing, wrong runway or taxiway, wrong airport, an unstable approach, etc. No doubt, you've clued into the fact that a UAS is never good and preventing or mitigating it is quite high on the priority list.

Supporting the need for a stable approach, The Flight Safety Foundation reviewed 16 years of accidents worldwide and determined that 30 percent of the accidents involved runway excursions, the vast majority of which were due to unstable approaches.

Aviation history has shown a substantial correlation between unstable approaches and runway excursions. As a UAS, unstable approaches are primary contributors to numerous aviation mishaps. HQ AMC's MFOQA analysis indicates that over 12 percent of all operational and training approaches flown deviate from stable approach criteria—overwhelmingly for poor airspeed control. Supporting the need for a stable approach, The Flight Safety Foundation reviewed 16 years of accidents worldwide and determined that 30 percent of the accidents involved runway excursions, the vast majority of which were due to unstable approaches. Additionally, the Foundation's *1998 Analysis of Critical Factors During Approach and Landing in Accidents and Normal Flight Final Report* revealed that approximately 56 percent of the world's jet fleet accidents between 1959 and 1996 occurred during the approach and landing phase and accounted for 44 percent of all fatalities. Interestingly, the approach and landing phase only accounts for 16 percent of the total flight time!

Per current MDS Vol 3 and FCIF guidance, aircrews are to take immediate corrective actions to stabilize the approach when outside designated parameters or conduct a Go Around. As a result, during your next simulator adventure, expect simulator instructors to discuss stable approach criteria and to debrief all notable deviations after approaches. Simulator instructors will also debrief the Pilot Monitor(ing) (PM) if the PM neglected to observe or comment on deviations from stable or failed to call "Go Around" if warranted during the approach.

Stressing the importance of the PM, the National Transportation Safety Board has highlighted PM duties as causal or contributory in numerous aviation mishaps. Combatting this weakness, several airlines are establishing "How Can I be a Better PM" working groups. Though the PM's duties are numerous, of special note is their responsibility to help maintain aircrew situational awareness (a CRM core skill). Other aircrew members (including ACMs) bear a similar responsibility,

whether official or unofficial. In addition, when aircraft commanders are the PMs, they must lead by example, emphasizing continual "lean forward," situationally aware PM engagement.

Flight Ops safety reps from the airline industry repeatedly ponder, "What makes aircrews take unnecessary risks? Why do they continue an unstable approach?" To answer such questions, let's look into the inner workings of aircrew members. Human Factors experts speak of *self-efficacy*, which they define as a person's degree of confidence with task completion. The stronger the self-efficacy, the longer the person will persist and exert effort to accomplish the task. In the aviation context, conditions often arise in which self-efficacy and overconfidence in one's ability can impair performance, especially during high workload, high stress situations—conditions AMC aircrews face on nearly every flight.

Per the Aeronautic Learning Laboratory for Science, Technology, and Research (ALLSTAR Network), the causal factor in 80 percent to 85 percent of aviation accidents is the human element (pilot error), a poor decision or a series of poor decisions made by the captain (aircraft commander) and/or pilot flying (PF). Known as the Poor Judgment Chain, it is a situation when one poor decision increases the probability of another. As the Poor Judgment Chain lengthens, the probability of a safe flight significantly decreases. Highlighting the issues of judgment and decisionmaking, aviation safety expert and Director of Global Programs at the Flight Safety Foundation, Rudy Quevedo, revealed that aircrews are reluctant to abort landings, saying, "One of the biggest things that we see is that the pilots don't feel a threat—they feel they can recover." Unfortunately, in too many instances, they cannot.

So how do we gauge ourselves? As noted by CRM/TEM instructors and aviation professionals, one skill set central to aviation safety is the post-mission debrief conducted by the crew. At a minimum, a good CRM/TEM debrief answers the following questions:

- What were the threats on this mission, and how did we manage them as a crew?
- What were the decisions we made as a crew? How did we arrive at these decisions? Did we use all available resources? How did these decisions affect the mission?
- Did we make any errors on this mission, and how did we trap those errors?
- Were there any undesired aircraft states? How did we identify and correct them?

Rounding out the 2014 CRM/TEM topics is the promotion of AMC's ASAP program. As a voluntary self-reporting system, this valuable program uncovers hazards and potential CRM/TEM issues not recorded via any other system. Though the ASAP program does not replace mandatory reporting methods (e.g., HATR), the information obtained is used to identify aircrew errors and threats to aircrew, and is a source for data correlation with other data-gathering systems. The ASAP scoreboard and submission website is located at **http://www.safety-masap.com**.

In summary, it is a huge understatement to say that our air mobility world is filled with threats to safety—on the ground, in the air, and sometimes mechanically within our aging aircraft. Too often, such threats and pilot-induced errors lead to a UAS and, unfortunately, mishaps. However, Dr. Erik Hollnagel, a prominent expert in the study of human factors, was "spot on" during his speech at the International Symposium on Aviation Psychology when he said, **"Things go right because people adapt their performance to meet demands, interpret and apply procedures to match conditions, and detect and correct conditions when things go wrong."** Although effective CRM/TEM "at eight miles a minute" is not easy, it is crucial to practice it at every opportunity. If you do so, rest assured that it will be there when needed most.

Capt Joseph Waddell, 458th Airlift Squadron pilot, goes over his pre-flight check-lists during pre-flight inspections at Scott AFB, Ill.

USAF PHOTO BY SRA TRISTIN ENGLISH

AMC FY13 Mishap Statistics Scoreboard

C-17A Globemaster III
USAF photo by MSgt Scott T. Sturkol

FY13 Flight Mishaps

Aircraft	Class A	Class B	Total As of Oct 2013
C-5M	0	2	2
C-17A	1	2	3
C-130J	1	0	1
KC-135R	1	0	1
Total	**3**	**4**	**7**

FY13 Ground Mishaps

Category	Class A (Fatal)	Class B	Total As of Oct 2013
PMV 2Whl	3 (3)	0	3
PMV 4Whl	1 (1)	0	1
Sports & Rec/Misc.	0	0	0
Property Damage	0	0	0
Industrial	2 (2)	1	3
Pedestrian/ Bicycle	0	0	0
Total	**6**	**1**	**7**

The mishaps listed above are for AMC only. They do not include mishaps from other MAJCOMs (AFRC, ANG, etc.).

FY13 FLIGHT SAFETY NOTES

Class A

AMC had three Class A flight mishaps in FY13: a C-17A landing mishap, a C-130J landing mishap/ runway excursion, and a KC-135R inflight breakup. This is an increase from two in FY12.

Class B

The total number of Class B mishaps also increased in FY13 as compared to the three in FY12. These included C-5M taxi and bird strike mishaps, a C-17A engine compressor stall, and C-17A engine damage.

C-5M Bird Strike

While in the radar pattern, the aircraft sustained damage to the radome and number two engine from multiple Canada geese.

C-5M Taxi Mishap

The wingtip of the taxiing aircraft damaged the radome of a parked C-5.

C-17A Engine Overtemp

C-17A engine overtemp transiting Europe, resulting in Class B damage.

C-17A Engine Compressor Stall

The aircraft ingested sand during backing operations that caused mechanical erosion of the compressor blades in engines number two and three. The damage led to the reduction in both EGT margin and surge margin resulting in compressor stalls in the number two engine and rapid margin drop in the number three engine.

C-17A Land Short

Crew continued on an unstable approach and landed short of the runway. The ILS antenna contributed to the extensive damage to the aircraft.

C-130J Departed Runway

Crew continued on an unstabilized approach for excessive airspeed and landed long and fast on the runway resulting in the aircraft departing the runway. There were no injuries, but the subsequent fire destroyed the aircraft.

KC-135 Crash

Aircraft experienced an inflight breakup. All three crewmembers were fatalities.

FY13 GROUND SAFETY NOTES

There were six fatal mishaps and one permanent partial disability.

PMV 2Whl

- One member was attempting an illegal pass and struck a turning vehicle.
- One member was speeding, lost control in a curve and struck a guard rail.
- One member was struck by a deer.

PMV 4Whl

One member was struck by another vehicle and forced into fixed object.

Industrial

- One member struck by a crated boom sustained crushing fatal injuries.
- One member stepped behind a vehicle he was spotting and sustained crushing fatal injuries.
- One member was attempting to raise an aircraft pallet lock and sustained a partial finger amputation.

AMC sustained no losses in Sports and Recreational/ Miscellaneous, Property Damage, or Pedestrian/Bicycle categories.

Airfield Maps *at Your Fingertips*

By ANDREE SWANSON
Air Mobility Command
Geo Integration Office

Every AMC aircrew member is well versed with the Giant Report, a part of the Airfield Suitability and Restrictions Report (ASRR). Now the report can be supplemented with a look at the airfield, right from your desktop.

The Rapid Global Mobility viewer is the latest addition to AMC's geospatial visualization effort. Called AMC.maps for short, the CAC-enabled site contains data visualized on a map, combined with tools that make the maps interactive.

On this map, airfield imagery is supplemented by photos from the National Geospatial-Intelligence Agency and other Air Force major commands. Using the Giant Report data, AMC Geo Integration staff mark key airfield structures, including light towers, ILS components, and navigation aids, along with labeling airfield taxiways, runways, parking aprons, and other key features.

Additionally, the maps contain links directly to important flight mission planning websites, from the Global Decision Support System (GDSS) to NOTAMs and airfield pavement reports.

"We asked the Geo Integration people to create these maps because seeing an airfield you've never flown into before is just another way of making flying safer," explained Joe Motowski, chief of the AMC Airfield Suitability Branch. "We use imagery in our branch to determine or verify runway, taxiway, and parking apron dimensions on current imagery. We fly large airplanes into challenging locations. We can list all the taxiways, ramps, and known obstacles we want, but allowing aircrews to visualize the airfield environment enhances their situational awareness."

AMC.maps is a combination of data from the Giant Report, AMC/A3AT Terminal Procedures (TERPS) data, NGA's airfield diagrams, and the Automated Air Facility Information File (AAFIF). The airfields on the maps are those requested by the AMC/A3 staff, generally the most frequently used fields of the 2,500 active fields mobility forces may use. About 100 airfields have data and current imagery associated with them on AMC.maps, but any airfield can be viewed using the *Global Airfield Search* tool within the map. If requested, the AMC Geo Integration Office will acquire more imagery as needed.

Motowski says the Airfield Suitability team relies on aircrew feedback to make the reports more reliable. "If an aircrew flies to a location and encounters an issue that every AMC aviator should know, the Giant Report is a vehicle to share that knowledge." Aircrews with airfield information to help others should be emailed to the AMC Airfield Helpdesk at **airfield.helpdesk@us.af.mil**.

AMC.maps' newest viewer is another advancement in the development of the ASRRs. The death of Commerce Secretary Ron Brown in a 1996 CT-43 crash near Dubrovnik, Croatia, was a catalyst in the establishment of a consolidated ASRR and its resultant Giant Report.

Then Lt. Col. Mike Yanaros, who was the AMC Airfield Suitability branch chief, played a key role in today's branch mission.

"The predecessor to the ASRR was archaic. It contained a one-liner for the airfield's primary runway only; it

was printed and mailed to customers to be used by aircraft in flight. The Airfield Suitability Branch was slated to be cut when the crash occurred," said Yanaros, now serving as an airfield analyst in the branch.

When Secretary Brown's accident occurred, AMC's Giant Report had Dubrovnik restricted as suitable only for visual flight rules (VFR) landings, recalled Yanaros. "We knew the NavAids there were unreliable, and the mountains made instrument landings hazardous."

The USAFE aircrew, which wasn't required to follow AMC's airfield suitability report, flew an instrument flight rules (IFR) approach into Dubrovnik. Though other factors beyond the approach led to the crash, then Air Force Chief of Staff Ronald Fogleman directed all Air Force aircrews to consult the AMC ASRR from then on. Soon after, the report was automated and put online.

