

THE EFFECTS OF LEADERSHIP ON CARRIER AIR WING SIXTEEN'S LOSS
RATES DURING OPERATION ROLLING THUNDER, 1965-1968

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ABSTRACT

THE EFFECTS OF LEADERSHIP ON CARRIER AIR WING SIXTEEN'S LOSS RATE DURING OPERATION ROLLING THUNDER, 1965-1968, by LCDR Peter R. Fey, 150 pages.

During Operation Rolling Thunder, Carrier Air Wing 16 suffered the highest loss rates of any unit in naval aviation during the Vietnam conflict. During three separate cruises on the USS *Oriskany* (CVA-34), the air wing was continually plagued with high losses. The worst losses were taken during the June 1967 through January 1968 deployment. During 122 days of combat the USS *Oriskany* lost one-half the airplanes assigned to her and one-third of her pilots. Twenty aviators were killed or missing in action, seven taken prisoner of war, and thirty-nine aircraft lost. This thesis will examine the factors that led to Carrier Air Wing 16's extreme loss rates. It will first provide a background of the Rolling Thunder campaign. This thesis will then discuss the divide between America's strategic goals and the operational level goals, and the resulting affects on the United States Navy. Next it will examine the underlying reasons for attrition at the tactical level. The thesis will then examine the leadership in the air wing and analyze what role, if any, it played in the losses. This study will conclude with the resultant morale issues arising from these experiences and implications for a professional military dependant on volunteers.

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ACRONYMS

AAA	Anti-Aircraft Artillery
AGM	Air-to-Ground Missile
AI	Aviation Intelligence Officer
BARCAP	Barrier Combat Air Patrol
CAG	Commander Air Group
CAP	Combat Air Patrol
CARGRU	Carrier Battle Group staff
CINCPAC	Commander in Chief Pacific
CINCPACFLT	Commander in Chief Pacific Fleet
CNO	Chief of Naval Operations
CO	Commanding Officer
COMNAVAIRPAC	Commander Naval Air Forces Pacific
CTF	Carrier Task Force
CVW	Carrier Air Wing
ECM	Electronic countermeasures
GCI	Ground Controlled Intercept
JCS	Joint Chiefs of Staff
MACV	Military Assistance Command Vietnam
PACAF	Pacific Air Force
POL	Petroleum-oil-lubricants
RESCAP	Rescue Combat Air Patrol
ROE	Rules of Engagement
SAM	Surface-to-air missile

SAR	Search and Rescue
SEVENTHFLT	US Navy's Seventh fleet
TACAN	Tactical Air Navigation system
TARCAP	Target Combat Air Patrol
VPAF	Vietnamese Peoples Air Force
WESTPAC	Western Pacific
XO	Executive Officer

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CHAPTER 1

INTRODUCTION

Wars cannot be fought the same way bureaucrats haggle over apportionments. The toll of human life in battle does not lend itself to cost/benefit analysis. One's plan of action on the international chessboard cannot be built on compromise businesslike decisions among factions. To design a country's strategy along a middle course for bureaucratic reasons is to aim at what Winston Churchill has called the bull's eye of disaster.

James Stockdale, *A Vietnam Experience, Ten Years of Reflection*

The assassination of President John F. Kennedy in November 1963 left President Lyndon Johnson in a dilemma. He was committed to building his domestic policy and his "Great Society," but found himself burdened with inherited foreign policy issues in the fight against communism. Witness to America's success behind President Kennedy's leadership during the Cuban Missile Crisis, Johnson did not want to be seen as the President that permitted communism to take over in South Vietnam--as he believed President Truman had done in China in 1949 and had nearly done in South Korea. By 1967, American involvement in Vietnam divided the country: there were those that supported the war and those who fervently opposed it. Opposition to the war led to a large antiwar movement characterized by protests, violence, and, when coupled with racial tensions of the emerging civil rights movement, riots.

The social, political and financial cost of the war was devastating. 58,000 Americans gave their lives. Untold millions of Vietnamese, in both the North and South, perished, not to mention the countless numbers of Laotians and Cambodians killed as the war spread to their countries. The financial cost to the United States was appalling. Involvement in Vietnam cost the United States \$150 billion, prevented President

Johnson's Great Society from reaching its potential, and destroyed his political career. Perhaps the largest cost came in the loss and disillusionment of a generation that went to Vietnam to fight for their country, in some cases giving their lives in a war of limited aim and for a country that did not want them there. The Vietnam War continues to influence American thoughts and actions, from politics to foreign policy, including military action and civilian-military relations, although it ended more than thirty years ago.

Operation Rolling Thunder, the ill fated bombing campaign against North Vietnam, is emblematic of the divisiveness surrounding the American experience in Vietnam. President Johnson's policy of graduated response and the severe restrictions placed on the air war resulted in the division of America's strategic goals and the operational level goals of the military. As part of the United States Navy's overall effort in Vietnam, the USS *Oriskany* (CVA-34) and her embarked Carrier Air Wing 16 (CVW-16) made three deployments to Vietnam between April 1965 and January 1968. During these deployments, the air wing suffered extremely heavy losses while participating in Operation Rolling Thunder. During 1965, CVW-16 spent 141 days on the line and lost twenty-three aircraft. During 1966, the air wing lost twenty-five aircraft during a foreshortened eighty-seven day line period. This cruise was cut short due to a tragic fire on 26 October 1966 that killed forty-four men, including twenty-four aviators and the air wing commander. A shortage of aircraft carriers meant the *Oriskany* would have only six months for repairs before deploying again in 1967. CVW-16's worst losses were taken during the June 1967-January 1968 deployment when the air wing lost over half of its assigned aircraft and over a third of its assigned pilots. The *Oriskany's* losses

accounted for almost 20 percent of the Navy's total losses during 1967, the highest loss rate of any carrier air wing during the Vietnam War.

The significant losses experienced by CVW-16 while flying from the *Oriskany* can be attributed to several factors. Foremost was the dichotomy between President Johnson's strategic goals and the operational goals faced by pilots flying missions. Pilots found themselves fighting a total war against the North Vietnamese, who were also waging total war, while American leadership in Washington D.C. sought to fight the war in limited terms. Second, the deployments made by the *Oriskany* coincided with the most dangerous phases of Operation Rolling Thunder; the Johnson administration's gradual application of force meant that each deployment made by the *Oriskany* arrived as bombing restrictions were lifted. As a result the *Oriskany's* pilots bore the burden as they ventured into heavily defended areas previously declared off limits. These deployments also coincided with the summer monsoons, a weather pattern which provided the clearest skies over North Vietnam. This was the best time frame for flight operations, and the numbers of sorties flown by the *Oriskany* increased dramatically. Finally, Air Wing 16 had aggressive leaders. As professional officers, they had a vested interest in a successful outcome of the war. These leaders realized that they were indeed making a difference despite Washington's limited goals and that the lifting of each restriction meant another chance to strike North Vietnam and possibly bring about a quicker ending to the war.

This thesis will analyze Carrier Air Wing 16's heavy losses during the three years of Operation Rolling Thunder. Chapter 1 will first provide a background of the Rolling Thunder campaign. Chapter 2 will discuss the divide between America's strategic goals and the operational level goals, and the affects on the United States Navy. Chapter 3 will

examine the underlying reasons for attrition at the tactical level. Chapter 4 will then examine the leadership in the air wing and analyze what role, if any it played in causing or limiting the losses. Chapter 5 will conclude with the resultant morale issues arising from these experiences and implications for a professional military dependant on volunteers.

Operation Rolling Thunder

Throughout the American involvement in Vietnam, the United States was divided about how to proceed. President Johnson relied heavily on the advice of his divided civilian advisors, including Secretary of Defense Robert S. McNamara and his staff of “whiz kids.”¹ This dependence created a rift between the military advisors and the administration that hindered military operations throughout Vietnam. Secretary of Defense McNamara sold Johnson on the use of force in gradual responses to show American resolve in the face of communist aggression and to punish North Vietnam for its continued support of the insurgency in South Vietnam. The administration’s policy of gradualism can be traced to a series of Pentagon papers from March 1964.²

The Joint Chiefs of Staff, in a memo to Secretary McNamara, presented two courses of action for ending the conflict in Southeast Asia that did not involve a possible war with Communist China. The first option was a small scale, border crossing operation by South Vietnamese forces against the Ho Chi Minh trail. The second option would be pressure against North Vietnam itself, primarily through air operations. These could be sudden or heavy air strikes that demonstrated American resolve to halt North Vietnamese aggression, or they could be gradual attacks, at first made by the South Vietnamese Air Force, on an increasing scale of severity. Secretary McNamara recommended the second

option to President Johnson, which became a campaign of overt naval and military pressure against North Vietnam.³ President Johnson approved this recommendation on 17 March 1964.

Congress passed the Tonkin Gulf Resolution following the Tonkin Gulf incidents of August 1964. The resolution gave President Johnson power to use military force in any way he saw fit against communist aggression in Vietnam. While Johnson's goals for American involvement in Southeast Asia had clear political purpose, the strategy of gradual response meant that the United States military would never be allowed to fight the war on terms that would allow them to succeed. McNamara's approach turned out to be more costly than the traditional method of choosing a political goal, adopting a strategy, and then granting the authority and responsibility to the military to reach that goal.⁴ Following a Viet Cong attack against United States military advisors in Pleiku in February 1965, the United States retaliated with a series of air strikes known as Flaming Dart I. The Viet Cong responded in kind by blowing up a hotel in Qui Nhon, South Vietnam. America then retaliated with Flaming Dart II, and more air strikes against North Vietnam. Though important in McNamara's idea of graduated response, Flaming Dart I and II proved to be inconsequential at best, as communist forces in South Vietnam continued their insurgency with little concern for American reprisal.⁵

In an effort to convince the North Vietnamese government to abandon its support of the insurgency in South Vietnam, President Johnson began a new bombing campaign in March 1965, known as Operation Rolling Thunder. Lasting from 2 March 1965 until 1 November 1968, Rolling Thunder was the longest bombing campaign in United States history. It involved tactical aviation assets from the 7th Air Force in Thailand and South

Vietnam, as well as aircraft from 7th Fleet and Marine Corps assets. The campaign was marred by disputes between senior military leaders and the civilian administration from the outset. Military leaders argued for decisive strikes in order to isolate North Vietnam and to destroy their production capabilities and transportation systems. President Johnson and Secretary McNamara sought the graduated use of force, choosing a cycle of bombing halts followed by escalation in an effort to persuade the North Vietnamese to negotiate for peace with the United States and South Vietnam. During the three years of Rolling Thunder, Johnson and McNamara instituted seven bombing halts (see appendix D).⁶

The three basic objectives of Operation Rolling Thunder under the Johnson administration were: (1) strategically deter North Vietnam from supporting the insurgency in South Vietnam; (2) raise the morale of military and political elites in South Vietnam; (3) interdict North Vietnam's support of the communist insurgency in the South. Johnson and his staff continually sought a middle ground that would demonstrate American resolve without raising the ire of the international community. Ironically, by seeking this middle ground, the administration guaranteed that Rolling Thunder would fail to meet any of its objectives.

The Johnson administration also insisted on unprecedented control of the air war. Rolling Thunder was controlled down to a tactical level by Johnson and his closest staff, who dictated types and numbers of aircraft, the ordnance carried, and even their flight profiles. President Johnson was once quoted, saying, "They can't even bomb an outhouse without my approval."⁷ This planning was all done during the administration's Tuesday lunch meetings. Through 1967, no professional military men, not even the Chairman of the Joint Chiefs of Staff (JCS), were allowed to attend these meetings and were thus left

out of the target selection process. As the Commander In Chief of Pacific forces (CINCPAC) said, “The omission, whether by deliberate intent or with the indifferent acquiescence of Secretary McNamara, was in my view a grave and flagrant example of his [McNamara’s] persistent refusal to accept the civilian-military partnership in the conduct of our military operations.”⁸

Campaign targeting and planning suffered as a result of Secretary McNamara’s highhanded behavior. There was no military logic to the targets aircrews were permitted to strike. Aviators often found themselves repeatedly tasked to bomb targets already destroyed, while other important targets, such as SAM sites, airfields, and the ports of Haiphong, remained off limits. President Johnson and his Tuesday lunch group often had little idea of the capabilities of the military equipment or of combat realities, such as the weather, over North Vietnam. Aircrews were given at most two weeks to destroy targets placed on the strike list before those targets were removed. Monsoon weather prevented many targets from being struck, while at other times, targets remained on the list long after they had been struck and destroyed. Serious delays were often experienced when aviators asked for approval to strike targets because the JCS could not get an answer from the Tuesday lunch club. By 1967, instead of asking for permission to attack, CINCPAC began sending messages to the JCS stating that, unless told otherwise, the targets listed in the message would be attacked within twenty-four hours.⁹

The air war in Southeast Asia was further hampered by command and control arrangements that were driven by political and diplomatic concerns as well as inter-service squabbling. It created a situation in which five separate air wars were fought: one in South Vietnam; one in Cambodia; one in Laos; one in North Vietnam; and one to

interdict supplies along the Ho Chi Minh Trail in southern Laos. Each campaign had its own command and control arrangement and its own restrictions. The Military Assistance Command, Vietnam (MACV) controlled all sorties in South Vietnam, while the Ambassadors to Cambodia and Laos ran the air campaigns in their respective countries. The campaign against North Vietnam was controlled by CINPAC, who was forced to continuously justify the need for an air campaign against the North.¹⁰ Admiral U.S. Grant Sharp complained that:

Air assets programmed for attacks in the North would be diverted to satisfy the needs in the South. . . . Any request by Westmoreland for more airpower always got a sympathetic ear from the Secretary of Defense, who was determined that all in-country requirements would be satisfied, no matter how inflated they were, before we used any effort against North Vietnam. His priorities for air strikes were (1) South Vietnam, (2) Laos, and (3) North Vietnam--and North Vietnam was a very poor third.¹¹

McNamara's distrust of military leaders was compounded by the lack of appreciation for what Rolling Thunder was accomplishing, as well as his preoccupation with the growing ground campaign in South Vietnam.

In an effort to deal with Washington's micromanagement and the parochialism of the services, CINCPAC developed a way to divide North Vietnam and keep thousands of aircraft out of each others way. With McNamara's approval, CINCPAC divided North Vietnam into six areas called Route Packages and then developed a complicated set of Rules of Engagement (ROE) for each Route Package. USAF aircraft were restricted to Route Packages I, V and VIA, while Navy aircraft were to attack targets in Route Packages II, III, IV and VIB (see figure 1). MACV controlled all sorties into Route Package I as an extension of the ground war in South Vietnam. Any target in Route Package VI required White House authorization to attack. Furthermore, Hanoi and

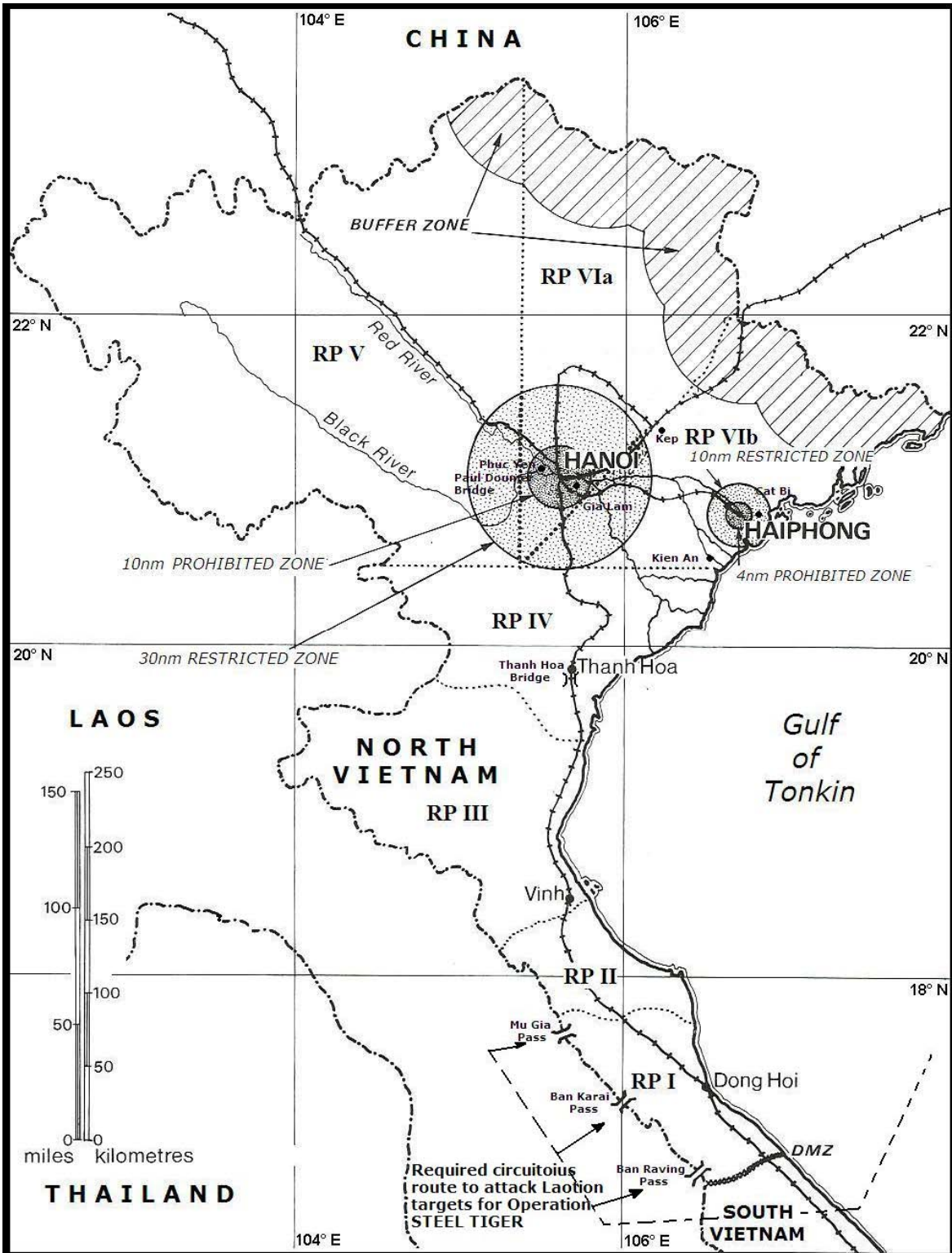


Figure 1. Route Packages

Haiphong were declared off limits. Hanoi was given a ten-mile prohibited zone, surrounded by a thirty-mile restricted zone that pilots were forbidden to enter. Haiphong received similar treatment with a four-nautical-mile prohibited zone and a ten-nautical-mile restricted zone, (see figure 2). Thus, the most valuable targets were out of reach for the duration of Rolling Thunder.¹²

