

# 1994 Fairchild Air Force Base B-52 crash

*Wikipedia is sustained by people like you. Please donate today.*



From Wikipedia, the free encyclopedia

The **B-52 crash at Fairchild Air Force Base** was a fatal air crash that occurred on June 24, 1994, killing the four crew members of a United States Air Force (USAF) B-52 Stratofortress during a training flight. In the crash, Bud Holland, who was the command pilot of the aircraft based at Fairchild Air Force Base, call sign *Czar 52*, flew the aircraft beyond its operational parameters and lost control. As a result, the aircraft stalled, hit the ground, and was destroyed. Video footage of the crash was shown throughout the United States on news broadcasts.

The accident investigation concluded that the chain of events leading to the crash was primarily attributable to Holland's personality and behavior, USAF leaders' reactions to it, and the sequence of events during the mishap flight of the aircraft. Today, the crash is used in military and civilian aviation environments as a case study in teaching crew resource management. Also, the crash is often used by the USAF and US Army during safety training as an example of the importance of compliance with safety regulations and correcting the behavior of anyone who violates safety procedures.

## Contents

## Crash

At 07:30 local time (Pacific Time Zone) on June 24, 1994, at Fairchild Air Force Base, Washington, a USAF B-52H bomber crew stationed at Fairchild prepared to practice an aircraft demonstration flight for an upcoming air show. The crew consisted of pilots Arthur "Bud" Holland (46 years old), Mark McGeehan (38), Robert Wolff (46), and weapon systems officer/radar navigator Ken Huston (41). Holland was the designated command pilot for the flight, with McGeehan as the copilot and Wolff designated as a safety observer. Holland, McGeehan, and Huston were Lieutenant Colonels and Wolff was a Colonel. Holland was the chief of

## Fairchild Air Force Base B-52 crash



The B-52 about to crash.

### Summary

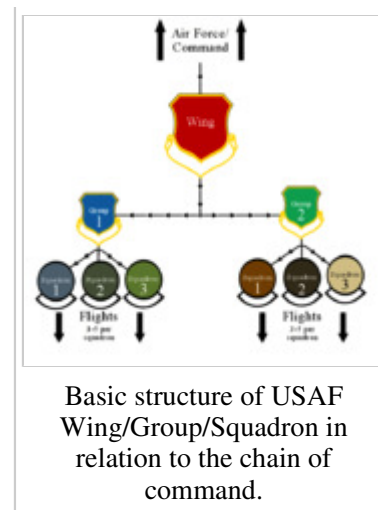
<b>Date</b>	June 24, 1994
<b>Cause</b>	Pilot error caused uncontrolled flight into the ground
<b>Site</b>	Fairchild Air Force Base, Washington, United States
<b>Fatalities</b>	4
<b>Injuries</b>	0
<b>Aircraft</b>	
<b>Aircraft type</b>	B-52H bomber
<b>Operator</b>	United States Air Force
<b>Tail number</b>	61-0026
<b>Crew</b>	4
<b>Survivors</b>	0



The B-52 midway through its final, steeply-banked, 360° turn around the control tower.

the 92nd Bomb Wing's Standardization and Evaluation branch, McGeehan was the commander of the 325th Bomb Squadron, Wolff was the vice commander of the 92nd Bomb Wing, and Huston was the 325th Bomb Squadron's operations officer.<sup>[1]</sup>

The mission plan for the flight called for a demanding series of low-altitude passes, 60 degree banked turns, a steep climb, and a touch-and-go landing on Fairchild's Runway 23. The flight was also Wolff's "fini flight" — a common tradition in which a retiring USAF aircrew member is met shortly after landing on his or her final flight at the airfield by relatives, friends, and coworkers, and doused with water. Thus, Wolff's wife and many of his close friends were at the airfield to watch the flight and participate in the post-flight ceremony. McGeehan's wife and two youngest sons watched the flight from the backyard of McGeehan's living quarters, located nearby.<sup>[2]</sup>



