

# AIR WAR COLLEGE

## RESEARCH REPORT

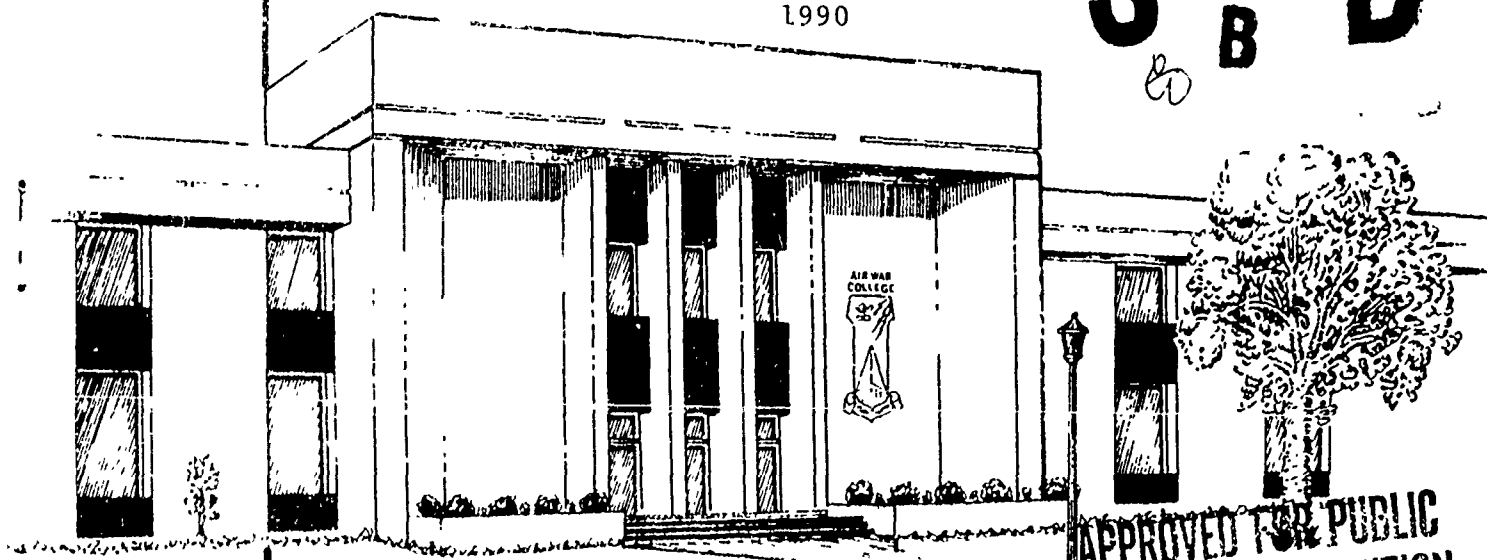
AD-A229 938

THE STRATEGIC BOMBER AND LOW-INTENSITY CONFLICT

LIEUTENANT COLONEL JOHN A. BREED

1990

DTIC  
ELECTE  
DEC 26 1990  
S B D  
B



AIR UNIVERSITY  
UNITED STATES AIR FORCE  
MAXWELL AIR FORCE BASE, ALABAMA

APPROVED FOR PUBLIC  
RELEASE; DISTRIBUTION  
UNLIMITED

AIR WAR COLLEGE

AIR UNIVERSITY

THE STRATEGIC BOMBER AND  
LOW-INTENSITY CONFLICT

by

John A. Breed  
Lieutenant Colonel, USAF

A DEFENSE ANALYTICAL STUDY SUBMITTED TO THE FACULTY  
IN  
FULFILLMENT OF THE CURRICULUM  
REQUIREMENT

U	1
C	2
C	3
	4
	5
	6
	7
	8
	9
	10

Advisor: Lieutenant Colonel G. Brent Smith

MAXWELL AIR FORCE BASE, ALABAMA

MAY 1990

### DISCLAIMER

This study represents the views of the author and does not necessarily reflect the official opinion of the Air War College or the Department of the Air Force. In accordance with Air Force Regulation 110-8, it is not copyrighted but is the property of the United States government.

Loan copies of this document may be obtained through the interlibrary loan desk of Air University Library, Maxwell Air Force Base, Alabama 36112-5564 (telephone [205] 293-7223 or AUTOVON 875-7223).

<b>Accession For</b>	
NTIS GRA&I	<input checked="checked" type="checkbox"/>
DTIC TAB	<input type="checkbox"/>
Unannounced	<input type="checkbox"/>
Justification	
By _____	
Distribution/	
Availability Codes	
Dist	Avail and/or Special
A-1	



## EXECUTIVE SUMMARY

TITLE: The Strategic Bomber and Low-Intensity Conflict

AUTHOR: John A. Breed, Lieutenant Colonel, USAF

→ The value of strategic (long range) bombers as a key component of the United States nuclear deterrent force has been well established. The utility of employing these same aircraft in conventional operations has been demonstrated, although less well accepted. As the probability of major conflict with the Soviet Union declines in the 1990s, the likelihood that the United States will find itself engaged in a Third World conflict is increasing. Consequently, in a period of declining defense budgets, the need to maintain a large strategic bomber force is questioned. Prior to accepting reductions in the strategic bomber force, the utility of employing the long range bomber at the lower end of the spectrum of conflict must be analyzed. This paper examines the feasibility of employing the strategic bomber in low-intensity conflict scenarios. Furthermore, it proposes that the conventional B-52G has the potential to increase the United States options, flexibility, and responsiveness to conflicts in the Third World. The B-52 is an available and cost effective interim alternative until either the B-1B or B-2 can fully assume a dedicated conventional role. Keywords: Low intensity conflict, Strategic bombing, Bomber aircraft, Theses. (RWJ)✓

### BIOGRAPHICAL SKETCH

Lieutenant Colonel John A. Breed (MS, Air Force Institute of Technology) has been involved in strategic bombing as a B-52 aircraft commander, instructor pilot, and staff officer at Headquarters Strategic Air Command. He has experience in both conventional and nuclear B-52 operations. As the B-52 Program Element Monitor, he managed various aspects of SAC's bomber modernization program and dedication of B-52Gs to conventional only operations. He is a graduate of the Armed Forces Staff College and Air Command and Staff College. Colonel Breed completed Air War College as a member of the class of 1990.

## TABLE OF CONTENTS

DISCLAIMER.....	ii
EXECUTIVE SUMMARY.....	iii
BIOGRAPHICAL SKETCH.....	iv
Chapter	
I. INTRODUCTION.....	1
The Environment.....	1
National Security Policy.....	3
Low-Intensity Conflict and Strategic Bombers...	4
Assumptions and Limitations.....	5
II. LOW-INTENSITY CONFLICT.....	7
History.....	7
A Definition for Low-Intensity Conflict.....	9
The Spectrum of Conflict.....	11
Preparation for Low-Intensity Conflict.....	14
Application for Strategic Bombers.....	15
Limits and Constraints.....	18
III. OPPORTUNITIES FOR STRATEGIC BOMBERS.....	23
Strategic Bomber Alternative.....	23
Challenges.....	26
B-52G Window of Opportunity.....	32
Myths Concerning the B-52.....	36
Responsiveness.....	38
Upgraded Capabilities.....	40
Employment.....	44
Implementation.....	47
IV. RECOMMENDATIONS AND CONCLUSIONS.....	52
Realities of Today.....	52
Recommendations and Proposals.....	55
Conclusion.....	57
APPENDIX A: LIC Risk and Probability.....	59
APPENDIX B: Strategic Bomber Cost Factors.....	61
LIST OF REFERENCES.....	65

## CHAPTER I

### INTRODUCTION

While there are remarkable developments on the international scene, U.S.-Soviet rapprochement and negotiated settlements in the Persian Gulf, southern Africa, Cambodia and elsewhere will not resolve serious, long-term problems in the Third World. Narcotrafficking, insurgency, terrorism and debt will persist and will have a direct impact on U.S. interests. Of necessity, they will require a sustained, effective U.S. response. (1:1)

#### The Environment

As we enter the last decade of the twentieth century the United States is facing a dynamic world. The Soviet Union will no longer be the dominant threat. Defense Secretary Dick Cheney summarizes the potential for a conflict between the two superpowers as, "at its lowest point since World War II." (2:1) Conversely, the threat in the Third World is increasing. January 1989, Senators Nunn, Warner, Kennedy, and Cohen, members of the Senate Armed Services Committee, jointly voiced their concerns to Lieutenant General Brent Scowcroft, Assistant to the President for National Security Affairs, that the United States is ill prepared for low-intensity conflict in the Third World, "...the prime challenge we will face, at least through the remainder of the century." (3:66)

Lack of preparedness for low-intensity conflict in the 1990s will continue. Because military forces are developed to counter the primary threat, the United States finds itself

currently with forces well prepared to fight a major conventional conflict against the Soviet Union in central Europe. Consequently, it is imperative that the United States take action to prepare its forces to engage in Third World conflicts. As we enter the 1990's we are best prepared to fight the wrong war. (4:5) If Secretary Cheney and Senator Nunn's predictions are correct, we must take actions now to ensure that U.S. forces are ready to fight in the Third World, which Sam Sarkesian calls the "New Battlefield." (5:1)

As we embark on an era of a declining Soviet threat, we will face inevitable reductions in defense spending. Military spending has declined 15 percent, after inflation, since 1985 and this downward trend will be amplified by Gramm-Rudman, Congress's "across-the-board" budget cut designed to reduce the federal deficit. The affect of Gramm-Rudman and the perceived reduction of the threat posed by Mikhail Gorbachev's new policies has forced Defense Secretary Cheney to plan for a reduction in defense spending of \$180 billion over the next five years. (6:23) Reductions of this magnitude will certainly impact the United States' capability to prepare for and conduct low-intensity conflict operations in the Third World.

If history is a good predictor of future defense spending trends, only a small portion of the defense budget will be allocated to prepare for low-intensity conflict. In spite of a two trillion dollar appropriation for defense during the Reagan administration, our ability to respond to low-intensity conflict



improved only marginally since 1981. (7:23) The vast majority of the United States defense resources are allocated to prepare for major wars, either nuclear or conventional. But, as the threat shifts towards the Third World, we face an increased potential that America will face crises for which it is least prepared. Preparedness for major war does not constitute preparedness for small wars or low-intensity conflicts. (1:2)

### National Security Policy

Lack of preparedness for low-intensity conflict is linked to our national security policy which traditionally has placed minimal emphasis on the need to prepare for limited conflicts in the Third World. The military must prepare to defend national security objectives and interests that further the fundamental goals and values of the nation. Furthermore, vital interests are those that a nation is willing to go to war to protect. The issues that may draw the United States into a conflict in the Third World will most likely not involve our vital interest. Although, United States involvement can be justified to assist friends or allies and to protect important but non-vital interests. (8:7)

Since America's experience in Vietnam, the nation has been less willing to become embroiled in small Third World wars. The Nixon Doctrine, which required individual nations to actively participate in their own defense, may not have reduced the chances for United States involvement. Treaties and informal

agreements still commit the United States to the defense of various nations. (9:154) Third World issues can affect United States national security interests, including: overseas military basing rights; transit rights; access to raw materials and minerals; and insurgencies that threaten democracies. President Reagan provided guidelines for involvement in low-intensity conflicts: The United States response, "must be realistic, often discreet, and founded on a clear relationship between the conflict's outcome and important U.S. national security interests." (10:34)

#### Low-Intensity Conflict and Strategic Bombers

The environment of a declining threat and a corresponding reduction in defense spending will most likely dictate that the United States will engage in Third World conflicts with few forces specifically designed and trained for low-intensity conflict. The United States will be forced to employ forces designed primarily to fight major conventional wars. Consequently, it is advantageous to capitalize on those existing systems that can prove most efficient and effective for low-intensity conflict.