Just as in 1996, aircrews still need accurate airfield data.

"We use a uniform set of airfield approval standards for mobility Air Force aircraft, reviewing each airfield for safety and operational restrictions," Motowski said. "Though only AMC is required to use the Giant Report, all major commands with mobility aircraft are recommended to view it before going into an unfamiliar field."

"Our job is provide the most current and accurate information available," concluded Yanaros. "We resolve conflicting information from different sources. The advantage of the Giant Report is that we resolve those conflicts for the aircrews so they don't have to."

ACCESSING AIRFIELD MAPS FROM YOUR .MIL COMPUTER

AMC's geospatial solution to lines of data are maps that host a lot of useful information, from building, aircraft, and overseas airfields locations and information to weather radar and hurricane tracking. Most users use the *General Purpose* viewer on AMC.maps, but the AMC Geo Integration Office has developed a map view just for aircrews seeking overseas airfield information: the *Rapid Global Mobility* viewer.

If you have a common-access card, you can access AMC.maps. Go to **https://amc.maps.us.af.mil** and select the *Rapid Global Mobility* viewer. New users need to register the first time. When the map viewer loads, you can search for airfield by name, ICAO, or WAC-INNR in the *Global Airfield Search* window. Click on the name to zoom into the airfield. A popup window shows additional links to airfield information, including NOTAMS, Giant Report, and AirNav.com.

You can also search for an airfield by AOR. Click on the *Bookmarks* tool on the toolbar at the top of the page, and select the AOR you want. From the popup window, you'll see all the airfields that have data associated with them.

To see Giant Report data, click on any point next to a label. A new popup window will open with information such as suitability codes, runway length, and taxiway width.

Many more tools and services are offered on the *General Purpose* viewer. On the home page at **https://amc.maps.us.af.mil**, scroll down to the user guide for an introduction to AMC.maps, the *Rapid Global Mobility* viewer, a training presentation on the main viewer, video tutorials, and other user guides.

AMC.maps is maintained by the GIO in the AMC Installations and Mission Support Directorate. For additional information, contact DSN 779-4360 or email **amc.maps@us.af.mil**.

NO DEATHS, NO BROKEN BONES, and NO BENT METAL is the Goal for Major General Neubauer

Major General Kurt F. Neubauer
PHOTO BY KEITH WRIGHT, AIR FORCE SAFETY CENTER PUBLIC AFFAIRS

Interview conducted by
KIM BRUMLEY, Staff Writer

You would think that taking the reigns as Air Force Chief of Safety in the midst of sequestration and after many years of conflict would be a particularly difficult task, but Major General Kurt F. Neubauer assumed the duties of his new role in stride. He said, "I don't think it's more challenging, but certainly recent sequestration and the ops tempo of the last 20 years put a twist on things."

MAJ GEN KURT F. NEUBAUER is the Air Force Chief of Safety, Headquarters U.S. Air Force, Washington, D.C., and Commander, Air Force Safety Center, Kirtland Air Force Base, N.M. He develops, executes, and evaluates all Air Force aviation, ground, weapons, space and system mishap prevention, and nuclear surety programs to preserve combat readiness. Additionally, he directs research to promote safety awareness and mishap prevention, oversees mishap investigations, evaluates corrective actions, and ensures implementation. Finally, he manages, develops, and directs all Air Force safety and risk management courses.

BRILLIANCE IN THE BASICS

"Our leaders are faced with tough decisions in regards to resourcing and prioritization, and have had to make hard choices about which outfits will stay flying and which outfits will be grounded for a period of time due to sequestration," said Neubauer.

"The piece that we haven't really gotten to see yet is the effect on grounded units once they start spinning back up. A certain learning curve has to take place. Even with experienced personnel, skills atrophy. The book knowledge can be very fresh, but the actual execution—the blocking and tackling if you

> There is tension between the pace of operations and how that pace affects the overall health of our Airmen and the fleet—that tension must be watched over carefully, as it can have an effect on safe, effective operations whether they are ground, weapon, space, or aviation.
>
> *Major General Neubauer*

will—those skills need continual practice. An experienced Airman may have a wealth of know-how to fall back on, but recency is key. So there has to be a building block approach, a focus on fundamentals, to rebuild those atrophied skills."

LEADING BY EXAMPLE

"There has to be consistent, repeated emphasis on safety at command levels, but also at every leadership level below that," Neubauer continued. "There are the obvious things that we do—following tech data, AFI guidance, and the like—and stuff we can easily avoid, scratch right off the top of the list, like don't drink and drive, wearing seatbelts, don't text while driving—common sense things. But it's leaders who lead by example, who demonstrate a commitment to safety that make the biggest difference. They walk the walk, talk the talk, and our Airmen listen, see, and follow that lead."

OMISSION OR COMMISSION

A majority of mishaps often include human error as a contributing factor. "People make mistakes," Major General Neubauer said. "There rarely is any ill intent, but they are still errors of omission or commission. The hard part is trying to quantify those errors into a human factors category. We try to identify and label, the best that we can, if the error was a decision making issue or a judgment issue. Too often, decision making and judgment have been cited as causal factors in our mishaps. We need to keep pushing that compliance is the key to successful operations, and ensure that's understood at every level: down to the wings, through the groups, the squadrons, and the flights."

DOUBLE CHECKS AND NOT SECOND THOUGHTS

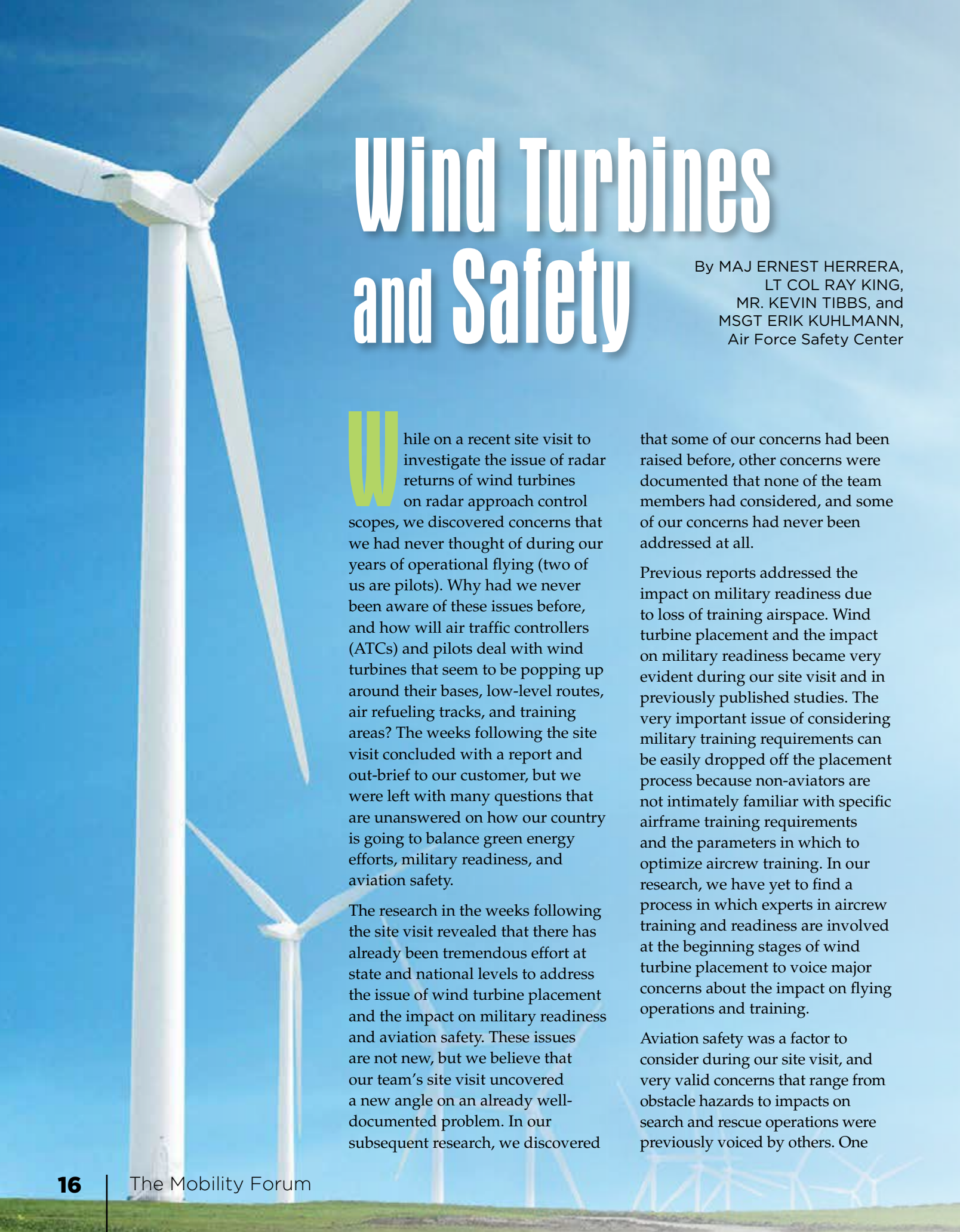
"I would like our folks to remember the phrase *double checks and not second thoughts*," Neubauer said. "Because again, there are plenty of rules, processes and guidelines for what kind of gear to wear or procedures to follow whether you're riding a motorcycle, operating heavy equipment, or turning wrenches on the flight line. All those rules are written in blood. They are there for a reason. I would just ask our Airmen, all of our Airmen, to be in the habit of *double checks and not second thoughts*. That little bit of extra effort can make all the difference."

BY THE BOOK OR BUY THE FARM

Emphasizing the need to follow policy and procedure, Neubauer said, "There's a legend in the old days of flying—when an aircraft crashed, they'd say the pilot 'bought the farm'—because if a pilot crashed into a farmer's barn, the pilot paid for it—either financially or with his life or limb. After pilots 'bought the farm,' the mishap was studied to find out what happened and why, and we started codifying those lessons into our flying operations. Those lessons, notes, procedures and techniques are all codified in our books, whatever those books are—could be AFI or tech data or policy guides. The connection between the two is simple: we all need to remember that regardless of what we're doing, it has to be *by the book* or we *buy the farm*. This year, I'm asking our commanders to get out there and preach that we all need to be deliberate about doing things by the book."

A WORTHY, ACHIEVABLE GOAL TO STRIVE FOR

What are Major General Neubauer's goals for 2014? "I would like to see no deaths, no broken bones, no bent metal—meaning no preventable deaths, injuries, or mishaps for the year. I know that is a tall order, but it's a worthy, achievable goal for us to strive for."



Wind Turbines and Safety

By MAJ ERNEST HERRERA, LT COL RAY KING, MR. KEVIN TIBBS, and MSGT ERIK KUHLMANN, Air Force Safety Center

While on a recent site visit to investigate the issue of radar returns of wind turbines on radar approach control scopes, we discovered concerns that we had never thought of during our years of operational flying (two of us are pilots). Why had we never been aware of these issues before, and how will air traffic controllers (ATCs) and pilots deal with wind turbines that seem to be popping up around their bases, low-level routes, air refueling tracks, and training areas? The weeks following the site visit concluded with a report and out-brief to our customer, but we were left with many questions that are unanswered on how our country is going to balance green energy efforts, military readiness, and aviation safety.

The research in the weeks following the site visit revealed that there has already been tremendous effort at state and national levels to address the issue of wind turbine placement and the impact on military readiness and aviation safety. These issues are not new, but we believe that our team's site visit uncovered a new angle on an already well-documented problem. In our subsequent research, we discovered that some of our concerns had been raised before, other concerns were documented that none of the team members had considered, and some of our concerns had never been addressed at all.

Previous reports addressed the impact on military readiness due to loss of training airspace. Wind turbine placement and the impact on military readiness became very evident during our site visit and in previously published studies. The very important issue of considering military training requirements can be easily dropped off the placement process because non-aviators are not intimately familiar with specific airframe training requirements and the parameters in which to optimize aircrew training. In our research, we have yet to find a process in which experts in aircrew training and readiness are involved at the beginning stages of wind turbine placement to voice major concerns about the impact on flying operations and training.