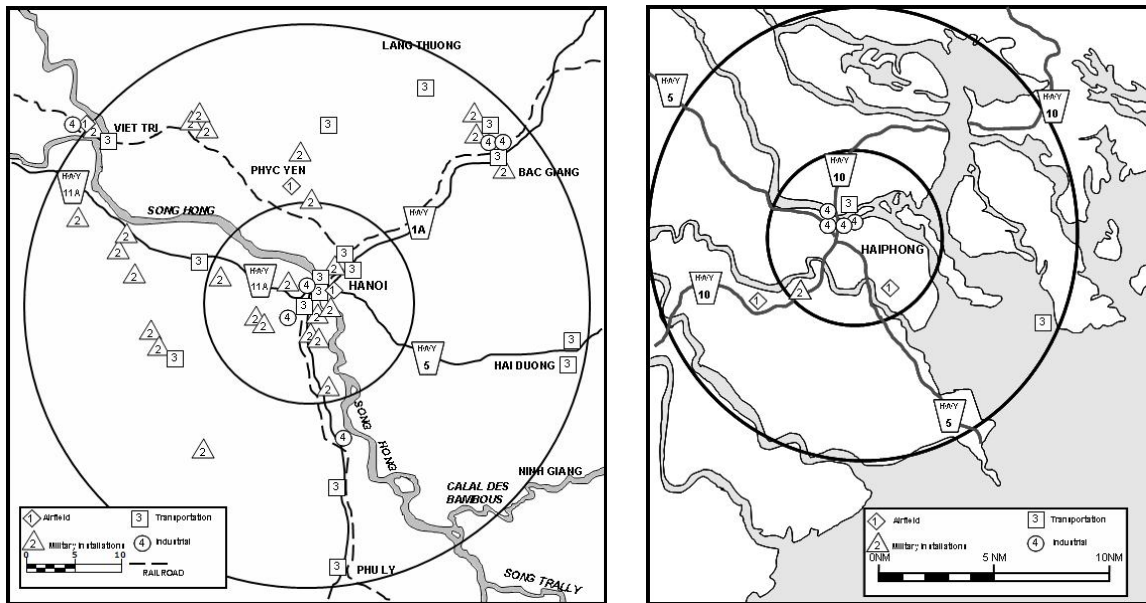


Figure 2. Prohibited and Restricted Areas

Rolling Thunder went through five phases (see appendix D). During Phase I, from March to June 1965, a variety of targets were struck in an attempt to persuade North Vietnam to negotiate for peace. The air strikes served little purpose, other than to harden the resolve of North Vietnam and to solidify the sanctity of their cause. Most importantly, it led to the creation of the world's most complex and lethal air defense networks.

Phase II from July 1965 to January 1966 was primarily an interdiction campaign aimed at roads, bridges, boats, and railroads. These attacks destroyed an estimated 4,600 trucks, 4,700 boats, and 800 railroad cars. At the urging of Admiral U. S. Grant Sharp, CINCPAC, the focus of Rolling Thunder shifted from interdiction to petroleum products. Admiral Sharp realized that the interdiction campaign was not achieving the desired results and believed that by focusing the campaign on energy resources, North Vietnam might be forced to negotiate for peace.¹³

Phase III from January to October 1966, focused on North Vietnam's petroleum, oil, and lubricant (POL) resources. Before this phase began, North Vietnam required only 32,000 tons of oil a year to supply their needs. By the time Rolling Thunder began to target POL resources, North Vietnam had 60,000 tons of POL stocks in reserve.¹⁴ While the attacks destroyed an estimated 70 percent of the North Vietnamese supply, the North dispersed the remaining stock in fifty-five gallon barrels throughout the country. This proved more than adequate to supply the infantry and guerrilla forces fighting in South Vietnam and did little to affect the war in South Vietnam.¹⁵

Phase IV from October 1966 to May 1967, concentrated the campaign's efforts on the industry and power-generating capabilities of North Vietnam. For the first time, targets in Hanoi were struck, but as with Phase III the new tactics failed to have much impact on a non-industrialized country. Because North Vietnam's ports still remained off limits, the strikes did not impede North Vietnamese ability to receive and distribute supplies destined for South Vietnam.¹⁶

Phase V, the final phase, from May 1967 to October 1968, concentrated on isolating Hanoi from Haiphong, and both cities from the remainder of the country, as well

as the destruction of remaining industrial infrastructure. United States aircraft averaged over 13,000 sorties a month and destroyed over 5,600 trucks, 2,500 rail cars, and 11,500 boats during this final phase of Rolling Thunder. As during earlier phases, the North Vietnamese air defense network grew. By 1967, pilots confronted the most comprehensive air defense network in the world. North Vietnam fired over 25,000 tons of AAA ammunition from 10,000 anti-aircraft guns and hundreds of missiles from over twenty-five SAM battalions during any given month of 1967.¹⁷

In January 1968, Rolling Thunder was interrupted by the Tet Offensive. Although Tet was a military defeat for the North Vietnamese and the communist forces in South Vietnam, the Tet Offensive was the turning point of the war. The offensive was seen as a military disaster in the United States, as the American public with household access to television news watched shocking images of the fighting in Saigon, Hue and the siege of Khe Sanh. Because the public had been repeatedly assured that the war was almost over, the Tet Offensive gave them cause to question Johnson's credibility. Growing frustration with the war and its rising cost in American lives resulted in President Johnson's loss to Eugene McCarthy, an anti-war candidate, in several 1968 Democratic primaries. It ultimately led to his decision to withdraw from the 1968 Presidential election, his call for a halt of all bombing of North Vietnam above the Nineteenth Parallel, and his pursuit of peace negotiations with North Vietnam.¹⁸

From March 1965, until November 1968, Air Force and Navy aircraft flew hundreds of thousands of sorties over North Vietnam, (not including the hundreds of thousands of sorties flown during covert operations in Laos and Cambodia). In doing so, American pilots dropped 643,000 tons of bombs on North Vietnam.¹⁹ In doing so, they

destroyed 70 percent of North Vietnam's POL storage capacity and 60 percent of its power-generation sources.²⁰ Despite this damage, Rolling Thunder failed to achieve any of its stated objectives as decisive targets in areas around Hanoi and Haiphong were placed off-limits by United States policy as a result of the limited goals sought by Johnson. As put by one naval aviator, "At times it seemed as if we were trying to see how much ordnance we could drop on North Vietnam without disturbing the country's way of life."²¹

All of this came at great cost to the United States, both in dollars spent and lives lost. During 1965-68 air operations throughout Southeast Asia consumed 47 percent of all American war expenditures. In 1965, the CIA estimated that Rolling Thunder cost the United States \$6.60 to render \$1.00 worth of damage, and \$9.60 a year later. It is estimated that the \$600 million of damage inflicted by Rolling Thunder was dwarfed by the \$6 billion it cost to replace all the aircraft lost during the campaign.²²

The interdiction campaign failed to stem the flow of supplies to South Vietnam, and no peace agreement was signed. When Rolling Thunder began, farmers made up 80 percent of North Vietnam's laborers, and agriculture accounted for nearly half of the gross national product, estimated at 1.5 billion dollars.²³ Destroying North Vietnam's oil supplies meant little to a nation that relied on bicycles for transportation and depended on water buffalo for farming. The Johnson administration never came to grips with these facts and wasted American lives, aircraft, and money on an air campaign that had little impact on the ability of North Vietnam to support the war in South Vietnam.

Rules of Engagement

The American efforts during Rolling Thunder were hindered by restrictive Rules of Engagement (ROE) imposed by the Johnson administration in Washington, D. C. The underlying theme for these rules of engagement was an attempt to minimize civilian casualties while avoiding confrontation with the Soviets and Chinese. In effect, these rules minimized destruction to North Vietnam's most important targets, while placing undo burden on the military commanders and the aircrews flying combat missions over North Vietnam. Aviators were required to fly and fight in a manner contrary to common sense, training, and their published doctrine. The self-imposed and restrictive rules prevented air power from reaching its maximum potential during Rolling Thunder. Early in the campaign, pilots began to refer to their efforts in the air over North Vietnam, as "fighting with one hand tied behind their backs."²⁴

The ROE changed frequently creating further confusion for pilots flying over North Vietnam. These changes often coincided with the two-week phases of Rolling Thunder (see appendix D). Because the ROE varied in each Route Package, and changed every two weeks it was difficult for pilots to know the current restrictions and keep track in the heat of combat.

Under the restrictions, targeting was mainly limited to lines of communication such as roads, railways, and canals, as well as POL storage facilities. The main target along these lines of communication was trucks. However under the approved ROE, only military trucks were authorized targets, and they could only be hit when a safe distance from villages. Thus American pilots were expected to differentiate military trucks from civilian trucks while flying 3,000 feet up and at 500 nautical miles per hour. That pilots

were expected to make this distinction in a country where the entire nation was mobilized for war is an example of the extreme restrictions brought on by the ROE. Everything that moved, from bicycles to water buffalo and certainly every truck, was a military target.²⁵

SAM sites are another example of the excessive restrictions placed on pilots due to the rules of engagement. The Johnson administration knew that Soviet technicians were installing, training, and in some cases, operating SAM sites. McNamara's concern about harming these advisors and the Soviet reaction it might entail led him to place the sites off limits until they actually engaged American aircraft. At one point during the early stages of the air war, Assistant Secretary of Defense John McNaughton ridiculed a request to strike a SAM site under construction. "You don't think the North Vietnamese are going to use them!" he scoffed. "Putting them in is just a political ploy by the Russians to appease Hanoi." The administration's theory was that if the United States did not bomb the SAM sites, it would send a signal to the North Vietnamese, who it was thought, would act in kind.²⁶ One commanding officer watched the SAM site being built that eventually shot him down.²⁷ During Rolling Thunder, of the more than 100 SAM sites in and around Hanoi, up to 40 percent of them remained off limits because of their proximity to the civilian populace.²⁸

Although the interdiction of supplies that supported the insurgency in South Vietnam was a stated objective of Rolling Thunder, the port facility of Haiphong remained off limits. The presence of Soviet and Chinese ships and the potential communist reaction if they were struck was too great a risk for McNamara. Ships anchored off shore were also off limits, even if they were visibly offloading munitions. Barges ferrying supplies to the piers were viable targets once they were 600 meters from

the ship; however, attacking these barges was not always a possibility. Most communist flagged ships had AAA pieces mounted on them, with which they were free to fire, with little fear of reprisal.²⁹ This meant that pilots then had to accomplish the much harder task of interdicting supplies once they had been offloaded and disbursed for storage or shipment south. In fact, during October 1967, after the lines of communications extending from Haiphong were cut, so many supplies were being offloaded that they began to pile up on the docks in Haiphong. It was estimated that there was over 200,000 tons of supplies stacked in the open, however pilots were unable to destroy them due to the restrictions and the North Vietnamese were able to disburse them for transshipment south.³⁰

Perhaps the most absurd example of the restrictions placed on aircrew was the plan for Rolling Thunder 50 as proposed to Secretary McNamara by the Joint Chiefs of Staff in March 1966 (see appendix D).³¹ The plan proposed strikes against two types of targets: the entire POL system and major industries in the Northeast portion of North Vietnam. Authority was given to attack eleven specific industrial targets, and planning began between 7th Air Force and 7th Fleet assets for strikes against the POL system in late April 1966.

Though planned for late April, the strikes were delayed. The reason for this delay was uncertainty on McNamara's part that only the eleven targets would be hit, and that no collateral damage on other targets such as third country shipping or civilians would occur. A search was conducted for ways to minimize these perceived risks, and after two months of consultation and analysis, McNamara finally ordered the attacks. Secretary McNamara himself directed that special care be taken to avoid damaging Russian,

Chinese or Communist Bloc shipping in Haiphong. Special care was also to be taken to minimize civilian casualties. He directed that the most experienced pilots should be used, that good weather should be selected in order to promote visual accuracy, and that the axis of attack should be carefully considered.³² The finishing touch came when the impending raids were leaked to the media. Newspaper stories written by *Wall Street Journal* correspondent Philip Geyelin appeared throughout the United States which revealed that North Vietnam's POL system was going to be struck soon and gave vital strike details.³³ After postponing the raids for yet another week, the POL system was finally struck on 29 June 1966, more than a year after Rolling Thunder had begun.

In the late 1960s, comedian Bill Cosby had a routine that parodied the rules-of-engagement in use over North Vietnam. Speculating on the presentation of Revolutionary war tactics, Cosby cast the opposing generals as team captains receiving pregame instructions from the referee.

Cap'n Washington meet Cap'n Cornwallis. Cap'n Cornwallis meet Cap'n Washington. Cap'n Cornwallis, your team gets to wear bright red coats, stand in nice straight lines, and march around in the open. Cap'n Washington, your team gets to hide behind trees, shoot from behind rocks, and run away if the red coats get too close. Good luck to both of you.³⁴

Whether intentional or not, his routine provided a good analogy of how the United States conducted the air war over North Vietnam. It is convenient and easy to blame President Johnson and Secretary McNamara for the failure of Operation Rolling Thunder and airpower. However, part of the blame also lies on service leadership that continually told government leaders that they could achieve results against a country that presented a poor target for a strategic bombing campaign. While the successes and failures of airpower in Vietnam are still debated, the fact remains that Operation Rolling Thunder failed to meet

its objectives. By seeking to achieve a middle ground America ensured the eventual failure of Rolling Thunder. The gradual application of force and limited nature of the American commitment had the opposite effect, in that it actually strengthened North Vietnamese resolve.

¹Robert McNamara became the Secretary of Defense under President Kennedy after being the CEO of Ford Motor Company. Products of the Ivy league, Kennedy and McNamara filled their staff positions with what were known as the “whiz kids” or “the best and brightest,” essentially the educated elite of East Coast schools.

²*The Pentagon Papers*, Senator Gravel ed., IV (Boston: Beacon Press, 1971), 283.

³Frank Uhlig Jr., *Vietnam: The Naval Story* (Annapolis: Naval Institute Press, 1986), 68.

⁴Ibid.

⁵John Sherwood, *Afterburner: Naval Aviators and the Vietnam War* (New York: New York University Press, 2004), 8.

⁶Ibid., 10. Also read U.S. Grant Sharp’s book, *Strategy for Defeat*, for an account of the mindset of the administration at that time. Their reasons varied for each bombing pause, but often were an attempt to show good will to North Vietnam. In many cases the military was not told of the impending pauses until ordered to cease operations.

⁷John Nichols and Barrett Tillman, *On Yankee Station: The Naval Air War over North Vietnam* (Annapolis: Naval Institute Press, 1987), 16.

⁸U. S. Grant Sharp, *Strategy for Defeat* (California: Presidio Press, 1978), 87.

⁹Ibid., 127.

¹⁰Ibid., 114.

¹¹Ibid., 115.

¹²Sherwood, 10.

¹³Ibid., 12.

¹⁴*The Pentagon Papers*, Senator Gravel ed., IV (Boston: Beacon Press, 1971), 110.

¹⁵Sherwood, 12.

¹⁶Ibid.

¹⁷Ibid., 14.

¹⁸Ibid., 13.

¹⁹It is interesting to note that during the same time period, the United States dropped 2.2 million tons of bombs on South Vietnam--their supposed ally, and 2.1 million tons on Laos. The political message sent by this restraint was not missed by the North Vietnamese, and only furthered their resolve.

²⁰Sherwood, 13.

²¹John Nichols and Barrett Tillman, *On Yankee Station: The Naval Air War over Vietnam* 2 ed. (Annapolis: Naval Institute Press, 2001), 16.

²²*Pentagon Papers*, Gravel edition, IV. 138.

²³Zalin Grant, *Over The Beach: The Air War in Vietnam* (New York: W. W. Norton and Company, 1986), 19.

²⁴Ricky Drake, *The Rules of Defeat: The Impact of Aerial Rules of Engagement on USAF Operations in North Vietnam, 1965-1968* (Master's thesis, Air University, 1992), 21.