This paper will examine the value of employing strategic bombers in low-intensity conflicts. The value of strategic (long-range) bombers, as a key component of the United States nuclear deterrent force has been well established. Additionally, the utility of employing these same aircraft in

conventional operations has been demonstrated, although less well accepted. Facing the reality of declining defense budgets, the need to maintain a large strategic bomber force is questioned. Furthermore, as the perceived probability of conflict in central Europe declines, the probability that the United States will find itself engaged in conventional conflict in other regions of the world is increasing. Prior to accepting reductions in the strategic bomber force structure, the utility of employing the long-range bomber at the lower end of the conflict spectrum must be carefully analyzed. Specifically, can the strategic bomber be effectively employed in low-intensity conflicts?

#### Assumptions and Limitations

Within the scope of this study, the utility of strategic bombers will be discussed on a conceptual basis. A specific plan or roadmap for the development and employment of strategic bombers will not be developed. Additionally, in an unclassified study, precise technical capabilities and force structure specifics can not be reviewed. Notwithstanding, the overall goal of the paper is to examine the feasibility of employing strategic bombers as an effective and economical resource supporting United States national security interests.

In the following chapters, the potential application of strategic bombers to support United States national security interests in the Third World is examined. Chapter II will

review low-intensity conflict, including the United States' preparation for and constraints on involvement. Low-intensity conflict will be examined for those characteristics favorable for strategic bomber employment. Building on the basics of Chapter II, Chapter III will examine specific alternatives for application of strategic bombers in low-intensity conflicts. Lastly, this study will conclude with Chapter IV which provides recommendations for the future.

## CHAPTER II

### LOW-INTENSITY CONFLICT

.... Low-intensity conflict (LIC) has remained and is likely to be the most prevalent threat to our security and to the peace that is so essential to our world. Because of this threat environment, the United States has been called upon to use its force to protect its interests.... Force has never been our first recourse, nor has it been a measure we have ever resorted to happily. But in a world where others are only too willing to use force against us, our friends and allies, sometimes it is all that is left to us in dealing with people who understand or respect nothing else. (11:3)

#### History

The threat environment facing the United States is both delicate and dynamic. The predominant threat facing the United States is no longer Soviet troop concentrations in central Europe, rather it is the Third World. The nature of conventional conflict is shifting from armies meeting on a common battle field to hostage crises, peacekeeping operations, rescue missions, and counterinsurgency efforts. (4:3-4) The Third World has most often been the focus of these lower order conflicts. Since World War II, with only the exception of the Soviet invasion of Hungary in 1956, there has been no war directly among the forty four wealthiest (first and second world) nations. Whereas, during the same period, there has been many wars almost entirely within the Third World. (12:4) For the United States, low-intensity conflict in the Third World has

been the primary type of conflict in which the United States has been engaged. (13:12)

Low-intensity conflict is a euphemism that grew out of the Vietnam war. This term replaced the traditional terminology of revolutionary war and reflects America's efforts to forget its disastrous experience in Southeast Asia. (14:164) Additionally, this terminology reflects a superpower's perspective and does not accurately reflect warfare in which thousands die and many others are physically or psychologically maimed, and the fate of nations hang in the balance. The intensity of any conflict depends upon one's perspective. For those involved, the conflict is definitely not a low-intensity conflict. (15:4)

Low-intensity conflict presents the United States with a dilemma in that waging war in the Third World is contrary and distinct from the American perception of war. American political-military policies and doctrine are not designed for conventional conflict of a lesser order. Traditionally, the United States has prepared to wage war in the Clausewitzian manner, requiring combat between armies and the destruction of the enemy's military might. (5:105) Furthermore, the American concept of war is a technological and managerial conflict, involving masses of troops, sophisticated weapons, and electronics. (16:14) In fact, until recently low-intensity conflict in the Third World was not a major concern.

After Vietnam, America shied away from police-type actions. Senator Edward Kennedy summed up American opinion stating, "we

must throw off the cumbersome mantle of world policeman." But as the memory of Vietnam aged, America once again became involved in Third World conflicts including Lebanon, Grenada, and Libya. (17:95) America's successful deterrent policy forced the Soviets, their allies and surrogates in the Third World to focus their attention on conflicts below the level of conventional war. For them, low-intensity conflict is attractive because of its low cost, worldwide media attention, and the retaliation problems it causes for the United States. (18:2) Although the conflicts the United States faces in the Third World are less demanding than a direct American-Soviet confrontation, they may affect access to critical regions, American credibility among allies and friends, and American self-confidence. (17:96) The growing importance of Third World conflicts has increased the need for a simple and concise definition of low-intensity conflict.

#### A Definition for Low-Intensity Conflict

There have been a multitude of terms developed to reflect conflicts of an order less than full scale conventional warfare. The term "low-intensity conflict" has been in vogue since the mid-eighties and categorizes nonnuclear conflicts of a lesser order. (16:12) More recently, it has been used to define wars waged against Third World opponents. (9:153) The development of a clear and concise definition of low-intensity conflict has been elusive and has handicapped the development of policies,

doctrine, strategies, and forces to counter this growing threat. The primary hindrance has been the ability to determine the bounds of low-intensity conflict. Consequently, there has been no consensus on the types of conflict that should be included in a definition of low-intensity conflict. (14:163)

Over time, the term "low-intensity conflict" has increased in scope to include more and more elements or activities. In its broadest scope, low-intensity conflict spans the spectrum of conflict from relative peace to conventional war, including: terrorism and counterterrorism; guerrilla warfare and counterinsurgency; pro-insurgency; anti-drug operations; border conflicts and skirmishes; naval show-of-force operations; and other contingency operations. Some would argue that the concept of low-intensity conflict has stretched to the point that it now includes almost any short-term military activity that the President might seek to undertake. (17:95)

Efforts to solidify a definition for low-intensity conflict progressed as greater attention was focused on the need for a organized strategy for America's response to low-intensity conflict. By 1987, President Reagan signed the National Security Strategy for the United States which included the following low-intensity conflict definition, adopted by the Joint Chiefs of Staff:

Political-military confrontation between contending states or groups below conventional war and above the routine, peaceful competition among states. It frequently involves protracted struggles of competing principles and ideologies. Low intensity conflict ranges



from subversion to the use of armed force. It is waged by a combination of means employing political, economic, informational, and military instruments. Low intensity conflicts are often localized, generally in the third world, but contain regional and global security implications. (19:23)

To avoid confusion this definition will be used for this paper.

### The Spectrum of Conflict

It is important to examine the scope or range of conflicts that are included in this definition. It is convenient to examine low-intensity conflict within the context of the classical "Spectrum of Conflict." The classical spectrum ranges from peaceful competition to strategic nuclear war. By definition, low-intensity conflict ranges from peaceful competition among states to hostile confrontation below mid-level conventional war. The following figure depicts the spectrum of conflict, subdivided into nine subsets of which low-intensity conflict includes five subsets. (16:77) As one moves up the spectrum of conflict the intensity of the conflict increases; the probability of engaging in conflict decreases; and the risks associated with each type of conflict increase (see Appendix A).

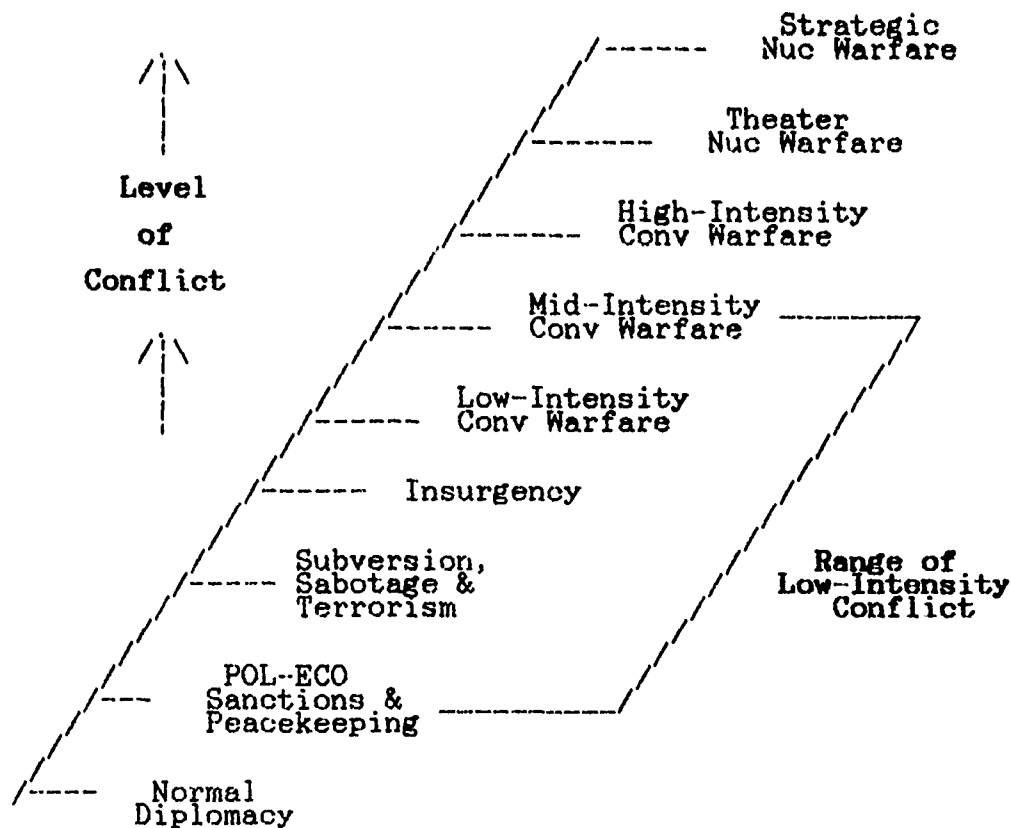


Figure 1: Spectrum of Conflict (16:77)

Whereas the lower bound of low-intensity conflict lies just above normal peaceful relationships and diplomacy, the upper bound is less clearly defined. It is generally accepted that the upper bound is located within the range of mid-intensity conventional warfare. The exact point at which low-intensity conflict graduates to a higher order (mid- or high-intensity) conventional conflict is not clear. The transition point is situational dependent. A convenient reference or break point

would be when the United States commits division-sized ground force units and wing-sized air force units to the conflict.

(8:2)

Low-intensity conflict is complex. It involves the integration of social-economic, political, and military elements to support United States national security objectives.

Social-economic and political actions are the predominant actors in low-intensity conflict. At the lower bounds of low-intensity conflict, military involvement may be nonexistent or limited to supporting functions of advice and training. As the conflict expands, the role of the military increases. At the upper bounds of low-intensity conflict, the military, social-economic, and political elements play equally important roles. (20:40)

From the broader perspective, success in low-intensity conflict is achieved when the national security objectives of the United States are achieved or protected. What differentiates low-intensity conflict from mid or high intensity conventional war is what is required to be successful. Mid and high-intensity wars are won on the battlefield by military strength. Whereas, low-intensity conflict is won, not by military power alone, but by an integrated social-economic, political, and military effort. (21:1) Unfavorable outcomes of low-intensity conflict may also cause:

1. Loss of access to strategic energy reserves and other resources.
2. Loss of military basing, transit, and access rights.