Aviation safety was a factor to consider during our site visit, and very valid concerns that range from obstacle hazards to impacts on search and rescue operations were previously voiced by others. One

report discussed the potential for aircrew to miss a planned climb point and impact a wind turbine. The team agreed that this type of mishap is a possibility, as there are numerous previous Class A mishaps involving collisions with terrain obstacles.

Wind turbines' effect on radar captured the team's attention. Issues here include radar blind spots, weather radar effects, aircrew training due to loss of radar capability, antiquated radar capability, and radar upgrades. While these were interesting topics to understand, the team felt the most serious issue was not the effect on radar, but rather the human factor of false returns on ATCs and aircrew.

Wind turbines had a cause and effect scenario for both ATCs and aircrew. The wind turbines, even with radar software filtering, produce radar returns identical to aircraft without a transponder. These returns then must be acted upon by ATCs per regulations as actual aircraft traffic. The procedure is to advise aircrew of "unidentified traffic" at "unknown altitude" or to vector aircrew away from a potential mid-air collision or to delay runway departures. The aircrew, in turn, are required to visually search for this called out traffic, as well as search for traffic identified on the Traffic Collision Avoidance System on board the aircraft. In some cases, aircrew have been required to deviate course for traffic or delay their departure for traffic. ATCs and aircrew are advised to consider the tables below.

The team's concerns were on human factors surrounding the environment of flying operations and wind turbines.

Human factors affecting air traffic controllers include automation and local training issues/programs, error due to misperception, and/or ops tempo/workload.

Human factors affecting aircrew include distraction, caution/warning ignored, cognitive task oversaturation, checklist interference, and/or misinterpreted/misread instrument.

The safety team believes that the human factor errors present potential contributors, which could lead to a mid-air collision or a landing mishap due to an incomplete landing configuration. Considering all this, it is easy to understand how any combination of human factor errors and very reasonable event scenarios between pilots and ATCs could lead to a chain of events resulting in a mishap.

The team's observations are just the beginning of what could potentially be a model—not just for wind turbine placement but also an integrated approach to proactive safety when other aviation safety concerns are presented to the HQ AF Safety Center. A collaborative effort using multiple divisions from the AF Safety Center and multiple career fields is proving useful. Even more revolutionary is the role in which Military Flight Operations Quality Assurance (MFOQA) and Aviation Safety Action Program (ASAP) are being used to address safety concerns.

PILOT AND ATC CONCERNS WHEN DEALING WITH FALSE RADAR RETURNS

EVENT	AIR TRAFFIC CONTROLLERS	PILOTS
False radar return on final approach or departure	Call out traffic, possibly re-route traffic or delay departure	Search for traffic, acknowledge to ATC, comply with approach/departure instructions, resume checklist
False radar return in visual or instrument traffic pattern	Call out traffic, possibly re-route traffic for collision avoidance	Search for traffic, acknowledge to ATC, comply with ATC instructions, resume checklist to prepare for landing or departure climb out

PILOT AND ATC CONCERNS WHEN DEALING WITH UNKNOWN ACTUAL TRAFFIC

EVENT	AIR TRAFFIC CONTROLLERS	PILOTS
No radar return on actual traffic due to software filtering, no Mode C transponder (not required)	Unaware of actual traffic, unable to control or advise known IFR/VFR traffic of potential mid-air collision hazard; reactionary when given position or altitude pilot reports from other participating aircraft	Unaware of actual traffic, potential mid-air collision hazard; if traffic is visually observed, interruption in checklist and potential emergency collision avoidance maneuvers required

The phrase "winter weather advisory" can only mean one thing here in southwest Ohio. It means that things are about to get ugly: snow and ice, sleet, freezing rain, and those cold temperatures.

WINTER WEATHER ADVISORY

By MSGT JULIE MEINTEL
445th Airlift Wing

One of the things I love about the area where I live is the change of the seasons. With each season, there are unique conditions to consider and plan for, and in the winter, snow and ice are usually a part of that process.

When summer heat fades to cooler fall temperatures, winter cold is not far off, and winter cold requires that we go about our business a little bit differently. We need to dress differently to keep warm in colder weather, and as flyers, we need to be aware of changing weather conditions. There are several well-known hazards of cold weather, but here we'll stick to the ones that affect our work as flyers: aircraft icing and exposure to cold temperatures or hypothermia. In the winter, one of our biggest concerns is aircraft icing, because this will ruin your flight, every time, if you are not paying attention.

Aircraft icing is one of those things where the requirements and definitions don't change very much. Air Force Handbook 11-203, Vol II, *Weather for Aircrews*, is the authoritative guide on all things weather related, and it should be your first stop when reviewing procedures as the seasons change. Chapter 11 deals exclusively with icing issues in depth. We're just painting with very broad strokes, so if you need to really review in-depth, pull out that book. Don't rely solely on your experience or memory alone.

There are two varieties of aircraft icing, structural and induction. They are what they sound like: structural icing builds up on aircraft surfaces and can add weight to the aircraft, as well as slow down moving parts. Induction icing is most common in the air induction systems, where air is taken in to the engines, but may also show up in the fuel systems. It can appear when temperatures are above freezing, so be aware that you need to watch for it.

Within structural icing, there are three sub-categories of ice: clear, rime, and mixed. Clear ice is the most dangerous of the three types; it is hard and glossy, and it is very difficult to remove with deice equipment. You will find this where you find high water content in the clouds and temperatures slightly below freezing. It sticks well to the aircraft's surfaces and can build to a dangerous level in a pretty short time. It might be smooth if it is made up only of freezing rain, but if there is snow, ice pellets, or small hail mixed in, it can be rough.

Rime ice is milky and granular in appearance, making it more brittle and easier to remove than clear ice. It is made up of small water droplets that freeze when they strike the surface of the aircraft, and a lot of air usually gets trapped in with the water, giving this ice its rough and opaque appearance. It is not as heavy as clear ice either, so its weight is not really an issue.

Mixed ice is just what it sounds like: a mix of small and large water droplets, sometimes with snow or ice particles mixed in. It builds rapidly and ice particles can become embedded in clear ice, making a rough surface.

Additionally, we have to think about frost, which is the thin layer of crystalline ice that forms on aircraft surfaces. It decreases your lift to drag ratio and obstructs your vision, although is not included in the icing categories. It can make your flight more difficult and possibly create a hazard during

PREVENTION IS CRUCIAL for dealing with the effects of the weather.

takeoff, so make sure it is all removed from your jet before you go.

If you are flying in this nasty weather, you might get stuck in it, too. Let's go over exposure while we're talking about cold weather, shall we? Exposure to cold air, moisture, snow and ice can really take a toll on your body, and it takes less time than you think to develop frostbite or hypothermia. As flyers, we spend a lot of our duty time exposed to the elements, especially flight engineers, scanners, loadmasters, flight nurses, and aeromedical technicians, in addition to all the ground crew that help us get off the ground. Look out for the following symptoms of frostbite and hypothermia.

Frostbite is a severe reaction to cold exposure, and it can cause permanent damage. Some early warning signs of frostbite include:

- A loss of feeling and a white or pale, waxy appearance to the fingers, toes, nose, or earlobes
- Skin that is hard to the touch
- Redness and/or pain in the skin indicates that frostbite may be developing

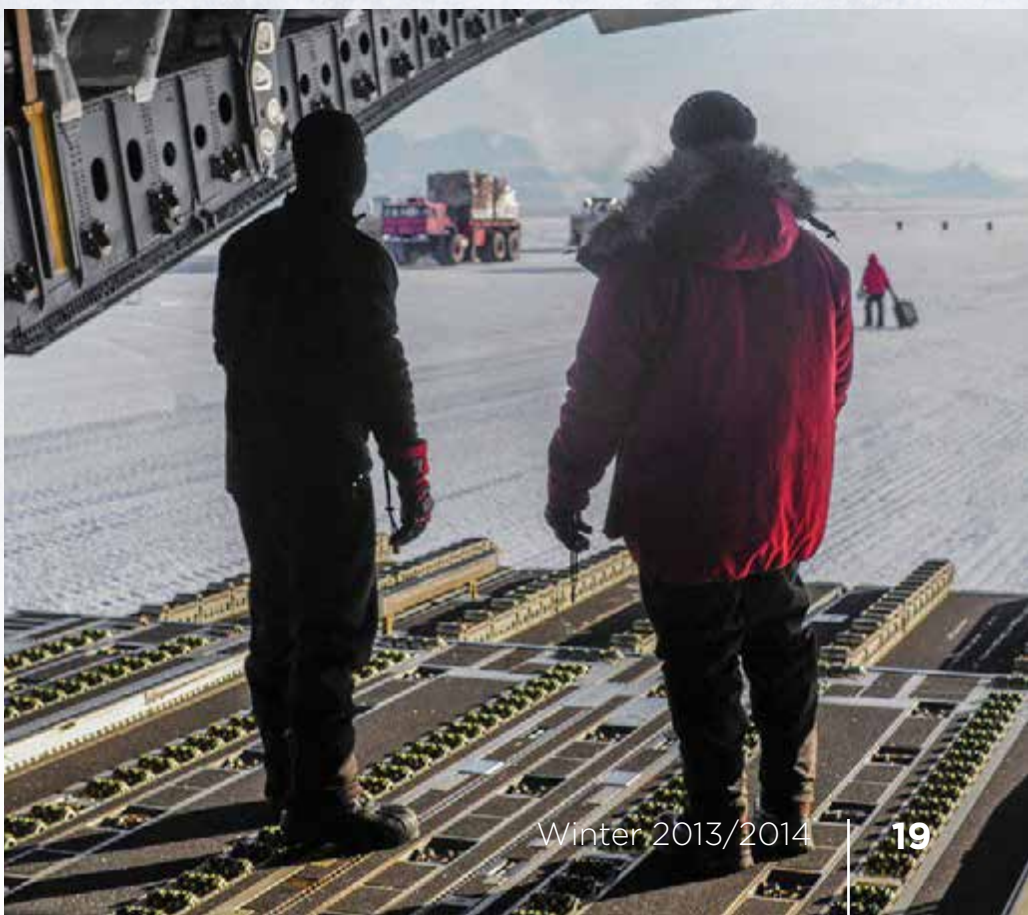
Hypothermia is more serious that frostbite; it occurs when the core body temperature dips below 90 degrees F. Look for these indicators:

- Body that is cold under clothing
- Slow, shallow breathing
- Confusion, unusually aggressive, irrational, disoriented, or combative behavior
- Slurred speech
- Stumbling or unsteadiness while standing
- Unconsciousness
- Appearance of being dead

If a coworker shows any of these signs, move the victim to a warmer place, and call for immediate medical attention. Try to warm the victim gently, using body heat or warm, dry clothes and blankets. Remove any wet clothing, and heat the affected area in warm water for 15-30 minutes if possible. Do not rub any affected areas, and do not give the victim any liquids with caffeine or alcohol.

Prevention is crucial for dealing with the effects of the weather. Dress appropriately for your duties. Dress in layers of warm clothing, paying special attention to your head. The vast majority of body heat is lost from the head, so be sure to cover it with a wool hat. Mittens are better than gloves because they will keep your hands and fingers warmer but it can be tough to turn wrenches and bolts with mittens. Use your best judgment. Take breaks to go inside, warm up and dry off when you can. Check the weather reports frequently; if severe weather is called for, consider putting off outside duties until it is safer, if possible.

Be a good wingman; watch out for your people, and they will watch out for you. Keep warm!



304th Expeditionary Airlift Squadron loadmasters wearing cold weather gear await a forklift to load a pallet of cargo onto a C-17 Globemaster III aircraft on the seasonal ice runway outside of McMurdo Station, Antarctica.