²⁵Nichols and Tillman, 28.

²⁶William C. Westmoreland, *A Soldier Reports* (New York: Doubleday and Company, 1976), 144-45.

²⁷Nichols and Tillman, 18. This was the comment made by Commander W. A. Frank, the Commanding Officer of VF-21 on the USS *Midway*, upon his repatriation in March 1973.

²⁸Ibid.

²⁹Ibid., 19.

³⁰Smith, 144.

³¹“Joint Chiefs Ask Raids on Haiphong Fuel, Oil,” *The Denver Post*, 13 March 1966, 1.

³²Frank Uhlig Jr., *Vietnam: The Naval Story* (Annapolis: Naval Institute Press, 1986), 37.

³³David Kraslow, “Bomb Decision ‘Leak’ Probed,” *The Denver Post*, 29 June 1966, 14.

³⁴Nichols and Tillman, 15.

CHAPTER 2

THE NUMBERS GAME

Max effort, of course, but within “guidelines” prescribed--no body punching, no uppercuts to the chin; only thrust and parry. Keep dancing, boys. When we were in the thick of it and losing Jim Dooley and Ralph Bisz and the rest, I could only think of some faceless policy maker saying “Gentlemen, we must accept two facts in this war: limited objectives and unlimited losses.” It was a time filled with excitement and personal pride--and filled with sadness. Thrills and pride fade with time, but the sadness lives on--missing squadromates, killed or captured. Fate. Luck. Providence. Timing.

John Miles, “The Saints of VA-163”

The American policy of communist containment in the early 1960s was based on previous American experiences in the Cold War. The stalemate that ended the Korean War, the 1962 Cuban missile crisis, and the Bay of Pigs invasion all influenced foreign policy and military strategy. While the United States was prepared for a potential nuclear showdown with the Soviet Union, it was unprepared for the sustained level of operations required to support the growing conflict in Vietnam. Operation Rolling Thunder began with a peacetime mindset stemming from President Johnson’s attempts to limit American involvement and preserve his cherished “Great Society.” It ended up being fought using accounting and control measures introduced by Secretary McNamara. It was a state of mind that permeated all aspects of the war--from the government’s budget process to the services themselves. As the war was fought on the cheap, serious shortages in personnel, ordnance, aircraft, and aircraft carriers affected the operations of every service. Most importantly it unnecessarily exposed pilots to the ever increasing North Vietnamese defenses.

War on the Cheap

No one was better qualified to attempt to make Johnson's "guns and butter" policy work than Secretary of Defense Robert McNamara. During his tenure, McNamara introduced quantifiable accounting and control methods into his management of the Pentagon. An accountant and a former chief executive officer of Ford Motor Company, his ability to reel off statistics on any relevant subject astonished subordinates and often left stenographers struggling to keep pace. Surrounded by his "whiz kids," McNamara kept close tabs on every facet of the sprawling bureaucracy in the Pentagon, using statistics and any other quantifiable data as means of evaluating success. This included the use of expected sortie rates for each of the different types of aircraft then in service. Thus in his search for a measure to evaluate Rolling Thunder, McNamara chose sortie rates because of the lack of any other perceived criteria.¹ In simplistic terms, the belief was that if the United States just flew enough sorties, and just dropped enough ordnance, the North Vietnamese would mathematically be forced to quit. It was this kind of thinking that also produced the "body counts" in the ground war in South Vietnam. Unfortunately, success or failure in war cannot be reduced to such simplistic terms, though this thought process continued to dominate American policy throughout Operation Rolling Thunder.

The greatest "war on the cheap" handicap to the Navy during Rolling Thunder was an insufficient number of aircraft carriers. The number of carriers committed to the war put an unforeseen strain on the Navy's carrier fleet. Initially, the war was fought by carriers from the Pacific fleet, but in mid-1965 Atlantic fleet carriers were sent to Southeast Asian waters and began participating in the war. The USS *Enterprise*, the

Navy's only nuclear powered aircraft carrier, was transferred to the Pacific fleet in 1966 to assist in the war effort. To further compensate for the shortage of carriers, the Navy extended the duration of line periods for aircraft carriers on Yankee station beyond the normal three weeks and the length of their deployments beyond the six month standard.² Carrier deployments during Rolling Thunder typically ranged from seven to ten months, though many went longer as the intensity of the war increased. A carrier would stay on the line from twenty-five to thirty-five days or longer, then pull back to the Philippines, Hong Kong, or Japan for port calls.

Standard procedure called for a carrier to complete four line periods prior to returning stateside, although exceptions were the rule.³ Turn around time between deployments, traditionally used for ship repairs and training, was also reduced. The long deployments and limited time for refit caused even more problems as most United States carriers dated from the end of World War II and were either reaching the end of their functional lives, or required a major overhaul.⁴ The high operational tempo of the war made the withdrawal of a carrier from combat impossible. Thus the carrier fleet was gradually worn down and World War II era carriers that should have been decommissioned continued to make cruises through the end of the war.⁵ Accidents also had an effect on the operations schedule. Three tragic fires on different carriers put ships out of action for prolonged periods. The disabling of carriers by fires increased the pressure on remaining ships and inadvertently amplified the degradation of the carrier fleet.

The hectic pace set by combat operations and frequent cruises took an immeasurable toll on the officers and enlisted personnel of the Pacific Fleet. By 1966, the

Navy was having severe personnel problems, especially with pilots and aircrews. The Navy did not limit the number of combat missions an aviator could fly over North Vietnam. Since a typical tour of duty in a squadron aboard the carrier could last three years, it was normal to make two or three cruises to the Tonkin Gulf during that time.⁶ Therefore, naval aviators typically flew sixty to seventy missions over North Vietnam during each cruise. Naval aviators found themselves flying during a single deployment, well in excess of the 100 missions that would send their Air Force counterparts home, and they could still reasonably expect to be sent back again during follow on assignments.⁷

By the fall of 1966, it was not unusual for a naval aviator to fly two missions over North Vietnam in a twelve-hour period. A Department of Defense investigation revealed naval aviators were flying an average of sixteen to twenty-two combat missions per month, with some pilots going as high as twenty-eight.⁸ In 1967, the situation became so serious that the Navy implemented a policy that aviators could have only two combat cruises in fourteen months. While this improved the situation somewhat, it still meant that during fourteen months a naval aviator could fly about 120 missions over North Vietnam, and then be called upon to repeat the same hectic pace again during their next tour of duty.⁹

In an attempt to increase the number of carrier qualified pilots, the Navy instituted programs to speed new aviators through the training pipeline. Slots in carrier aviation were opened up to “Must Pumps”-- naval aviation candidates pushed through training as fast as possible due to the shortage of pilots as the war intensified--and other elements of Naval Aviation.¹⁰ Though the Navy did try to train more pilots, the high standards

necessary for carrier aviation made it difficult to increase the number of pilots quickly. No matter how badly the Navy needed new aviators, each pilot had to be able to land on an aircraft carrier, generally acknowledged as the most difficult task in flying. The extra training required to land on a carrier made the Navy's training system slower to respond to the urgent need for replacements.¹¹

Because of their continued exposure to combat in the skies over North Vietnam, naval aviators became highly experienced. Regrettably, pilots with little experience, or who had flown helicopters or multi-engine propeller aircraft prior to converting to tactical jet aircraft quickly became cannon fodder in the heavily defended skies over North Vietnam.¹² Pilots that did survive the high loss rate were forced to fly even more combat sorties as the supply of new aviators diminished. The result was that the same cadre of pilots flew the missions over North Vietnam--and took the brunt of the losses. This combination of extensive combat losses with little hope of relief and the increasing unpopularity of the Vietnam War in the United States began to cause serious morale problems within naval aviation.¹³

The Navy also faced a shortage in aircraft, though less serious than the shortages affecting the carriers and personnel. Carrier aviation's combat and operational loss rates far exceeded pre-war estimates.¹⁴ By mid-1966, the loss rate for the A-4 Skyhawk was catching up with the Navy's planned procurement rate and budget. At the time, A-4 losses were averaging six per month. Department of Defense procurement contracts, which were still at peacetime levels, provided for only ten Skyhawks a month to both the Navy and Marine Corps in both the Atlantic and Pacific fleets.¹⁵ Short term relief was provided by depleting stateside and Atlantic Fleet commands of aircraft (in addition to

ordnance and sometimes aircrew) until production rates increased. Long term relief came as aircraft like the Skyhawk were phased out by newer and more capable aircraft such as the A-6 Intruder and A-7 Corsair.

As the war in Southeast Asia expanded, the massive amounts of ordnance being dropped on Laos, Cambodia, South Vietnam, and North Vietnam created a shortage of bombs by early 1966. Production of conventional “iron bombs” had virtually ceased as the military concentrated on nuclear weapons and more advanced ordnance such as the AGM-12 Bullpup, AGM-62 Walleye and the AGM-45 Shrike. Stockpiles of modern ordnance vanished, while the supply of World War II and Korean era surplus bombs dwindled. Although the month-long bombing pause in early 1966 (see appendix D) was opposed by the Joint Chiefs of Staff and Admiral U. S. Grant Sharp, it was used as an opportunity to refill ordnance stockpiles.

As the tempo of air operations steadily rose, military commanders in South Vietnam reported that the ordnance shortfall had created an “emergency situation” that forced them to cancel planned strike sorties. By mid-1966, there were inadequate inventories of thirteen different types of ordnance. Additionally, production in the United States was not keeping pace with rising demand, and there were delivery delays in getting munitions to Southeast Asia. In April 1966, newspapers across the United States began reporting that the Department of Defense had repurchased, for \$21.00 apiece, 5,570 bombs that had been sold to West Germany for scrap at \$1.70 each. Later the Defense Department admitted that in order to supply the war in Vietnam, the United States had repurchased 18,000 bombs sold to various nations. Throughout, Secretary McNamara denied there was a shortage of bombs. At one point, McNamara responded to media

questions that, “All this baloney about lack of bomb production is completely misleading.”¹⁶ (See figure 3.)

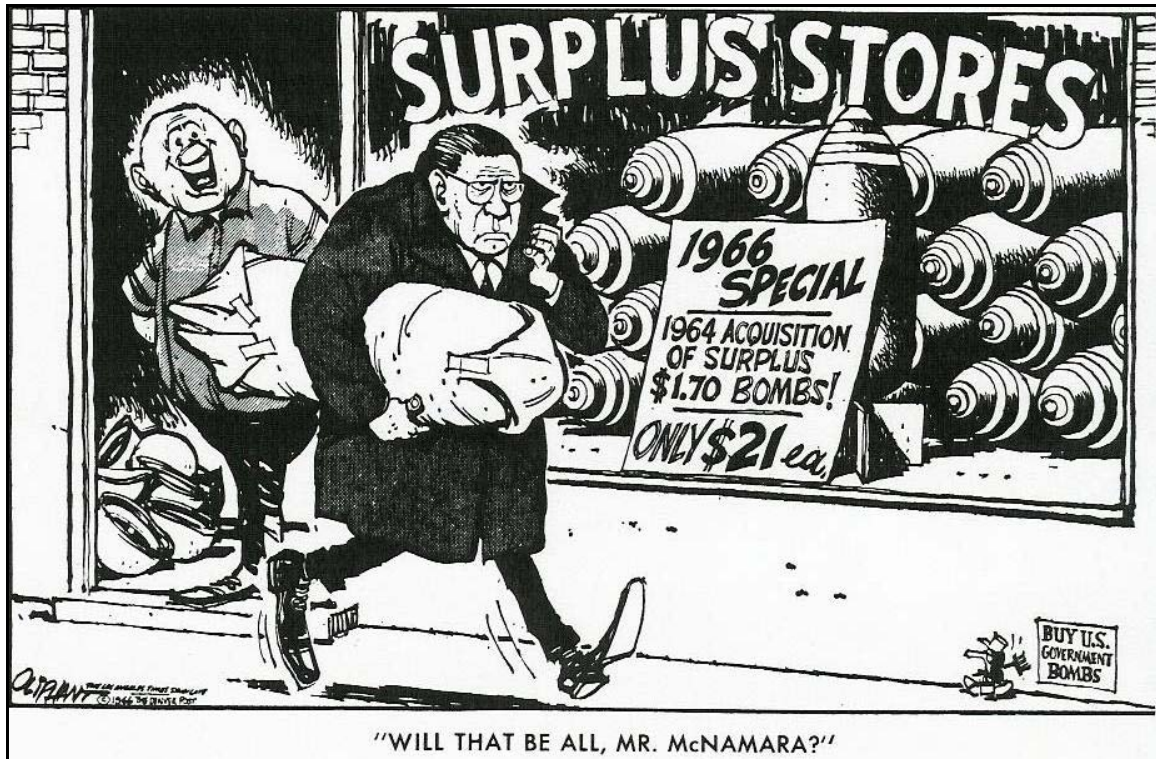


Figure 3. Political Cartoon from *The Denver Post*, 20 April 1966, Spoofing McNamara’s Response That Reports of a Bomb Shortage Were Baloney. Source: Pat Oliphant, Universal Press Syndicate.

In an effort to solve the ordnance shortage, two solutions were presented. President Johnson assigned “the highest national priority” to several types of munitions, including 250-pound, 500-pound, and 750-pound bombs, while Secretary McNamara had Admiral Sharp make tentative sortie allocations for the remainder of 1966. Each service was given ordnance loading limits for their available sorties. The Joint Chiefs consistently argued for full loading of aircraft to assure some degree of success during

strike missions. McNamara asserted that large ordnance loads were not warranted simply because aircraft could carry them.¹⁷ The pressure to maintain sortie rates with insufficient amounts of ordnance caused considerable concern among commanders and the pilots who were expected to risk their lives carrying less than optimal bomb loads. The shortage of bombs resulted in aircraft being sent on missions to high risk areas with one or two bombs instead of their full load. Though the bomb shortage lasted through the end of 1966, Carrier Air Wing 16 appears not to have been affected by it.¹⁸

That American carriers were at the end of a long supply chain further compounded the aforementioned problems. In the Tonkin Gulf, squadrons found the peacetime supply system unresponsive to their wartime needs. As the Executive Officer of VA-163, Wynn Foster was forced to buy green dye while the *Oriskany* was in port in Philippines so that the pilots of the air wing would not be forced to wear their standard issue orange flight suits on missions over North Vietnam. At the beginning of the war, the only flight suits in the supply system were orange or khaki, neither of which were suitable for combat missions over the jungles of Southeast Asia. As Foster commented, “In peacetime its high visibility was an advantage during search and rescue. But in combat it was a distinct disadvantage, crying ‘Hey, here I am!’ to a converging enemy force should a pilot have to bail out into a green jungle.”¹⁹

The tremendous pace of operations also meant that there was oftentimes an insufficient supply of parts to fix combat damaged aircraft. When combined with insufficient peacetime manning, the potential for accidental losses greatly increased.²⁰ In addition to performing all the daily maintenance requirements needed to keep complex jet aircraft flying, squadron maintenance personnel found themselves fixing scores of

aircraft damaged in combat. During the last two line periods of the 1967-1968 cruise, VA-163 sailors spent over 418 hours repairing just ten combat damaged Skyhawks--this does not include total maintenance hours required, nor all the losses incurred, as some damaged aircraft required repairs beyond the ability of squadron maintenance personnel.²¹ Squadrons often struggled to maintain airworthy aircraft due to the long supply chain and an insufficient supply of parts. With the pressure to fly all sorties allocated, it is not difficult to imagine pilots flying aircraft that were not mission capable due to these shortages.

The Strategic Divide

Throughout the Vietnam War, the Navy and Air Force competed against each other over which would provide the most effective use of airpower. Though both services were committed to the use of airpower, animosity between the two services remained from the late 1940s, when the Air Force began efforts to wrest defense dollars for its large strategic bomber fleet at the cost of the Navy's newest aircraft carrier. The Navy spent large portions of its budget to build and develop aircraft carriers for what they believed was the best use of airpower. Senior Navy leaders found it as difficult as those in the Air Force to admit that Rolling Thunder was failing due to their own vision of strategic bombing. The Navy could not admit the failure of Rolling Thunder without having to acknowledge that their vision of airpower was based on a faulty premise. Given that the Navy was trying to obtain funding for its next generation of super-carriers (along with completely new air wings), which were some of the most expensive and complex ships ever developed, this was an extremely bitter pill to swallow.²² The Navy stood to

lose this funding, because if sea-based airpower could not succeed against North Vietnam, how could it be expected to succeed against the Soviet Union?

