

Missteps in the Bunker

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Just after 9 a.m. on Aug. 29, a group of U.S. airmen entered a sod-covered bunker on [North Dakota's](#) Minot Air Force Base with orders to collect a set of unarmed cruise missiles bound for a weapons graveyard. They quickly pulled out a dozen cylinders, all of which appeared identical from a cursory glance, and hauled them along Bomber Boulevard to a waiting [B-52](#) bomber.

The airmen attached the gray missiles to the plane's wings, six on each side. After eyeballing the missiles on the right side, a flight officer signed a manifest that listed a dozen unarmed AGM-129 missiles. The officer did not notice that the six on the left contained nuclear warheads, each with the destructive power of up to 10 [Hiroshima](#) bombs.

That detail would escape notice for an astounding 36 hours, during which the missiles were flown across the country to a [Louisiana](#) air base that had no idea nuclear warheads were coming. It was the first known flight by a nuclear-armed bomber over U.S. airspace, without special high-level authorization, in nearly 40 years.

The episode, serious enough to trigger a rare "Bent Spear" nuclear incident report that raced through the chain of command to [Defense Secretary Robert M. Gates](#) and [President Bush](#), provoked new questions inside and outside [the Pentagon](#) about the adequacy of U.S. nuclear weapons safeguards while the military's attention and resources are devoted to wars in [Iraq](#) and [Afghanistan](#).

Three weeks after word of the incident leaked to the public, new details obtained by [The Washington Post](#) point to security failures at multiple levels in North Dakota and Louisiana, according to interviews with current and former U.S. officials briefed on the initial results of an Air Force investigation of the incident.

The warheads were attached to the plane in [Minot](#) without special guard for more than 15 hours, and they remained on the plane in Louisiana for nearly nine hours more before being discovered. In total, the warheads slipped from the Air Force's nuclear safety net for more than a day without anyone's knowledge.

"I have been in the nuclear business since 1966 and am not aware of any incident more disturbing," retired Air Force Gen. Eugene Habiger, who served as U.S. Strategic Command chief from 1996 to 1998, said in an interview.

A simple error in a missile storage room led to missteps at every turn, as ground crews failed to notice the warheads, and as security teams and flight crew members failed to provide adequate oversight and check the cargo thoroughly. An elaborate nuclear

safeguard system, nurtured during the Cold War and infused with rigorous accounting and command procedures, was utterly debased, the investigation's early results show.

The incident came on the heels of multiple warnings -- some of which went to the highest levels of the Bush administration, including the [National Security Council](#) -- of security problems at Air Force installations where nuclear weapons are kept. The risks are not that warheads might be accidentally detonated, but that sloppy procedures could leave room for theft or damage to a warhead, disseminating its toxic nuclear materials.

A former National Security Council staff member with detailed knowledge described the event as something that people in the [White House](#) "have been assured never could happen." What occurred on Aug. 29-30, the former official said, was "a breakdown at a number of levels involving flight crew, munitions, storage and tracking procedures -- faults that never were to line up on a single day."

Missteps in the Bunker

The air base where the incident took place is one of the most remote and, for much of the year, coldest military posts in the continental United States. Veterans of Minot typically describe their assignments by counting the winters passed in the flat, treeless region where January temperatures sometimes reach 30 below zero. In airman-speak, a three-year assignment becomes "three winters" at Minot.

The daily routine for many of Minot's crews is a cycle of scheduled maintenance for the base's 35 aging B-52H Stratofortress bombers -- mammoth, eight-engine workhorses, the newest of which left the assembly line more than 45 years ago. Workers also tend to 150 intercontinental ballistic missiles kept at the ready in silos scattered across neighboring cornfields, as well as hundreds of smaller nuclear bombs, warheads and vehicles stored in sod-covered bunkers called igloos.

"We had a continuous workload in maintaining" warheads, said Scott Vest, a former Air Force captain who spent time in Minot's bunkers in the 1990s. "We had a stockpile of more than 400 . . . and some of them were always coming due" for service.

Among the many weapons and airframes, the AGM-129 cruise missile was well known at the base as a nuclear warhead delivery system carried by B-52s. With its unique shape and design, it is easily distinguished from the older AGM-86, which can be fitted with either a nuclear or a conventional warhead.