USAF PHOTO BY SSGT SEAN TOBIN

Feelin' Fa

Did You Know?

Research has indicated that being **awake for 18 hours is comparable to having a blood alcohol concentration (BAC) of 0.08 percent,** which is **legally intoxicated** and leaves you at equal risk for a crash.

Drowsy driving causes more than

30,000

accidents **annually**

730

the number of **fatal** car accidents caused each year by drowsy driving

66%

of **19–29** year olds have driven drowsy

Resources:
http://www.osan.af.mil/shared/media/document/AFD-120508-027.pdf
http://www.fmcsa.dot.gov/about/outreach/education/driverTips/Driver-fatigue.htm
http://www.cdc.gov/mmwr/preview/mmwrhtml/mm6151a1.htm?s_cid=mm6151a1_w
http://www.sleepfoundation.org/sites/default/files/sleepinamericapoll/SIAP_2011_Summary_of_Findings.pdf
http://www.cdc.gov/Features/dsDrowsyDriving/

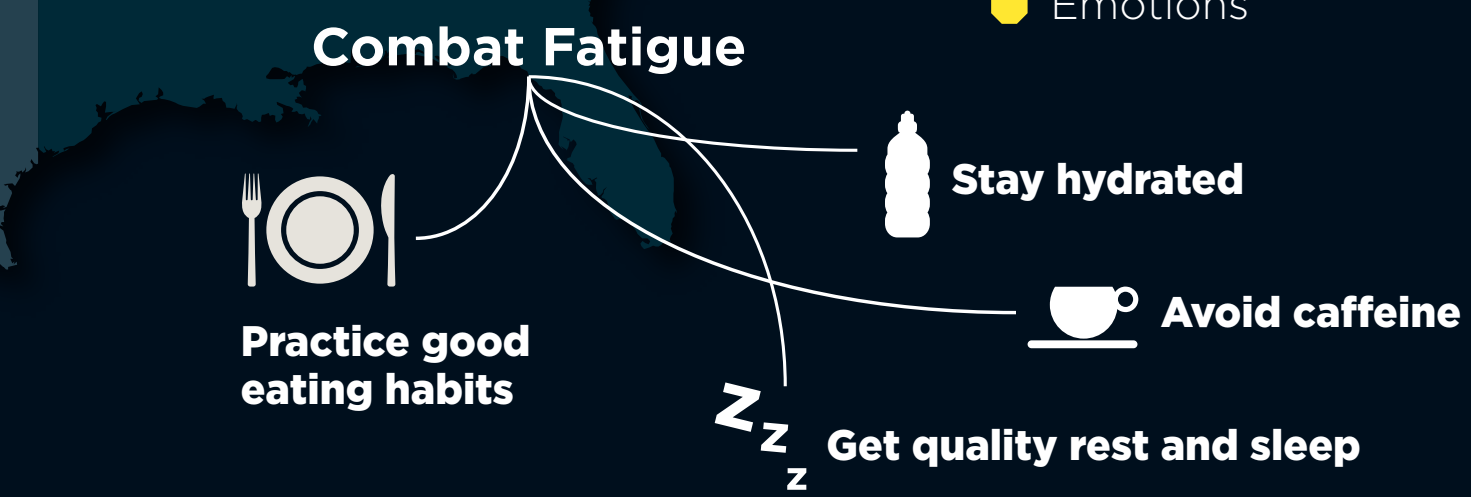
atigued?

than
ALF
ns admit to
hile drowsy

It's not just about driving...

The effects of fatigue can directly impact:

- Performance
- Situational awareness and alertness
- Reaction time
- Memory
- Decision-making
- Attitude
- Emotions



Stop the Madness!

By MSGT JULIE MEINTEL, 445th Airlift Wing

We may not always be able to stop the madness at work, but we can stop the spread of sickness. Wintertime is prime cold and flu season, and it is one time when it's not good to share! Staying home from work when you are sick not only helps you get better faster, it also helps keep your workplace healthier.

No one likes to have to miss work because of the flu, and certainly no one enjoys the expanded to-do list and all the missed calls and emails to catch up on when back at the office. For flyers, it's a bit of a process to "call in sick" for a flight or a mission, otherwise known as "going DNIF (Duties Not Including Flying)." DNIF always involves a visit to the flight surgeon and forms to be filled out and submitted. For those of us with ground duties, it's not quite as much work to miss work, but getting back in the swing of things after you've been sick can still be tough.

So should you go to work even when you are sick? How do you know when to tough it out and when to stay in bed?

Let's look at your symptoms. Do you have the sniffles? How about a deep, raspy cough that produces mucus? Are you achy and tired? Do you have the chills, even while you're sweating? Yep, you are officially too sick to go to work. Call the flight surgeon so you can get off that mission you are scheduled to fly. If you're sick and not scheduled to fly, you should still consider seeing the doctor, and take a day or two off to rest and get better. If you are sniffly but not feverish or achy and you feel okay otherwise, it's more likely allergies than a cold and you can feel safe going in to work. Make sure you bring some tissues, though!

If you have chills and you're hot and sweaty at the same time, you probably have a fever. And if you have a fever, you should stay home from work. A fever is cause to consider seeing your doctor, especially if it hangs on for a few days. A word about fevers: we probably all know or remember from health class that when you have a fever, it means you're fighting some type of infection. But there are grades of fevers, too. Not all are catastrophic and cause for alarm. A temperature of 98.6 degrees is the average normal; yours may be a touch higher or lower than that, but anything below 100 degrees would generally be considered a low-grade fever. Lace up your boots and go on in to work.

Now, about that cough. Is it a tickle in the back of your throat? Do you have postnasal drip? In that case, it is more likely to be associated with allergies rather than a cold or the flu. Is it a deep, raspy cough that leaves you a little short of breath? Are you bringing up mucus with it? This type of cough is probably a cold—possibly the flu. If it persists for more than a couple of days, see the doctor to make sure it is not something more serious, like bronchitis or even pneumonia.

Now that we have decided whether you can safely go in to work without sharing your cold with your squadron-mates, let's talk a little bit about

Hand washing is so important and so effective at curbing the spread of germs that some World Health Organization researchers have estimated that if people washed their hands routinely, approximately a million deaths each year could be prevented.

how you can help keep your work section healthy and free from germs. These tips are useful anytime but especially during cold and flu season, when more people tend to get sick.

- Cover your mouth and nose when you cough or sneeze. This one is a no-brainer. We've all had that experience when someone coughs or sneezes on you; not only is it thoroughly icky, it makes it much more likely that you will get whatever virus that person has. Try to cough or sneeze into the crook of your elbow rather than into your hand, or use a tissue that can go right into the garbage. You touch your computer mouse, your phone, counters, doorknobs, file cabinets, and everything else with your hands, spreading those germs all over the place.
- Avoid touching your eyes, nose, and mouth. For the same reasons you don't cough or sneeze into your hands, keep your hands and fingers away from your face so you don't cover them with germs that you share with everyone and everything with which you come into contact. In addition to that, viruses and germs can enter your body very easily through your eyes, nose, and mouth, so just avoid touching them and you will minimize your chances of catching your coworker's cold.
- Make sure you wash your hands thoroughly with soap and warm water for at least 20 seconds (about the time it takes to sing "Twinkle, Twinkle, Little Star" or "Happy Birthday") several times a day. Come on, no one's listening! If you really don't want to sing, you can always just count to 20. If no soap and water is available, it's fine to use antibacterial wipes or gels, but good old soap and water will do the trick. Hand washing is so important and so effective at curbing the spread of germs that some World Health Organization researchers have estimated that if people washed their hands routinely, approximately a million deaths each year could be prevented.
- Keep surfaces clean. Wipe down your telephone handset, your keyboard, your mouse, your desk drawer handles, and your doorknobs regularly with disinfectant cleaner. This will kill any lingering germs, or at least help slow the spread of germs, and your coworkers will thank you.
- Last but definitely not least, don't be late getting your flu shot. It'll help you stay healthy, and you will be staying current at the same time.

These are just a few things to remember that will help keep you and your coworkers healthier all winter long. For more information, check out the Center for Disease Control's website at **www.cdc.gov**.

Photos top and center: Avoid coughing and sneezing into hands, using a tissue instead, or your arm if one is not available. Wash hands often with soap and water. Avoid touching your eyes, nose, or mouth.

USAF PHOTOS BY SSGT MARIE BROWN

Bottom photo: A flu shot is administered in the 375th Medical Group immunization clinic.

USAF PHOTO BY SSGT MARIA BOWMAN

Preventing Fuel Leaks

By MR. LEN CWIKLIK
C-17 System Safety Manager
C-17 Division AFLCMC/WLMP

In the past few months, I've seen safety reports from the C-17 community (USAF and international customers) about fuel leaking from cargo and the accuracy of Center of Gravity (CG) markings on vehicles and heavy equipment. As we increase the tempo of removing equipment from the Area of Responsibility (AOR), I want to increase the awareness of the problem for aircrews, aerial port personnel, and people preparing cargo for air shipment.

As we begin to move the equipment and cargo out of many bases, the documentation certifying that the cargo has been properly prepared for air shipment may not receive the highest priority. One of the most frequent pieces of equipment involved with fuel leaks or fumes in the cargo compartment is generators. These items have significant fuel capacity and can be shipped with as much as three-fourths of a tank of fuel. In addition, these units have vapor recovery lines that should be purged as part of the preparation because they can vent fuel fumes as the pressure in aircraft is reduced. In one recent incident, a generator was loaded on board a C-17, and it leaked one to two gallons of fuel into the cargo compartment shortly after takeoff. To make matters worse, there was no spill kit on board the aircraft, and the loadmasters contained the fuel spill with blankets. When the aircraft reached its destination, the generator was off-loaded, and inspection of the unit revealed the following information:

- The fuel gage on the unit was inoperative, and the amount of fuel in the tank was unknown.
- Between 45 and 50 gallons of fuel was drained out of the generator.
- When the unit was loaded onto the aircraft, the fuel filler cap was oriented toward the back of the aircraft. The angle of the cargo deck during the initial climb out allowed fuel to flow out of the filler cap and into the cargo compartment.

This incident could have been prevented during shipping preparation by confirming the amount of fuel on board the generator. The inspector assumed the fuel gage was operational and accurate. A simple check of the fuel tank with a dipstick would have revealed the actual fuel level of the unit. If the equipment doesn't need to be used immediately after it is unloaded, consider shipping it with a lower fuel quantity to lower the risk of a fuel spill.

As we have become more environmentally friendly with our equipment designs, many of our units have vapor recovery lines that vent back to the fuel tank. On several occasions, these vent lines have returned fuel to the tank or began leaking as the pressure in the cabin decreased. Once the unit has been prepared to ship, it should not be run because the purged lines will re-fill and leak. In some cases, vehicles will be kept idling for a long period of time before they are loaded. This leads to a significant amount of fuel vapor being generated inside the tank. Before the vehicle is loaded, the fuel tank should be vented to the atmosphere outside the aircraft rather that have the vapors venting into the cargo compartment after takeoff.

My final concern is the accuracy of the CG markings on the equipment. In one instance, the CG marking on a piece of heavy equipment was changed after the equipment was loaded and the crew had entered crew rest. The next day, the loadmaster saw the changed marking and questioned its accuracy. As it turned out, the new marking was more accurate than the old one, but it was still incorrect—and if the aircraft had departed in that configuration, it would have had a five-degree aft CG, which is not where you want to be when taking off in a hot climate.

These problems are not limited to the USAF C-17 fleet. A small amount of time invested in the preparation of vehicles and powered ground equipment can significantly reduce the number of incidents of fumes in the cargo compartment. Here are some safety reminders:

1. Know the rules when you're prepping for cargo shipment.
2. If you're deploying equipment back from the AOR, ship it with the lowest amount of fuel permitted. Confirm the fuel levels with a physical measurement if possible.
3. Make sure the vapor recovery lines have been purged to keep them from venting as the aircraft ascends.
4. Pay attention to the CGs on vehicles and equipment you're loading. A quick reference book for the common types of vehicles and equipment would save time and help with load planning.