The use of sorties as the measurement of success resulted in aberrant thinking by service leadership. Careers and reputations depended on success as defined by the sortie count. The desire to impress Washington drove the normally competitive nature that existed between the Air Force and Navy, exacerbating the desire for each service to produce a higher number of sorties than the other. If McNamara's analysts in the Defense Department could produce statistics that showed that one service was better than the other, using the limited criterion of sortie rates, the apparently "inferior" service stood to lose in the next round of appropriations.²³

When the sortie count was combined with restrictions imposed on aircrew by the Rules Of Engagement, a strategic divide developed between the pilots who were fighting the war and those directing it from thousands of miles away. The senior leaders' obsession with statistics rather than the real outcome of the bombing campaign was unfair to the aircrews. Service leaders forced commanders in theater to fly all the sorties allocated to them, even in marginal weather and when no real targets were available. The bomb shortage produced a situation where six aircraft would be sent with only one bomb each, when one aircraft could carry six bombs, simply to keep up the sortie rate. Sorties became something that could be measured, assimilated by a computer, reduced to a mathematical formula, divided into dollar amounts, and analyzed for cost effectiveness--never mind actual combat effectiveness.²⁴

Air Wing 16 pilots were well aware of this dichotomy and mocked it, perhaps to mask their growing frustration with the war. According to Wynn Foster:

By November 1965 it seemed to me that daily sortie production had become an end in itself, even to the extent of ignoring the practical considerations of unsafe flying conditions and pilot over-utilization. Since we had little control over that aspect of our lives, however, pilot frustrations typically found relief in wry, sometimes black, humor. At naval air stations back in the States, posters prominently reminded pilots and other aviation personnel, "Of all our operations, SAFETY is paramount!" In Ready Room Five, the flight-scheduling officer Larry DeSha, after working hours to juggle the availability of the pilots against a frequently amended daily mission plan, posted his own notice: "Of all our operations, GETTIN' THEM SORTIES OUT is paramount!"²⁵

The emphasis placed on statistics by senior leadership meant there was constant pressure to show results. This influenced all aspects of daily operations during Rolling Thunder, and even intelligence officers felt the pressure. Lieutenant Dick Wyman, a pilot in VF-162, described a post flight debriefing after a strike mission. He had seen what he had figured was ten trucks, and successfully destroyed three before smoke and haze obscured further bombing. The Intel officer debriefing him was incredulous, insisting he had destroyed more saying, "Look, the Admiral's Staff is not going to accept anything as vague as that. Let's say you destroyed five trucks, damaged three."²⁶ The pressure to show results was a constant as each carrier sought to generate results that would reflect well on the air wing, the ship and the Navy. This pressure led to exaggerated claims (if not outright lying) concerning the damage done during air strikes. Lieutenant Frank Elkins and several other pilots from VA-164 made light of this issue as noted in his journal, which he faithfully kept until he was lost in October 1966 (see appendix B):

There's an incredible overestimation on the damage we do. It's mostly imagination or propaganda. Radio Hanoi yells about the numbers of aircraft shot down in a given day, and we laugh and call them crazy, wild propagandists. Then we tell about the bridges, trucks, barges, and POL storage areas which we've blown to hell every day, and our releases read worse than the Hanoi crap. Hell, if you took the combined estimated BDA reports from just the time we've been here, a total like that would cripple the little nation. As Norris says, "I'd hate to be an aviator's mother back in the States reading Hanoi's evaluation of anti-aircraft successes, but I'd hate worse to be a truck driver's mother in Hanoi reading the

American estimates of trucks blown up--it reads like a Detroit production figure!”²⁷

The greatest example of this divide occurred in October 1966 when Secretary McNamara and a party of high ranking personnel visited the *Oriskany* as part of a tour of Southeast Asia. One of the first questions McNamara asked Captain Iarrobino, the *Oriskany*'s Commanding Officer, concerned the number of sorties the *Oriskany*'s pilots flew per day. When Iarrobino answered that his pilots were flying two missions a day, Secretary McNamara immediately became critical, wanting to know why pilots were not averaging only one and one-half sorties a day as his guidelines stated. Iarrobino's response that there were too few pilots for too many missions did not please the Secretary. Iarrobino could have also told McNamara about the severe shortage of sailors affecting operations aboard the *Oriskany*, but chose not to press the situation as Secretary McNamara was already obviously agitated by the apparent disconnect.²⁸

This obsession with numbers blinded senior leadership to the real goals of Rolling Thunder. Sorties were flown just for the sake of flying sorties, and bombs were dropped for similar reasons. Stories of pilots bombing empty jungle labeled as “suspected truck parks” were not far from the mark as each carrier and air wing sought to produce results that would reflect well on them and the Navy.

The Stennis Hearings

From its inception, Rolling Thunder had been meant to be a deliberate increase in pressure on North Vietnam. This did happen, but each phase of Rolling Thunder failed to cause any change in the North Vietnamese objectives. McNamara originally supported the bombing, but as the air war increased, his support decreased, especially as the lack of

any favorable outcome became apparent. Rolling Thunder 50 became the turning point in McNamara's support for the air war. From his vantage, the military continually promised more than it could deliver, and nowhere was this more apparent than in the failure of the POL campaign. Admiral Sharp had promised that the destruction of North Vietnam's POL system would greatly limit the infiltration of supplies south. While the attacks did destroy large amounts of the POL infrastructure, they failed to stem the tide and never lived up to McNamara's expectations.²⁹

While the POL campaign was the turning point in McNamara's support for the war, *The Jason Report* cemented his position as the main critic of the air war in the Johnson Administration.³⁰ On 29 August 1966, a committee of scientists from the Jason Division of The Institute for Defense Analysis submitted what became known as *The Jason Report*. Their report evaluating the results of the Rolling Thunder campaign began:

As of July 1966 the U.S. bombing of North Vietnam (NVN) had had no measurable direct effect on Hanoi's ability to mount and support military operations in the South at the current level. Although the Political constraints seem clearly to have reduced the effectiveness of the bombing program, its limited effect on Hanoi's ability to provide such support cannot be explained solely on that basis. The countermeasures introduced by Hanoi effectively reduced the impact of U.S. bombing. More fundamentally, however, North Vietnam has basically a subsistence agricultural economy that presents a difficult and unrewarding target system for air attack.³¹

That Secretary McNamara was disillusioned with and becoming an openly hostile opponent of the bombing left senior military leaders feeling betrayed. They felt that airpower had never been given a real chance to show what could be achieved, and that halting the bombing was a mistake. If Rolling Thunder was scaled down, airpower would be seen as a failure, as would their leadership. The military considered that they had never been given a chance to succeed with the bombing because of political limitations.

Military leaders considered that the targeting policy as forced on them by political leaders in Washington, DC had stopped Rolling Thunder from producing results.

By 1967, the air war over North Vietnam had become the main point of public controversy. Fueling the public's outcry was a series of articles published by Harrison Salisbury, the assistant managing editor of *The New York Times*. That Salisbury's articles were manipulated as part of North Vietnamese propaganda efforts is important; however their overall effects cannot be understated. The articles fueled public outcry and led to further dissension within the Johnson administration.³²

In a desperate attempt to preempt any efforts by McNamara to cut bombing or show that airpower had failed, military leaders turned to hawks in the senate for support. The Senate Armed Services Committee, chaired by Senator John C. Stennis (D-MS), were ardent supporters of the war. According to the Pentagon Papers, "The subcommittee unquestionably set out to defeat Mr. McNamara. Its members were known for their hard-line views and military sympathies. . . . They viewed the restraints on bombing as irrational, the shackling of a major instrument which could help win victory."³³

Preparations for the Stennis Hearings began in July 1967, and went public on 9 August 1967. Various senior military leaders testified before the committee, airing their grievances concerning the conduct of the war.³⁴ This forced Secretary McNamara to justify the political decision making process in front of an already critical committee. By this stage of the war, McNamara had lost much of his original faith in the bombing campaign and did not feel the need to justify his opposition to the war.³⁵ McNamara's aloofness and the public nature of the hearings forced President Johnson to make a political decision to expand the air war. On 9 August, the day the Stennis Hearings went

public, Johnson added sixteen extra targets to the target list, expanded the armed reconnaissance missions and removed the restrictions surrounding Hanoi and Haiphong, as well the buffer zone along the Chinese border.

The general lifting of restrictions throughout 1967 resulted in an incredible increase of sorties and resulted in increased losses amongst CVW-16 squadrons (see appendix C). The lifting of restrictions as a result of the Stennis Hearings occurred as the *Oriskany* arrived on station for its second line period of their 1967-68 deployment. This meant that CVW-16 would be attacking what would later be described as “The center of hell with Hanoi as its hub. The area that was defended with three times the force and vigor that protected Berlin during World War II.”³⁶

With Secretary McNamara publicly attacking the war during The Stennis Hearings, President Johnson finally lost faith in him. McNamara continued to lose influence with Johnson until his eventual resignation in November 1967, when he took the job as President of World Bank. McNamara’s original purpose behind the bombing was to force North Vietnam to cease its support for the war in South and his public reversal did untold amounts of damage to the American cause. If North Vietnamese leaders had not realized it before, The Stennis Hearings made it readily apparent to them that the bombing was not likely to work and unlikely to be increased. If Johnson was playing poker with the North Vietnamese leaders, McNamara had just told the North what cards Johnson held and revealed his bluff.³⁷ On the American side, hearing the Secretary of Defense say they were wasting their time and effort did not help the morale of pilots risking their lives over the North, and served to widen the divide between the strategic and operational levels.

Upon the conclusion of The Stennis Hearings, the Joint Chiefs continued to pressure President Johnson for an expansion of the air war. Secretary McNamara requested another report from the Jason Division that read similar to the first. This report was not acted upon, and in December 1967 Johnson released an additional ten targets (out of the twenty-seven requested by the Joint Chiefs). As 1967 drew to a close, military leaders continued to press for further expansion in a futile attempt to make Rolling Thunder effective despite the limitations placed on it. By the second week of January 1968, the *Oriskany* was on her way back to the United States and President Johnson would call for an end to the bombing before they returned again.

While it is easy to blame President Johnson and his political advisors for the dichotomy and the growing numbers of casualties, part of the blame lies on service leadership that continually told political leaders that the military could achieve results against a country that presented a poor target for a strategic bombing campaign. Military leaders at all levels owe a duty to their troops to use them wisely, not to squander their lives. They also have a duty to obey their superiors' orders. Advising elected officials and obeying unwise decisions is a thankless, difficult duty that during the Vietnam War and Operation Rolling Thunder had tragic consequences.³⁸

¹John T. Smith, *Rolling Thunder: The Strategic Bombing Campaign North Vietnam, 1965-1968* (Surrey, Great Britain: Air Research Press, 1994), 110.

²Rene J. Francillon, *Tonkin Gulf Yacht Club: US Carrier Operations off Vietnam* (Annapolis: Naval Institute Press, 1988), 45.

³Jeffrey L. Levinson, *Alpha Strike Vietnam: The Navy's Air War, 1964 to 1973* (California: Presidio Press, 1986), 26.

⁴The time required from budget approval for construction of a new aircraft carrier to her first deployment usually exceeded four years. Thus the only carriers

commissioned during the war were laid down prior to its start. The Nimitz class super-carriers common today were laid down during the war, but were unavailable until after the fall of Saigon in 1975.

⁵Marshall L. Michel III, *Clashes* (Annapolis: Naval Institute Press, 1997), 27. For an example of how this carrier shortage affected the Navy, read Lieutenant Commander McBride's diary, *Shang Log*, (New Mexico: Paper Tiger Publishing, 1999), which chronicles the last cruise of the USS *Shangri-La*, a World War II era carrier during her last cruise of the war. The ship was beset throughout its nine month cruise by mechanical and morale issues, and McBride's diary is an excellent accounting of these issues.

⁶Ibid. 120.

⁷The USAF policy caused its own set of peculiar problems. The Air Force required pilots to fly 100 missions over North Vietnam before a tour of duty ended. They also required that no-one would serve twice until everyone had served once. As a result, many who had never flown a tactical aircraft or even knew the tactical mission, and many who had not flown for years, were suddenly rushed through several months of refresher training and sent to Southeast Asia. Quite often, on account of their rank, these men found themselves in combat leadership roles for which they were vastly unqualified.

⁸Levinson, 176.

⁹Michel, 168.

¹⁰Levinson, 177.

¹¹Michel, 168.

¹²For an account of the results of this disastrous policy, read Jeffrey Levinson's *Alpha Strike Vietnam*.

¹³Ibid.

¹⁴The US Navy differentiates between combat and operational losses. For example an aircraft shot down by AAA on a combat mission is considered a combat loss. An aircraft lost while being catapulted off the aircraft carrier for a combat mission is considered an operational loss. Because one-third of all Navy losses during the Vietnam War were a result of operational accidents, the differentiation between combat and operational losses may be seen as a technicality in an effort to lessen the perception that the Navy was losing an excessive number of aircraft in combat.

¹⁵Wynn Foster, "The Saints of VA-163," *The HOOK* (winter 1990): 43.

¹⁶"US Gets Bad Deal in Bombs," *The Denver Post*, 17 April 1966, 6.

¹⁷Jacob Van Staaveren, *Gradual Failure: The Air War over North Vietnam, 1965-1966* (Washington, DC: United States Air Force, Government Printing Office, 2002), 264.

¹⁸No sources, including unit histories and personal interviews mentioned a lack of ordnance on the *Oriskany*. This could be the result of several factors, including the fact that the *Oriskany* did not deploy until May 26 and that the Navy had ample time to correct ordnance shortfalls in the Tonkin Gulf by the time the *Oriskany* started her first line period in July.

¹⁹Wynn Foster, *Captain Hook: A Pilot's Triumph and Tragedy in the Vietnam War* (Annapolis: Naval Institute Press, 1992), 37.

²⁰Wynn Foster email to author, 19 September 2005. VA-163 was undermanned in both pilots and enlisted personnel for the entire duration of its 1965 deployment.

²¹VA-163 *Command History 1967* (Washington, DC: Naval Historical Center, Aviation History Branch), Enclosure One.

²²Smith, 225.

²³*Ibid.*, 111.

²⁴Wynn Foster, *Captain Hook: A Pilot's Tragedy and Triumph in the Vietnam War*, 132.

²⁵*Ibid.*, 133.

²⁶Zalin Grant, *Over the Beach: The Air War in Vietnam* (New York: W. W. Norton and Company, 1986), 112.

²⁷Frank Elkins, *The Heart of a Man* (New York: W. W. Norton and Company, 1973), 71.

²⁸Grant, 91.

²⁹Smith, 112.

³⁰*Ibid.*, 113.

³¹*The Pentagon Papers*, Senator Gravel ed., IV (Boston: Beacon Press, 1971), 502.

³²Further compounding the debate was General Westmoreland's request for an additional 200,000 troops in South Vietnam as part of the Americanization of the war. *The Pentagon Papers*, Senator Gravel ed., IV (Boston: Beacon Press, 1971), 527.

³³Ibid., 540.

³⁴Ibid.

³⁵Smith, 137.

³⁶Jack Broughten, *Going Downtown* (New York: Orion Books, 1988), 105.

³⁷Smith, 138.

³⁸John Nichols and Barrett Tillman, *On Yankee Station: The Naval Air War over North Vietnam* (Annapolis: Naval Institute Press, 1987), xiv.

CHAPTER 3

TACTICAL FACTORS AFFECTING ATTRITION

The theory was, in those days, that if they shot missiles at you, you got as low as possible, in order to defeat them. That was the theory. You tried to grab the dirt. Somebody called “SAMs!” and we all dove for the deck. There were twenty-four airplanes trying to fit into a small valley at five hundred knots apiece, fifty feet off the ground. Talk about wild--that was all the wildness a person could stand. You had the possibility of a midair collision, of hitting the ground, or getting shot down.

Dick Wyman, *Over the Beach: The Air War in Vietnam*

At the tactical level during Rolling Thunder, many factors affected attrition rates of the Navy’s carrier air wings. Factors beyond the ability of the United States to control included the North Vietnamese defenses and the assistance of other Communist countries, the weather of the region, and the operations area in the Tonkin Gulf. Factors that could be used to lessen the attrition rates included the overall American campaign strategy with its restrictive Rules of Engagement (ROE), and the use of sound tactics, which included the use of electronic warfare to degrade enemy defensive systems and exploit their weaknesses. Leadership and the ability of leaders to adapt to rapidly changing tactical situations while motivating pilots were equally important and will be covered in the next chapter.

North Vietnamese Defenses

Before discussing these factors in depth, it is important to describe North Vietnamese strategy. The central factor in Hanoi’s strategic thought during the war was the Vietnamese Communist Party’s concept of *dau tranh*, or struggle. This concept was believed unique to the Vietnamese because of their tradition of unity and patriotism, the

support of the collectivist state, the political development of their armed forces along with support from other communist countries, and their belief in the righteousness of their cause. The great success of *dau tranh* in its forty years of use against the French, the United States, and China was twofold: it clouded enemy perceptions and nullified their opponents' overwhelming military power. *Dau tranh* was highly effective against the United States. It clouded the Johnson administration's strategy and caused great misconceptions about North Vietnamese goals and overall strategy.¹ The United States allowed *dau tranh* to dictate American counterstrategy, which forced the United States to fight under unfavorable conditions.