3. Accommodation with hostile groups.
4. Long-term advantages for adversaries. (22:1-2)

When to employ combat forces in low-intensity conflict is a critical decision. Because of the distinct possibility of escalation to a higher order conflict, the direct employment of combat forces should be considered as a last resort and only when national security interests cannot be otherwise adequately protected. (21:2-3)

#### Preparation for Low-Intensity Conflict

Defined narrowly, low-intensity conflict offers limited opportunities for United States' military involvement. But on a grander scale, involving major threats to national security, low-intensity conflict offers increased opportunity for involvement of United States' military forces. (4:53)

Accordingly, the United States must be prepared, if the situation warrants, to employ military forces in low-intensity conflicts. In his Fiscal Year 1990 Annual Report to Congress, Secretary of Defense Carlucci stated that the United States must be ready to employ military strength selectively and assertively. (13:43) This military response can be divided into four general mission categories:

1. **Insurgency and Counterinsurgency:** Military operations designed to assist others in defending themselves and achieving internal security essential to the growth of democratic institutions. Security assistance is the primary method of assistance.

2. **Peacetime Contingency Operations:** Politically sensitive peacetime contingency operations of limited duration, short of conventional war, including: strikes, demonstrations and shows of force.
3. **Peacekeeping Operations:** Deployment of forces to preserve peace by participating in international peacekeeping activities. The objective is to separate belligerents to allow time for negotiations and the development of peaceful solutions.
4. **Counterterrorism:** Military operations to protect United States personnel and installations, and to create an environment that is not conducive to terrorist activities. (13:44-45)

These four categories conveniently summarize the potential American response to, or involvement in low-intensity conflicts. Although the military can play a role in each category, the potential for employment of combat forces can be limited by current capabilities and other constraints.

#### Application for Strategic Bombers

Although the total United States' capability to respond to low-intensity conflict can be summarized in four categories, applicability for employment of strategic (long-range) bombers is limited. Long range airpower is most applicable to peacetime contingencies and counterterrorism. Peacekeeping operations, by nature, are not normally offensive actions and would not benefit from the employment of strategic bombers. Insurgency and counterinsurgency operations could be candidates for strategic bomber employment, but the probability of escalation is high and political constraints would most likely prevent use of strategic bombers. Because escalation of insurgency and counterinsurgency

operations is likely, the use of wing-sized strategic bomber elements would meet the definition of mid-level intensity conventional warfare and will not be specifically addressed in this study. Integration of American combat forces of any significant quantity would be difficult without the declaration of war. Consequently, strategic bombers can best be employed in peacetime contingency and counterterrorism operations.

The United States' capability to respond effectively to low-intensity conflict is currently limited. Although efforts have been recently taken to revitalize Special Operation Forces (SOF), these forces are only a single element of a comprehensive low-intensity conflict response. An effective military response must also rely on other conventional forces. (1:2)

Unfortunately, the United States is equipped and trained to fight large conventional wars. Preparedness to fight a large conventional war does not insure readiness to operate effectively in low-intensity conflicts. In reality, the United States is prepared for the least likely scenario, conventional war in Europe, and least prepared for more likely conflicts in the Third World. (5:173) The Joint Chiefs of Staff foresee that either deterring or waging low-intensity conflict will be the most demanding job for military forces in the future. (23:41)

Long-range strategic bombers are just one element of the conventional arsenal and can influence conflicts across the full spectrum of conflict.

The unique capabilities of long-range air power can provide an increased range of options to the United States when confronting low-intensity conflict situations. First, strategic airpower provides a global response capability unimpeded by terrain. Their navigation accuracy, large payload, and all weather capability allow the strategic bomber to deliver a large amount of conventional ordnance rapidly and accurately. Secondly, strategic bombers can provide increased response flexibility by assuming an alert status to indicate a reaction to crisis situations. In general, strategic bombers can signal a level of commitment greater than naval presence but less than the deployment of ground forces. (24:3) Furthermore, the Chairman of the Joint Chiefs of Staff has identified an insufficient number of aircraft as a primary factor which currently limits the United States' SOF mission. (25:13-2) Employed selectively, the strategic bomber can partially offset these existing limitations, which will not improve significantly in the austere budget environment projected for the 1990s. Overall, strategic bombers can be extremely responsive and can establish a presence in a distant region more rapidly than any other type of military force. (24:4) The value of long-range strategic bombers is often touted as the only national asset which can effectively project conventional firepower on a global basis within 24 hours. (26:20)

### Limits and Constraints

In addition to those characteristics that enhance the long-range strategic bomber's ability to support low-intensity conflict, there are also constraints which limit its use. Most importantly, the direct employment of combat forces should be used as a last resort and only when national interests cannot otherwise be adequately protected. (21:2) Beyond this basic tenet of force employment, there are five key factors which will impact or constrain the ability of the United States to effectively participate in low-intensity conflicts.

First, employment of combat forces in low-intensity conflict will be constrained diplomatically and by international issues. United States' involvement will most likely be accomplished without a declaration of war and may be either a crisis response or a result of an existing treaty or agreement. With the exception of a counterterrorist response or a rescue operation, prior armed aggression will have taken place and United States intervention will be preceded by a formal request for assistance. (27:65) Additionally, diplomatic channels will be used to attempt to resolve critical issues prior to the commitment of combat forces. Then, if committed, statesmen will have to work to neutralize opponents, woo neutrals, and reassure friends and allies. (9:163) Military operations by a superpower in the Third World will be watched closely, criticized, and second guessed. As was demonstrated during the United States' raid on Libya, employment of airborne forces can be



operationally constrained by refusal of a nation to allow overflight of its sovereign territory. This constraint will most likely be encountered if vital international or regional concerns involving political, economical, or ideological issues are at stake. (24:4) The international arena will have many critics and the United States' response will be bounded by foreign policy and diplomatically driven rules of engagement.

Secondly, the level or degree of the United States' involvement will be constrained by public opinion and Congressional support. The American public and its representatives in Congress must be convinced that national interests are in jeopardy and that employment of combat forces is justified. The "Vietnam Syndrome" still affects public opinion, and it is questionable if the American people or Congress will support involvement in another Third World conflict costing 500,000 American lives. (9:155-156) Additionally, the willingness of Americans to become involved in small wars or crisis situations wanes quickly over time. Although many Americans will initially support involvement, that support declines in proportion to the length of the conflict. If the conflict is short-lived and reasonably successful, such as the Grenada operation, the use of American forces can be undertaken with minimal criticism or public opposition. (28:10) On the other hand, if there is potential for a protracted conflict with poorly defined objectives, public support will be hard to find. Additionally, few politicians will willingly

advocate United States' involvement if it is unpopular with his constituents.

Thirdly, Americans are constrained by their perceptions of how to successfully engage in low-intensity conflict. American culture, values, and traditional military doctrine are ill-prepared to deal with the ambiguous objectives and definitions for success often encountered in low-intensity conflict. Americans tend to see a clear-cut distinction between peace and war, and if war occurs, victory is defined as the unconditional surrender of the enemy. Low-intensity conflict does not fit the American concept of how to engage an enemy and win wars. Consequently, it is difficult for Americans to effectively wage low-intensity conflict. (29:267) Over time, as additional experience with low-intensity conflict is gained, Americans will better understand the unique character of low-intensity conflict.

Fourthly, the military threat posed by Third World nations is growing. The world arms bazaar can provide even the smallest insurgent group or nation with up-to-date weaponry, including surface-to-air missiles and antiaircraft artillery. (8:25) United States forces can no longer expect to confront a militarily backward opponent. There is a definite trend towards increased sophistication and lethality of military equipment in the Third World. This fact will make United States intervention increasingly dangerous. (13:28) Consequently, the ability to employ United States forces in low-intensity conflicts will most

likely be constrained. The military capabilities of an opponent will influence the type and number of aircraft employed. Employment of strategic bombers or any air assets will be affected and in some extreme situations not recommended.

Lastly, the United States' ability to conduct successful low-intensity conflict operations will be constrained by the declining defense budget. Although the Reagan administration increased funding for special operations and low-intensity conflict (1981-1987), the focus was on the SOF. Funds were not specifically allocated to improve low-intensity conflict capabilities. In fact, low-intensity conflict has been accorded a distinctly secondary priority. To adequately address special operations and low-intensity conflict requirements, it has been estimated that approximately \$12 billion or four percent of the defense budget would be required annually. (7:27) Given projected declines in the defense budget, it is doubtful if the United States will be able to adequately fund the forces required to successfully meet the growing challenges of low-intensity conflict and the Third World.

The United States faces a potentially serious situation caused by a limited capability to respond to future crises in the Third World. The military has prepared itself to fight the least probable war and will find itself ill-prepared to engage in protracted low-intensity conflict. Facing the reality of a declining defense budget the United States will be forced to do the best it can with existing resources. The strategic bomber

is a asset that is paid for and available to improve the United States' low-intensity conflict response capability. The strategic bomber is not the savior of low-intensity conflict. But it possesses a proven conventional capability and when employed selectively can and will influence low-intensity conflicts.

## CHAPTER III

### OPPORTUNITIES FOR STRATEGIC BOMBERS

The "strategic" (long-range, heavy) bomber force...provides an existing asset which can significantly add to this nation's capability.... The reality is that heavy bombers already have significant non-nuclear responsibilities, that their present-day capabilities to carry out these responsibilities are substantial, and that this potential is expanding even more dramatically with technological advances. (30:23)

#### Strategic Bomber Alternative

Historically, strategic bombers have been closely associated with the nuclear deterrent mission. It is a misnomer to identify strategic bombers with nuclear missions only. In fact, when the Strategic Air Command (SAC) was formed in 1946, the "strategic bomber" was labeled the long-range combat aircraft. (31:1) The bomber's characteristic of long-range provides mobility and mission flexibility which is not available in other aircraft. Within this study, the term "strategic bomber" is used to reflect the inherent range flexibility provided by long-range bombers, not the potential to deliver nuclear weapons.

Strategic bombers can play an important role across the entire spectrum of conflict. They can signal political will by assuming increased readiness postures, alert status, or being deployed to distant locations. (32:233) The Strategic bomber is an important element of our national security policy which allows the United States to effectively display national will or

to project combat firepower on a global basis. General John T. Chain Jr., Commander of the Strategic Air Command, has summarized the importance of the strategic bomber by stating, "long-range bomber striking power--the ability to reach anywhere in a few hours--is integral to future security." (23:44)

Furthermore, according to Colonel John A. Warden III, Deputy Director for Warfighting, Plans and Operations Deputate at Headquarters Air Force, "range is now, more than ever, the name of the game.... As we think about what our doctrine and operations principles should be,... we have simply got to have range, range, range." (23:44) Consequently, the strategic bomber can be a vital element of United States national security policy.

In a low-intensity conflict scenario, the strategic bomber can provide a highly effective means to project offensive firepower to discourage acts of Third World adventurism. (26:21)

As discussed in the previous chapter, the strategic bomber can best be employed in peacetime contingency or counterterrorism operations. The range and responsiveness of the strategic bombers allow these assets to immediately influence low-intensity conflicts. Although the strategic bomber could be used in insurgency or counterinsurgency missions, such conflicts will most likely escalate beyond the limited spectrum of low-intensity conflict.