Last fall, after 17 years in the U.S. arsenal, the Air Force's more than 400 AGM-129s were ordered into retirement by then-Defense Secretary [Donald H. Rumsfeld](#). Minot was told to begin shipping out the unarmed missiles in small groups to [Barksdale Air Force Base](#) near [Shreveport](#), La., for storage. By Aug. 29, its crews had already sent more than 200 missiles to Barksdale and knew the drill by heart.

The Air Force's account of what happened that day and the next was provided by multiple sources who spoke on the condition of anonymity because the government's investigation is continuing and classified.

At 9:12 a.m. local time on Aug. 29, according to the account, ground crews in two trucks entered a gated compound at Minot known as the Weapons Storage Area and drove to an igloo where the cruise missiles were stored. The 21-foot missiles were already mounted on pylons, six apiece in clusters of three, for quick mounting to the wings of a B-52.

The AGM-129 is designed to carry silver W-80-1 nuclear warheads, which have a variable yield of between 5 and 150 kilotons. (A kiloton is equal to the explosive force of 1,000 tons of TNT.) The warheads were meant to have been removed from the missiles before shipment. In their place, crews were supposed to insert metal dummies of the same size and weight, but a different color, so the missiles could still be properly attached under the bomber's wings.

A munitions custodian officer is supposed to keep track of the nuclear warheads. In the case of cruise missiles, a stamp-size window on the missile's frame allows workers to peer inside to check whether the warheads within are silver. In many cases, a red ribbon or marker attached to the missile serves as an additional warning. Finally, before the missiles are moved, two-man teams are supposed to look at check sheets, bar codes and serial numbers denoting whether the missiles are armed.

Why the warheads were not noticed in this case is not publicly known. But once the missiles were certified as unarmed, a requirement for unique security precautions when nuclear warheads are moved -- such as the presence of specially armed security police, the approval of a senior base commander and a special tracking system -- evaporated.

The trucks hauled the missile pylons from the bunker into the bustle of normal air base traffic, onto Bomber Boulevard and M Street, before turning onto a tarmac apron where the missiles were loaded onto the B-52. The loading took eight hours because of unusual trouble attaching the pylon on the right side of the plane -- the one with the dummy warheads.

By 5:12 p.m., the B-52 was fully loaded. The plane then sat on the tarmac overnight without special guards, protected for 15 hours by only the base's exterior chain-link fence and roving security patrols.

Air Force rules required members of the jet's flight crew to examine all of the missiles and warheads before the plane took off. But in this instance, just one person examined only the six unarmed missiles and inexplicably skipped the armed missiles on the left, according to officials familiar with the probe.

"If they're not expecting a live warhead it may be a very casual thing -- there's no need to set up the security system and play the whole nuclear game," said Vest, the former Minot airman. "As for the air crew, they're bus drivers at this point, as far as they know."

The plane, which had flown to Minot for the mission and was not certified to carry nuclear weapons, departed the next morning for Louisiana. When the bomber landed at Barksdale at 11:23 a.m., the air crew signed out and left for lunch, according to the probe.

It would be another nine hours -- until 8:30 p.m. -- before a Barksdale ground crew turned up at the parked aircraft to begin removing the missiles. At 8:45, 15 minutes into the task, a separate missile transport crew arrived in trucks. One of these airmen noticed something unusual about the missiles. Within an hour, a skeptical supervisor had examined them and ordered them secured.

By then it was 10 p.m., more than 36 hours after the warheads left their secure bunker in Minot.

Once the errant warheads were discovered, Air Force officers in Louisiana were alarmed enough to immediately notify the National Military Command Center, a highly secure area of the Pentagon that serves as the nerve center for U.S. nuclear war planning. Such "Bent Spear" events are ranked second in seriousness only to "Broken Arrow" incidents, which involve the loss, destruction or accidental detonation of a nuclear weapon.

The Air Force decided at first to keep the mishap under wraps, in part because of policies that prohibit the confirmation of any details about the storage or movement of nuclear weapons. No public acknowledgment was made until service members leaked the story to the Military Times, which published a brief account Sept. 5.

Officials familiar with the Bent Spear report say Air Force officials apparently did not anticipate that the episode would cause public concern. One passage in the report contains these four words:

"No press interest anticipated."

'What the Hell Happened Here?'

The news, when it did leak, provoked a reaction within the defense and national security communities that bordered on disbelief: How could so many safeguards, drilled into generations of nuclear weapons officers and crews, break down at once?