The B-52 aircraft launched at 13:58 and completed most of the mission's elements without incident. Upon preparing to execute the touch-and-go on Runway 23 at the end of the practice profile, the aircraft was instructed to go-around because a KC-135 aircraft had just landed and was on the runway. Maintaining an altitude of about 250 feet (75 meters) above ground level (AGL), Holland radioed the control tower and asked for permission to execute a 360 degree left turn, which was immediately granted by the tower controller. The B-52 then began the 360 degree left turn around the tower starting from about the midfield point of the runway. Located just behind the tower was an area of restricted airspace, reportedly because of a nuclear weapons storage facility.<sup>[3]</sup> To avoid flying through the restricted airspace, Holland apparently flew the aircraft in an extremely tight, steeply banked turn while maintaining the low, 250 foot (75 meter) AGL altitude. Approximately three quarters of the way around the turn, at 14:16, the aircraft banked past 90 degrees, descended rapidly, and hit the ground, exploding and killing the four crew members. Although McGeehan attempted to eject, the ejection sequence was interrupted by the crash before he could clear the aircraft. No one on the ground was physically injured. The crash was videotaped and the video was shown repeatedly on news broadcasts throughout the United States.<sup>[4]</sup>

## Investigation



The USAF immediately convened a safety investigation under the direction of the USAF's Chief of Safety, Brigadier General Orin L. Godsey. The safety investigation board released the report of its investigation into the crash on August 10, 1994. A final evaluation of the safety investigation was released on January 31, 1995. The USAF safety report was distributed only to U.S. Department of Defense personnel and not to the general public. An accident investigation board, called an "AFR 110-14 Investigation," released a separate report in 1995. Unlike the USAF safety investigation, the AFR 110-14 report was released to the general public.<sup>[5]</sup>

The AFR 110-14 investigation identified several factors which contributed to the crash, including the actual crash sequence, the personality and earlier behavior of Bud Holland, previous

USAF Brigadier General Orin L. Godsey, who directed the safety investigation into the crash.

supervision and lack of corrective action exercised by USAF officers over Bud Holland, mission planning and execution, and other environmental and human factors.<sup>[6]</sup>

### Crash sequence

The investigation found that as the B-52 entered its final turn sequence around the tower, its indicated airspeed (IAS) was 182 knots (337 km/h). Although Holland applied additional engine power after starting the turn, the late power application was not enough to maintain the aircraft's current airspeed during the turn. Although the aircraft's airspeed indicator was available to all four aircrew members, the aircraft's airspeed was allowed to continue to decrease. Eight seconds before impact, the aircraft's IAS had deteriorated to 145 knots (269 km/h), the aircraft's bank increased past 60 degrees, and the aircraft began to stall. Although Holland or McGeehan at this time applied full right spoiler, right rudder, and a nose-up elevator, the aircraft continued to stall, exhibiting a behavior known as an "accelerated stall". An accelerated stall occurs when the stall speed of an aircraft increases without an aircraft reducing its airspeed because of environmental factors and/or the current attitude of the aircraft in relation to which way it's moving.<sup>[6]</sup>

Due to the bank of 60 degrees or more, the stall speed for the aircraft at that moment was an IAS of 147 knots (272 km/h). Thus, flying at 145 knots (269 km/h) IAS the aircraft stalled without sufficient altitude to recover before impacting the ground.<sup>[6]</sup>

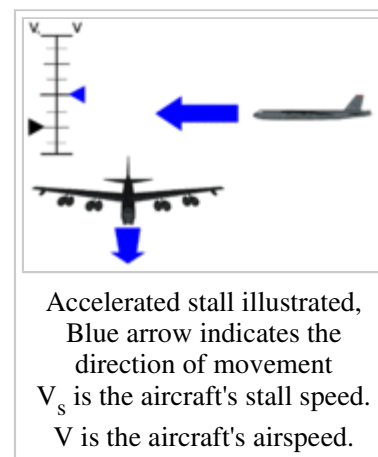
### Holland's previous behavior and USAF leaders' reactions