The ability to react within the first 72 hours of a conflict or crisis situation can be decisive and help constrain

a growing conflict in the Third World. In some cases, an initial show of force or demonstration of resolve may be adequate to deter contemplated aggression or intervention. (26:23) The strategic bomber has definite application in low-intensity conflict and in many cases is the only possible way the United States can project firepower into the Third World in a timely and effective manner. (16:9) Although naval battle groups can provide aerial support for low-intensity conflicts, they are not always positioned in the immediate vicinity. For example, during the Falklands War it was 10 days before the first submarine and 27 days before the first fleet elements arrived. (30:28)

Current political and military trends reflect a national security environment where the United States will have to increasingly rely on rapidly deployable firepower, such as provided by strategic bombers, to defend its allies and national interests around the world. Strategic bombers can be employed with conventional weapons to:

1. Deny or delay the insertion, reinforcement, and supply of enemy ground forces.
2. Neutralize enemy capabilities to operate aircraft from specific bases.
3. Destroy high value targets with precision.
4. Provide intermittent air support to indigenous ground forces.
5. Retaliate promptly against terrorist acts.  
(33:vi,15)

The strategic bomber provides increased flexibility in tailoring a response to critical situations around the globe. The United States must ensure that it has the capability and force posture to defend its national security interests in an era when power projection is likely to take on increased importance. (34:9)

The strategic bomber provides the capability for the rapid projection of firepower to address the growing probability that the United States will face a low-intensity conflict situation in the Third World. According to General Russell E. Dougherty, "the key to our future will be our ability to project power without being there." (23:42)

#### Challenges

Although strategic bombers can make a significant contribution to the United States total response to low-intensity conflict, there are some key challenges which must be addressed. First, since the first atomic bomb was delivered by a long-range bomber in 1945, there has been a trend to disassociate the long-range or strategic bomber with conventional conflicts. There persists a misconception that the strategic bomber is only effective in support of nuclear deterrence. This misconception is fundamental to many decisions which has affected the United States' ability to maintain, modernize, and support strategic bombers for conventional or low-intensity conflict operations. Because strategic bombers were initially procured as nuclear delivery vehicles, their



utility in conventional warfare is not fully understood and has led to steady force structure attrition. (35:30) In fact, subsequent to the dedication of four B-52G squadrons to a conventional-only mission status in FY 89, one squadron was retired from the active inventory by the end of the year. (13:232)

Division of forces into classical strategic or tactical categories has constrained the way strategic bombers have been employed. To categorize strategic bombers as nuclear-only places artificial barriers on operational planning and employment. The terms strategic or tactical reflect the mission, not the type of weapons carried. (36:11-12) Considering the strategic bomber as a nuclear-only asset limits its tremendous potential to increase the United States' flexibility of response in low-intensity conflict scenarios. Efforts must be made to eliminate the historical misconception that strategic equals nuclear.

Although strategic bombers have technically been able to conduct either conventional or nuclear missions, it has only been recently that the strategic bomber's conventional mission has assumed increased importance. The Strategic Air Command first confirmed the need to use strategic bombers to support conventional missions in 1964, by directing that bombers would be tested, equipped, and crews trained for dual nuclear/conventional tactics. (37:20) For the next 21 years, many of SAC's strategic bombers would support either

conventional or nuclear taskings, with the conventional mission being given a secondary priority. Finally, in 1988 the link to the Single Integrated Operations Plan (SIOP), or nuclear mission, was severed for 61 PAA (Primary Aircraft Assigned) B-52Gs. At last, it was possible to plan for and employ strategic bombers to support conventional operations without fear of a potential recall of the bombers to support the SIOP. This action eliminated the dilemma of weakening the SIOP in order to provide strategic bombers for conventional operations. (38:97) This change provided the freedom to plan for the use of strategic bombers, in this case conventional-only B-52Gs, to support low-intensity conflict. Although the United States has experience in using strategic bombers for conventional operations, such as Vietnam, and has current plans to employ strategic bombers to support the theater commanders, planning and doctrine for low-intensity conflict must be perfected and expanded. In the future the SIOP/conventional dilemma must not be allowed to again degrade the ability of strategic bombers to support conventional or low-intensity conflicts.

The next challenges which will continue to hinder the effective application of strategic bombers in low-intensity conflict scenarios will be defense budget and force structure decisions. First, as the nation enters the 1990s, the growing federal deficit is the focus of national concern. The unprecedented peacetime expansion of the defense budget, pursued by President Reagan from 1981 to 1985, could not continue

forever. Public and Congressional concerns over the deficit, waste and mismanagement of the defense buildup, and a changing Soviet threat under Gorbachev was a death knell for continued defense spending. (39:3-4) Since the reversal of the defense buildup in 1985, the budget for the Defense Department has fallen approximately 15 percent, after inflation. This downward trend is entrenched with Secretary of Defense Cheney facing the reality of reducing military spending by 180 billion dollars over the next five years, FY90-94. (6:23) Both the deficit and the dynamic threat will influence the defense budget in the 1990s. According to House Armed Services Committee Chairman Les Aspin, "The deficit will continue to place severe constraints on all spending.... But, the next defense budget will be Gorbachev-driven." (40:30)

Budget reductions of this magnitude will reverberate throughout the Department of Defense. Air Force Chief of Staff, General Larry D. Welch, predicts "draconian" measures to adjust programs and force structure to compensate for significant reductions in spending. (41:2) The current and future strategic bomber force structure of B-52s, B-1Bs, and B-2s will be heavily debated given required capabilities versus available budget dollars. Bomber force structure will also be impacted by arms control negotiations and agreements. Efforts to reduce the strategic bomber force will be magnified given the desire to reduce both nuclear and conventional forces.

The strategic bomber force is a pawn in arms reduction negotiations. What must not be forgotten is the ability of the strategic bomber to function effectively in either a nuclear or conventional role. Force structure decisions made in either arena may, and most likely will, influence the other. The traditional link between strategic bombers and nuclear deterrence causes difficulties in segregating conventional and nuclear capable bombers. Past strategic arms limitation agreements have tied conventional strategic bombers (B-52s) to imposed ceilings. Additionally, the bomber's potential to carry conventional cruise missiles was linked to nuclear arms reductions during the Reykjavik discussions. This presents arms negotiators a dilemma. The United States can increase its conventional strategic bomber capability only at the expense of the nuclear deterrent force. (42:31) Arms negotiations must effectively protect conventional-only bombers. Across the board reductions of strategic bombers will significantly impact the United States' ability to conduct not only conventional warfare, but further erode force projection capabilities that can impact an effective low-intensity conflict response.

Reduction in the United States strategic bomber force is a reality during a period of declining budgets, reduced threat, and arms control negotiations. The United States must seek a comprehensive national security policy that capitalizes on the inherent capability of the strategic bomber to operate across the full spectrum of conflict. A mix of nuclear and

conventional capable bombers is essential. Reductions in force structure must take into account the total threat, including the growing Third World threat. If reductions are made without considering the effectiveness of long-range bombers in low-intensity conflict we would be eliminating a key capability to rapidly influence Third World crises. This is not to say that strategic bombers play an overriding role in low-intensity conflict; quite the contrary is true. The firepower offered by strategic bombers should be employed in low-intensity conflict only as a last resort. Military force is only one element of a coordinated political, economic, social, and military response. The strategic bomber should be used selectively and only when it can help achieve definite national security goals and objectives.

The dedication of a portion of the B-52G force to conventional-only operations in 1988 was a historical first. Not only did it highlight the need for conventional capable strategic bombers, it also helped to sever the traditional link between strategic bombers and the nuclear mission. Today, it is important to further consider the contribution that the strategic bomber can play in low-intensity conflicts. According to General John T. Chain Jr., "This country is at a critical juncture regarding the future of the manned bomber." (38:97) The strategic bomber can significantly contribute to the nation's ability to effectively respond to Third World low-intensity conflicts.

### B-52G Window of Opportunity

As the United States enters the 1990s, it will face a growing array of national security challenges. The probability of having to face crises simultaneously and in geographically dispersed areas is high. Given increasingly constrained defense resources, the United States will not be able to apply overwhelming force to attempt "risk-free" operations. (43:241) On the contrary, the nation will have less resources with which to defend its national interests and will have to rely more on its forces in being. The strategic bomber is one asset that today can contribute to an effective response to low-intensity conflict. The Air Force is currently planning for the global projection of long-range combat airpower from bases in the United States. Plans include strategic bombers delivering conventional weapons in various scenarios. This employment concept already incorporates the B-52G and B-1Bs and there is the potential for the B-2 in the future. (23:40) Consequently, the strategic bomber is currently an element of the overall Air Force's plans to develop a comprehensive conventional response capability.

The dynamics of the strategic bomber force structure will not be resolved quickly. The allocation of strategic bombers to either the SIOP or conventional taskings will not be a simple or rapid decision. Additionally, the size of the ultimate B-2 force will not be determined immediately. Consequently, cost effective alternatives should be examined to assure the United

States has an effective military response to low-intensity conflicts. One alternative is the potential use of conventional, non Air Launch Cruise Missile (ALCM) capable, B-52Gs in low-intensity conflicts.

The conventional B-52G should be retained, at least through the 1990s. It is an asset with proven capabilities. Historically, the B-52 has demonstrated its flexibility to operate across the full spectrum of conflict. (38:97) The conventional B-52Gs have been modernized over the past ten years to further enhance their conventional capability. Upgrades to the navigation and weapons delivery systems has increased the accuracy of the B-52G. (44:20) Every effort should be made to capitalize on these existing capabilities. The investments made to improve the conventional capability of the B-52G should not be cast aside in any quick budget reduction exercise. Air Force Chief of Staff General Larry D. Welch cautions that any reduction in force structure should consider past modernization efforts so, "we do not squander those gains with short-sighted and impatient revisions in national priorities." (41:2) The investment to modernize the B-52 has amounted to over 8.5 billion dollars over the years. (45:64) Kaufman and Korb, of the Brookings Institute, advocate the continued use of modernized platforms (bombers) with improved weapons/munitions, rather than pursuing expensive, next generations systems. This will allow the maximization of current technology before pursuing follow-on systems. (6:21-22) The conventional B-52G,

with its upgraded avionics and weapons, currently offers a tremendous capability that can influence low-intensity conflict. Although the B-52H could be used, it is currently part of the SIOP and has not received the conventional modifications that have enhanced the B-52G's capability.

The dedicated conventional-only B-52G, as contrasted with the other strategic bombers, is totally independent from the SIOP. The United States can plan for and employ the conventional B-52G without the fear that the aircraft would be recalled to support the SIOP. This eliminates the dilemma of balancing nuclear and conventional requirements among a limited strategic bomber force. It is doubtful that other strategic bomber assets, the B-1B or ALCM capable B-52s would be freed from their primary SIOP commitments. These aircraft were designed and modernized to provide a strong nuclear deterrent force. In fact, 60 percent of the investment in strategic weapon systems from 1981-1988 was to modernize the air-breathing leg of the Triad. (46:47) Consequently, if the United States is to assure a long-range strategic bomber response capability for low-intensity conflict, the conventional B-52G is the best choice, until other strategic bombers are freed from their SIOP commitment.

The dynamics and uncertainties in the future employment scenarios for the B-1B and B-2 increase the viability of the conventional B-52G to provide stability through the 1990s. The B-1B and B-2 may take on a conventional role in the future, but



there is uncertainty concerning at what point these bombers could assume a significant conventional role. First, pending completion of the START talks, the total B-2 force structure will be unknown. (6:23) Secondly, with the perceived Soviet threat declining and the defense budget shrinking, the total number of B-2s procured may be reduced from the current 132. These factors make it difficult to project and plan for a strategic bomber force that may be available to support low-intensity conflict operations.

The level of technological and political risk associated with the conventional B-52G is lower than other strategic bombers. The risk associated with the potential combat loss of a B-52 is less than that of a B-1B or B-2. The loss of either of these newer generation aircraft could reveal warfighting capability or result in the loss of critical technology. Additionally, the loss of either of these state-of-the-art aircraft in low-intensity conflict situations could be politically damaging, causing doubt as to the United States' ability to defend its national interests or support its allies and friends. Overall, if the B-1B or B-2 were planned to support low-intensity conflict it is doubtful if they would actually be employed. The conventional B-52G is a much more likely candidate for low-intensity conflict employment.

### Myths Concerning the B-52

There are many who will challenge the concept of employing the B-52G in any future conflict, including low-intensity conflict. In fact, there are many myths supporting the position that the B-52 has outlived its usefulness. But, the facts do not support this assertion. The investments made to modernize the B-52G over the past years is now ready to pay dividends. Upgraded avionics and improved weapons make the B-52G a very capable conventional bomber. To answer the critics it is appropriate to address the primary myths.