These problems are not limited to the USAF C-17 fleet. A small amount of time invested in the preparation of vehicles and powered ground equipment can significantly reduce the number of incidents of fumes in the cargo compartment.

Generators and other flight equipment are loaded on to a C-17 Globemaster by members of the 92d Logistics Readiness Squadron at Grant County International Airport in Moses Lake, Wash.

USAF Photo by A1C Taylor Curry

USAF Photo

Anyone who ever told a flying story started with "There I was ... "

In Praise of War Stories

By COL GARNETT C. BROWN JR., USAF (Ret.)

You may call them war stories, bar stories, hangar-flying stories, or anything else, but when military personnel with some slack time get together, there is a good chance someone will start telling tales. In the Air Force, these are likely to be flying stories.

> *"There I was at 43,000 feet, a fire in the cockpit, and a boiling thunderstorm flashing lightning at me as I was barely skimming its top! Then number two starts unwinding ... "*

Fun tales? Yes.

Do they have anything to do with safety, lessons learned, crew management, or tanker and airlift operations? You betcha! Sit back, take a sip of your sarsaparilla, and see if you agree.

Picture two or three folks swapping tales.

You might hear "Yeah, but . . ." when one guy has told a story, and the next guy is pretty sure he can top it. Sometimes the aircraft can be working fine, but what if *you're* not?

> *"Why, one morning we took off from a base in Turkey, headed for Germany. About the time we flew around the toe of the Italian boot, I started feeling sick. And sicker. Then real sick. Figured it must have been those hash browns I had for breakfast at the mess. There was just me and the copilot, so I couldn't abandon the cockpit for long."*

About here, you know the story is gonna get better.

> *"Heck, the copilot was right out of training and on his first trip to Europe. The weather in Germany was down to minimums in rain and fog, and I couldn't ask him to fly that approach. I was so sick I knew I was going to die, but I also knew I had to get that plane on the ground first!*
>
> *"We started down, bouncing through the rotten weather—really helped my stomach—flew the approach, and then painted that Starlifter on the runway! It turned out to be one of the best approaches and landings I'd flown in months. We got that puppy parked, and I went to the Q and slept the entire crew rest. The next morning I was fit and ready."*

The next guy nods and takes over.

> *"That reminds me of the time I was a copilot on Old Shaky and got sick coming out of Africa . . ."*

Pay attention, listen to the stories, and learn (sometimes you'll learn what not to do), and know they'll be told for a long time.

And so it goes.

The point is that these are not just useless stories or wastes of time. They serve valuable purposes. There is often a genuine safety message that is transmitted in many of our war stories. They might describe how you coped with a problem or cheated death in a way that might help someone else. Think of flight tales as possible NOTAMS.

There is a historical component. Times change. Destinations change. Leadership changes, and certainly the equipment changes, but aircrew remains aircrew.

Human, fallible, funny, brave, and dedicated to duty, honor, country. We ARE our stories and they are us.

When we laugh (or cry) together, we build that camaraderie that binds us as a crew, a squadron, a wing, or an air force to everyone else who not only wears the blue, but also to those who wear the other uniforms of the United States. We become brothers and sisters in a way that will carry through to the end of our days. Many of us say our time in the service and the friends we made there represent our finest hours.

Our "war" stories remind us of those times when we worked together on something bigger than ourselves. Whether you serve a few years and go on to something else or serve a full career, you *will* have stories to tell. When you are long in the tooth, grey of hair, and bending with the weight of years, or when you go to your unit reunion, you will walk a little taller. Your eyes will light at the sight of a comrade from long ago. You'll hug, shake hands, and tell the old jokes and stories—recount the times of peril and those of fun.

You may note your evenings get earlier and earlier, the stories get better with each telling, and those who are no longer with you get reverent recollections that invariably end with raucous stories!

Here comes the safety message: *You definitely want to make it to old age!* There is a lot to be said for longevity. Pay attention, listen to the stories, and learn (sometimes you'll learn what not to do), and know they'll be told for a long time. Hopefully, by you. Sure, safety awareness is rules and regulations and training, but it is also common sense, and perhaps, in the ultimate way of doing things "right," it can be fun, too. The accounts our hangar-flying tales relate bring witness to our profession and provide real life explanations of how things were—sometimes illuminating both mistakes and great saves! Gathered together, they reflect our history.

Remember the guy who was telling about getting sick coming out of Africa?

> *"I spent most of the 10-hour flight sprawled on the cockpit floor, covered by an army blanket, and sick as the proverbial dog. (Safety note to self: When they say drink only bottled water, make sure the ice cubes are made from bottled water, too.)*
>
> *"We came from Ouagadougou—in Upper Volta then, but they have since changed the name of the country to Burkina Faso—across the Sahara to Libya. The crew helped me into the copilot seat for the landing, but I wasn't much help to the AC.*
>
> *"The truck that met the aircraft took me and the whole crew to the clinic, where a corpsman was on duty. I remember he was a big guy. He literally picked me up and sat me on a gurney. "Lieutenant," he smiled, "we're gonna have to take a blood sample to see what variety of Montezuma's revenge you've got." Later one of the crew told me that as the syringe filled with blood, what little color was left in my face seemed to leave in a direct correlation. He said, "You just faded away on that gurney, and said, 'Sarge, you better put it back . . . ' Three days later, when we took off again, the crew was still laughing."*

Sometimes just a sentence or two reminds you of a story. Like the fellow on a training flight along the Northern tier, landing in a driving snowstorm, the drifts so heavy the runway plows had been unable to keep up. The aircraft bounced on landing, but the trainee salvaged things the second touchdown. As they rolled out, the instructor announced over the intercom, "I didn't know you could bounce one of these on a foot of snow . . . "

In the grand tradition, the tales will continue. Be sure to mine them for pearls of wisdom as well as for laughs.

You be safe out there, okay? I'll be waiting to hear your stories.

Don't Grab That!

A MISHAP OF Atomic Proportion

By KIM BRUMLEY, Staff Writer

The year was 1958 and the United States and the Soviet Union were locked in a fierce arms race in the midst of the cold war. As tensions escalated between the two global superpowers, everyone hoped for the best but prepared for the worst. In preparation, the United States not only amped up weapons at home, but they reinforced training and defense with British allies as well.

On the 11th of March, a crew consisting of pilot Capt Earl Koehler, co-pilot Capt Charles Woodruff, navigator/bombardier Capt Bruce Kulka, and crew chief Sgt Robert Screptock took off from Hunter Air Force Base in a B-47 en route to Bruntingthorpe Air Base in England for training exercises. Due to the potential looming crisis, this was not just any training exercise – it was a nuclear weapons training exercise, so a Mark 6 30-kiloton fission bomb was onboard.

Shortly into flight, the crew received an alert that there was a problem in the bomb bay area, and Capt Bruce Kulka worked his way to the back to investigate. He quickly realized the problem was with the locking pin, but the captain had difficulty pinpointing its exact location. After a 12-minute search, he realized the locking pin had to be somewhere above the device, but as a man of short stature, Capt Kulka was not able to see over the bomb. In an ill-fated move, the captain decided to climb high enough to get a good look, but in the process accidently grabbed the emergency release as a hand-hold. When Capt Kulka pulled the release, he and the three-ton bomb dropped down on the bay doors. Seconds later, the doors burst open, sending the bomb plummeting to earth. Kulka narrowly escaped sliding out after the bomb but managed to grab hold of something and pull himself back to safety.

The bomb struck the ground close to a farmhouse in Mars Bluff, North Carolina, leaving a 70-foot wide, 35-foot deep crater in its wake. The blast virtually destroyed the house, but all six individuals in close proximity miraculously survived with only minor injuries.


Florence Morning News

READER'S TIP

WEATHER

ATOM BOMB WITHOUT WARHEAD DROPS IN MARS BLUFF SECTION

Officials Say 'No Danger' Of Atom Blast

Six Injured By Explosion; Windows Shake

Photo by Kelly Michals

U.S. Mark 6 nuclear bomb, a 1950s plutonium implosion weapon.

So how did the bomb not destroy all of North Carolina and its inhabitants? The nuclear core was not housed in the device due to Air Force standard procedure for transporting. Instead, it was stored onboard separately in the "birdcage." This mishap is a prime example of why standard procedures are in place. In this case, that one procedure prevented thousands of potential fatalities.

Not knowing the extent of the damage, the plane immediately circled back after the accidental drop to take aerial photos—yet another procedure. The crew continued to follow procedures by attempting to notify Hunter Air Force Base. There had never been a similar incident, so the base didn't recognize the coded transmission from the aircraft. But Hunter had to be immediately notified, so Capt Koehler radioed the closest airport in Florence, South Carolina, and asked on-duty personnel to call Hunter and let them know that "aircraft 53-1876A had lost a device."

In the meantime, help had arrived on the scene for the Gregg family: Mr. and Mrs. Gregg, their children Walter Jr., and Effie, and a young cousin named Ella Davies. Ella had gone to play with her cousins after school and was hit by debris from the playhouse. As a result, she required 31 stitches and was the only individual hospitalized due to the incident.

In an interview many years later, Ella reflected back on the events of that day. She said, "When the thing fell, I remember hearing it, it was the whistle of the bomb coming down. I thought it was an airplane or jet flying over."

When the incident occurred, the Gregg family had no idea what had happened, but because of all the media attention from the Cold War crisis, they assumed the farm had just been bombed by the Russians. It wasn't until the next day, that they discovered what had actually happened.

"After I left the hospital," recalls Ella, "the General from Shaw Air Force Base, where the plane was held, came over and visited. He had a book and doll for me. He sat around and talked with the family. He was there as a concerned person."

"At the time, we were all just glad to be alive and went on with our lives." Ella said. "I did a shoot 22 years later with a documentary crew, and I remember being amazed at how bitter my cousins were, whereas I walked away without any long-term effects except this amusing story. It was just something that happened."

The most important outcome of this mishap is that everyone involved did walk away. Since 1958, there have been many changes to policies and procedures. Planes have been outdated or upgraded, and what is commonly transported by AMC has greatly changed since the Cold War. Today, AMC transports cargo either at home or somewhere around the globe on a daily basis. So, if you happen to be onboard and have to go into the cargo bay in-flight, watch what you grab hold of so you don't have a mishap of atomic proportion.

The Florence Museum of Art, Science, and History, only a short distance from Mars Bluff, houses a large collection of photos, memorabilia, and articles from the incident. More information can be found at **www.roadsideamerica.com/story/16444** or by visiting the museum located at 558 Spruce Street, Florence, South Carolina.

Santa Checks THIS List—Do You?

By MONTE NACE, Staff Writer

Have you seen the Facebook post or received the email about the "miracle children" who survived growing up in the 1930s, 1940s, 1950s, 1960s, or 1970s? Here's a snippet:

- First, we survived being born to mothers who smoked and/or drank while they carried us.
- Then we slept in baby cribs covered with brightly colored lead-based paints.
- We had no childproof lids on medicine bottles, doors, or cabinets.
- As children, we rode in cars with no seat belts or air bags. Riding in the back of a pick up on a warm day was always a special treat.

The list goes on, and it is surprising that so many kids survived childhood unscathed in those decades. But others did not—some children indeed suffered from

THE CONSUMER PRODUCT SAFETY COMMISSION has jurisdiction over many types of consumer products. However, some products are covered by other federal agencies. For example, automobiles, trucks, and motorcycles are within the jurisdiction of the Department of Transportation; food, drugs (except for child resistant-packaging for these products) and cosmetics are covered by the Food and Drug Administration.

what we now know as fetal alcohol syndrome, some became ill from ingesting lead-based paint, and some died because of accidental poisonings or vehicle accidents. Of course, once parents knew better, they did better!