The accident board stated that Bud Holland's personality significantly influenced the crash sequence. USAF personnel testified that Holland had developed a reputation as an "aggressive" pilot who often broke flight safety and other rules. The rule breaking included flying below minimum clearance altitudes and exceeding bank angle limitations and climb rates. He also regularly and illegally parked his car in a "no parking" zone near the base headquarters building without anyone saying anything to him about it.<sup>[7]</sup>

An earlier incident occurred in 1991 when a B-52 piloted by Holland performed a circle above a softball game in which Holland's daughter was participating. Beginning at 2,500 feet (760 m) AGL, Holland's aircraft executed the circle at 65 degrees of bank. Described by one witness as a "death spiral," the nose of the aircraft continued to drop during the maneuver and the bank angle increased to 80 degrees. After losing 1,000 feet (300 m) of altitude, Holland was able to regain control of the aircraft.<sup>[8]</sup>

During the May 19, 1991 Fairchild air show, Holland was the command pilot of the B-52 aerial demonstration flight. During the demonstration, Holland's aircraft violated several safety regulations, including exceeding bank and pitch limits, flying directly over the air show spectators, and possibly violating altitude restrictions. The base and wing commander, Colonel Arne Weinman, along with his staff, observed the demonstration but apparently took no action.<sup>[9]</sup>

On July 12, 1991, Holland commanded a B-52 for a "fly over" during a change of command ceremony for the 325th Bomb Squadron at Fairchild. During both the practice and actual fly over, Holland's



aircraft flew at altitudes below 100 feet (30 m) -- well below the established minimum altitude, flew steeply banked turns in excess of 45 degrees, exceeded pitch angle limits, and executed a wing over. The wing over was not specifically prohibited but was not recommended because it could damage the aircraft. After witnessing the fly over, Colonel Weinman and his deputy commander for operations, Colonel Julich, verbally reprimanded Holland but took no formal action.<sup>[7]</sup>

During the May 17, 1992 Fairchild air show, Holland was again the command pilot of the B-52 aerial demonstration flight. During the demonstration, Holland's aircraft again violated several safety regulations, including several low altitude steep turns in excess of 45 degrees of bank and a high pitch angle climb, estimated at over 60 degrees nose high which Holland finished with a wing over maneuver. The new wing commander, Colonel Michael G. Ruotsala, apparently took no action. One week later, the new deputy commander for operations (DO), Colonel Capotosti, on his own initiative warned Holland that if he (Holland) violated any more safety regulations, Capotosti would ground him (remove him from flying status). Capotosti did not, however, document his warning to Holland or apparently take any other kind of formal action.<sup>[9]</sup>



A B-52H takes-off with a standard pitch attitude.

On April 14 and April 15, 1993, Holland was the mission commander of a two-ship (two B-52 aircraft) training mission to a bombing range near Guam in the Pacific Ocean. During the mission Holland flew his aircraft closer to the other aircraft than regulations allowed. Holland also asked his navigator to videotape the bombs falling from the aircraft from inside the aircraft's bomb bay, also against regulations. Holland's navigator later brought the video to the attention of three Fairchild USAF leaders. The first, Lieutenant Colonel Bullock, the current 325th Bomb Squadron commander, did not do anything about it and may have even tried to use the videotape for blackmail to coerce the navigator into accepting a position as mission scheduler for the wing. The second, the deputy operations group commander, Lieutenant Colonel Harper, told the crew member to conceal the evidence. The third, the DO, allegedly responded to reports of the video by stating, "Okay, I don't want to know anything about that video -- I don't care."<sup>[10]</sup>

At the August 8, 1993 Fairchild air show, Holland once again commanded the B-52 demonstration flight. The demonstration profile once again included bank angles greater than 45 degrees, low altitude passes, and another high pitch climbing maneuver, this time in excess of 80 degrees nose high. The climb was so steep that fuel flowed out of the vent holes from the aircraft's wing tanks. The new wing commander, Brigadier General James M. Richards, and the new DO, Colonel William E. Pellerin, both witnessed the demonstration but neither took any action.<sup>[11]</sup>



