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Removing the B-52's Nuclear Mission

by

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Disclaimer

Contents

Abstract

Today's military faces more budget cuts and nuclear arms reductions, forcing tough decisions on what capabilities to maintain. Removing the Air Launched Cruise Missile and the B-52 from the nuclear arsenal provides the Air Force an opportunity to divert valuable dollars to newer programs without any major losses in capabilities. The Air Force would be able to spend that money on new systems while the B-52 would be able to focus on a singular mission. This paper looks at why now is the right time to remove this aging weapons system.

Introduction

Originally developed as a nuclear bomber, the B-52 has outlived the conflict it was designed to fight. With the end of the Cold War, the Air Force shifted the primary focus of its oldest bomber to a conventional mission. The 2007 accidental transport of six nuclear cruise missiles changed that focus once again.[1] Many Strategic Air Command (SAC) veterans have voiced their harsh criticism of the Air Force's handling of its nuclear weapons and the B-52's nuclear role. Two years later and after numerous studies, the Air Force has refocused its attention on the nuclear mission. The creation of Air Force Global Strike Command (AFGSC) has consolidated all of the Air Force's strategic nuclear weapons under one command. Yet even after the creation of this command, some studies have called for completely removing the B-52 from the nuclear mission for several reasons.[2] Expected defense cuts and the expensive nuclear weapons program are headed for a showdown and the potential victim is the aging Air Launched Cruise Missile (ALCM). Eliminating the ALCM would remove the need for the B-52 to maintain a nuclear mission. The numerous benefits and minimal drawbacks, without sacrificing deterrence, make removing the B-52 and the ALCM from the nuclear arsenal a logical solution to a myriad of issues.

The B-52 and the Nuclear Pendulum

Before one can discuss the nuclear role of the B-52 today, it is important to review the relationship that the B-52 and the nuclear mission have had since the 1950s. The B-52 was developed during the early days of the Cold War to serve as the primary nuclear bomber in the US nuclear fleet. Through the decades, the B-52 has seen its mission focus shift between the nuclear and conventional roles. Conflict has generally driven the focus of the B-52. As one conflict would replace another and the focus of the B-52 force would shift to the mission at hand,

creating deficiencies in performance and tactical procedures. These deficiencies have surfaced throughout the B-52's lifespan and draw attention to the difficulties of maintaining a truly dual mission bomber.

The B-52 was designed to be able to deliver a nuclear strike in the Soviet Union with the assistance of air-to-air refueling. In its early years, the nuclear mission was king. SAC controlled the nuclear bombers and ensured that their focus was the nuclear mission.[3] SAC's inspections were extremely unforgiving. They still resonate with the crewmembers of today, who never served in SAC, but understand the consequences of not passing a SAC inspection. The B-52s flew countless hours of nuclear airborne alert with full nuclear payloads and later sat on ground alert ready to launch in a moment's notice. Tension was high and so was the B-52 crewmembers' understanding of the nuclear mission, the only mission they had.

Vietnam was the first use of B-52's in combat. The nuclear bomber's ability to deliver large amounts of conventional bombs ensured its use in the conflict. For a force trained in the nuclear mission, close air support and interdiction were unfamiliar missions. Many SAC crews had no conventional experience and arrived in theater with only a limited amount of conventional training.[4] The tactics used in nuclear combat were rigid and ill suited for conventional combat. Even the aircraft had difficulty adjusting to the new weapons and the new bomb racks.[5] Despite all of this, the SAC crews performed admirably and played a key role in bringing the conflict to a close.

After Vietnam, the B-52 returned to its nuclear mission and the rigid structure that it demanded. The high number of Nuclear Operational Inspections failures, by B-52 units recently returning from Vietnam, demonstrated that the nuclear mission had suffered during the war.[6] The B-52 continued to focus on the nuclear role until removed from alert in 1991.[7] With alert

gone, the last generation of B-52 crewmembers focused solely on nuclear operations, were slowly transforming to a more conventional mission. Around the same time, the B-52s conducted conventional missions again during Operation DESERT STORM. The conventional success of the B-52 in DESERT STORM continued through the 1990s with ALLIED FORCE and into the next decade with ENDURING FREEDOM and IRAQI FREEDOM. The conventional mission became the dominate mission of the B-52. B-52 crewmembers' focus shifted dramatically during the early 2000s. New crewmembers arrived at their operational squadrons and within weeks or months, often before becoming nuclear mission qualified, deployed to support conventional combat operations. The nuclear mission was on the back burner.