We certainly live in a different world today. We're constantly inundated with information from scientific studies, and the federal government (to some degree) regulates many things we do and nearly every product we buy. But that's not necessarily a bad thing.

As you're shopping for holiday gifts, I'll bet you take time (either online or in person) to compare prices. And if you're like me, you'll take time to read reviews to see how other buyers like certain brands or models of toys, appliances, and other potential presents. So why not spend a little more time and let that government oversight work for you by learning about the hazards of items that might be on your shopping list?

The Consumer Product Safety Commission (CPSC) is the federal agency charged with protecting the public from unreasonable risks of injury or death associated with the use of thousands of consumer products. According to the CPSC website, deaths, injuries, and property damage from consumer product incidents cost the nation more than $900 billion annually. Unlike reviews written by consumers, who typically rate a particular item based on how much they like it or whether it meets their expectations, the CPSC's concern is whether an item is safe.

If you go to the CPSC website at **www.cpsc.gov** and click on Recalls, you'll see a short list of recent recalls with a link to others. For example, one list in July included:

- an office chair from a well-known office supply store *(the base of the five-wheel chairs can break and cause the user to fall)*
- a computer for divers *(the computer can malfunction and display incorrect tank pressure, leading to a drowning hazard)*
- a hammock *(seam in the canvas hammock can rip and cause a fall)*
- a remote-controlled helicopter from a popular toy store *(the rechargeable battery can overheat, causing fire and burn hazards)*
- small lamps with stained glass shades in the shape of a butterfly or shell *(exposed wiring can cause shock and fire hazards)*

As you can tell from the list, the types of products and the associated risks vary greatly. These are only five of the recall notices for the first two weeks of July in 2013. Other items that month included votive candles, a bicycle, a baby rattle, a track lighting fixture, an off-road vehicle, a laptop battery, an outdoor chair, a baby stroller, a propane cooker, a coffee cup, and many more. Look long enough, and you'll probably find something on the list that you own!

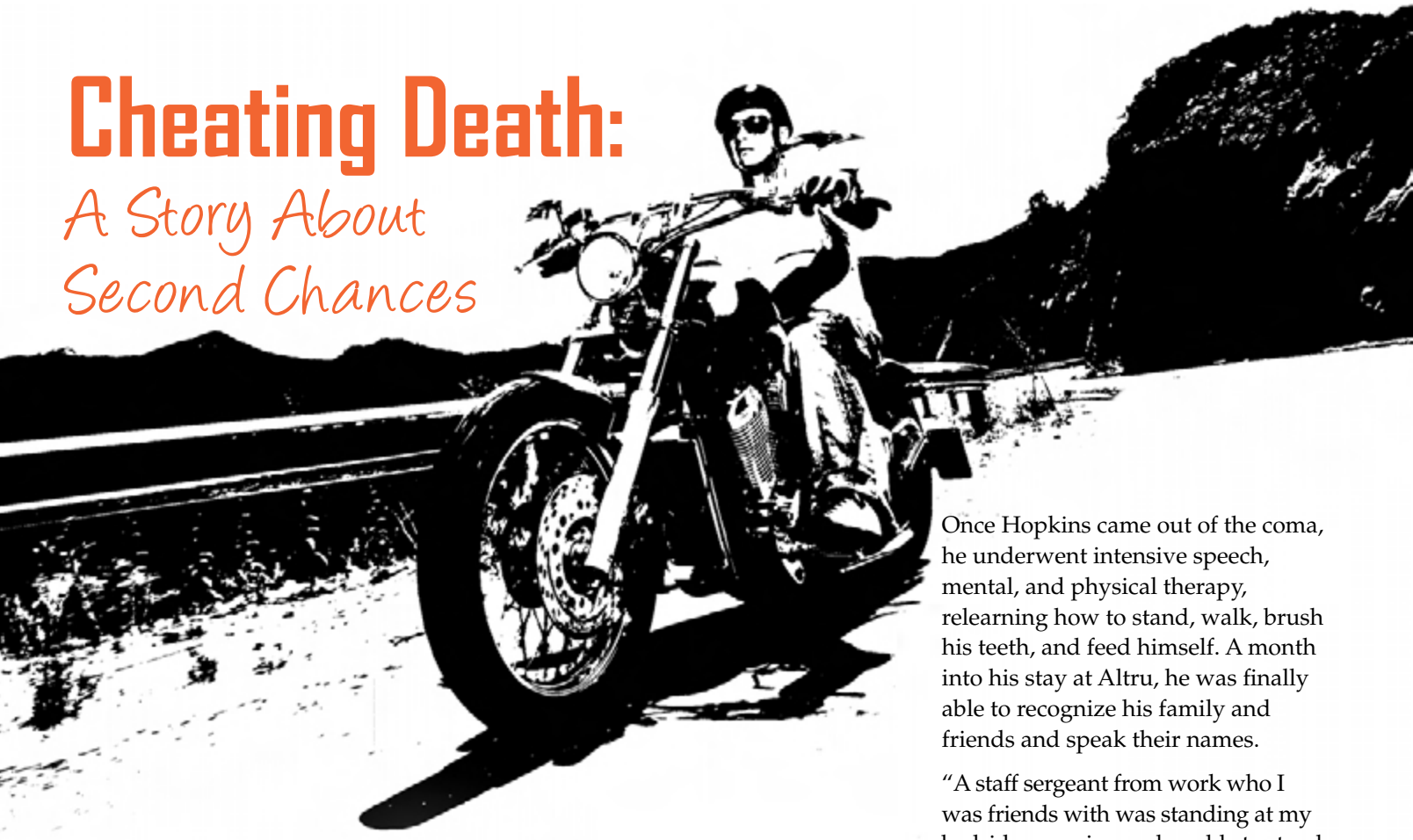
Other ways to search for recall notices include searching the CPSC website by Product Category (e.g., Babies and Kids, Sports and Recreation, Toys, etc.), searching by Product/Company Name, or searching by Country Where Manufactured. Many—but not all—recalled products are made in China. That doesn't make them inherently bad. In fact, trying to find products that aren't made in China can be like finding the proverbial needle in a haystack. According to the U.S. Census Bureau, the value of U.S. toy imports, including stuffed toys (such as dolls), puzzles, and electric trains from China between January and September 2012 was well over $9 billion.

Pre-lit trees and ornaments may pose serious risks if they are defective.

In addition to visiting the CPSC website, you can elect to receive recall announcements by email, subscribe by RSS feed, or download a recall app (Android). At the very least, reading these recalls will make you think about potential risks associated with similar products that are on your shopping list. Also, watch for CPSC recall notices after the holidays in case you receive a gift that is subsequently found unsafe. Have a happy (and safe) holiday season!

Cheating Death:

A Story About Second Chances



By SSGT SUSAN L. DAVIS
319th Air Base Wing Public Affairs

May 27, 2012 is a day TSgt Mark Hopkins will never forget—even though it's a day he can barely remember.

It was the day he made a choice that drastically altered his life forever, and almost ended it in the process.

"All I remember is hopping on my motorcycle around noon on my way to hang out with some fellow bikers for a friend's birthday," he said. "I woke up a month later from what I thought had been a nap. Apparently, I'd had a pretty serious motorcycle accident."

The injuries he sustained from the accident should have been enough to kill him, he said. The wreck ruptured and shattered the left side of his skull, causing his brain to bleed and his eardrums to burst. His left eye socket was fractured and he was left almost totally deaf in his right ear, and with a traumatic brain injury.

According to the blood tests taken at the hospital, Hopkins had a blood alcohol level roughly twice the legal limit, and had been wearing a helmet that wasn't approved by the Department of Transportation.

He said his road to recovery has been a long and difficult one. Shortly after arriving at Altru Hospital in the city of Grand Forks, ND, he was taken into surgery where the doctor induced a medical coma in order to prevent any further bleeding and swelling on his brain. He spent the next 13 days in the critical care unit.

His injuries were so severe the Grand Forks Air Force Base Honor Guard began preparing for a military funeral when news of the accident got back to the base.

Once Hopkins came out of the coma, he underwent intensive speech, mental, and physical therapy, relearning how to stand, walk, brush his teeth, and feed himself. A month into his stay at Altru, he was finally able to recognize his family and friends and speak their names.

"A staff sergeant from work who I was friends with was standing at my bedside, weeping and unable to stand up straight," Hopkins said. "Apparently after countless visits over the past month, I finally recognized him and spoke his name for the first time."

After spending 43 days in the hospital, Hopkins was released to go home, although he was far from finished with his recovery process.

"I continued therapy three days a week and had to be with someone at all times, both in and out of the hospital," he said. "My skull hadn't been repaired with titanium yet because my brain still had to heal a while longer."

It would be several months before he could have his head hardened with titanium while the healing process continued. During that time, he was forced to wear a black medical helmet to protect his brain from further injury, which his doctor said could very well have killed him.

"My days were short then," he said. "I would wake up in the morning and

just be so miserable and exhausted, and I would have to lie down for a nap in the middle of the day and wake up again around 5 p.m.," he said. "My wife, Melissa, worked, but would come home on her lunch break; my three kids (14, 13, and 11) took turns staying with me throughout the days on summer break. They would take me for walks around the base, always making sure I had my black medical helmet on, and calling my wife if I refused to wear it."

In November 2012, six months after fragments of his skull had been removed immediately after the accident, Hopkins finally had an operation to harden that portion of his scalp with titanium.

During the healing process, Hopkins endured the grueling ordeal of having staples applied to and removed from his scalp (more than once) and having the doctor insert a needle the size of a pencil into his head to drain the excess fluid that would build up.

Hopkins expressed his deep remorse over the choice he made and what it put his loved ones through.

"I have no one to blame except myself for what happened," he said. "I failed to practice my own safety techniques that I'd learned throughout my years of riding, and I nearly lost my life for it. My wife, children, family, friends, and co-workers nearly lost me because I was selfish and I chose to drink and wear improper safety equipment while operating my motorcycle."

Hopkins, or "Hopper," as he's known to his friends, had 14 distinguished years of service behind him when the accident happened, but he's being discharged now and will lose his career.

Surprisingly to some, however, Hopkins still has an unwavering love for riding, and plans to work on motorcycles after he separates from the Air Force.

But, he said there are two things he will never ride without again: "A DOT-approved helmet and sobriety!"

Hopkins has a firm grasp of the gravity of his situation, and said he is very thankful to have been able to come out on the other side.

"This is my second chance to continue to be a better father, a better husband, and a second chance to do something I love," he said. "I am the living example of what may happen to a biker who does not put safety first and respect his bike, and the trauma it can cause. If I can help save one life just by sharing my story, that makes it worth it to me."

Photo inset: TSgt Mark Hopkins, 319th Civil Engineer Squadron, works a pipe-fitting machine at Grand Forks AFB, ND. He was named Warrior of the Week for Feb. 2 – 9, 2011.

USAF photo by Amn Derek VanHorn

Photo right: TSgt Hopkins suffered a motorcycle accident on May 27, 2012 that nearly ended his life. The wreck had ruptured and shattered the left side of his skull, causing his brain to bleed, his eardrums to burst, and a fracture to his left eye socket. He was left almost totally deaf in his right ear, and with a traumatic brain injury.

Courtesy photo

MacDill Airman Lucky to be Alive After Fireworks Accident

By SSGT BRANDON SHAPIRO
6 AMW Public Affairs

"I never would have imagined that I would be rushed off to the hospital, injected with morphine, and wondering if I would ever be able to use my hands again."

This was one of the grim thoughts that raced through the mind of SSgt Aaron Youngblood, 6th Medical Group NCO In charge of physical therapy, as he was transported off the site of a firework malfunction.

On Dec. 31, 2012, Youngblood and two others were celebrating the coming new year as many do, by grilling, lighting fireworks and making New Year's resolutions—until something went horrifically wrong.

Youngblood set up two tube-mortar style fireworks, lit the fuse and backed off to an appropriate distance, but only one launched.