Many will contend that the B-52 is too old to be effective. But, although B-52Gs will be over thirty years old as they enter the 1990s, they are far from obsolete. The life of the basic airframe has been estimated to be to the year 2030. (44:20) Although this may be an optimistic projection, it does give confidence that the B-52G will be able to support low-intensity conflict operations at least through the year 2000. Furthermore, the long term results of the strategic modernization and improved readiness programs, funded during the defense buildup of the Reagan administration, are now being realized. Modernization of the B-52 with more reliable subsystems and components, along with an increase in spares availability, has resulted in higher in-commission rates than have been experienced during the last ten years. (47:70) In total, the B-52 has undergone over 1,899 engineering modifications which have allowed this aircraft to remain viable.

(48:70) Although the B-52 has remained operationally effective, it has required increased maintenance. Currently, the B-52 requires approximately 70 maintenance man-hours for each flying hour. (48:75) Regardless, the B-52G provides a viable option to provide strategic bomber support for low-intensity conflict to the end of the century.

One of the most often raised arguments against the B-52 is its vulnerability and inability to survive in today's high threat combat environment. It is not logical to expect the threat in the Third World to be less than state-of-the art. Almost any ground-to-air or air-to-air defensive capability is available on the world's marketplace. Although missions would be planned to avoid or circumnavigate known threats, one must expect to encounter the heaviest and most capable defenses in the target area. The primary element that will make the B-52 effective will be surprise; to accurately strike and withdraw as rapidly as possible. The probable scenario would be a night low absolute altitude penetration tactic using night-vision equipment (49:48) and near simultaneous time over target for multiple aircraft to saturate the enemy's defenses. (50:26)

The B-52 carries an impressive suite of detection and self-protection electronic countermeasures which make the aircraft capable against many Third World threats. In fact, the B-52 electronic countermeasures capability is comparable, particularly in area jamming, to the EF-111. (32:156) When striking targets defended by modern threats, the B-52 may have

to be employed with defense suppression and electronic warfare aircraft in sophisticated force packages. (49:47)

Alternatively, the conventional B-52Gs are capable of carrying the Have Nap, an electro-optical guided standoff munition. The 50 nautical mile range of the Have Nap (49:48) would allow the B-52 to strike high value point targets, while remaining outside the lethal range of many target defenses. The employment tactic, weapons, and force package requirements will be tailored to each mission. The conventional B-52G can effectively operate and survive in low-intensity conflict.

#### Responsiveness

The B-52G has not outlived its usefulness and one of its strong capabilities, that make it appropriate to consider it for low-intensity conflict operations, is its responsiveness. The B-52G can provide a CONUS based response to global crises. The B-52G has an impressive range of up to 6500 nautical miles with a 70,000 pound weapons load. (32:138) This range is achieved in a maximum range cruise flight profile and although achievable could be considered unrealistic. A more conservative figure would be 4,600 nautical miles range, 2,300 nautical miles combat radius, with a 40,000 pound payload. (42:35) To bound the spectrum, a B-52G mission flown entirely at low altitude and carrying a full internal and external weapons load has a combat radius of approximately 1,100 nautical miles. (49:48) Although range will vary with payload, configuration, flight profile,

altitude, and speed, the B-52G has the capability to respond over great distances. When air refueled, the true capability of the B-52 is maximized and global response can be achieved. Although tactical air forces could also accomplish long-range missions, any serious deployment would require massive air refueling support. Consequently, the range advantage of the B-52 makes it particularly effective for low-intensity conflict in the Third World. (35:19)

Facing a declining number of overseas bases and the potential for restrictions on overflight of sovereign territories make the strategic bomber the prime candidate for rapid force projection missions. Although carrier based aircraft could also operate around the globe, an initial response may not be possible for days, depending on the steaming time required to position the carrier task force. The B-52G can strike within hours.

Although historically, the United States has depended upon overseas basing to support military operations around the world, the pendulum is swinging the other way. Political pressures are slowly making foreign bases unavailable, especially those engaged in combat operations either directly or indirectly. The declining Soviet threat and shrinking defense budget will force the United States to withdraw many of its deployed forces from bases around the world. Consequently, the ability to operate from the CONUS is becoming more advantageous to assure an effective response to world crises. A 1988 White House

Commission study on Integrated Long-Term Strategy emphasized that alternatives to overseas bases must be developed. (23:42) CONUS basing of strategic bombers is a logical alternative. At the Air Staff, planners are already turning to stateside basing. In the future, "our units are more and more likely to be based in the United States. So we're thinking in terms of deploying airpower from home." (23:42) Thus, as the pendulum swings toward CONUS basing, the importance of the long-range capabilities of the strategic bomber is magnified. Given the reality of a leaner combat force in the 1990s, the conventional B-52G may be the only United States combat aircraft that can be responsive to rapidly changing Third World crises.

#### Upgraded Capabilities

The conventional B-52G has remained an effective warfighter over its lifetime, due to an aggressive modernization program. Through modification and upgrade the B-52 has been able to keep pace with technology. Avionics upgrades have significantly increased the navigation and weapons delivery accuracy of the conventional B-52G and made it compatible with a full range of conventional bombs, naval mines, state-of-the-art munitions, and standoff weapons. The B-52G possesses a standoff capability with the Harpoon antiship missile. Recently, some conventional B-52Gs have been modified to carry the Have Nap air-to-surface standoff missile. (44:20)

<u>Weapon/Munitions</u>	<u>Number</u>
General Purpose Bombs	
Mk 82 (500 lb.)	51
M 117 (750 lb.)	51
Mk 84 (2000 lb.)	18
Cluster Bomb Units	
CBU 52	51
CBU 87 (CEM)	30
CBU 89 (anti-armor mine)	30
Naval Sea Mines	
Mk 36	51
Mk 52	30
Mk 60 (Captor)	18
Mk 64, 65 (Quick Strike)	18
Standoff Missiles	
AGM 84 (Harpoon)	8
AGM 136 (Tacit Rainbow)	30
HAVE NAP	3

Figure 2: Representative B-52G Weapons Load  
Present and Programmed (30:28)

The first step in increasing the B-52's navigational and weapons delivery accuracy was the Offensive Avionics System (OAS) upgrade. This modernization effort provided the B-52 with a new inertial navigation capability and a computer based bombing and navigation system. Performance since this upgrade was completed has indicated that a 50 percent increase in weapons delivery accuracy was achieved. Not only does it increase the probability that the target will be destroyed, it also decreases the probability of collateral damage. Furthermore, increased accuracy equates to less aircraft required to destroy a given target, subjecting fewer aircraft and crews to the risks of combat.

Many people believe the B-52s conventional weapons capability is limited to gravity bombs and mines. This is not true. The B-52 has kept pace with many changes in weapons technology. For example, the conventional B-52G will be able to carry the Tactical Munitions Dispenser (TMD), providing the ability to deliver a new generation of munitions. With the TMD, the B-52G can deliver submunitions that include: the Combined Effects Munition (CEM) effective against area targets such as troops and convoys; air delivered mines to interdict lines of communication; Direct Airfield Attack Cluster Munitions (DAACM) to destroy airfields and pavements; and sensor fused munitions to kill armored vehicles. (30:30) These new generation munitions have effectively increased the B-52s flexibility to strike a broad range of targets.

One of the key modifications which has significantly enhanced the conventional B-52Gs versatility is the Integrated Conventional Stores management System (ICSMS). All the conventional B-52Gs will be ICSMS modified. ICSMS allows the B-52G to integrate with future munitions through a standard MIL-STD-1760 interface. This provides increased flexibility by opening up a full range of new weapons to the B-52G. ICSMS modified aircraft will also be modified with Global Positioning System (GPS) capability. GPS will improve the B-52's navigational and weapons delivery accuracy by 87 percent. This improved accuracy is over and above the enhancement provided by the OAS previously installed in the mid-1980s. (30:30) The



ICSMS/GPS modifications have multiplied the B-52G's conventional capability, although without a standoff capability, the aircraft must still overfly its targets to deliver gravity munitions.

HAVE NAP was selected to give the conventional B-52G a precision standoff capability. The ability to deliver standoff munitions puts additional targets at risk, not previously vulnerable to B-52 attack. Standoff capability allows the B-52 to deliver a conventional strike while remaining outside the lethal surface-to-air missile (SAM) and antiaircraft artillery (AAA) defenses often surrounding key target complexes. HAVE NAP is a medium-range (50 nautical mile) electro-optically guided weapon with a 750 pound high explosive warhead. Developed by Rafael of Israel, HAVE NAP will be integrated on selected conventional B-52Gs. (51:148) This precision standoff capability will make the B-52G extremely effective for selected employment in low-intensity conflict or against terrorist targets.

To compliment the conventional B-52G's versatility and penetration capability, selected aircraft will be modified to carry the Tacit Rainbow antiradiation weapon. Tacit Rainbow is currently in Full Scale Development with production planned for the mid-1990s. This standoff weapon, with a 56 nautical mile range, will be deployed by the carrier B-52Gs to seek out and attack electronic emitting threats, such as SAM or AAA radars. Tacit Rainbow can be programmed to autonomously search for a selected array of emitters along a specified track or

patrol/loiter area. When its passive sensor identifies a programmed signal Tacit Rainbow will home on the signal and attack the emitter (51:148) Each B-52G will be able to carry 30 Tacit Rainbow missiles, providing a significant "weasel" type capability. Furthermore, the ability of the Tacit Rainbow to loiter in a designated area increases its ability to keep enemy emitters off the air. (52:40) The Tacit Rainbow will allow the B-52G or other aircraft to more effectively penetrate defended areas or overfly and strike defended targets.

Modernization of the B-52 and development of next generation munitions/weapons has markedly enhanced the viability of the B-52G to fight and survive in the conventional arena of the 1990s. The B-52G is available today and should be integrated into any combat response to low-intensity conflict. The B-52G can carry a variety of conventional weapons for a long-range strike capability. Additionally, integration of defense suppression weapons and precision standoff capability provide airpower flexibility not previously available. Today, one or two B-52s employing standoff and antiradiation weapons could saturate a limited air defense sector and destroy key defenses or command and control elements, allowing B-52s or other combat aircraft to penetrate and strike targets. (50:29)

#### Employment

In low-intensity conflict, combat forces must be employed selectively and when there is a high probability that their use

will positively influence the conflict. The B-52 provides the United States a very responsive force that can strike quickly and at long range. Although these qualities would tend to portray the B-52 as a independent fighter, there may be many situations which would make it more beneficial to employ the B-52 in a force package with other aircraft. The tactical situation will dictate the most appropriate employment scenario, autonomous or in an integrated force package. If employed with other aircraft, a delay may be incurred while assets are forward deployed to support the strike. If warranted, the B-52G carrying modern munitions coupled with its defensive capabilities could be effectively employed in low-intensity conflict directly from bases in the United States.

Given that the myths concerning the B-52's demise are exaggerated, the inherent characteristics of long-range bombers, and the benefits of an extensive modernization program, the B-52G should be considered a key element in the United States' response to low-intensity conflict.