A B-52 piloted by Holland

On March 10, 1994, Holland commanded a single-aircraft training mission to the Yakima Bombing Range to provide an authorized photographer an opportunity to document the aircraft as it dropped training munitions. The minimum aircraft altitude permitted for that area was 500 feet (150 m) AGL. During the mission, Holland's aircraft was filmed crossing one ridgeline about 30 feet (10 m) above the ground. Fearing for their safety, the photography crew ceased filming and took cover as Holland's aircraft again passed low over the ground, this time estimated as clearing the ridgeline by only three feet (1 m).

clears a ridgeline at low altitude on March 10, 1994.

The co-pilot on Holland's aircraft testified that he was forced to grab the controls to prevent Holland from flying the aircraft into the ridge while the aircraft's other two aircrew members repeatedly screamed at Holland, "Climb! Climb!." Holland responded by laughing and calling one of the crew members "a pussy".<sup>[4]</sup>

After that mission, the crew decided that they would never again fly with Holland and reported the incident to the bomb squadron leadership. The squadron commander, Lieutenant Colonel Mark McGeehan, reported the incident to Pellerin and recommended that Holland be removed from flying duty. Pellerin consulted with Holland and gave him a verbal reprimand and warning not to repeat the behavior, but refused to take him off flying duty. Pellerin also did not document the incident or the reprimand or notify his superiors, who remained unaware of the incident. McGeehan then decided that in order to protect his aircrews, he (McGeehan) would be the co-pilot on any future missions in which Holland was the command pilot. Evidence suggests that after this incident "considerable animosity" existed between Holland and McGeehan.<sup>[12][13]</sup>

In preparation for the 1994 Fairchild air show, Holland was again selected as the command pilot for the B-52 demonstration flight. Holland briefed the proposed demonstration flight plan to the new wing commander, Colonel William Brooks, on June 15, 1994. The demonstration profile as briefed by Holland included numerous violations of regulations, including steep bank angles, low altitude passes, and steep pitch attitudes. Brooks ordered Holland not to exceed 45 degree bank angles or 25 degree pitch attitude during the demonstration. During the first practice session, on June 17, 1994, Holland repeatedly violated these orders. Brooks witnessed this but took no action. Pellerin flew with Holland on that flight and reported to Brooks that, "the profile looks good to him; looks very safe, well within parameters." The next practice flight on June 24 ended with the crash.<sup>[7]</sup>

## Other factors

The demonstration profile as designed by Holland included a 360 degree turn around Fairchild's air traffic control tower. Holland had not attempted this maneuver in previous air show demonstrations. During the final flight, Holland performed a series of 60 degree banked turns and a 68 degree pitch climb in violation of Brooks' orders. No evidence exists that McGeehan or Wolff attempted to intervene as Holland executed the maneuvers.<sup>[6]</sup>

Pellerin was originally scheduled to fly in this mission, as he had done on the June 17 flight. Pellerin, however, was unavailable for the flight on June 24 and Wolff was selected as the replacement aircrew member. Due to the short notice of his assignment to the mission, Wolff did not participate in the pre-flight briefing and boarded the aircraft after the engines were started. Thus, Wolff was not aware of the planned mission profile and did not have an opportunity to raise any objections before take-off.<sup>[6]</sup>

All of the aircrew involved in the crash had only limited flying time in the months before the crash. The



Mark McGeehan, the USAF squadron commander who refused to allow any of his squadron members to fly with Holland unless he (McGeehan) was also on the aircraft.