After waiting about 45 seconds to see if the firework was still active, Youngblood left his safety zone and approached the "dud." Just as he reached down and picked up the launcher, it exploded out of the bottom, shredding his hands and putting him in near shock conditions.

"My entire hand was blood; the muscles and tendons surrounding my right thumb were completely blown out and I broke the ring and pinky finger on my left hand all the way down to my wrist," described Youngblood.

Over the next four months Youngblood would undergo three surgeries and more than 100 hours of physical therapy. Only then, and after an extensive Air Force line of duty investigation, was he able to return back to work full time.

"I thought that I had done everything right," said Youngblood. "Not until after the accident had I realized that I should have had a bucket of water ready to put out a fire or to pour on unexploded fireworks. Next time I'll leave it to the professionals and probably just go watch a show."

Needless to say, preparations and precautions must be taken to ensure an evening of fun doesn't turn into one like that of Youngblood's.

Graphic courtesy of the U.S. Consumer Product Safety Commission

This was just one of the thousands of accounts that could have been told about the importance of fireworks safety. From this year on, make sure you take the manufacturer's warnings seriously. Make certain you are knowledgeable on the type of fireworks being used, your surroundings, and the potential dangers.

According to the U.S. Consumer Product Safety Commission, **9,000** individuals seek emergency room visits annually due to fireworks mishaps. According to the National Fire Protection Organization, there are more than **50,000** fires caused by fireworks yearly. For questions or concerns regarding the usage of fireworks, contact your local fire department or safety office.

Investigation Report Details Causes of FOB Shank C-130J Accident

AMC Public Affairs

Air Mobility Command released the results of an investigation on a C-130J accident in Afghanistan May 19 in which there were no fatalities or significant injuries.

The Accident Investigation Board (AIB) report determined that on the C-130J's second landing attempt at Forward Operating Base Shank, the aircraft speed was too fast for the current landing conditions, causing it to go off the end of the runway. FOB Shank is a high altitude airfield and at the time had a weather advisory for winds gusting at 25 to 35 knots.

The crew members calmly and safely ran through their emergency response procedures to evacuate passengers to safety, resulting in no fatalities or significant injuries. The aircraft was assigned to the 19th Airlift Wing at Little Rock Air Force Base, Ark., and flown by deployed members of the 451st Air Expeditionary Wing.

The AIB report is the result of a thorough investigation that included data from historical records; Air Force directives and guidance; engineering reports; witness testimony; and input from technical experts.

An Airman from the 317th Airlift Group marshals in the newest C-130J at Dyess AFB, Texas.

USAF PHOTO BY SRA JONATHAN STEFANKO

Flying Hour MILESTONES

AIR MOBILITY COMMAND

C-130 Hercules
Graphic by Bob Goode, AFNEWS/NSPD

Unit Award

101st Air Refueling Wing, Bangor, Maine

41 Years – 126,080 Hours

8,500 HOURS

152 AW, NVANG, Reno, NV
Lt Col Jonathan Thorpe

312 AS, Travis AFB, CA
CMSgt David M. Lafferty
SMSgt Christopher J. Kerr
TSgt Harold L. Marquez

7,500 HOURS

172 AW, Thompson Field, MS
CMSgt Richard B. Davis

312 AS, Travis AFB, CA
Lt Col Rodney M. Carpenter
Maj Todd D. Hegy
SMSgt James V. Grant

6,500 HOURS

1 AS, JB Andrews, MD
Lt Col Michael Wheeler
SMSgt Roberta Pereira

16 AS, JB Charleston, SC
Lt Col Robert B. Atkatz
MSgt Keith Bryer

64 ARS, Pease ANGB, NH
Lt Col Thomas C. Blake

101 ARW, Bangor ANGB, ME
Lt Col William Blood
CMSgt Robert Phair

117 ARS, Forbes Field, Topeka, KS
CMSgt Timothy Treinen

133 ARS, Pease ANGB, NH
Lt Col Timothy H. Graff

152 AW, NVANG, Reno, NV
Lt Col Jon Schulstad

312 AS, Travis AFB, CA
MSgt Stephen G. Burke
MSgt William E. Copeland
TSgt Gary B. Till

5,000 HOURS

1 AS, JB Andrews, MD
Lt Col Brian Bartee
Lt Col Michael Connolly
Lt Col Michael Havard
Lt Col Mark Kruse
Lt Col Jeffrey Smitley
Lt Col Thomas Thibault
SMSgt Tangella Brown
MSgt Darren Jenkins
MSgt Sylvia Neff
TSgt Jason Kneier

15 AS, JB Charleston, SC
TSgt Joshua J. Watson

52 AS, Peterson AFB, CO
Maj Ian C. Carney
SMSgt Aaron K. Roberts
MSgt Aaron P. Ingebo

101 ARW, Bangor ANGB, ME
Lt Col Richard Thompson

117 ARS, Forbes Field, Topeka, KS
Col Joel Darbro
Lt Col Jarrod Frantz
Lt Col Chris Gnagi
Lt Col Jeff Warrender
SMSgt Brian Dillon
SMSgt James Spurlock
MSgt Jamesson Dunbar
MSgt Macario Torrez

133 ARS, Pease ANGB, NH
Gen William N. Reddel
Col Laurie M. Farris
Lt Col Noah C. Conrad
Lt Col James P. Ryan
Maj Corey D. Aiken
Maj Jeffrey R. Cole
CMSgt Anthony J. Casella
MSgt Gary Howard
MSgt John E. Lennon

152 AW, NVANG, Reno, NV
Lt Col Derek Gardner

172 AW, Thompson Field, MS
Lt Col Scott P. Ditto
Lt Col Trevon S. Miller
Lt Col Keri Villemarette
Maj Jeffrey A. Blaylock
Maj Louis R. Grones
Maj Edward L. Walsh
SMSgt Robert L. Lundy
MSgt Michael A. Griffin
MSgt Bobby W. Harris

312 AS, Travis AFB, CA
Lt Col John P. Bordewick
Lt Col Kevin S. Lane
Lt Col Steven F. Lisec
Maj Ryan D. Schaeffer
Maj Robert B. Silver
MSgt Patrick J. Tiaffay

3,500 HOURS

1 AS, JB Andrews, MD
Lt Col Sean Adcock
Lt Col Jeffrey Beers
Lt Col Joseph Brewer
Lt Col William Buckingham
Lt Col David Cooper
Lt Col Mike Cummings
Lt Col Nathan Dennes
Lt Col David Durkin
Lt Col Chris Eden
Lt Col Susan Foy
Lt Col David Grein
Lt Col Christopher Hays
Lt Col Robert Hilliard
Lt Col Don Jentgens

Lt Col Thomas Kootsikas
Lt Col Albert Lense
Lt Col Michael Needham
Lt Col Robert Rhyne
Lt Col Jeffrey Ward
Lt Col Michael Yi
Maj Gabriel Behr
Maj Gerald Cushenberry
Maj Jachin Finch
Maj Brian Johnson
Maj Joseph Laclede
Maj Jacob Lutterman
Maj Rodger Malmgren
Maj Matt Peterson
Maj Robert Reed
Maj Clay Tebbe
Maj Joshua White
SMSgt Monique Townsend
MSgt Shawn Chada
MSgt Kenneth Graham
MSgt Douglas Tatum
TSgt Benjamin Cronan
TSgt Joshua Erhard

8 AS, JB Lewis-McChord, WA
SSgt Ryan Anderson
SSgt Trinidad Gutierrez

15 AS, JB Charleston, SC
Lt Col Brady D. Caldwell
Lt Col David L. Owens
Maj Kevin L. Bass
Maj Kevin R. Watry
Maj Timothy G. White
Capt David B. Anderson
Capt David M. Padilla
MSgt Stephen G. Brown
MSgt Jason B. Soule
TSgt Brian C. Chaney
TSgt Thomas D. Elsworth
TSgt Michael S. Seaton
TSgt Matthew J. Shields
TSgt Danny N. South

16 AS, JB Charleston, SC
Capt Ryan Spodar
SSgt Joseph Joiner

52 AS, Peterson AFB, CO
Maj Jeremy C. Sloger
Maj Robert W. Zid
Capt Eric T. Elmore
MSgt Sean A. Stephens

64 ARS, Pease ANGB, NH
Maj Douglas E. Foster
Capt Jason T. Knab
SMSgt Keith A. Jauss
MSgt Patrick L. Ingram
TSgt Ronald R. McKinney
TSgt Justin R. Poteet

101 ARW, Bangor ANGB, ME
Col Frank Roy
Maj Edward Vanidestine

117 ARS, Forbes Field, Topeka, KS
Col Ken Folger
Lt Col Lee Grunberger
Lt Col Michael O'Brien
Lt Col Charles Remboldt
Lt Col Russell Sakati
Lt Col Anthony Smith
Lt Col Robert Williams
Maj Erik Baker
Maj Matthew Bayes
Maj Kent Crane
Maj Nathan Drewry
Maj Toby Foster
Maj Justin Tiffany

133 ARS, Pease ANGB, NH
Lt Col Robert C. Courtemanche
Lt Col Jason R. Denton
Lt Col Jeffrey M. Denton
Lt Col Sean P. Mooney
Maj Robert A. Connors
Maj Jonathan R. Eckerman
Maj Amy L. Emanuel-Bassett
Maj Ryan P. Jones
Maj Heidi A. Lelke
Maj Paulo A. Morales
Maj Michael J. Sanders
Maj Ian S. Tate
Maj Marc I. Zubricki
Capt Toby B. Pellenz
SMSgt Michael P. George
SMSgt Glen E. Starkweather

152 AW, NVANG, Reno, NV
Col Jeffrey Burkett
Lt Col Julie Dietrich
Lt Col James Fleitz
Lt Col Koby Harding
Maj Steve Mills
CMSgt Robert Martinez
SMSgt Thomas Glover
MSGgt Michael Martin

172 AW, Thompson Field, MS
Maj Justin S. Brown
Maj Brian S. Burke
Maj Earl W. Carter
Maj Dennis F. Cobb
Maj Brian P. Matranga
Maj Patrick M. Saunders
Capt Berryman E. Woodruff
MSgt Edsel J. Brown
MSgt Michael S. Curry
MSgt James T. Gibson
MSgt Ronald J. Statham

457 AS, JB Andrews, MD
Lt Col Anthony Caparella
Lt Col Craig Moe
Lt Col Timothy Stuart
Maj Amy Eichelberger
Maj Giorgio Szabo

2,500 HOURS

1 AS, JB Andrews, MD
Col David Almand
Col David Siegrist
Lt Col David Beaver
Lt Col Dick Blakemore
Lt Col Hans Ellison
Lt Col Michael Freimarck
Lt Col Brent Graham
Lt Col Matthew Harmon
Lt Col Michael Kitching
Lt Col James Larkin
Lt Col Aaron Pierce
Lt Col Daniel Rebecky
Lt Col Justin Riddle
Lt Col Marc Rodriguez
Lt Col Michael Snodgrass
Lt Col Michael Turner
Lt Col Christopher Wilson
Maj Brett Ellis
Maj Justin Fronk
Maj David Kolton
Maj David Paland
Maj Timothy Szeszulski
Maj Luke Urish
CMSgt Kevin Gordon
MSgt Robert Hooker
MSgt Heidi Huff
MSgt Dennis Morris
MSgt Angell Stone
MSgt Robert Summerfield
MSgt William Wilson
TSgt Marqus Ambush
TSgt Barry Bonnema
TSgt Rachel Bush
TSgt Ronald Giannetti

TSgt Brandon Jackson
TSgt Jacob Mast
TSgt Glenn Robinette
TSgt Joel Rose
TSgt Loretta Smith
TSgt James Williams

8 AS, JB Lewis-McChord, WA
Lt Col John Rozsnyai
Maj Grant Fish
Capt Jason Birdsall
Capt Matthew Cooper
Capt Donald Frey
SrA Brian Whitcomb