Unlike the Americans, who split the air campaign with bureaucratic controls, interservice rivalries, and global commitments, all aspects of North Vietnam's air defenses were unified under the Air Defense Command following the concept of *dau tranh*. The North Vietnamese air defenses during Rolling Thunder evolved into an integrated network of surface-to-air missiles (SAM), anti-aircraft-artillery (AAA) and People's Air Force (VPAF) fighters. The ROE imposed on American pilots allowed the North Vietnamese to allocate and employ their defenses with great effect. The way that targets were released piecemeal by Washington meant that, each time a new target or set of targets was bombed, the North Vietnamese could expect the same target or types of targets to continue to be attacked for the succeeding few weeks. This gave them the chance to concentrate their defenses on the predicted targets and routes.² American restrictions forced pilots to fly predictable routes, and these avenues of approach became defended by large volumes of barrage fire. The North Vietnamese did not need to aim at

the aircraft, but simply fired into a predetermined block of airspace that the aircraft would have to fly through. According to Commander John Nichols:

Gunners didn't have to track a jet. All they had to do was draw a straight line between the airplane's roll-in point and its target, then fill that portion of the sky with as much steel as possible. Regardless of its speed, the jet had to fly through that box. At that point probability theory takes over. It becomes a crapshoot.³

SAMs were central to the increased effectiveness of North Vietnam's AAA branch. The mere presence of the SA-2 forced a fundamental change in American tactics. While the number of aircraft lost to SAMs was never more than a small proportion of the total lost, the very existence of the missile threat forced American commanders to change their tactics.⁴ Once launched, SAMs disrupted American formations and drove aircraft to lower altitudes. At these lower altitudes, small arms and radar controlled AAA took an excessive toll. Before the SA-2 was introduced, American aircraft could remain at altitude, above the effective range of even the largest guns.⁵ American pilots became even more vulnerable to AAA as the North Vietnamese massed guns on an unprecedented scale. Large numbers of guns were placed in small areas such as critical installations and population centers. As Rolling Thunder escalated, North Vietnam continued to increase their numbers of early warning and fire control radars, which increased the lethality of their AAA.

With support from the new Soviet premier, Leonid Breznev, North Vietnam began receiving military aid and advisors. The aid included the SA-2 Guideline surface-to-air missile. North Vietnam activated their first SAM regiment on 7 January 1965. The regiment was given the highest national priority; political officers searched the armed forces, universities and technical schools of North Vietnam to find the best electricians, technicians, mechanics, and engineers to fill its ranks.⁶ The regiment's missiles,

launchers, and Soviet advisors arrived in April 1965 to begin training. It was not until 24 July 1965, that the first American loss to a SAM occurred, when an Air Force F-4C was shot down. Because there had been insufficient time to train Vietnamese crews, Soviet personnel actually took part in the engagement. On 24 August 1965, the North Vietnamese were finally able to conduct a full engagement on their own.⁷ Despite North Vietnamese successes with the SA-2, Soviet advisors and technicians continued to serve with North Vietnamese missile units at the battalion and regimental level for the remainder of the war.

The fighter aircraft flown by the VPAF provided the final critical link in the Air Defense Command. Because of their limited numbers and ability at the start of Rolling Thunder, MiGs were used sparingly. As their capabilities increased they attacked only when the outcome of the engagement favored their victory. Their general tactic was to intercept American aircraft, forcing them to jettison their bombs prior to reaching their target. As Rolling Thunder progressed, American Iron Hand missions began to take a toll on North Vietnamese AAA and SAM units, forcing MiGs to become more active and assume the burden of defense.

Although North Vietnamese MiGs did engage Navy strikes, Air Force missions were more frequently targeted. The reasons for this were twofold. First the proximity of aircraft carriers to the coast meant that Navy aircraft spent less time enroute to the target, denying the Air Defense Command sufficient time for the elaborate ground controlled intercepts needed by MiG pilots. Second, the tactical formations flown by the Navy, known as “Loose Deuce,” proved relatively hard to counter. The Air Force flew in rigid

formations dictated by their electronic jamming pods, which made them easier prey for Vietnamese hit-and-run tactics.⁸

During Rolling Thunder, North Vietnam received support from other Communist countries including the Soviet Union, China, and North Korea. Chinese pilots downed at least nine American aircraft, while Chinese anti-aircraft divisions took an additional but unknown toll. From 1965 through 1968, roughly 50,000 Peoples Liberation Army (PLA) troops were stationed in North Vietnam. These troops built and repaired airfields, bridges and other transportation routes, as well as key military installations. Their presence sent a clear signal to both North Vietnam and the United States concerning China's willingness to influence or intervene in the ongoing war to their South.⁹ North Korea sent additional forces, including a fighter regiment that arrived in early 1967, just in time to take part in some of the largest air battles of the war.¹⁰ Of the support given by Communist countries, the support given the Air Defense Command by the Soviet Union was the most significant. Both the United States and the Soviet Union fielded some of their best weapons in the skies of North Vietnam, making it significant to the global balance of power and far different from the war being conducted in South Vietnam. If an American unit defeated a North Vietnamese ground unit in the jungles of Vietnam, it had little bearing on whether or not that unit was capable of defeating a similar Soviet unit in Germany. But, if American forces could operate freely in a Soviet SAM environment, there were serious repercussions for Soviet forces in Europe. Likewise, if North Vietnamese MiG-21s could shoot down the latest American fighters on a continual basis, it indicated how American aircraft might fare against the Soviets if war broke out in Europe.¹¹

On several occasions during Rolling Thunder, North Vietnamese defenses were overwhelmed by American tactics and technology. However, North Vietnamese leaders attributed each defeat to internal ideological weaknesses and mistakes, not American superiority in firepower and technology. North Vietnamese leaders knew that if they ever allowed themselves and their subordinates to blame their problems on U.S. material and technological superiority, defeatism would spread through the ranks like wildfire.¹² Faith in the ultimate success of their cause became a matter of dogma, and political officers stood by, ready to reeducate any that faltered.

The slow pace of escalation coupled with the frequent bombing pauses and severe ROE restrictions were continually exploited by the North Vietnamese. The North Vietnamese General Staff took quick action to correct any deficiencies, making the defense of Hanoi and Haiphong their highest priority. Each time the Johnson administration called a bombing halt, the Air Defense Command would redeploy AAA and SAMs to cover gaps exposed during the most recent round of raids. The Vietnamese knew the reasoning behind the American strategy and used it to their advantage. A Vietnamese history of the war states,

During the first three months of 1967 the enemy launched no large attacks against Hanoi and Haiphong. This was due in part to poor weather and in part to the restrictions of the American imperialist policy of escalation. In this situation the Air Defense Service directed forces in both cities to vigorously prepare for combat.¹³

By the time the *Oriskany* and CVW-16 returned for their third cruise of the war in June 1967, Hanoi was protected by one of the most lethal air defense networks ever assembled. The 365th and 367th Air Defense Divisions had been brought into Hanoi to reinforce the 361st Division. The Air Defense Command had committed ten AAA

regiments and five SAM regiments, totaling 60 percent of North Vietnam's available AAA batteries and 52 percent of its SAM battalions, along with the entire North Vietnamese Air Force to the defense of Hanoi.¹⁴

The Weather

The uncertain and unpredictable nature of the Vietnamese weather was a factor that heavily favored North Vietnam and improved their defensive capability. During certain months of the year, the weather over North Vietnam posed severe limitations to air operations. During the winter, or Northeast monsoon, which starts in November and lasts until mid-May, the weather over North Vietnam and the Gulf of Tonkin is characterized by heavy clouds and large amounts of rainfall. Conditions are especially harsh when a weather phenomenon known as "chrachin" occurs. Chrachin is characterized by thick clouds and ceilings as low as 100 feet, in combination with fog and persistent drizzle. Conversely during the summer, or Southwest monsoon from May to October, the skies are generally clear and dry. This is the opposite of the monsoon seasons in South Vietnam and Laos. It is important, therefore, in any discussion of air operations over North Vietnam to keep in mind what weather period was involved.¹⁵

During the Winter Monsoon, cloud cover is usually low, about 6,000 feet with solid overcast above. For an attack pilot to acquire the target in such weather, he had to descend through the cloud layer and fly between 4,000 and 6,000 feet, where he became increasingly vulnerable to ground fire. North Vietnamese gunners regularly knew the altitude of the cloud ceilings, so pilots were forced to fly even lower, into the effective range of small arms, to avoid being at a known altitude. The low ceilings also required the use of horizontal or low angle glide delivery bombing, which brought aircraft even

closer to AAA. Finally, the low ceilings restricted the directions from which American aircraft could attack, making North Vietnamese barrage fire more effective. Under these conditions, strikes into North Vietnam would often be cancelled and the already strenuous task of landing aboard an aircraft carrier became a recipe for disaster.¹⁶ Vice Admiral Richardson, who commanded Carrier Task Force 77 (CTF-77) during 1966-1967, described how the weather affected the air war,

The nature of the weather in Vietnam was also a vital factor in the interdiction campaign that was never fully appreciated by Washington. With the centralized control of the war from afar, Washington could not keep in touch with the ever-changing weather which often required on-the-scene changes in target and weapon assignments.¹⁷

Though the majority of the *Oriskany's* cruises occurred during periods of good weather, its influence on their operations cannot be understated. Weather was often responsible for hundreds of canceled or aborted missions, it delayed launch and recovery aboard the ship, which in turn delayed formation rendezvous, and it prevented aerial refueling or created difficulties for aircraft attempting to rendezvous for in-flight refueling. Poor weather forced aircraft to deviate from planned routes or planned targets, leaving pilots with the option of hitting their secondary target or aborting the mission. Quite simply the weather was a large factor that played into every mission flown by Air Wing 16 over North Vietnam.

The Gulf of Tonkin

When examining the causes for attrition, the geography of the Northern Tonkin Gulf also deserves special consideration. The communist Chinese island of Hainan dominates the Tonkin Gulf. While launching planes in an already constrained area, the Navy was required to honor the three-mile international limit, further limiting the already

crowded waters of the Gulf. At 13,000 square miles, Hainan boasted numerous airfields from which Chinese MiGs harassed and sometimes even attacked Navy aircraft. Throughout the war, Navy fighters flew Barrier Combat Air Patrols (BARCAP) to prevent not only North Vietnamese aircraft from attacking the fleet, but Chinese aircraft as well.¹⁸ These BARCAP missions were a constant requirement for squadrons, whose pilots and maintenance personnel were being worn out by the pace of Rolling Thunder operations.

The Tonkin Gulf also had large amounts of seaborne traffic. Although CTF-77 usually operated more than 100 nautical miles from the coast, it was constantly surrounded by hundreds of small fishing boats and junks. Under international law-of-the-sea, smaller vessels have the right of way over much larger ships. Therefore, it was not uncommon for a fishing trawler to cross the bow of an aircraft carrier engaged in flight operations, forcing it to alter course, causing a delay of critical launches and recoveries. However, the greatest danger came from the early warning capabilities of these vessels. Most ships carried a radio and within minutes of launching aircraft, the Air Defense Command in Hanoi often received word of the number and types of aircraft bound for North Vietnam.¹⁹

Despite the early warning provided by North Vietnamese vessels, the Tonkin Gulf did give the Navy a tactical advantage not available to the Air Force. By positioning aircraft carriers close to the shore, little to no aerial refueling was needed for large strikes over North Vietnam. These strikes could fly extremely low over the water, below radar coverage and get to their target in a matter of minutes, limiting the time available for North Vietnamese defenses to react. Even when Navy aircraft struck as far inland as

Hanoi, the time from the coast to the target was much less than the time it took an Air Force strike group to arrive from Thailand via Laos.²⁰ This became more of a factor later in the campaign, as the VPAF began to intercept Rolling Thunder missions on a more frequent basis.

Rules of Engagement

As stated in the first chapter, the ROE imposed by President Johnson significantly affected the air war. The ROE imposed on American pilots allowed the North Vietnamese to allocate and employ their defenses to maximum effect. The small number of targets on Washington's approved target lists meant that North Vietnam could effectively dispense the maximum amount of defenses to these known targets, lessening the burden placed on North Vietnam's air defenses. Throughout Rolling Thunder, pilots had to exercise extreme care, at the risk of their own lives, to avoid populated areas and civilian casualties. At times, the ROE went so far as to dictate types and numbers of aircraft and even the ordnance they carried, as well as their routes of flight, with little regard for the tactical realities faced by pilots flying over North Vietnam. Many aviators were shot down because the ROE required approach angles and other tactics designed to reduce civilian casualties rather than to afford maximum protection to the attacking aircraft. Lieutenant Commander Dennis Weichman,²¹ a pilot in VA-164 from the *Oriskany* happened upon the captain of a Soviet tanker ship they had recently flown over while it was off loading supplies in Haiphong:

When the line period ended, the ship went to Hong Kong, and a couple of us ran into the captain of the tanker at a bar. He was a nice guy, a Soviet, who told us, "Hell, I'm just driving the ship and not involved in anything else." But he had a question. "Why do you guys go in at the same place every day, at the same time, and fly over the same gun, and get shot at every time? Why do you do that?" The

question was a good one, and we were certainly guilty of real dumb things. Virtually all the Alpha strikes had to be at the same time every day. Routinely, day in and day out, same time, same altitude.²²

Operating under constantly changing rules of engagement put the United States at a continued tactical disadvantage. Each time the United States threatened to overwhelm North Vietnam's defenses, a bombing halt or some other self-imposed restriction invariably allowed the North Vietnamese to train, reequip, and overcome the technological advantage. It was a defensive advantage that Hanoi exploited at every opportunity and at great cost to American aviators. As political opposition to the war grew, pilots became increasingly disillusioned with the war. ROE quickly became the focal point of this disenchantment as pilots felt that the restrictions placed on them by Washington was responsible for the many deaths, and Prisoner Of War status of their fellow pilots. Pilots felt that they were being held back by the ROE and that they were being criticized by their own leadership for failings that were not of their making.²³

Naval Aviation tactics

Throughout the campaign, the Navy operated aircraft carriers from an area known as Yankee Station. From the earliest days of Rolling Thunder, the Navy usually kept two carriers on-the-line, with one more on its way from the United States and one on its way home. Although operations on Yankee Station were fairly standardized amongst the carriers of CTF-77, the constantly changing ROE meant there was no single standard tactic in use throughout Southeast Asia. Each carrier on Yankee Station acted as its own autonomous war making machine, and the tactics employed by one air wing may have been opposite of another air wing operating at the same time. Each carrier did publish its own set of lessons learned that were kept in the CTF-77 operations annex, but they were

not all inclusive to keep from further obstructing the people fighting the war at the tactical level. Not all air wings were equal and up to the task of air combat--surviving to put bombs on target day after day. While tactics played a large part, the difference was often found in the leadership of the air wing and its squadrons (a factor that will be discussed in later chapters).

Of the two aircraft carriers on the line, each conducted flight operations for twelve hours and then stood down for twelve hours for maintenance. One carrier operated as the daytime carrier, while the other carrier operated as the night carrier. This schedule rotated every few weeks as carriers withdrew from the operating area for port calls, or to replenish stores of ordnance, fuel, and food. Afterward, the schedule often flip-flopped with carriers reversing their schedules.

Aircraft carriers conducted two types of flight operations: cyclic operations and Alpha strikes. During cyclic operations, a certain number of aircraft (anywhere from twenty-five to forty) were launched every ninety minutes, after which the previous cycle's aircraft were recovered. This cycle repeated itself throughout the fly day, with jets continually being launched and recovered for missions over Vietnam. Missions conducted during cyclic operations were usually flown in Route Packages II, III, and IV.

When a target required a major strike, the aircraft carrier shifted operations to the Alpha strike. During an Alpha strike, all available airplanes from a single carrier were organized into a single strike group for a mission against the specified target which was more often than not in Route Package VI. Alpha strikes usually meant an interruption of cyclic operations for two hours in order to perform maintenance and load ordnance on aircraft and prepare the flight deck for the upcoming strike. After recovering an Alpha

strike it took the same amount of time for the carrier to begin cyclic operations again. A carrier could launch two to three Alpha strikes a day, with cyclic operations conducted in between. As Rolling Thunder reached its apex in October 1967, the *Oriskany* was launching three Alpha strikes each day.

The sorties flown by Carrier Air Wing 16 during Rolling Thunder can be divided into several categories, including Alpha strike missions, armed reconnaissance, and general support sorties. Alpha strikes included not only the attack missions, but Iron Hand missions for the Suppression of Enemy Air Defenses (SEAD), flak suppression missions, fighter Combat Air Patrols (CAPs), and various support missions. Armed reconnaissance missions were flown both day and night to interdict North Vietnam's supply system. Support missions were the often mundane but vital missions that enabled the war over North Vietnam, and included tanker sorties; electronic warfare, such as jamming and electronic surveillance; and early warning missions.

Separate from Rolling Thunder missions, sorties were flown in support of Operation Steel Tiger, the covert bombing of Laos. Steel Tiger missions were flown as frequently as Alpha strikes and involved similar amounts of planning and support. Because of its covert nature, Operation Steel Tiger had its own set of separate ROE to be followed. This included a special circuitous route of flight, requiring pilots to fly over South Vietnam prior to entering Laos, instead of a direct flight over North Vietnam to Laos. One negative result of Steel Tiger missions was that they never allowed the aircraft carriers and carrier air wings a chance to stand down. While North Vietnam used each bombing halt to their advantage, the Navy continued flight operations in a threat environment that equaled North Vietnam's. The pace of operations thus continued to take

its toll in men, planes, parts, and other assets while North Vietnam rearmed in preparation for the resumption of Rolling Thunder.

Alpha Strikes

Air strikes against any North Vietnamese targets of significance were tightly controlled by Washington, D.C. They were listed in the “Alpha” section of the Master Target List drawn up during the Tuesday luncheons, thus missions against those targets became known as Alpha strikes. Each Alpha strike was a major undertaking as each involved large numbers of aircraft that would penetrate deep into Vietnam, most often Route Package VI, to strike a heavily defended target. As CDR Wynn Foster, the Commanding Officer of VA-163 during 1965-1966 noted, “Any mission in the North carried personal risks, but each Alpha strike took on a life of its own. The mere intonation of the words ‘Alpha strike’ sent shivers up my spine.”²⁴

Throughout Rolling Thunder, strike leaders for Alpha strikes were the air wing commander, the jet attack squadron commanding officers and executive officers, and a select few experienced senior officers in the attack squadrons. The strike leader evolved his plan, which depended on several variables. (See Table 1.) After taking these variables into account strike leaders planned the mission to reduce their exposure to the North Vietnamese defenses and still hit the target. The plan was then published and briefed to all participating pilots on the mission. Secondary and tertiary targets were briefed and studied by all pilots for each mission.