B-52's aircrew were apparently unaware that the aircraft had stalled until shortly before impact, indicated by a failure to apply standard recovery techniques to the aircraft once it entered the stall. Nevertheless, the investigation reported that even had the proper stall recovery techniques been applied, the aircraft was probably too low to recover before hitting the ground.<sup>[6]</sup>

Four days before the accident, a significant emotional event had occurred at Fairchild. On June 20, an emotionally disturbed ex-USAF serviceman entered Fairchild's hospital and shot and killed five people and wounded many more before being killed by a military policeman. The crime was a major distraction for personnel stationed at Fairchild for some period of time afterwards.<sup>[6]</sup>

## Conclusions

The accident investigation concluded that the chain of events leading to the crash was primarily attributable to Holland's personality and behavior, USAF leaders' reactions to it, and the sequence of events during the final flight of the aircraft. Holland's disregard for procedures governing the safe operation of the B-52 aircraft that he commanded and the absence of firm and consistent corrective action by his superior officers allowed Holland to believe that he could conduct his last flight in an unsafe manner, culminating with the slow, steeply banked, 360 degree turn around the control tower.<sup>[4]</sup>

During Holland's last flight, the other environmental factors involved, including the addition of a new maneuver (the 360 degree turn around the tower), inadequate pre-flight involvement of Colonel Wolff, and the distractions from the base shooting four days prior, combined with Holland's unsafe and risk-taking piloting behavior to produce conditions favorable for the crash to occur. The final factor was the 10-knot tailwind that pushed the steeply banked aircraft into the accelerated stall, resulting in the crash.<sup>[4]</sup>

## Aftermath

On May 19, 1995, Pellerin pleaded guilty at a USAF court-martial proceeding to two counts of dereliction of duty for his actions, or lack thereof, that contributed to the crash. He was sentenced to forfeit \$1,500 of salary a month for five months and received a written reprimand. The USAF did not reveal whether any other officer involved in the chain of events leading to the crash received any type of administrative or disciplinary action. Critics of USAF's safety record stated that this crash was an example of a pattern of problems related to enforcement of safety procedures within USAF.<sup>[14]</sup>

Although the accident investigation found that procedures and policies were supposedly already in place to prevent such a crash from occurring again, the fact that this crash occurred showed that in at least one instance the existing safety policies and their enforcement had been inadequate. To re-emphasize the importance of adherence to existing safety policies and correcting the actions of anyone who violated any of these policies at any time, USAF quickly distributed the findings of the accident investigation throughout the service. Today, the crash is used in both military and civilian aviation environments as a training aid in teaching crew resource management. The crash is also often used in safety training as an example of the importance of enforcing compliance with safety regulations.<sup>[9][15]</sup>

## References

### Notes

1. ^ Thompson, *Way, Way Off in the Wild Blue Yonder*, Kern, *Darker Shades of Blue* and USAF, *AFR 110-14*, p. 2-3. Holland, as chief of standardization and evaluation, was responsible for the knowledge and enforcement of academic and in-flight standards for the bomb wing's flying operations.
2. ^ Piper, *Chain of Events*, p. 136, Kern, *Darker Shades of Blue*, and USAF, *AFR 110-14*, p. 2-3.
3. ^ Diehl, *Silent Knights*, p. 125.
4. ^ *a b c d* Diehl, *Silent Knights*, p. 125, Thompson, *Way, Way Off in the Wild Blue Yonder*, USAF, *AFR 110-14*, p. 2-3, and Kern, *Darker Shades of Blue*
5. ^ Air Force Link, *Brigadier General Orin L. Godsey*, and USAF, *AFR 110-14*, p. 2-3.
6. ^ *a b c d e f g* USAF, *AFR 110-14*, all.
7. ^ *a b c* USAF, *AFR 110-14*, p. 3-4, and Kern, *Darker Shades of Blue*.
8. ^ Diehl, *Silent Knights*, p. 125, Thompson, *Way, Way Off in the Wild Blue Yonder*, and USAF, *AFR 110-14*, p. 3-4.
9. ^ *a b c* Kern, *Darker Shades of Blue*.
10. ^ Diehl, *Silent Knights*, p. 125, Kern, *Darker Shades of Blue*. The article does not state whether this DO was Colonel Capotosti or a new DO, Colonel William E. Pellerin.
11. ^ Air Force Link, *Brigadier General James M. Richards USAF biography*, Thompson, *Way, Way Off in the Wild Blue Yonder*, and Kern, *Darker Shades of Blue*.
12. ^ Thompson, *Way, Way Off in the Wild Blue Yonder*, Kern, *Darker Shades of Blue*, and USAF, *AFR 110-14*, p. 3-4.
13. ^ Lou Holtz/Upper Ohio Valley Hall of Fame, *Lt. Col. Mark C. McGeehan*.
14. ^ Diehl, *Silent Knights*, p. 126, Thompson, *Way, Way Off in the Wild Blue Yonder*, Kern, *Darker Shades of Blue*
15. ^ Check-Six.com, *The Crash of Czar 52*.