15 AS, JB Charleston, SC
Lt Col Peter S. Reddan
Maj Thomas H. Crittenden
Maj Arma F. Peltier
Maj Eugene K. Rainey
Maj Adam J. Smith
Maj Edward V. Szczepanik
Capt Jeremey M. Brockman
Capt Brandon J. Brown
Capt Ryan R. Halligan
Capt Timothy R. Kniefel
Capt Christopher E. Ostroski
Capt James E. Pike
Capt John H. Querl
CMSgt Michael S. Cumberland
TSgt Lindy J. Warner
SSgt Jose L. Botello
SSgt Brandon P. Dahlstrom
SSgt Jerry D. Daniels
SSgt William B. Davis
SSgt Justin D. Hoffman
SSgt Eugene D. Mehaffy
SSgt Jeremy C. Owens
SSgt Alfonso D. Rogers
SSgt Michael J. Solly
SSgt Gary R. West
SSgt Justin A. Wright

16 AS, JB Charleston, SC
Capt Noah Ayers
Capt Matthew Distefano
Capt Patrick Ng
SSgt Bradley Edwards

52 AS, Peterson AFB, CO
Lt Col Joey L. Dible
Lt Col Jason B. Terry
Maj Travis E. Christensen
Maj Daniel A. Corindia
Maj Christopher R. MacDonald
Maj James I. Speakes
TSgt Wilma B. Alvarez
SSgt Matthew P. Lafever
SSgt Aaron M. Swenson

64 ARS, Pease ANGB, NH
Lt Col Jeremiah S. Heathman
Lt Col Daniel W. Stone
Capt Edward C. Atkins
Capt Jeffrey S. Osgood
TSgt Geoffrey R. Schultz

101 ARW, Bangor ANGB, ME
Maj William Dunn
Maj Gary Thompson
Capt Richard King
MSgt John Fidler

117 ARS, Forbes Field, Topeka, KS
Lt Col Brian Budden
Lt Col Daniel Skoda
Maj Kevin Dark
Maj Erik Epperson
Maj Mark Kelly
Maj Shane Kessler
Maj Joe Lovuola
Maj Brandi Staniec
Maj Ryan Strong
Maj Steve Thomas
Maj Jeffrey Woods
Capt Jeff Dickman
Capt Matt Hedlund
Capt William Sanders
SMSgt Scott Clampitt
MSgt Nate Neidhardt
MSgt Jon Swinney
MSgt Bryan Thomas
MSgt Wayne Walls
TSgt James Whisenhunt

133 ARS, Pease ANGB, NH
Lt Col Darik C. Day
Lt Col Paul M. Kell
Maj Christopher Dillman
Maj Matthew B. Holloway
Maj Nelson Perron
Capt Nelson A. Abreu
Capt Keith R. Anderson
Capt Brian P. Bennett
Capt Scott W. Doughty
Capt Matthew D. Valentino
MSgt Alan F. Beaulieu
MSgt Daniel E. Luter
TSgt Mark W. Brophy
TSgt Eric Diaz
TSgt Christie F. Tetley

152 AW, NVANG, Reno, NV
Lt Col Brian Thayer
Maj Eric Beyersdorf
Maj Michael Fugett
Maj Jason Little
Maj Brian Moynihan
Maj Hillary Moynihan
Maj Michael Ramsay
Capt Frank Magee
Capt Spencer Trehal
MSgt Cameron Pieters
MSgt Kevin Walen

172 AW, Thompson Field, MS
Capt Bryan J. Devries
Capt Michelle R. Scott
MSgt Jacob L. Fleming
TSgt Ryan C. Smith

311 AS, Peterson AFB, CO
Lt Col Mark Keener
Maj Aaron Husk

457 AS, JB Andrews, MD
Maj Erik Todoroff

458 AS, Scott AFB, IL
Maj Brian Jacobsen
Maj Emanuell Vega

914 AES, Niagra Falls IAP, NY
Lt Col Laila Schwinge
Lt Col Paul Seyfried
Maj Robert McGaughey
CMSgt Ronald Nowasell

Submitting Flying Hour Milestones

To submit flying hour milestones, send your request to: *mobilityforum@us.af.mil*
HQ AMC/SEE, 618.229.0927 (DSN 779)

Please submit as shown in the listings above (first name, last name, sorted alphabetically within rank).

...Quickstoppers

Job Safety Training Outlines (JSTO): Who needs it? You do!

By TSGT LISA MOON
HQ AMC/SEG

According to the Federal Workers' Compensation Act and the Occupational Health and Safety Regulation, it's the employer's responsibility to implement an occupational health and safety (OHS) program to prevent workplace injury and disease. A Job Safety Training Outline (JSTO) is a means to comply with federal regulations to train and protect our Department of Defense and Air Force employees.

Even though a piece of paper doesn't prevent mishaps, a JSTO serves as an important prevention tool. The JSTO is the supervisors' training guide for newly assigned workers. This guide helps cover, in detail, unique workplace occupational safety and health issues that may affect an employee's health. The important thing to remember if you are a supervisor is to never assume that a worker will be aware of a hazard because "it's common sense." You must bring every risk, even if it seems obvious, to the attention of the workers you supervise. While it is impossible to anticipate and prevent EVERY accident, JSTOs help supervisors implement reasonable precautions to prevent mishaps.

From known and potential hazards to what to do when a new hazard is discovered, the JSTO is a federal requirement and is not something we can opt out of doing. It is an employee's right to know, and every supervisor's obligation to inform their workers of those risks. For more information on JSTOs, contact your local Wing Ground Safety Office or refer to *AFI 91-202*, Attachment 5, for mandatory items the JSTO must cover.

Wild Ride

By MAJ JEN YATES
HQ AMC/SEF

Have you ever slid on ice while driving? Possibly even endured a near 180 on the road and ended up in the ditch or median? If so, I imagine it was a scary and eye-opening experience. Now imagine sliding in your aircraft. That is exactly what happened in the following two examples.

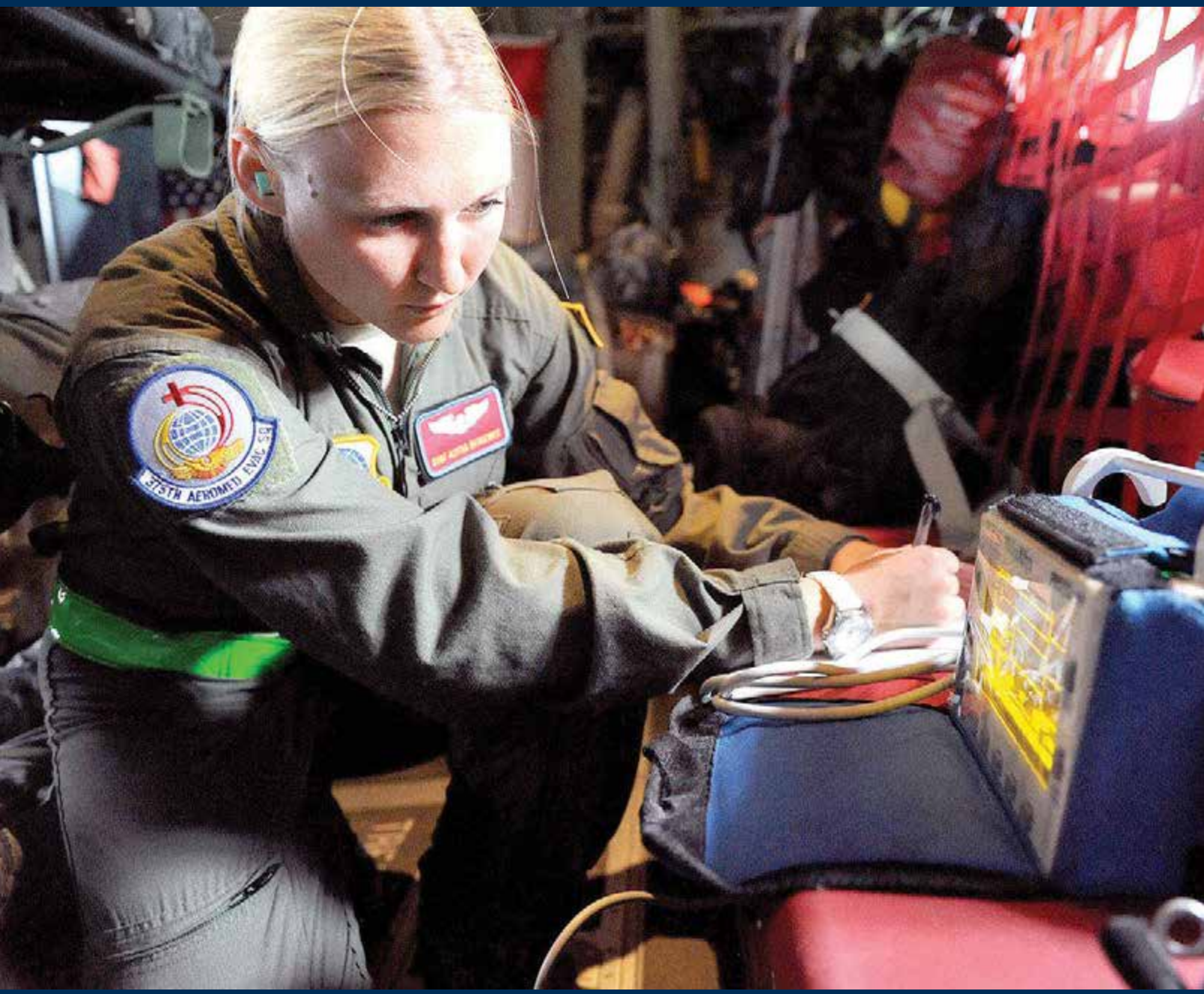
The event aircraft (EA) was on the extreme right side of the taxiway with high asymmetric power to steer back toward centerline. The limited tire traction was overcome by centrifugal forces and quartering tailwinds. The aircraft rapidly spun counterclockwise 150 degrees, traversed the 50-foot width of the taxiway, and slid off the left side of the taxiway. As the EA came to a stop, the right wing dipped and the #4 propeller struck the ground. The aircrew said weather conditions were "normal for here."

In the second incident, the mishap pilot (MP) taxied the aircraft straight ahead. After rolling approximately five feet, the nose of the aircraft began to skid to the right. The MP applied full brakes and was able to stop the forward momentum of the aircraft (groundspeed was zero), but the nose continued to track to the right. While standing on the brakes, the MP advanced the #4 throttle to arrest the nose tracking to the right with no effect. The #4 throttle was retarded to idle and the aircraft eventually slid to a stop approximately 30 feet from an aircraft sitting in an adjacent parking spot. After exiting the aircraft, the crew noticed that the parking ramp was extremely icy.

Takeaways from both of these incidents reinforce that inclement weather conditions are dynamic, and airfield RCR/RSCs differ on varied airfield surfaces. Taxiways may present a greater hazard than runways; just because one area of the airfield has a sufficient braking coefficient does not necessarily mean that all areas do. Do not hesitate to inquire as to the conditions of taxiways and parking ramps. If in doubt, deploy a crew member to determine conditions. Just because it is "normal" does not necessarily mean you can risk being complacent!

GPO U.S. GOVERNMENT PRINTING OFFICE: 2011-645-263.
For sale by the Superintendent of Documents, U.S. Government Printing Office.
Internet: bookstore.gpo.gov Phone: toll free (866) 512-1800; DC area (202) 512-1800
Fax: (202) 512-2104 Mail: Stop IDCC, Washington, DC 20402-0001

VITAL TRAINING



SSgt Alyssa Dutkiewicz checks vital signs during a training exercise at Scott Air Force Base, Ill. Members of the 375th Aeromedical Evacuation Squadron trained with the Canadian Air Force to improve their aeromedical evacuation skills.

USAF PHOTO by A1C Jaeda Waffer