Table 1. Mission Planning Variables

1. The current Rules-Of-Engagement defining what was off limits or the current emphasis of Rolling Thunder.
2. The type and number of aircraft available for the mission, depending on how many aircraft were down for maintenance or because of combat damage.
3. The kind of target to be attacked--a bridge or barges and junks or POL storage facilities.
4. The local geography--if the target was on the coast or inland.
5. The numbers and types of conventional North Vietnamese defenses defending the target (radar controlled and visually fired AAA).
6. Would the attacking aircraft be in a SAM envelope?
7. Weather and visibility depending on monsoon season.
8. The type of mission--Alpha strike, Iron Hand, Flak suppression, or armed reconnaissance.

While certain aspects of Alpha strikes were determined by the tight controls of Johnson's administration, CVW-16 attempted to lessen their attrition rates through changes in tactics. Each change in tactics was influenced by improvements to North Vietnamese defensive capabilities, especially with the introduction of SAMs and the increasing ability of the VPAF. The tactics employed by CVW-16 on Alpha strikes therefore varied on each cruise. What had worked in 1965 did not work in 1966 and tactics that had worked in 1966 definitely did not work by 1967.²⁵ During 1965, the lack of self protecting jammers such as the ALQ-51 dictated the use of low level tactics. Flying at low levels exposed aircraft to all forms of ground fire, however, and it was not uncommon for more than 50 percent of aircraft on each Alpha strike to receive combat damage.²⁶ By 1966, the increasing numbers and capabilities of North Vietnamese guns meant that the low level tactics previously employed were no longer viable. CVW-16 felt that the best tactic involved an "approach between 3,500 to 5,000 feet with the flight divisions in a line abreast formation, holding 400 to 700 feet between aircraft."²⁷ This formation, it was thought provided the best defense against all forms of enemy threat. By

1967, “the basic formation tactics used by CVW-16 during Alpha strikes was a broad V formation, with 500 to 800 feet of separation between aircraft and 1,000 to 1,500 feet between divisions; and a high speed approach to the target between 7,000 and 12,000 feet, with varying altitudes and headings.”²⁸ (See figure 4.) This change in tactics was a result of the increased SAM threat, and the belief that this formation provided the best maneuverability and mutual support between aircraft. This new tactic resulted in CVW-16 flying through the heart of the SA-2 envelope, which resulted in extremely high loss rates for the air wing. As related by Dennis Weichman:

This . . . cruise was really a high point of the war, and we lost an awful lot of people. Air Wing 16 became known as “Bloody 16”. . . CAG-16 was doing what had been done and worked in the past, but it didn’t work in 1967. We followed the same tactics so often the North Vietnamese were setting up for it, they knew what to expect. Eventually CAG picked up on a little diversity, helped by suggestions like “CAG, we’re not flying with you anymore.”²⁹

The ordnance used on each Alpha strike varied as well. If not predetermined by Washington, ordnance was determined by the type of target, weapons availability and the distance from the ship to the target. As North Vietnam’s defenses increased, weapons that did not require a low-level delivery became favored. By 1967, the Mk82 500 pound general purpose bomb was CVW-16’s weapon of choice against wood frame buildings and POL targets. The Mk83 and Mk84, 1,000 and 2,000 pound bombs were preferred for hardened targets, such as bridges or other concrete structures.³⁰ Special weapons, such as the AGM-62 Walleye or AGM-12 Bullpup, were typically used only for highly dangerous missions where it was essential to destroy the target and preclude further strikes, or to prevent collateral damage.³¹ By 1967, CVW-16 limited its pilots to a 45 degree dive with weapons delivery by 6,000 feet on all Alpha strikes, in order to prevent the pilots from flying into the range of increasing amounts of small-arms fire.

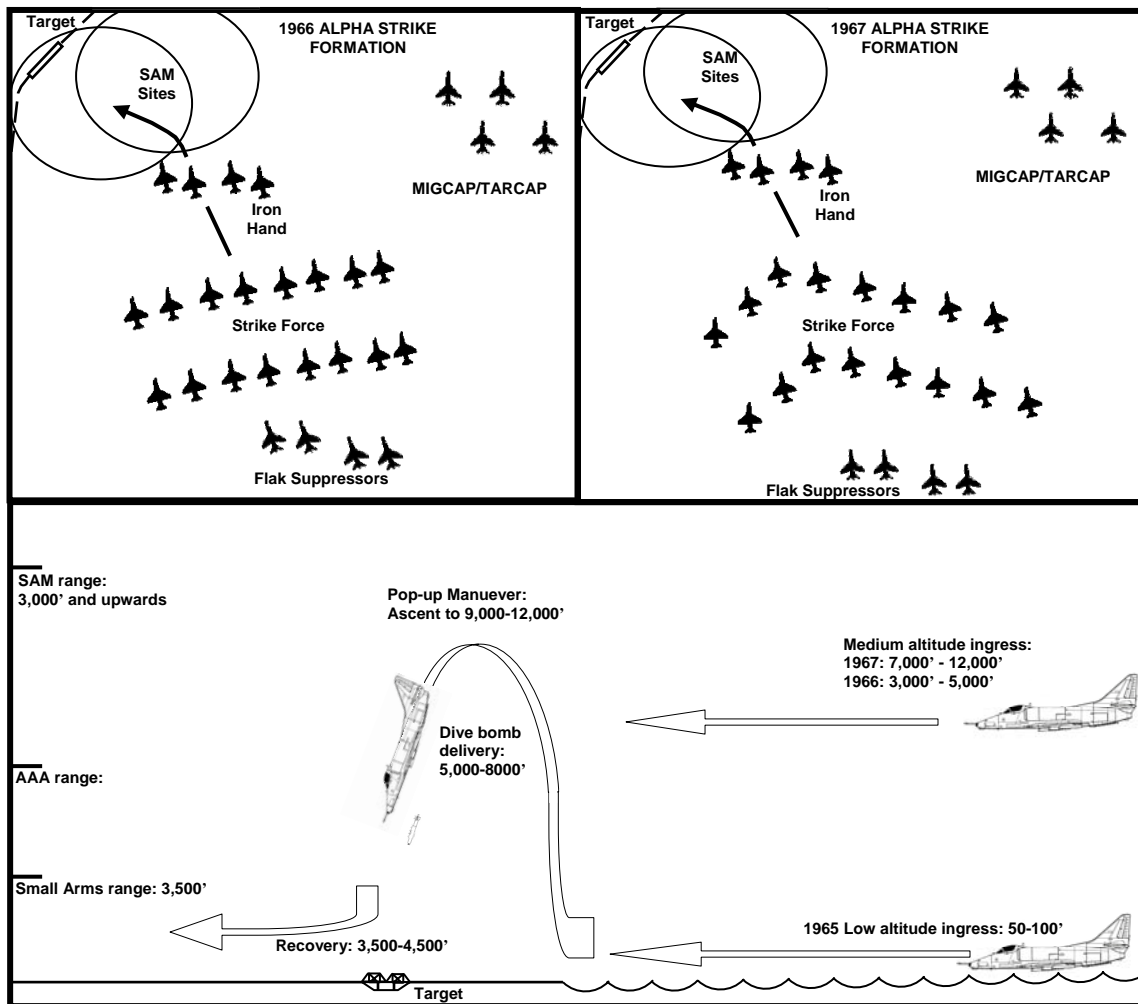


Figure 4. 1966 and 1967 Alpha Strike Formations

Armed Reconnaissance

Armed Reconnaissance (ARREC) missions were flown continually throughout Rolling Thunder in an attempt to interdict the southward flow of supplies. These missions were flown both day and night with a minimum of two aircraft. Pilots sought specific types of targets in Route Packs II, III, and IV as per the current rules of engagement. One week it might be trucks or barges the next week, perhaps bridges.³² A wide variety of tactics were used for these missions, though for the most part, the fewer Vietnamese

defenses in the southern part of North Vietnam allowed for lower altitude tactics. Time spent over North Vietnam varied with each mission, and was dependant on the area to be covered and targets available--it could be as little as fifteen minutes or as much as ninety. Known AAA positions were avoided whenever possible and in areas with no known defenses flights flew as low as possible in order to detect camouflaged trucks, trains, barges, and POL storage areas. These sorties achieved limited success, due to the ROE restrictions discussed earlier. The number of interdiction sorties flown would have been drastically lowered if supplies had been stopped prior to being offloaded in Haiphong harbor.

While day ARREC sorties occasionally yielded positive results, night armed reconnaissance missions were in a league of their own. Aircraft would fly in a preassigned sector searching for beneficial targets of opportunity. Each aircraft would carry a load of six MK 24 parachute flares that would be dropped to illuminate specific areas in the hope of finding worthwhile, targets such as trucks and barges. If pilots were lucky enough to illuminate a target, they then had to attack under the limited illumination provided by the flares. The disorientation caused by such conditions often resulted in pilots flying into the ground, even if maximum care was taken. VA-163's unit history for 1966 questioned the usefulness of this tactic:

The effectiveness of the A-4E at night in locating and destroying targets of opportunity is a highly debatable subject. Although BDA is often difficult to obtain it was estimated the A-4E is 10 to 15 times more effective in daylight hours at the hands of the same pilots. This does not mean to imply that night armed reconnaissance should not be conducted over North Vietnam by A-4E squadrons but rather points out the difficulties and limitations of an A-4E conducting this type of mission. . . . The biggest deterrent against a successful night recce mission was marginal weather conditions. Navigation, target acquisition, SAM evasion and target destruction are all degraded by cloudy and

low visibility conditions over the beach. In many cases it was the Air Wing pilots that were being harassed rather than the enemy.³³

When considering that these sorties were flown at night, in heavily defended and sometimes mountainous terrain, the night ARREC missions had limited success, and caused great strain on the pilots (which will be addressed in the next chapter).

Iron Hand Missions

After the SA-2 became operational in 1965, American forces rushed to destroy the threat before it claimed more aircraft. On 12 August 1965, CINCPAC Admiral Sharp ordered Operation Iron Hand to destroy the SA-2 batteries in North Vietnam. He ordered Air Force aircraft to stand down while aircraft from the USS *Coral Sea* and USS *Midway* undertook a massive hunt for SAM sites. For two days, 124 jets searched North Vietnam with an outcome not unlike the Air Forces first anti-SAM effort on July 27: high cost and no verifiable results. In less than forty-five minutes during the second day of the operation, they had lost seven aircraft to intense AAA without finding any SAM sites.³⁴ 13 August became known as “Black Friday”—an ominous beginning for future Iron Hand missions.

Iron Hand missions became the United States’ attempt to reduce the effectiveness of North Vietnam’s SAM and AAA threat. These missions were centered around the AGM-45 Shrike, an anti-radiation missile that was capable of homing in on North Vietnamese radar emissions. These missions were mostly flown in support of Alpha strikes or any other mission in which a major SAM threat was recognized. They were considered some of the most terrifying and costliest missions flown throughout the war.³⁵

A-4 Skyhawks flew the majority of Iron Hand missions during Rolling Thunder. Four to eight aircraft were given the Iron Hand mission per Alpha strike and usually carried the Shrike, Zuni rockets, or MK 82 500-pound bombs.³⁶ Air Wing 16's policy was to keep a minimum ordnance load on the aircraft, to increase their maneuverability in the SAM environment.³⁷ The Shrike missile became the main SAM deterrent allowing aircraft to engage AAA and SAM sites in the vicinity of target area. Typically Iron Hand aircraft would weave ahead and above the strike group, while listening for SAM radar emissions on their ALQ-51 and APR-27 gear (described later). Iron Hand pilots could also establish a racetrack pattern in the target area, placing themselves between any known SAM sites and the strike group. On station anywhere from 8,000 to 10,000 feet and eight-to-ten miles from the SAM site, Iron Hand aircraft were well inside the effective range of the SA-2 missiles they were tasked with destroying. This led to what became known as the "down the throat" delivery, in which A-4 pilots launched their Shrike missiles after detecting a SAM launch. While this tactic generated a higher SAM kill rate, it also cost the lives of many pilots, as the Shrike was slower than the SA-2. As one pilot related, "It was near suicidal to fire a Shrike at an SA-2 site that had missiles guiding on you because their missiles would get to you before your Shrike got to them."³⁸

Although they were demanding missions, the Iron Hand missions had a devastating effect on North Vietnamese missile crews. On 7 November 1965, Carrier Air Wing 16 squadrons attacked SAM sites south of Nam Dinh. The attacks hit the 236th Missile Regiment and destroyed two of the regiment's four missile battalions and the regimental technical support battalion that was responsible for assembling and

transporting missiles to the regiment.³⁹ Though the attacks took the 236th Missile Regiment out of action for some time, the psychological effect was even more profound. Unlike most North Vietnamese soldiers, missile crews were for the most part educated urban youth unfamiliar with the strain of war and trained more on technical matters than combat and political ideology. At times entire North Vietnamese missile units faltered, afraid to fire a missile for fear the launch would expose them to attack by American aircraft.⁴⁰ In 1966 a senior Air Defense Command officer, observing combat operations with a missile battalion near Haiphong, was frustrated by the reluctance of the battalion commander (who claimed US jamming made it impossible to identify a target) to fire on US aircraft that he finally exploded in anger. “Even my old eyes can see the target on your screen,” he shouted at the young officer. “Launch your missiles, damn it! They’re attacking the Uong Bi power plant!”⁴¹

Part of the problem affecting Iron Hand attrition rates was that naval aviators received little training in the mission. It was another mission to be mastered along with all the other missions already flown by light attack pilots. For the most part, the training received by pilots involved listening to audio recordings of Fire Can and Fan Song radars in various states of activity, and learning the proper switch positions in between missions.⁴² Success depended on available tactical manuals and actual combat on the wing of a senior pilot who may or may not have had more experience flying the Iron Hand mission.⁴³ Simply put, it became a matter of on-the-job training in a high-stakes environment.

Flak Suppression

There was a wide range of opinion amongst air wings and squadrons as to the use and viability of the flak suppression missions. F-8 Crusaders were typically employed in this role in an effort to suppress North Vietnamese AAA sites in the target area. AAA sites known to be active were selected for neutralization during the strike planning phase. However, once in the target area, aircraft were free to attack other threatening sites that commenced firing at the strike group.⁴⁴ Generally, the Crusaders would fly along the flank or behind the strike force and approximately two minutes prior to the time-on-target (TOT), the flak suppressors would accelerate and pass the strike group to attack first. By attacking the AAA sites first, North Vietnamese gunners were forced to seek shelter while the A-4s were in the most vulnerable part of their weapons delivery. The main benefit of this tactic came from the psychological boost it gave attack pilots, as flak suppressors were never able to completely suppress the threat of AAA.

Early in Rolling Thunder, F-8 Crusaders generally used Zuni rockets and their 20-millimeter cannon at minimum release altitudes, as AAA sites were hard to hit and thus required the most accurate delivery tactics. These tactics proved to be extremely hazardous however, and were discontinued. Tactics and weapons evolved into steeper dives and higher release altitudes with a variety of ordnance. In 1967, CVW-16 was using dive angles well in excess of 50 degrees to minimize exposure, although aircraft performing the flak suppressor role were allowed more than one pass over the target as required.⁴⁵

Fighter Missions

CVW-16's fighter squadrons flew a variety of support missions during Rolling Thunder. For the most part, these missions involved some sort of Combat Air Patrol (CAP). Barrier CAP (BARCAP) missions were flown anytime the carrier was conducting flight operations to prevent North Vietnamese or Chinese aircraft from attacking the fleet. Target CAP (TARCAP) was used mainly during Alpha strikes in order to protect the attack aircraft in the vicinity of the target. F-8s would establish a CAP between the target and any known threats, such as North Vietnamese airfields. MiG CAPs were similar to TARCAPs except their stationing was selected so as to remain well clear of AAA and SAM threats while searching for airborne threats.⁴⁶ The final mission flown by F-8s was the photo escort role, as each RF-8 mission required one escorting aircraft.

Unlike World War II fighter pilots who speak of victories, the fighter pilots who flew over North Vietnam speak mainly of survival.⁴⁷ In general, the *Oriskany's* Crusader squadrons were successful in the air-to-air role, downing two MiGs, while losing two Crusaders during Rolling Thunder. More important however, is the fact that none of the air wing aircraft they were tasked with escorting were lost to North Vietnamese MiGs.