By either direct attack or area denial, bombers can attenuate infiltration of supplies to the degree that new routes will have to be developed. They can then attack forces massing for assault on government positions.... Long range air can then prepare the way for government force offensive action. Assuming that there is a surrogate state supporting the conflict, long range airpower can be a weapon of choice for decisive action against the national resource base supporting the conflict. In each case, bomber attack can be both prompt and massive enough to cause the enemy to totally redirect his war effort. (35:27-28)

The strategic bomber can provide a powerful and swift attack against opposition forces and have an immediate influence on the conflict. Today, the conventional B-52G can effectively support low-intensity conflict, providing:

1. Precision attacks on important economic, political, or military targets.
2. Isolation of the enemy from external military and economic resupply by mining harbors and interdicting lines of communications to supporting areas and countries.
3. Suppression of enemy air defenses so United States and allied forces can sustain air operations.  
(33:14)

Although combat force should be used as a last resort in low-intensity conflict, the B-52 can provide unique capabilities not otherwise available in the United States arsenal. B-52Gs staged from the CONUS frees the response from foreign basing and possible overflight restrictions and can strike without delay while forces are forward deployed. The long-range bomber can strike swiftly and with enough firepower to force an opponent to redirect his war effort. In low-intensity conflict, forcing an enemy, often with limited resources, to redirect and reconfigure his campaign can be decisive. Loss of the initiative and vital resources can signal the defeat of many smaller combat forces often engaged in low-intensity conflict. (32:192) Consequently, conventional B-52Gs should be retained for potential employment in low-intensity conflict and other crises less than mid or high

level conventional conflicts. But, is it cost effective to maintain the conventional B-52G in today's austere budgetary environment?

### Implementation

Considering the changing nature of the threat and the realities of the federal budget deficit, the United States is facing the most massive restructuring since the Reagan defense buildup (1981-1985). New systems will not be procured and existing aircraft will be retired. (53:18) The temptation to cut the conventional B-52G must be resisted. It is a capability which can enhance the United States low-intensity conflict capability, is available today, and is paid for. As the probability of the United States becoming involved in Third World conflicts grows, it is illogical to eliminate the conventional B-52G now and then in the future pay for the same capability again. According to Kaufman and Korb, critics of the defense budget, it is cost effective to get full utilization from modernization before upgrading to more expensive follow-on systems. (39:21) The recently modernized conventional B-52G fits this strategy. It is cost effective and logical to sustain the conventional B-52G and protect it from possible budget cuts.

There are no "up-front" costs required to obtain the conventional B-52G to augment the United States limited low-intensity conflict capability. Investment made to procure and modernize the B-52G is a sunk cost and the only expense that

will be incurred will be operation and maintenance costs. This is not to say that the B-52G is a low cost option. The cost to maintain a long-range strategic bomber capability is significant. The following table, based on Air Force Cost Center data, represents an estimate of the funds required to maintain a typical B-52G and B-1B squadron.

	<u>FY91</u>	<u>FY92</u>	<u>FY93</u>	<u>FY94</u>	<u>FY95</u>	<u>FY96</u>	<u>FY97</u>
B-52G (14 PAA)	99.74	104.85	106.30	109.30	112.43	115.85	119.31
B-1B (16 PAA)	109.32	112.41	114.92	117.79	120.58	123.40	126.24

Figure 3: Strategic Bomber Estimated Funding (54)  
(then year dollars in millions)

These totals include procurement, operations and maintenance, and military pay requirements (see Appendix B). On an average annual cost per aircraft basis the B-52G costs \$7.83 million as compared to \$7.63 million for the B-1B. The similarity of these costs reflect the basic cost to provide long-range airpower. Procurement of an entirely new bomber for low-intensity conflict would obviously cost significantly more to develop. Consequently, the B-52G is as costly as the newest operational strategic bomber. Because the B-1B and the B-52H are fully committed to the SIOP, the conventional B-52G is currently the best option to provide support for low-intensity conflict. The conventional B-52G has already been isolated from the SIOP and according to General John T. Chain Jr, CINCSAC, "does not compromise our capability.... we intend to prevent future SAC

leadership from being faced with the dilemma of diluting the strategic mission or not providing theater support at all."

(38:97)

One key concern is the supportability of a weapon system whose basic airframe and engines entered service over 30 years ago. Although many of the recent modernization efforts and upgrades have improved the B-52's reliability and maintainability, many subsystems are becoming increasingly difficult to support. Consequently, the ability to provide cost effective logistical support for those B-52Gs tasked to support low-intensity conflict will be economically linked to those B-52s supporting the SIOP. When the SIOP no longer includes B-52s, the costs to sustain a small number of aircraft for low-intensity conflict operations will be prohibitive. With the last B-52H being modified for internal carriage of Air Launched Cruise Missiles (ALCM) in mid-1993, it can be anticipated that the B-52 will remain in the inventory well into the next decade. (51:134) Defense industry analysts project that the strategic bomber force will include a mix of B-1B, B-2 and B-52s throughout the 1990s. (47:72) Until the B-52 is eliminated from the SIOP, the conventional B-52G can garner most of their logistical support from the commonality of the basic B-52 subsystems and components. This is not to say that the B-52 can go on forever, but it is highly probable that it can remain viable through the end of the century.

In FY1990, the United States has 310 PAA (Primary Aircraft Assigned) strategic bombers, of which 47 B-52Gs remain dedicated to conventional taskings and could provide immediate capability to support low-intensity conflict. (13:231-232) But, as the nation faces an era of increasingly austere defense budgets, there will be many who will strongly advocate the elimination of the B-52. Furthermore, the perceived reduction in the Soviet threat will most assuredly result in public and Congressional calls for reduction in Triad forces. Lastly, arms control negotiations may also take its toll on the strategic bomber inventory. These realities coupled with potential delays or reductions in the procurement of the B-2 (55:23) will result in a retention of existing B-52 and B-1B assets in their nuclear role. Consequently, lacking a major restructuring of the strategic bomber force structure, the conventional B-52G will be the best alternative for low-intensity conflict.

Based on extensive modernization during the 1980s, and the potentially dynamic nature of the nuclear force structure in the 1990s, there exists a window of opportunity to capitalize on the conventional capabilities of the B-52G. Development and acquisition of a new long-range bomber to support low-intensity conflict would take at least ten years. Consequently, the United States has the opportunity to immediately enhance its capability to respond to low-intensity conflict by retaining the conventional B-52G. The B-52G can be employed effectively in low intensity conflict scenarios and should be considered part



of the overall United States response to low-intensity conflict when use of combat forces is warranted.

## CHAPTER IV

### RECOMMENDATION AND CONCLUSIONS

...Though the United States hoped to lessen her involvement with the third world in the aftermath of Vietnam with the Nixon Doctrine, it seems that she cannot so dissociate herself. Her interests in some parts of the world are too vital and (as Iran showed) surrogates are too unreliable for her to trust her fate to them. Evidently, US interdependence with the third world is bound to continue.... (24:11)

#### Realities of Today

The most likely threat facing the United States is shifting from a conflict with the Soviet Union in central Europe to the Third World. Events as dramatic as the opening of the Berlin Wall or the dynamic political changes throughout eastern Europe will undoubtedly drive major changes in United States defense spending, as the nation adjusts to the changing threat and a growing federal deficit. According to House Armed Services Committee Chairman Les Aspin, "We have entered the Gorbachev era.... The deficit will continue to place severe constraints on all spending, of course. But the next defense budget will be Gorbachev-driven." (40:30) Thus, as the United States embarks on the 1990s it will experience declining defense spending and the need to reevaluate the threat. Force structure changes are a reality. Defense Secretary Cheney projects massive spending cuts that will dictate base closings, force reductions, and termination of some new programs. (53:16) In a

period of austere funding, it is prudent to examine what existing assets are available to counter the growing Third World threat.

The long-range strategic bomber is one such asset that is available and can effectively operate across the full spectrum of conflict. A common misconception is that the strategic bomber can best operate at the nuclear end of the spectrum of conflict. This is not true and the strategic bomber has historically proven itself quite effective in a conventional role. According to General John T. Chain Jr., "...the extended reach of bombers makes them a powerful, quickly responsive and flexible force element for meeting contingencies in the remotest regions of the globe, as well as in a future conflict that may well be characterized by geographically shifting theaters of engagement." (30:23) On the lower end of the spectrum of conflict, low-intensity conflict offers an opportunity to capitalize on the capabilities of strategic bombers. The United States' response to low-intensity conflict will primarily be via economic, political, and social means, although in some cases use of military force may be warranted. When use of military force is called for, the inherent capabilities of range, payload, navigational, and weapons delivery accuracy make the strategic bomber ideal for integration into the total United States response to low-intensity conflict. Staging from bases in the United States or from forward operating locations, the strategic bomber can selectively deliver firepower rapidly and

accurately on a global basis. Of the current strategic bomber force, including the B-1B, B-52G, and B-52H, the conventionally modified B-52G offers the best capability to influence low-intensity conflict.

The basic warfighting capabilities of the B-52G were significantly improved as part of an extensive modernization program in the 1980s. Modifications have resulted in an upgraded conventional B-52G that is more lethal and survivable. Furthermore, the integration of precision standoff weapons on selected aircraft has markedly increased the B-52G's versatility. This increased conventional capability is effectively being integrated into the conventional warplans of the theater commanders. Primarily, the conventional B-52G will be employed in support of theater conventional warfare, such as a major conventional conflict in Europe or the Pacific. Capitalizing on the element of surprise, the B-52G will attack at night, avoiding known defenses, and flying a low level profile with minimum time over target. (30:26) This employment scenario can easily be tailored to low-intensity conflict operations, requiring immediate and selective application of firepower. The conventional B-52G has a tremendous capability for a responsive, worldwide, force projection capability that can effectively demonstrate national resolve or if required, engage in combat operations.

### Recommendation and Proposals

The conventional B-52G is a resource that is available today and can enhance the overall United States response to low-intensity conflict. The capability of these aircraft to counter the growing Third World threat, should be considered fully before they fall victim to the budget cutting axe of the 1990s. The threat must first be analyzed and the force structure needed to counter the threat developed, not visa versa. The strategic bomber, specifically the conventional B-52G, can contribute to the United States' low-intensity conflict warfighting capability throughout the 1990s. The United States must be prepared to respond to low-intensity Third World conflicts. This fact has been driven home by recent direct or indirect intervention in Panama, El Salvador, Columbia, and the Philippines. (56:6A)

This paper has highlighted the unique capabilities of the strategic bomber to successfully influence low-intensity conflict. Furthermore, the conventional B-52G has been singled out as the immediate candidate to assume responsibility for a timely, long-range response to Third World crises. Many critics will argue that this logic is designed as a "salvage strategy" to prevent the retirement of the aged B-52. This is not true. Examination of the capabilities of the modernized conventional B-52G show that it can contribute decisively and should be integrated into the United States' response to low-intensity conflict. This capability is paid for, available, and logically

should be used to meet the growing potential for conflicts in the Third World.

Although the conventional B-52G is the first choice to support low-intensity conflict, once the pandora's box of massive budget cuts and major force restructuring is opened, alternative strategic bomber options may present themselves. If the perceived reduction in the Soviet threat and arms control negotiations result in a reduction in the bomber leg of the Triad, the B-52H or the ALCM B-52G could become viable candidates for low-intensity conflict. In this case, the B-52H would be a logical choice for application in low-intensity conflict scenarios. First, the B-52H is newer and has increased range over the B-52G. Its engines are more powerful and do not require demineralized water to enhance takeoff performance if deployed outside the United States. Similar logic was used when the original Strategic Projection Force (SPF) was built around the B-52H in 1980. (31:2) Furthermore, from a nuclear arms treaty standpoint the B-52H is easily distinguishable from other ALCM carrying B-52s.

Given the realities of declining defense spending, if a conventional strategic bombing force was built around the B-52H, the ALCM B-52G would continue to support any remaining SIOP commitment and the conventional B-52Gs would be retired. The primary drawback to this scenario is that conventional modifications, such as the Integrated Conventional Stores Management System would have to be made to the B-52H to provide

a full conventional capability. Additionally, arms reduction constraints may also dictate the demodification of these ALCM capable bomber to eliminate their nuclear capability. These modifications would significantly increase the costs incurred, over the conventional B-52G, to provide a long-range low-intensity conflict capability. Thus, although the potential exists for using the B-52H for low-intensity conflict, use of the conventional B-52G is currently preferable, although major changes in force structure may warrant consideration of the B-52H.