A review of the training regiment for new B-52 crewmembers serves as the best example of how the nuclear pendulum has swung back and forth. In the early 1990s, the end of the Cold War, the initial qualification syllabus required the majority of training to be nuclear sorties with only a few conventional sorties. By 1997, the syllabus consisted of almost all conventional sorties and a single nuclear sortie and simulator session. At the same time, the syllabus was changing, the last generation of crewmembers who sat nuclear alert where either retiring or were too senior and no longer present at the squadron levels. The newer generations are trained by crewmembers whose nuclear experience was a fraction of their predecessors. In a short period, the majority of the nuclear experience simply disappeared from the crew force. It is no surprise that the accidental movement of nuclear weapons in 2007 occurred as the nuclear experience left the squadrons.

Since 2007, there has been a resurgence in the nuclear role of the B-52 program. Increased nuclear training, as well as a new nuclear major command and an additional squadron,

have help, crews divide their time more evenly between conventional and nuclear training. Today the nuclear syllabus for navigators is three nuclear sorties and two simulator sessions, with the rest of the sorties focusing on the conventional mission.[8] As the pendulum swings back towards the nuclear mission the question that remains is whether the conventional mission will begin to suffer much like the nuclear mission suffered, or will the B-52 finally be able to properly fulfill its dual mission. If history is any guide, one mission will continue to suffer at the expense of the other.

The Benefits

What are the benefits for removing the B-52? The Mitchell Pape found that there are a large number of financial benefits to removing the B-52 and the ACLM from the nuclear arsenal.[9] Both are aging platforms and the ALCM reaches its expected lifespan in 2020.[10] The amount of money saved by retiring the ALCM early is significant when you look at the possibility of shrinking defense budgets and the need to develop a follow on system. The money spent on the B-52 nuclear equipment and its nuclear weapons could help fund a new bomber or future cruise missile.[11] Budget gains aside, there are many other reasons why the removal of the nuclear mission would benefit the Air Force and the B-52.

There would be a major reduction of taskings on the B-52, making the aircraft and crews better prepared and more available for today's fight. Currently, the nuclear mission demands that everyone involved with it maintain a high level of training. A third of the training missions that a B-52 crewmember must fly are dedicated to nuclear training.[12] While a third sounds like a reasonable number, when you consider the amount of conventional mission sets that a crewmember must train to, they quickly run out of valuable training time. If that mission was removed, the training time could be devoted to improving B-52's conventional capabilities and

make it more effective for current operations. As an example, the average radar navigator takes around eight sorties to become qualified in the use of the advanced targeting pod. Take into account that same crewmember is only required to fly four sorties a month and you can quickly see how the different training programs compete for training time.

The creation of a fourth active duty squadron and the increased use of the B-52 reserve squadron to run the formal training unit has helped to alleviate some of the high operations tempo that the B-52 community has faced since 2001. However, the increase in emphasis on the nuclear mission still requires a high operations tempo. The past tempo has a squadron deploy, then return and dive directly back into a heavy nuclear training mission, with convention training deemphasized until the squadron is proficient at nuclear operations again. The result is training cycles that force more emphasis on one set of skills while the other skills suffer. The removal of the nuclear role would eliminate two to three major exercises a year. There would also be an increase in available training time both on the ground and in the air. These factors would allow the B-52 to focus on one mission set and play a larger role for the Air Force in today's fight.

The Mitchell Paper additionally argued that the ACLM is nearing the end of its lifespan, and without major changes, the ALCM will cease to be mission capable in 2020.[13] This leaves the choice of pouring money into an aging system while diverting money from future systems. While it might be easy to keep funding the ALCM, major modifications also draw into question the reliability and deterrence value of aging, untested warheads. "Weapons designers still worry that an accumulation of small changes could eventually reduce confidence in the safety and performance of weapons that are not tested."[14] The "new START Treaty" will also force the US military to look for weapons to cut. The proposed treaty will reduce number of nuclear warheads

by 30%.[15] The aging ALCM seems to be a perfect candidate to fill the majority of these reductions while saving dollars on expensive life extension programs.

The Drawbacks

Assessing the benefits of removing the nuclear mission from the B-52 is simple. The Air Force has numerous units that face the burden of high operations tempo along with stringent training requirements and alleviating that seems intuitive. The B-52 community would most likely benefit greatly from removing the nuclear mission, but this action would have repercussions beyond today's bomber force. The concerns over future bomber capabilities, the limited amount of B-2s, and the loss of a nuclear cruise missile capability are all key areas that need to be addressed.