Project Shoehorn

Besides the aforementioned changes to tactics, the Navy used electronic warfare in an attempt to slow the attrition rates over North Vietnam. As North Vietnamese defenses grew, they became increasingly reliant on radars to control their AAA and SAMs. While both the Air Force and Navy realized the need for self protection jammers to defeat this growing threat, the Navy acted first. Under Project Shoehorn, the Navy mounted the ALQ-51 deception jammer in its tactical jet aircraft. Because the ALQ-51

was small, it had relatively low power output. Rather than using excess power to jam enemy radars, the ALQ-51 was a deception jammer that sent a false return signal to the SAM or AAA radar. The premise being that the confused radar operator would not be able to figure out which return to fire on.⁴⁸

While Project Shoehorn was initially a success, it was not without its difficulties. Initial ALQ-51 reliability was poor and for most of 1965, the Navy had no self-protect jammer. Captain Julian Lake, who spearheaded the Shoehorn program, said:

The program was deficient as hell--spares, test equipment, training and equipment. The guys didn't have any training in the U.S. Because we didn't have any equipment back here. Every thing was out there. But they couldn't support it, they couldn't use it properly, they couldn't maintain it properly, they couldn't test it properly. Also, the commanders failed to understand the importance of EW at first. When they were about to launch a plane they wouldn't send it if they couldn't start an engine, they wouldn't send it if the wings wouldn't spread, they wouldn't send it if the radio didn't work. We had to convince them not to send it if the EW equipment didn't work.⁴⁹

Aircrew continually flew with their ALQ-51 gear in standby mode. Once they detected a missile site about to engage them, would they turn it on--lessening the effect of the system.⁵⁰ As the kinks were worked out of the system in 1966, the ALQ-51 began to give North Vietnamese missile crews significant problems. The loss rate to SAMs fell to one plane per fifty missiles fired, compared to one plane per ten missiles with no ALQ-51.⁵¹

With careful study and practice, North Vietnamese missile crews developed a technique that allowed them to differentiate between the false returns presented by the ALQ-51 and actual targets.⁵² By 1967 they became so proficient against the Navy's jammer, that on 31 August 1967, two A-4 Skyhawks from the *Oriskany* were destroyed by a single SA-2 missile. (See appendix C.) While the Air Force continued to upgrade its self-protect jammers, the Navy continued without modifying the ALQ-51. Most Navy air

wings continued to fly missions over North Vietnam in the heart of the SA-2 envelope, without knowing that the North Vietnamese had discovered a way to defeat their jammers. The Air Force loss rate to SAMs continued to fall, while Navy losses steadily increased. Throughout 1967, SAMs accounted for one-half of the Navy's losses and one-third of CVW-16s.

As Rolling Thunder sorties increased, units flying over North Vietnam struggled to cope with the increasing defenses. AAA continued to be the cause of most losses, while the growing SAM and MiG threats took greater tolls as their capabilities increased. Each escalation of the air war brought with it higher attrition rates for Carrier Air Wing 16. While the air wing could control certain aspects, factors such as the growing North Vietnamese defensive threat and the weather remained beyond their ability to control. Throughout, the Rules-Of-Engagement hampered efforts and caused even more losses than necessary. As a result, the ROE became a focal point for pilot's disenchantment, and drove the need for quality leaders with each expansion.

¹Ronald J. Cima, "Vietnam and Strategic Thinking," *A Country Study--Vietnam* [book on-line] (Washington DC: Federal Research Division, Library of Congress, 1987, accessed on 13 October 2005); available from <http://www.country-data.com/cgi-bin/query/r-14725.html>; internet.

²John T. Smith, *Rolling Thunder: The Strategic Bombing Campaign North Vietnam, 1965-1968* (Surrey, Great Britain: Air Research Press, 1994), 80.

³John Nichols and Barrett Tillman, *On Yankee Station: The Naval Air War over Vietnam*, 2 ed. (Annapolis: Naval Institute Press, 2001), 50.

⁴Smith, 71.

⁵Merle L. Pribbenow II, "The -Ology War: Technology and Ideology in the Vietnamese Defense of Hanoi, 1967," *The Journal of Military History* 67, (January 2003): 176.

⁶Ibid., 177.

⁷Ibid.

⁸Marshall L. Michel III, *Clashes* (Annapolis: Naval Institute Press, 1997), 169. The jammer pods used by the USAF forced them to fly in rigid formations, because if an aircraft broke formation, it lost its jammer protection. These formations and the long distances the USAF flew from Thailand to North Vietnam, meant the North Vietnamese had plenty of time to set up elaborate attacks in which MiG-21s attacked unseen from the rear and could usually escape before their presence was known. Much has been written and debated for the reasoning behind USN and USAF loss rates during air-to-air combat in Vietnam. It is generally accepted that the “loose deuce” formations flown by Navy fighters was superior to the Air Force’s “fluid four.” Michel’s book provides an in-depth look at the air war and explains the differences in tactics including the lessons learned from Rolling Thunder and how it led to the creation of TOP GUN, the Navy’s Air-to-Air tactics center, and the Air Force’s tactics school at Nellis AFB.

⁹Alan Whiting, *The Chinese Calculus of Deterrence* (Ann Arbor: The University of Michigan Press, 1975), 170. The actual number of American aircraft lost to Chinese pilots may never be known as China often gave credit to North Vietnam to deny an American excuse for retaliation. Likewise, the United States often failed to note the loss of American aircraft that had been downed by China, lest they confirm any potential wrongdoing, such as violations of Chinese airspace.

¹⁰Pribbenow, 184.

¹¹Michel, 2.

¹²Pribbenow, 183.

¹³Ho Si Huu et al., *History of the Air Defense Service*, vol. 2, (Hanoi: People’s Army Publishing House, 1993), 123, 182, quoted in Merle L. Pribbenow II, “The -Ology War: Technology and Ideology in the Vietnamese Defense of Hanoi, 1967” *The Journal of Military History* 67, (January 2003): 181.

¹⁴Ibid., 184.

¹⁵U. S. Grant Sharp, *Strategy for Defeat* (California: Presidio Press, 1978), 66.

¹⁶Jeffrey L. Levinson, *Alpha Strike Vietnam: The Navy’s Air War 1964 to 1973*. (California: Presidio Press, 1986), 28.

¹⁷Frank Uhlig Jr., *Vietnam: The Naval Story* (Annapolis: Naval Institute Press, 1986), 50.

¹⁸Nichols and Tillman, 21.

¹⁹Ibid., 20.

²⁰Michel, 139.

²¹Dennis Weichman went on to fly 625 combat missions, the most by a naval aviator during the war. After flying A-1 Skyraiders as an advisor to the South Vietnamese Air Force, he transitioned to A-4s. He made the 1966 and 1967-1968 cruise with VA-164, before eventually commanding an A-7 squadron during the last days of the war. Weichman also became one of the most decorated aviators of the war, ultimately receiving the Silver Star, five Distinguished Flying Crosses, forty-six Strike-Flight Air Medals and four individual Air Medals, six Navy Commendation Medals and the Purple Heart, along with campaign and Vietnamese awards.

²²Levinson, 133.

²³Smith, 120.

²⁴Wynn Foster, *Captain Hook: A Pilot's Triumph and Tragedy in the Vietnam War* (Annapolis: Naval Institute Press, 1992), 54.

²⁵Levinson, 132.

²⁶VA-163, *Command History 1966* (Washington, DC: Naval Historical Center, Aviation History Branch), 25.

²⁷Ibid., 29.

²⁸VA-164, *Command History 1967 Enclosure One* (Washington, DC: Naval Historical Center, Aviation History Branch), 8.

²⁹Levinson, 132.

³⁰VA-164, 9.

³¹One example of this is CVW-16's strike against Hanoi's Thermal Power Plant on 21 August 1967. CDR Bryan Compton, the commanding officer of VA-163 petitioned successfully to use the new AGM-62 on their strike. Because VA-163 did not have sufficient aircraft capable of carrying the AGM-62, four more aircraft were transferred to the Oriskany from the USS *Coral Sea*. In a highly successful strike, the plant was destroyed despite intense AAA and over thirty SAMs fired at the attacking aircraft. Both CDR Compton and LCDR James Busey were awarded the Navy Cross for this mission.

³²Nichols and Tillman, 23.

³³Ibid., 28.

³⁴Anthony M. Thornborough and Frank B. Mormillo, *Iron Hand: Smashing the*

Enemy's Air Defences (Somerset: Patrick Stephens Limited, 2002), 13.

³⁵Only two navy jet pilots were awarded the Medal of Honor for action in the air war. CDR Jim Stockdale received his for his leadership of American Prisoners of War (POWs). LCDR Micheal Estocin received his for actions during two separate Iron Hand missions in the vicinity of Haiphong Harbor in April 1967.

³⁶*Ibid.*, 17.

³⁷VA-163, 32.

³⁸Thornborough and Mormillo, 20.

³⁹Pribbenow, 178.

⁴⁰*Ibid.*

⁴¹Major General Nguyen Xuan Mau and The Ky, *Defending the Skies: A Memoir [Bao Ve Bau Troi: Hoi Ky]* (Hanoi: People's Army Publishing House, 1982), 133, quoted in Merle L. Pribbenow II, "The -Ology War: Technology and Ideology in the Vietnamese Defense of Hanoi, 1967" *The Journal of Military History* 67, (January 2003): 178.

⁴²The Fire Can and Fan Song radars are the NATO codenames for Soviet Union equipment. The Fire Can radar controlled AAA, while the Fan Song radar is normally associated with the SA-2 missile.

⁴³Thornborough and Mormillo, 21.

⁴⁴VF-162, *Command History 1967* (Washington DC: Naval Historical Center, Aviation History Branch), Enclosure 4, II-3.

⁴⁵*Ibid.*, Enclosure 4, II-2

⁴⁶*Ibid.*

⁴⁷Barrett Tillman, *MiG Master Story of the F-8 Crusader*, 2 ed. (Annapolis: Naval Institute Press, 1990), 150.

⁴⁸Michel, 38.

⁴⁹*Ibid.*

⁵⁰*Ibid.*, 57.

⁵¹Alfred Price, *The History of US Electronic Warfare*, Vol. 3, *Rolling Thunder through Allied Force, 1964-2000* (United States: Port City Press, 2000), 50.

⁵² Pribbenow, 179.

CHAPTER 4

THE CULTURE AND LEADERSHIP FACTORS

Heading back to Vietnam, the maturity among the guys who'd been there was a big advantage. . . . The problem was the junior officer with 400 or 500 hours of cockpit time who came along and said, "I can do that too." But he couldn't.

Wynn Foster, *Alpha Strike Vietnam*

As discussed in the previous chapter, attrition rates were influenced by many variables. Survival during Rolling Thunder depended on a mix of skill, competent tactics, superior leadership, and, it seemed at times, pure luck. As Rolling Thunder continued and North Vietnam's defenses grew increasingly more capable, the leadership factor became critical. In this regard, Carrier Air Wing 16 was unique among the other air wings due to its talented and aggressive leadership. While having capable leaders often meant the difference between life and death, it was also a Catch-22 in that junior and more inexperienced pilots were unable to match the abilities of their senior pilots. This chapter will analyze to what degree, if any, leadership influenced the attrition rates suffered by Carrier Air Wing 16 during Operation Rolling Thunder.

The Culture of Naval Aviation

The Navy pilots that flew and fought during Rolling Thunder were part of a distinct fraternity that consisted of older, highly educated, volunteer officers. This differed dramatically from the experience of the United States Army, whose frontline combat units consisted mainly of conscripts with no professional commitments to the military. As volunteers, these naval officers were often more patriotic and pro-military

than soldiers drafted into service against their will.¹ Once in the Navy, these pilots quickly adopted a careerist attitude towards the war, in that they had a vested interest in the institutional success of naval aviation, regardless of the politics of the war. Many believed it their professional obligation to fight the war to the best of their abilities, while working hard to enhance the reputation of naval aviation. The ultimate litmus test for these men, therefore, was to fly in combat. Most of them had flown and trained too long and hard, enduring constant danger, to simply give up and not go to war. Not flying in combat, i.e. Vietnam, for a naval aviator during Rolling Thunder was tantamount to failure.²

Tom Wolfe described this mindset in an article for *Esquire Magazine* and later published in book form in 1976. Wolfe described a couple of naval aviators flying in combat over North Vietnam in 1967:

A man may go into military flight training believing that he is entering some sort of open-air technical school where it is possible to acquire a certain set of skills. Instead he finds himself in a *fraternity* that encloses his whole life, as if he has taken vows and promised to sacrifice all to its requirements. He is faced with the undreamed-of task of climbing a pyramid that is miles high and extremely steep, and the idea is to prove at every inch of the way up that he is one of the elected and anointed ones who have a certain rare quality (which is never named but universally admired) and that he can move higher and higher and ultimately, God willing, one day--he might just be able to join the special few who reign at the Apex.

The idea is to put your hide on the line and then to have the moxie, the reflexes, and the experience, the coolness to pull it back in the last yawning moment--and then be able to go out again the next day and the next day and every next day and do it all over again--and, in its best expression, to be able to do it in some higher calling in some action that means something to thousands, to a nation. At the Apex in military flying has always been the business of flying fighter planes in combat, . . .³

The key ethos developed by Wolfe eventually became known as “the right stuff,” and the basis for a book of the same title. As Wolfe noted, naval aviators during Rolling Thunder

embodied the right stuff. They were cocky, aggressive, and proud, and many lived by the adage that they “would rather die than look bad.”⁴ While this devil-may-care, “kick-the-tires-and-light-the fire” attitude may seem egotistical, it was a mentality that belied a sense of invulnerability. It allowed pilots to continue flying in the high threat environment they faced day after day. Needless to say, leading this group of highly competitive, ‘Type A,’ personalities required someone of the same ilk, but who had reached “The Apex” as Wolfe described it.

As Rolling Thunder continued its off again, on again expansion, allowing North Vietnam’s defenses to mature, human motivation became more and more important. Quality leadership quickly became the most important factor affecting a pilot’s chances of survival. Because the war over North Vietnam tended to illuminate the difference between the courageous and the timid, this leadership was not always dependant on rank, but rather fighting spirit and combat experience. While every pilot had the basic skills, not everyone was up to the task of flying and leading missions “over the beach” into Route Package 6--Hanoi and Haiphong. How leaders motivated these professionals and volunteers to fly and face these defenses day in and day out, sometimes two or three times a day, is of paramount importance. A pilot’s experience in Vietnam was different from the ground war in that it was fought alone in the cockpit of each aircraft. Unlike a soldier serving in South Vietnam who could go for days, weeks or even months without getting shot at, a pilot knew every time he crossed North Vietnam’s coast that somebody down there was shooting at him, whether or not he could see the tracers. Each pilot had to continually muster the strength and courage to face the enemy on his own. As Lieutenant Commander Bob Arnold, a pilot in VA-164 noted, “. . . everyone knew that the moment

he went feet dry, he was over a death pit that would lash out with flak, missiles and MiGs, the sole purpose of which was trying to kill *you*.”⁵

Lieutenant Frank Elkins portrayed this issue throughout his journal. He describes trying to motivate himself to fly a night armed reconnaissance mission early in the 1966 cruise:

This morning, on the flight deck, still black night, I thought of those guns and of the stumbling around in the dark, and I thought of a hundred reasons why I shouldn't go. I was tired and sleepy, knew that I probably wouldn't hit anything anyway, and I kept thinking of those guns and flak. But I went, and maybe I kept some VN awake and worried too. Perhaps by chance I did some damage, but I doubt it.⁶

Less than a month later, after his squadron had lost four pilots, Elkins described searching for such courage as he prepared to launch for yet another night armed-reconnaissance mission:

During the brief in Air Intelligence you know you're going and you listen carefully. Then back in the ready room, you begin to dread it and you go on briefing though, even though you're beginning to look for a way out, to hope that you're really not going out, that the spare will be launched in your place, that you'll be late starting, that you'll have no radio, or a bad ALQ, or something--anything--that'll give you a decent, honorable out of that particular night hop. After the brief, waiting to suit up and man aircraft, you really dread it most then. A cup of coffee and another nervous call to the head, and you're told to man your aircraft for the 03:00 launch.

Up on the flight deck, you start looking for something wrong; you go all the way around the aircraft, looking for that little gem that'll be reason enough to your conscience and your comrades to refuse to go out. And it doesn't come. You never give up though, first the damned radio works, and the damned ALQ works, and the damned tacan works...⁷

How, then, did senior leaders motivate individual pilots to continue flying?

According to Jim Stockdale, “The truth is that failures of pilot nerve *matched* the record-breaking numbers of high-caliber flak guns and enemy fighters, to say nothing of the surface-to-air missiles they faced.”⁸ In such an environment, air wing and squadron

leadership was bound to struggle as well. Senior leaders felt the same emotions as their junior pilots but had to maintain the façade of the gung-ho aviator (“it's better to die than look bad”). Squadron commanders and flight leads had to fly every rugged mission lest they be found wanting. Great leaders flew these missions and motivated the junior pilots, making them feel as if they, too, could fly, fight, *and survive*. These leaders developed a reputation amongst the junior officers for teaching their wingmen the skills necessary to survive, taking care of them in dangerous situations, as well as getting the job done. These leaders were making tough decisions under extremely trying circumstances, when there was often no real solution to the issues they faced.

There were poor leaders also, but they were identified quickly through their incompetence or unwillingness to fly, and were quickly sent home lest their bad attitude affect others.⁹ Frank Elkins wrote of the distress caused by a poor flight leader in his squadron, VA-164: “When you go out with any qualified section leader, not to mention an experienced senior officer, you ought never to have to think for two people. And when folks are shooting at you, it’s one hell of a time to distrust your leader.”¹⁰ As Rolling Thunder continued, senior leaders found themselves at the vanguard, leading tougher and more costly missions with their junior pilots.¹¹ Because of this, these officers suffered high casualties throughout the air war.