Military officers, nuclear weapons analysts and lawmakers have expressed concern that it was not just a fluke, but a symptom of deeper problems in the handling of nuclear weapons now that Cold War anxieties have abated.

"It is more significant than people first realized, and the more you look at it, the stranger it is," said Joseph Cirincione, director for nuclear policy at the [Center for American Progress](#) think tank and the author of a history of nuclear weapons. "These weapons -- the equivalent of 60 Hiroshimas -- were out of authorized command and control for more than a day."

The Air Force has sought to offer assurances that its security system is working. Within days, the service relieved one Minot officer of his command and disciplined several airmen, while assigning a major general to head an investigation that has already been extended for extra weeks. At the same time, [Defense Department](#) officials have announced that a Pentagon-appointed scientific advisory board will study the mishap as part of a larger review of procedures for handling nuclear weapons.

"Clearly this incident was unacceptable on many levels," said an Air Force spokesman, Lt. Col. Edward Thomas. "Our response has been swift and focused -- and it has really just begun. We will spend many months at the air staff and at our commands and bases ensuring that the root causes are addressed."

While Air Force officials see the Minot event as serious, they also note that it was harmless, since the six nuclear warheads never left the military's control. Even if the bomber had crashed, or if someone had stolen the warheads, fail-safe devices would have prevented a nuclear detonation.

But independent experts warn that whenever nuclear weapons are not properly safeguarded, their fissile materials are at risk of theft and diversion. Moreover, if the plane had crashed and the warheads' casings cracked, these highly toxic materials could have been widely dispersed.

"When what were multiple layers of tight nuclear weapon control internal procedures break down, some bad guy may eventually come along and take advantage of them," said a former senior administration official who had responsibility for nuclear security.

Some Air Force veterans say the base's officers made an egregious mistake in allowing nuclear-warhead-equipped missiles and unarmed missiles to be stored in the same bunker, a practice that a spokesman last week confirmed is routine. Charles Curtis, a former deputy energy secretary in the Clinton administration, said, "We always relied on segregation of nuclear weapons from conventional ones."

Former nuclear weapons officials have noted that the weapons transfer at the heart of the incident coincides with deep cuts in deployed nuclear forces that will bring the total number of warheads to as few as 1,700 by the year 2012 -- a reduction of more than 50 percent from 2001 levels. But the downsizing has created new accounting and logistical challenges, since U.S. policy is to keep thousands more warheads in storage, some as a strategic reserve and others awaiting dismantling.

A secret 1998 history of the Air Combat Command warned of "diminished attention for even 'the minimum standards' of nuclear weapons' maintenance, support and security" once such arms became less vital, according to a declassified copy obtained by Hans Kristensen, director of the Federation of American Scientists' nuclear information project.

The Air Force's inspector general in 2003 found that half of the "nuclear surety" inspections conducted that year resulted in failing grades -- the worst performance since

inspections of weapons-handling began. Minot's 5th Bomb Wing was among the units that failed, and the Louisiana-based 2nd Bomb Wing at Barksdale garnered an unsatisfactory rating in 2005.

Both units passed subsequent nuclear inspections, and Minot was given high marks in a 2006 inspection. The 2003 report on the 5th Bomb Wing attributed its poor performance to the demands of supporting combat operations in Iraq and Afghanistan. Wartime stresses had "resulted in a lack of time to focus and practice nuclear operations," the report stated.

Last year, the Air Force eliminated a separate nuclear-operations directorate known informally as the N Staff, which closely tracked the maintenance and security of nuclear weapons in the United States and other [NATO](#) countries. Currently, nuclear and space operations are combined in a single directorate. Air Force officials say the change was part of a service-wide reorganization and did not reflect diminished importance of nuclear operations.

"Where nuclear weapons have receded into the background is at the senior policy level, where there are other things people have to worry about," said Linton F. Brooks, who resigned in January as director of the National Nuclear Security Administration. Brooks, who oversaw billions of dollars in U.S. spending to help [Russia](#) secure its nuclear stockpile, said the mishandling of U.S. warheads indicates that "something went seriously wrong."

A similar refrain has been voiced hundreds of times in blogs and chat rooms popular with former and current military members. On a Web site run by the Military Times, a former B-52 crew chief who did not give his name wrote: "What the hell happened here?"

A former Air Force senior master sergeant wrote separately that "mistakes were made at the lowest level of supervision and this snowballed into the one of the biggest mistakes in USAF history. I am still scratching my head wondering how this could [have] happened."