#### Conclusion

The answer to the original question, "Can the strategic bomber be effectively employed in low-intensity conflicts?" is definitely yes. The strategic bomber should be considered a key element in the United States' response to low-intensity conflict in the Third World. To further ensure its effective employment, doctrine should be developed to fully integrate the strategic bomber in low-intensity conflict operations. Lastly, future changes in force structure must consider the role of the strategic bomber in low-intensity conflict. Warning against haphazard force structure reductions, Senate Armed Services Committee Chairman Sam Nunn cautions:

I would hate to see us simply reacting to what is perhaps the greatest change we've had since World War 2 by getting so absorbed with Gramm-Rudman budget cuts that we don't recognize that a fundamental reassessment of the

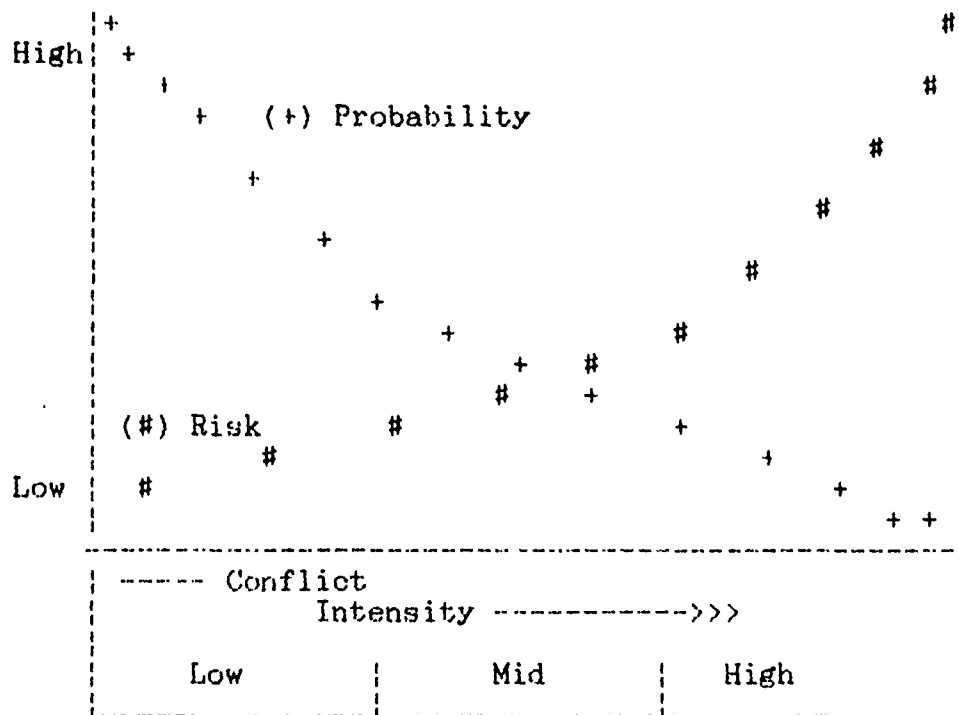
threat, and the fundamental reassessment of the strategy of our country and our alliances, needs to be the beginning point for any series of serious budget cuts,...  
(55:22)

The ability of the strategic bomber to influence low-intensity conflict should not be overlooked in reassessing the United States strategy to counter the dynamic threat. The strategic bomber, the B-52G today, and potentially the B-1B or B-2 in the future should be considered part of the total United States response to low-intensity conflict.



APPENDIX A

LOW-INTENSITY CONFLICT  
RISK AND PROBABILITY VERSUS  
THE SPECTRUM OF CONFLICT



Conflict Risk and Probability Versus  
The Spectrum of Conflict (19:4,30)

APPENDIX B

STRATEGIC BOMBER COST FACTORS  
Air Force Cost Center SABLE model (54)

```

*****
*                               *
*             SABLE MODEL       *
*                               *
*   REPORT = COST SUMMARY      M/D/S = 80526   *
*   DOLLARS = TY $ (MILLIONS)  MAJCOM = SAC    *
*   VERSION = 90-1 (AUG 89)    DATE = 22 AUG 89 *
*****

```

	FY90	FY91	FY92	FY93	FY94	FY95	FY96	FY97
	****	****	****	****	****	****	****	****
PAA QTY	14	14	14	14	14	14	14	14
FLYING HOURS	6468	6468	6468	6468	6468	6468	6468	6468
CREW RATIO	1.31	1.31	1.31	1.31	1.31	1.31	1.31	1.31
DRILL OFFICERS	0	0	0	0	0	0	0	0
DRILL ENLISTED	0	0	0	0	0	0	0	0
CIVILIANS	35	35	35	35	35	35	35	35
ACTIVE OFFICERS	140	140	140	140	140	140	140	140
ACTIVE ENLISTED	689	689	689	689	689	689	689	689

PROCUREMENT (3010)

\*\*\*\*\*

CLASS IV MOD KITS	2.10	2.15	2.20	2.24	2.28	2.32	2.36	2.40
REPLACE SUPT EQUIP	1.02	1.05	1.07	1.09	1.11	1.13	1.15	1.17
REFLEN SPARES	12.58	19.18	21.90	20.96	21.57	21.97	22.37	22.77
TOTAL 3010	15.70	22.38	25.09	24.29	24.96	25.42	25.88	26.34

PROCUREMENT (3080)

\*\*\*\*\*

TRAINING MUNITIONS	0.54	0.55	0.56	0.57	0.58	0.59	0.60	0.62
TOTAL 3080	0.54	0.55	0.56	0.57	0.58	0.59	0.60	0.62

OPS & MAINT (O&M)

\*\*\*\*\*

FUEL	15.20	16.03	16.97	17.88	18.75	19.65	20.61	21.61
CONSUMABLE SUPPLIES	2.88	2.92	3.00	3.06	3.12	3.17	3.23	3.29
DEPOT MAINTENANCE	15.77	16.25	16.66	17.00	17.30	17.54	17.81	18.10
CLS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CLASS IV MOD INSTALL	0.32	0.32	0.32	0.34	0.34	0.35	0.35	0.36
CIVILIAN PAY	1.11	1.14	1.17	1.20	1.22	1.25	1.27	1.29
IS (NON-PAY)	4.31	4.44	4.56	4.66	4.74	4.83	4.91	5.00
MEDICAL (NON-PAY)	0.33	0.34	0.35	0.35	0.36	0.37	0.37	0.38
TOTAL O&M	39.91	41.44	42.03	44.49	45.82	47.84	49.96	52.07

MILITARY COMPENSATION

\*\*\*\*\*

MILITARY PAY	27.60	28.24	28.83	29.40	29.98	30.59	31.19	31.77
ACQUISITION/TRAINING	5.27	5.48	5.67	5.85	6.05	6.25	6.45	6.67
PCS	0.63	0.65	0.67	0.69	0.71	0.73	0.75	0.77
TOT MIL COMP	34.50	35.37	36.17	36.95	37.75	38.57	39.40	40.21
TOTAL COST	96.69	99.74	104.81	106.70	109.11	112.43	115.75	119.21

\*\*\*\*\*  
 \* SAMPLE MODEL \*  
 \*  
 \* REPORT = COST SUMMARY M/D/S = BOSCH \*  
 \* DOLLARS = TY \$ (MILLIONS) MAJCOM = SAC \*  
 \* VERSION = 90-1 (AUG 89) DATE = 22 AUG 89 \*  
 \*\*\*\*\*

	FY90	FY91	FY92	FY93	FY94	FY95	FY96	FY97
	****	****	****	****	****	****	****	****
PAA QTY	19	19	19	19	19	19	19	19
FLYING HOURS	7847	7847	7847	7847	7847	7847	7847	7847
CREW RATIO	1.31	1.31	1.31	1.31	1.31	1.31	1.31	1.31
DRILL OFFICERS	0	0	0	0	0	0	0	0
DRILL ENLISTED	0	0	0	0	0	0	0	0
CIVILIANS	47	47	47	47	47	47	47	47
ACTIVE OFFICERS	182	182	182	182	182	182	182	182
ACTIVE ENLISTED	978	978	978	978	978	978	978	978

#### PROCUREMENT (3010)

\*\*\*\*\*

CLASS IV MOD KITS	3.07	3.15	3.21	3.27	3.33	3.39	3.45	3.51
REPLACE SUPT EQUIP	1.39	1.42	1.45	1.48	1.51	1.53	1.56	1.59
REPLEN SPARES	15.26	23.27	26.47	25.43	26.17	26.66	27.14	27.62
TOTAL 3010	19.71	27.83	31.14	30.18	31.01	31.58	32.15	32.72

#### PROCUREMENT (3080)

\*\*\*\*\*

TRAINING MUNITIONS	0.85	0.87	0.89	0.90	0.92	0.93	0.95	0.97
TOTAL 3080	0.85	0.87	0.89	0.90	0.92	0.93	0.95	0.97

#### OFS & MAINT (O&M)

\*\*\*\*\*

FUEL	15.54	16.38	17.35	18.28	19.15	20.09	21.07	22.09
CONSUMABLE SUPPLIES	3.49	3.55	3.64	3.71	3.78	3.85	3.92	3.99
DEPOT MAINTENANCE	21.50	22.96	24.35	25.72	27.10	28.55	29.99	31.54
CLS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CLASS IV MOD INSTALL	0.46	0.47	0.48	0.49	0.50	0.51	0.52	0.53
CIVILIAN PAY	1.49	1.53	1.57	1.61	1.64	1.67	1.70	1.73
IS (NON-PAY)	6.03	6.21	6.37	6.51	6.67	6.74	6.86	6.99
MEDICAL (NON-PAY)	0.46	0.47	0.49	0.50	0.51	0.51	0.52	0.53
TOTAL O&M	48.96	51.57	54.24	56.81	59.79	61.92	64.28	67.40

#### MILITARY COMPENSATION

\*\*\*\*\*

MILITARY PAY	38.19	39.05	39.88	40.65	41.51	42.37	43.22	44.14
ACQUISITION/TRAINING	8.54	8.91	9.08	9.34	9.51	9.87	10.15	10.44
FCS	0.87	0.90	0.92	0.95	0.97	1.01	1.07	1.06
TOT MIL COMP	47.60	48.86	49.98	50.97	52.09	53.25	54.44	55.64
TOTAL COST	117.12	129.03	136.15	139.07	143.32	147.69	152.10	156.74

```

*****
*                                     *
*               SABLE MODEL           *
*                                     *
*   REPORT = COST SUMMARY             M/D/S = 00010   *
*   DOLLARS = TY $ (MILLIONS)        MAJCOM = SAC     *
*   VERSION = 90-1 (AUG 89)          DATE = 22 AUG 89  *
*                                     *
*****

```

	FY90	FY91	FY92	FY93	FY94	FY95	FY96	FY97
	****	****	****	****	****	****	****	****
PAA QTY	16	16	16	16	16	16	16	16
FLYING HOURS	4736	4736	4736	4736	4736	4736	4736	4736
CREW RATIO	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10
DRILL OFFICERS	0	0	0	0	0	0	0	0
DRILL ENLISTED	0	0	0	0	0	0	0	0
CIVILIANS	42	42	42	42	42	42	42	42
ACTIVE OFFICERS	117	117	117	117	117	117	117	117
ACTIVE ENLISTED	917	917	917	917	917	917	917	917

#### PROCUREMENT (3010)

\*\*\*\*\*

CLASS IV MOD KITS	7.22	7.40	7.56	7.70	7.84	7.98	8.12	8.27
REPLACE SUPT EQUIP	1.21	1.24	1.26	1.29	1.31	1.33	1.35	1.38
REPLEN SPARES	51.90	14.18	14.57	14.58	15.03	15.30	15.58	15.86
TOTAL 3010	60.33	22.82	23.39	23.56	24.17	24.62	25.06	25.51