The next long-range strike platform is being discussed today. Although there are many questions regarding what missions it will perform, an assumption is that it will continue to operate within the nuclear arena.[16] By removing B-52 from the nuclear arsenal, there would be a dramatic reduction in the amount of nuclear expertise in the Air Force. The skills and mentality required to succeed in the nuclear mission would all but disappear from the bomber ranks. With the new platform at least a decade out from being fielded, the small B-2 force would be left with the responsibility of transferring the nuclear mission knowledge. This is no small task. Take for example the F-22. Despite the political controversies the plane itself has rolled into its mission with little problem. The reason behind this is the crew force originates primarily from the F-15 and their skill sets are current and transferable to the F-22. The removal of the B-52 would reduce the nuclear capable bomber force by almost 75%, leaving far less expertise to train the next generation.

The limited number of B-2 airframes also calls into question whether the nuclear mission maintainable by such a small amount of aircraft. With only 20 aircraft in service and the production line shut down, the B-2 has a valuable, but limited role in the Air Force. Take into consideration that the crash of a single B-2 on Guam reduced the B-2 force by 5% and you can quickly see how limited the B-2 really is. With routine maintenance schedules, dedicated test platforms, and deployments, the amount B-2s available is extremely limited.

Eliminating the ALCM from the inventory would remove a key component of United States' nuclear arsenal. ICBMs, SLBMs, and gravity bombs play an important role in the nuclear force, but none can replicate the capabilities that an ALCM gives to the United States. Bombers can fly to their launch boxes in a matter of hours. The ALCM does not present the same flight pattern as an ICBM, therefore reducing fears of other nations concerning the location of the missile's target. The ALCM represents the only standoff nuclear weapon employable by the bomber force.

Deterrence and Safety

Benefits and drawbacks aside, the most important question is what is truly necessary for the United States to maintain its nuclear deterrence. Currently every nuclear power is modernizing its nuclear weapons programs, save one, the United States.[17] The elimination of a key part of the nuclear arsenal could send the wrong message to the other nuclear powers of the world, however keeping an aging fleet barely alive also sends a message. Is the threat great enough today that we must maintain such a high level of nuclear readiness and diverse platforms? Most likely, the current international situation would allow the elimination of the ALCM. Many countries, such as China, rely on minimal deterrence, only producing the minimum number of warheads needed for deterrence, even though they have the capability to

produce more.[18] The elimination of the ALCM would still leave the United States with a large advantage in numbers of nuclear weapons over every country, with the exception of Russia. Could the US deterrence survive without the ALCM and the B-52 in the nuclear arsenal? There is little evidence to suggest that eliminating ALCM would have any real effect on US deterrence. Increased threat environments, meaning decreased survivability, and the advancing age of the missile are strong detractors from any argument for effective deterrence of the ALCM in the future.

Scott Sagan might argue that the United States would be safer by eliminating the B-52 from the nuclear arsenal. He believes that the organizational complex that supports nuclear weapons makes us more vulnerable to a mistake that could start a nuclear war. The events of 2007, although they had few international effects, further the point that "the experience of persistent safety problems in the US nuclear arsenal should serve as a warning."[19] Organizations are big and they make mistakes. The lack of focus on nuclear weapons, by the dual mission B-52 has created an environment where mistakes will happen and those mistakes could lead to a nuclear accident or conflict. If accidents occured during the days of SAC when the B-52 had a singular focus, it only makes sense that they would continue as the nuclear mission shares time with the conventional mission. Part of solution offered by Sagan was to "change the structure of the organization that controls the technology,"[20] removing the B-52 from the nuclear arsenal, would reduce the nuclear infrastructure and likely improve safety.

Conclusion

The B-52 has served as a nuclear and conventional bomber since it first entered into the Air Force. However, a close examination of its history shows that maintaining proficiency in both missions has proven extremely difficult. The focus switched from the nuclear mission to

the conventional mission after the Cold War. Nuclear expertise in the B-52 has been on the decline ever since. Today's crews are no less trained than the crews of SAC were, but they face a wider variety of weapons to gain proficiency in, therefore the nuclear mission has suffered. Since 2007, the Air Force has refocused the B-52 on the nuclear mission, but the conventional mission demands remain. AFGSC will help guide the focus of the B-52, but it is doubtful that crews will ever be up to the rigid standards once required by SAC. That leaves the Air Force with a choice, accept lesser-trained crews, or eliminate the ALCM and the B-52 from the nuclear mission. The aging ALCM and the pending nuclear arms reductions provide the perfect avenue for the Air Force to grace fully relieve the B-52 of the nuclear mission. The removal of the ALCM and the B-52 from the nuclear mission will allow the B-52 to increase proficiency in the conventional mission, while Air Force's focus can turn to the next long-range strike platform rather than continuing to look to the past.

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