## Printed media

- Diehl, Alan E. (2003). *Silent Knights: Blowing the Whistle on Military Accidents and Their Cover-Ups*. Potomac Books. ISBN 1574885448.
- Kern, Tony T. (1999). *Darker Shades of Blue: The Rogue Pilot*. McGraw-Hill Professional Publishing. ISBN 0070349274.
- Piper, Joan L. (2001). *Chain of Events: The Government Cover-up of the Black Hawk Incident and the Friendly-fire Death of Lt. Laura Piper*. Brassey's. ISBN 1574883445.
- United States Air Force (USAF) (1994). *Summary of AFR 110-14 USAF Accident Investigation Board Report*.

## Web

- Brigadier General Orin L. Godsey (<http://www.af.mil/bios/bio.asp?bioID=5566>). *Air Force Link* (1996). Retrieved on 2007-02-16.- Biography of the USAF Chief of Safety who led the initial investigation into the mishap.
- Brigadier General James M. Richards (<http://www.af.mil/bios/bio.asp?bioID=6898>). *Air Force Link* (1996). Retrieved on 2007-02-16.- Biography of the Commander, 92nd Bomb Wing, Fairchild Air Force Base from August 1992 - August 1993
- Check-Six (2007). The Crash of 'Czar 52' ([http://www.check-six.com/Crash\\_Sites/Czar52Crash.htm](http://www.check-six.com/Crash_Sites/Czar52Crash.htm)). *Check-Six.com*. Retrieved on 2007-04-20.- Contains video footage of the crash.
- Kern, Tony (1995). *Darker Shades of Blue: A Case Study of Failed Leadership* (<http://www.crm-devel.org/resources/paper/darkblue/darkblue.htm>). *Neil Krey's CRM Developers Forum*. Retrieved on 2007-03-01.
- Lt. Col. Mark C. McGeehan (<http://www.louholtzhalloffame.com/honorees/2000/index.html>). *Lou Holtz/Upper Ohio Valley Hall of Fame* (2000). Retrieved on 2007-03-01.
- Thompson, Mark (May 29, 1995). *Way, Way Off in the Wild Blue Yonder*

(<http://www.time.com/time/magazine/article/0,9171,982358,00.html>). *Time*. Retrieved on 2007-03-01.

- Mishap of B-52 at Fairchild Air Force Base Washington (<http://www.youtube.com/watch?v=YQa4PpIkOZU>). Retrieved on 2007-06-24. - Video of several incidents leading up to the crash, and the crash itself

Retrieved from "[http://en.wikipedia.org/wiki/1994\\_Fairchild\\_Air\\_Force\\_Base\\_B-52\\_crash](http://en.wikipedia.org/wiki/1994_Fairchild_Air_Force_Base_B-52_crash)"

Categories: Military history of the United States 1900-1999 | Non-combat accidents involving military | Aviation accidents and incidents in 1994 | Aviation accidents and incidents in the United States | Airshow accidents | 1994 in the United States | Disasters in Washington | United States Air Force

- 
- This page was last modified 05:01, 7 September 2007.
  - All text is available under the terms of the GNU Free Documentation License. (See **Copyrights** for details.) Wikipedia® is a registered trademark of the Wikimedia Foundation, Inc., a U.S. registered 501(c)(3) tax-deductible nonprofit charity.