#### PROCUREMENT (3080)

\*\*\*\*\*

TRAINING MUNITIONS	0.30	0.31	0.32	0.32	0.33	0.34	0.34	0.35
TOTAL 3080	0.30	0.31	0.32	0.32	0.33	0.34	0.34	0.35

#### OPS & MAINT (03M)

\*\*\*\*\*

FUEL	9.86	10.40	11.01	11.60	12.15	12.75	13.37	14.02
CONSUMABLE SUPPLIES	6.94	7.05	7.23	7.38	7.51	7.65	7.79	7.93
DEFOT MAINTENANCE	16.32	16.02	17.24	17.60	17.91	18.24	18.57	18.81
CLS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CLASS IV MOD INSTALL	1.08	1.11	1.13	1.15	1.18	1.20	1.22	1.24
CIVILIAN PAY	1.33	1.37	1.41	1.44	1.47	1.49	1.52	1.55
IS (NON-PAY)	5.37	5.54	5.68	5.80	5.91	6.01	6.12	6.23
MEDICAL (NON-PAY)	0.41	0.42	0.43	0.44	0.45	0.46	0.47	0.47
TOTAL 03M	41.32	42.71	44.13	45.42	46.58	47.80	49.05	50.25

#### MILITARY COMPENSATION

\*\*\*\*\*

MILITARY PAY	32.46	33.26	34.04	34.79	35.57	36.38	37.18	38.04
ACQUISITION/TRAINING	9.17	9.47	9.75	10.03	10.31	10.61	10.90	11.21
FCS	0.73	0.75	0.78	0.80	0.82	0.84	0.87	0.89
TOT MIL COMP	42.36	43.48	44.57	45.62	46.71	47.83	48.95	50.14
TOTAL COST	144.31	109.32	112.41	114.92	117.79	120.58	123.40	126.24

## LIST OF REFERENCES

1. Whitehouse, Charles S. "Special Operations and Low-Intensity Conflict," Defense Issues, Washington, Department of Defense, Vol. 4, No. 6, 1989.
2. Gordon, Michael R. "U.S. Considering Sharp Reductions in Eurpoe Force," The New York Times, pp. 1,14.
3. Schemmer, Benjamin F. "Senate Leaders Ask Scowcroft for New White House Focus on Low-Intensity Conflict," Armed Forces Journal International, March 1989, pp. 66-67.
4. Klare, Michael T., and Kornbluh, Peter (eds.). "The New Interventionism: Low-Intensity Warfare in the 1980s and Beyond," in Low-Intensity Warfare, New York: Pantheon Books, 1988, pp. 3-20.
5. Sarkensian, Sam C. The New Battlefield, New York: Greenwood Press, 1986.
6. Korb, Lawrence J. "How to Reduce Military Spending," The New York Times, Nov. 21, 1989, p. 23.
7. Shultz, Richard H. Jr. "Discriminate Deterrence and Low-Intensity Conflict: The Unintentional Legacy of the Reagan Administration," Conflict, Vol. 9, No. 1, 1989, pp. 21-43.
8. Dean, Lieutenant Colonel David J. The Air Force Role in Low-Intensity Conflict, Maxwell Air Force Base, AL: Air University Press, October 1986.
9. Cohen, Eliot A. "Constraints of America's Conduct of Small Wars," International Security, Fall 1984, pp. 151-181.
10. U.S., The White House, National Security Strategy of the United States, January 1988.
11. Marsh, John O. Jr. "Comments on Low-Intensity Conflict." Military Review, February 1989, pp. 2-5.
12. Mueller, John. Retreat From Doomsday, New York: Basic Book, Inc., 1989.
13. Carlucci, Frank C. Annual Report to the Congress, Fiscal Year 1990, Washington: U.S. Government Printing Office, 17 January 1989.

14. Klingaman, Jerome W., (et al). "US Policy and Strategic Planning For Low-Intensity Conflict," Low-Intensity Conflict, Maxwell Air Force Base, AL: Air University Press, August 1988.
15. Drew, Colonel Dennis M. Insurgency and Counterinsurgency. American Military Dilemmas and Doctrinal Proposals, Airpower Research Institute, Report No. AU-ARI-CP-88-1, Maxwell Air Force Base, AL: Air University Press, March 1988.
16. Shultz, Richard H. Jr. "Low-Intensity Conflict and US Policy: Regional Threats, Soviet Involvement, and the American Response," in Low-Intensity Conflict and Modern Technology, David J. Dean, ed., Maxwell Air Force Base, AL: Air University Press, 1986, pp. 9-32.
17. Klare, Michael T. "Blueprint for Endless Intervention," The Nation, August 6, 1988, pp. 1, 95-98.
18. Butler, Major Bradley L. Planning Considerations for the Combat Employment of Air Power in Peacetime Contingency Operations, Langley Air Force Base, VA: Army - Air Force Center for Low-Intensity Conflict, May 1988.
19. Dixon, Colonel Howard Lee. Low Intensity Conflict Overview. Definitions, and Policy Concerns, Langley Air Force Base, VA: Army - Air Force Center for Low-Intensity Conflict, June 1989.
20. Filiberti, Major Edward J. "Defining the Spectrum of Conflict," Military Review, April 1988, pp. 34-43.
21. Ayers, Major Charles M. (et al). "Operational Considerations for Military Involvement in Low Intensity Conflict," Langley Air Force Base, VA: Army - Air Force Center for Low-Intensity Conflict, June 1987.
22. U.S. Department of the Army, and Department of the Air Force. Military Operations in Low-Intensity Conflict, FM 100-20/AFM 2-XY (Draft), 27 July 1988.
23. Canan, James W. "Global Power From American Shores," Air Force Magazine, October 1989, pp. 38-44.
24. Mets, David R. Land-Based Air Power in Third World Crises, Maxwell Air Force Base, AL: Air University Press, July 1986.
25. U.S., Office of the Chairman, The Joint Chiefs of Staff, Joint Military Net Assessment 1989, Washington: U.S. Government Printing Office, 18 May 1989.



26. Alterman, Stanley B. "Long-Range Airpower and Emerging Technologies," Defense/84, July 1984, pp. 19-24.
27. Sarkesian, Sam C. and Scully, William L. (eds). U.S. Policy and Low-Intensity Conflict, New Brunswick (U.S.A.): Transaction Books, 1981.
28. Sarkesian, Sam C. "The Myth of US Capability in Unconventional Conflicts," Military Review, Vol. LXVIII, No. 9, September 1988, pp. 2-17.
29. Metz, Steven. "Foundation for a Low-Intensity Conflict Strategy," Comparative Strategy, Vol. 8, No. 1, 1989, pp. 265-273.
30. Chain, General John T. Jr. "Strategic Bombers in Conventional Warfare," Strategic Review, Vol. XVI, No. 2, Spring 1988, pp. 23-32.
31. Bodenheimer, Colonel Clyde E. Impact of New Technology Weapons on SAC Conventional Air Operations, Airpower Research Institute, Report No. AU-ARI-83-4, Maxwell Air Force Base, AL: Air University Press, June 1983.
32. Frisby, Lieutenant Colonel John E., and Myers, Major Grover E. Strategic Forces in Transition: A Doctrine for Indivisible Aerospace Application, Airpower Research Institute, Report No. AU-ARI-85-2, Maxwell Air Force Base, AL: Air University Press, June 1985.
33. Hosmer, Stephen T., and Kent, Glenn A. The Military and Political Potential of Conventionally Armed Heavy Bombers, Rand Report R-3508-AF, Rand Corporation: Santa Monica, CA, August 1987.
34. McCain, John S. III. "Proliferation in the 1990s: Implications for U.S. Policy and Force Planning," Strategic Review, Vol. XVII, No. 3, Summer 1989, pp. 9-20.
35. Kohout, Colonel John J. "Long Range Airpower in Low Intensity Conflict," paper presented at the 9th Air University Airpower Symposium, Air War College, Maxwell Air Force Base, AL, 11-13 March 1985.
36. Myers, Major G.E. "The Swords of Armageddon: A Discussion of the Strategic Mystique," Airpower Research Institute, Report No. AU-ARI-87-1, Maxwell Air Force Base, AL, January 1987.

37. Long, Lieutenant Colonel Francis J. "Do Strategic Bombers Have a Role in Conflict Short of General War?" A staff study report submitted to the faculty of the Air War College, Report No. 3082, Maxwell Air Force Base, AL, January 1966.
38. Chain, General John T. Jr. "A Rejoinder to 'Conventional Strategic Air Warfare'," Strategic Review, Vol. XVII, No. 2, Spring 1989, pp. 97-98.
39. Kaufmann, William W., and Korb, Lawrence J. The 1990 Defense Budget, Studies in Defense Policy Series, Washington: The Brookings Institute, 1989.
40. Mecham, Michael. "East Bloc Political Changes Add to West's Budget Battles," Aviation Week & Space Technology, November 20, 1989, pp.28-31.
41. U.S. Department of the Air Force. Office of the Secretary of the Air Force. Air Force Policy Letter for Commanders, (AFRP 190-1), Kelly Air Force Base, TX, October 1989.
42. Berlan, Major Gregory J. Forward Offense Preparing the B-52 for Conventional Warfare, Airpower Research Institute, Report No. AU-ARI-88-6, Maxwell Air Force Base, AL, February 1989.
43. Morgan, J.G., and Stavridis, J.G. "Examining Risk in U.S. Military Operations," Comparative Strategy, Vol. 8, No. 1, 1989, pp. 241-248.
44. Ropelewski, Robert R. "SAC Explores Conventional Role for Older Bombers," Armed Forces Journal International, September 1989, p. 20.
45. Smith, Brigadier General Richard D. "Modernization Through Modification," Air Force Magazine, October 1987, pp. 64-68.
46. Troyano, Thomas S. "Strategic Bomber Modernization and START: An Analytical Framework," Strategic Review, Vol. XVII, No. 3. Summer 1989, pp. 46-55.
47. Ropelewski, Robert R. "Target Mobility, Arms Control Challenge SAC Modernization," Armed Forces Journal International, September 1989, pp. 67-72.
48. Wolkomir, Richard. "The Once and Future Bomber," Air & Space Smithsonian, February/March 1989, pp. 68-78.

49. Morrocco, John D. "Air Force Approves SAC Plan to Modify B-52G Bombers for Conventional Role," Aviation Week & Space Technology, July 4, 1988, pp. 47-48.
50. Karle, Lieutenant Colonel D.D., and Hall, Lieutenant Colonel J.B. "Integrating Strategic and Tactical Airpower in Conventional Warfare B-52 Employment," A Research Report submitted to the Air War College faculty, Maxwell Air Force Base, AL, May 1988.
51. Young, Susan H.H., and Taylor, John W.R. (ed.), "Gallery of USAF Weapons," Air Force Magazine, May 1989, pp. 133-150.
52. Harrell, Colonel A. Lee, "Weaseling in the BUFF," Airpower Journal, (AFRP 50-2), Spring 1989, pp.36-49.
53. Morrocco, John D. "Defense Dept. Grapples With Massive Spending Cuts," Aviation Week & Space Technology, November 27, 1989, pp. 16-18.
54. U.S. Department of the Air Force. Air Force Cost Center. Operating and Support Division. "Systematic Approach to Better Long-Range Estimating (SABLE) Model," SABLE model output report, 22 August 1989.
55. Morrocco, John D. "Defense Cuts May Force Trade-off Between New Systems and Upgrades," Aviation Week & Space Technology, December 4, 1989, pp. 22-23.
56. Walte, Juan J. "Armed Forces Set To Clip Their Wings," USA Today, December 12, 1989, p. 6A.