Failures of courage did happen, though they were not peculiar to Vietnam nor were they rampant.¹² The volunteer status of naval aviators made them unique compared to the Army’s conscripts doing the majority of fighting in South Vietnam. In order to remove himself from the fighting, a pilot could feign sickness for a few days, or find a deficiency while performing the pre-flight inspection that would prevent him from flying

on that particular mission. To permanently remove himself from combat, all a pilot had to do was turn in his wings. Surprisingly, the men who turned in their wings were actually appreciated by pilots who continued to fly. No one wanted to go over the beach with someone whose heart wasn't in his work. It was thought to be much better to fess up and make room for somebody with "tiger blood" in their veins.¹³ Elkins wrote in his journal:

There's rarely been a war such as this when men could say, "I've had enough," and be sent home the next day. For those of us in the Naval air war in Vietnam, it's a volunteer war. And to that extent, it's a professional war. At the same time, it would be extremely difficult to turn in your wings and quit, even if you were afraid for your life, in the company of those with whom you've never been a quitter before.¹⁴

As Elkins wrote, the sense of professionalism drove most men, but the quality of leadership was often the decisive factor that motivated pilots during such difficult times. There was no question about senior leaders treating junior officers as equals. They were not. They were the senior, experienced tactical carrier aviators and the junior officers were neophytes in the air war. But these junior aviators were going to be wingmen for them during an extremely dangerous combat tour, and the senior officers wanted to be certain junior pilots had all the information necessary to be the best wingman possible. Whether or not their skills and courage would rise to the task remained to be seen, but they would not lack for tactical knowledge. If the information helped junior pilots to survive, that was simply a dividend.¹⁵

Carrier Air Wing-16 Leadership

Among the carrier air wings that participated in Rolling Thunder, CVW-16 was distinct. They were unique because of the quality leadership of the air wing and the above average quality of its airmen.¹⁶ This leadership began with the captain of the USS

Oriskany and the carrier air wing commander (CAG). It included the squadron commanding officers and executive officers, as well the senior pilots within the squadrons. Leadership affected all members of the air wing, down to the most junior enlisted personnel. While the air wing had many exceptional leaders during its three cruises to Vietnam, they and their accomplishments are too vast to list. Two individuals, however, epitomized the leadership typical within the air wing. They were Commander Jim Stockdale, who commanded the air wing during its first WESTPAC cruise, and Commander Bryan Compton, who led VA-163 during the 1967-68 WESTPAC cruise. Both men were extraordinary leaders who were largely responsible for the successes of CVW-16 and its squadrons.

In the rank structure aboard the Navy's aircraft carriers in the 1960s, the CAG was subordinate to the Captain of the ship. Though the air wing was the carrier's main battery to project power ashore, air wing commanders often found themselves answering to people who knew little--or had little idea of the tactical realities of the air war over North Vietnam. With the exaggerated emphasis that was placed on sorties, the promotion of the captain of an aircraft carrier to admiral often depended on how many sorties his ship produced.¹⁷ As the officer primarily responsible for what the sorties actually accomplished during day-to-day tactical operations over North Vietnam, the title of air wing commander became one of the most revered and sought-after leadership positions in naval aviation. Those selected as CAG were typically above average pilots with solid performance throughout their career. They had completed a tour as the commander of a fighter or attack squadron and made the cut above their peers.¹⁸ Selection as CAG was

seen as culmination of almost twenty years of preparation and training, making an aviator the acknowledged leader in a profession unforgiving of error.¹⁹

Commander Jim Stockdale was the archetypal air wing commander. He commanded Carrier Air Wing 16 during the 1965 cruise, and set the stage for the air wing's accomplishments during Rolling Thunder. Stockdale took command of the air wing in April 1965, after commanding VF-51, a fighter squadron on the USS *Ticonderoga*. As the *Ticonderoga* was already on station in the Tonkin Gulf, Stockdale had a wealth of experience concerning operations in Vietnam. He had been airborne as the on-scene-commander during the Tonkin Gulf Incident. He also took part in several of the reprisal raids in the rapidly escalating air war. These experiences made him uniquely suited for command of the *Oriskany's* air wing as she departed for her first Vietnam War cruise.

As the *Oriskany* sailed west across the Pacific Ocean, Stockdale overheard pilots of his squadrons talking about their role in what was already being recognized as a war of limited aim. He called for a mandatory meeting of all his pilots. While there, Stockdale delivered a two hour speech that included the following guidance concerning the officer's obligations:

. . . I think I owe you in addition a straight from the shoulder discussion of pilots' mental attitudes and orientation in "limited war" circumstances. . . I want to level with you right now, so you can think it over here in mid-Pacific and not kid yourself into imagining "stark realizations" in the Gulf of Tonkin. Once you go "feet dry" over the beach, there can be nothing limited about your commitment. "Limited war" means to us that our target list has limits, our ordnance loadout has limits, our rules of engagement have limits, but that does *not* mean that there is anything "limited" about our personal obligations as fighting men to carry out assigned missions with all we've got. If you think it is possible for a man, in the heat of battle, to apply something less than total *personal* commitment--equated perhaps to your idea of the proportion of *national* potential being applied, you are

wrong. It's contrary to human nature. So also is the idea I was alarmed to find suggested to me by a military friend in a letter recently: that the prisoner of war's Code of Conduct is some sort of "total war" document. You can't go half way on that either. The Code of Conduct was not written for "total wars" or "limited wars," it was written for all wars, and let it be understood that it applies with full force to this Air Wing--in *this* war.

What I am saying is that national commitment and personal commitment are two different things. . . . We are all at a fork in the road this week. Think it over. If you find yourself rationalizing about moving your bomb release altitude up a thousand feet from where your strike leader briefs it, or adding a few hundred pounds fuel to your over target bingo because "the Navy needs you for greater things," or you must save the airplane for some "great war" of the future, you're in the wrong outfit. . . . Let us all face our prospects squarely. We've got to be prepared to obey the rules and contribute without reservation. If political or religious conviction helps you do this, so much the better, but you're still going to be expected to press on with or without these comforting thoughts, simply because this uniform commits us to a military ethic--the ethic of personal pride and excellence that alone has supported some of the greatest fighting men in history. Don't require Hollywood answers to 'What are we fighting for'? We're here to fight because it's in the interest of the United States that we do so. This may not be the most dramatic way to explain it, but it has the advantage of being absolutely correct.²⁰

Stockdale gave this speech in April 1965, before the Americanization of the war began in earnest, and yet he knew enough about Vietnam, and the salient issues, including America's limited commitment, that he knew the war would eventually cause great debate amongst Americans. His caution to his men before they entered combat showed a greater understanding of the realities facing them and the United States than many of his superiors, including the politicians running the war from Washington. The strength of this speech is evidenced by Stockdale's emphasis on professionalism. He never calls for blind followership, but instead tells his pilots that as military men, they must accept the limited goals already set forth by the Johnson administration. By stressing to his pilots the importance of their obligations and loyalties, Stockdale set the tone for his air wing and their future performance. His pilots would continue giving their

all despite growing frustrations with the war and the Johnson administration's restrictions and unwillingness to employ them appropriately. Stockdale's emphasis on the importance of the Prisoner-of-War (POW) Code of Conduct was prophetic given his future role as the leader of American POWs in North Vietnam--a role that earned him the Medal of Honor. Stockdale's ability as a leader is evidenced by the fact that the issues he covered in this speech affected and impacted Air Wing 16 throughout Rolling Thunder, long after he had been shot down.

Part of Stockdale's success can also be attributed to the commanding officers of the USS *Oriskany*. During Rolling Thunder, *Oriskany* captains gave the air wing commanders authority rarely seen on other aircraft carriers. Beginning with the 1965 cruise, Captain Bart Connolly III gave Commander Stockdale authority to run his air wing as he saw fit. Administratively, this meant that CAG Stockdale had the authority to sign for and release all messages that dealt with air wing matters. Instead of waiting for approval from the captain of the ship, it was the CAG who decided whether a shot down pilot was MIA or KIA and sent the appropriate message from the ship to Washington.²¹ Operationally, CAG Stockdale was also given complete authority over his air wing, though he consulted with Captain Connolly on matters that he felt could put the Captain in jeopardy.

In August 1965, Stockdale was approached with an innovative idea by Lieutenant Colonel Ed Rutty, the executive officer of VMF-212, the Marine F-8 Crusader squadron onboard the *Oriskany*. Instead of losing a plane a week trying to drop the Thanh Hoa Bridge with relatively small bombs, Rutty proposed using F-8 Crusaders to drop 2000-pound Mk84 bombs. Rutty had already figured out how to load, arm, and drop the

ordnance from an aircraft that was not designed to carry it. Ruddy asked Stockdale for permission to fly test missions with the large bombs.²²

What Stockdale in turn proposed to Captain Connolly had never been attempted. The Crusaders were too heavy to catapult with such a heavy bomb load and a full load of fuel. The unorthodox answer was to launch them with one-third of their fuel, then refuel the Crusaders once they were airborne. Getting approval through official Navy channels would have taken months and ran the risk of being turned down outright. According to Stockdale:

In other words, what I wanted would stick the captain's neck out a mile. What actually happened was that I kept him abreast of the "test project" we ran as we tried these procedures out on a series of hops off the ship. Once we agreed it was practical, he said to go with it. Without mentioning it, we both agreed to let Washington go to hell.²³

Not many carrier commanding officers would have been willing to give their ship's air wing the latitude to attempt such a risky procedure. But on the *Oriskany*, Captain Connolly realized that this new tactic might help save the lives of pilots, and was willing to let CAG Stockdale and his pilots try. Unfortunately, Stockdale never got to see the results. On 9 September 1965, the air wing was set to bomb the Thanh Hoa Bridge using these new procedures, but weather obscured the target. Stockdale was shot down while attacking his secondary target and spent the next eight years as a POW (see appendix A). By prior agreement between Stockdale and Connolly, Lieutenant Colonel Charles Ludden, the commanding officer of VMF-212, assumed command of the air wing. Although he only commanded the air wing for a month, Captain Connolly's decision was significant because it was the first time since the Second World War that a Marine had commanded a Navy air wing.²⁴

The authority Captain Connolly and the subsequent *Oriskany* captains gave wing commanders is an excellent example of the superior leadership typical of the *Oriskany*/Air Wing 16 team. It was not until 1985, a full twenty years after these events, that the Navy made air wing commanders co-equal with carrier captains and gave them unimpeded command authority over their air wings. The authority and freedom to operate that are the hallmarks of current carrier air wings were first tested by Carrier Air Wing 16 during Rolling Thunder.

In the six months he led Air Wing 16, CAG Stockdale had a profound affect on the air wing that lasted for the remainder of Rolling Thunder. Stockdale's drive and personal commitment obliged him to fly frequently, often two missions per day in addition to his daily duties as CAG. His style of leadership was seen as almost superhuman and caused many of the junior officers in the air wing to emulate him.²⁵ Rick Adams recalls, "Stockdale used to walk around the flight deck when we were manning airplanes and look for an airplane with a good bomb load on it. He would find one and say to the pilot, 'You,' motioning him to get out. Then he would strap in and away he would go. The man had *cojones* as big as bowling balls."²⁶ Commander Wynn Foster, the executive officer of VA-163, had a closer affiliation with Stockdale and described him as follows:

Although he was generally quiet and low key, there never was any doubt about who was in charge of the air wing. Jim never was heavy handed or meddlesome in the affairs of the several squadrons, but he always knew what was going on. He allowed skippers free rein in running their outfits while masterfully molding their efforts into the highly effective main battery of the USS *Oriskany*.²⁷

CAG Stockdale's leadership affected even the most junior sailors on the *Oriskany*. His full name was James Bond Stockdale, and he used the popularity of Ian Fleming's *James*

Bond novels to his advantage, taking “double-oh-seven” as his personal radio call sign. The *Oriskany*’s crew loved it, and painted ‘007’ on all their tow tractors, starter jeeps, forklifts, and crash cranes.²⁸ Jim Stockdale left an indelible mark, as his leadership continued to influence the air wing and *Oriskany* for the remainder of Rolling Thunder.

Commander Bryan Compton was the commanding officer of VA-163 during the *Oriskany*’s 1967-1968 WESTPAC cruise. A native of Alabama and graduate of the United States Naval Academy, he was one of the most successful leaders of the air wing. His leadership saw the squadron through its terrible losses of this cruise. Lieutenant Commander John McCain (later Senator from Arizona), who was eventually assigned to VA-163 after surviving the fire on the USS *Forrestal*, described Compton in his memoir, “We had one of the bravest, most resourceful squadron commanders, who was also one of the best A-4 Pilots in the war, Commander Bryan Compton.”²⁹ Lieutenant Commander Dean Cramer was also a member of VA-163 during this cruise. He described Compton as follows:

Bryan is an unbelievable person, literally unbelievable. He’s got a genius IQ, I think number two in his class at the academy. . . . He’s a fearless pilot. He’d fly into the hinges of hell and get away with it. . . . Half your survival is not losing control, and because he had such iron emotions and control of his fears, he got away with a lot of stuff. . . . People would fly with him because they had faith that he could pull it off, . . .³⁰

His leadership was critical as VA-163 flew 2,700 combat missions, including 126 Alpha Strikes during this cruise.³¹ The cost to the squadron and air wing was extremely heavy. During the *Oriskany*’s first two weeks of combat, VA-163 alone lost three aircraft with two pilots KIA and the third sent home with neck injuries incurred while ejecting from his aircraft. Their sister squadron VA-164 lost four aircraft in less than one week, including an abortive rescue attempt during which the rescue helicopter crashed, killing

all on board, (see appendix C). The rest of the air wing suffered similar losses, and though they continued to lose aircraft throughout the cruise, nothing compared to the shock of their first two weeks of combat. Dean Cramer recalls, “My memory tells me the squadron started out with fourteen airplanes, and struck or lost nineteen, and we started out with twenty-one pilots and struck or lost eleven. At one point in the cruise, 163 was down to something like six airplanes and twelve pilots, and we called ourselves Det Charlie.”³²

The CAG during the 1967-1968 cruise was Commander Burt Shepard, the brother of Astronaut Alan Shepard. While he was a capable and effective leader, Shepard was often overshadowed by Bryan Compton. Commander Compton’s ability to lead was so compelling that he became the de facto leader of the air wing, especially when they flew high risk missions to Hanoi and Haiphong. According to Dean Cramer:

Burt Shepard, our air wing commander, was a very fine aviator and a helluva stick-and-throttle man, but he didn’t have that iron-like control. Burt couldn’t control himself--probably closer to the average aviator--and the problem was he had Bryan Compton, Jim Busey, and others, who could control themselves. He was compelled mentally to continue--he couldn’t and wouldn’t quit--and although he tried, Burt just couldn’t come up to that level of performance. . . .

Burt could not control Compton, there were very few people that I know of who could control Bryan. If he considered a request to be a stupid decision, he wouldn’t do it. It was an acknowledged but unspoken fact that if the target was a really tough place, Bryan should lead because he could do it better. Never spoken, it just happened. As a result our squadron then effectively led the war during that cruise on the *Oriskany*. We tried to spread the joy, but the natural tendency for Bryan was to ensure his people were with him.³³

An illustrative example of Commander Compton’s leadership ability was his raid on the Hanoi Thermal Power Plant, on 21 August 1967. Commander Compton had successfully petitioned for VA-163 to receive the new AGM-62 Walleye smart bomb, which allowed the squadron to attack what had been a previously prohibited target in the

middle of Hanoi. For the small raid, Compton took only five other pilots with him, all from VA-163.³⁴ Each pilot was given a different aim point on the generator, which they attacked after diving from differing points of the compass. Two aircraft were hit by the intense AAA and SAMs, with one being forced to turn back. Of the five remaining aircraft, three put bombs in the generator hall and two in the boiler house. Official records claim over thirty SAMs had been fired at the strike aircraft, as well as untold numbers of 85mm and 57mm guns and small arms. Lieutenant Commander James Busey's aircraft had more than 125 holes ranging from an inch in diameter to one eight-by-fourteen inch hole, plus his horizontal stabilizers had been shot off. In addition, the aircraft was on fire when he made his arrested landing on board the *Oriskany*. Lieutenant Commander Dean Cramer, who never made it to the target returned to the *Oriskany* with his aircraft on fire and more than fifty shrapnel holes of various sizes, including a hole in the port wing measuring thirty-eight-by-eighteen inches.³⁵ Rather than depart the area as quickly as possible, Commander Compton flew two more passes over the power plant, taking pictures of the bomb damage so that the air wing would not have to re-attack the target.³⁶ The mission was regarded as a huge success. For his courage and leadership of this raid, Commander Compton received the Navy Cross, as did Lieutenant Commander Busey, who successfully attacked the target despite suffering severe damage to his aircraft prior to reaching the target.

In his memoir, John McCain described flying a mission over Haiphong with Bryan Compton on 25 October 1967. During the mission, Bryan's wingman, Lieutenant Krommenhoek was shot down (see appendix C):

None of us saw him eject. Bryan wanted to determine whether or not the missing pilot had managed to escape his destroyed aircraft and parachute safely to ground. He kept circling Haiphong at an extremely low altitude, about two thousand feet, searching in vain for some sign that the pilot had survived. We were taking a tremendous pounding from flak and SAMs. I was scared to death waiting for Bryan to call off the search and lead us back to the *Oriskany* and out of harm's way. To this day I will swear that Bryan made at least eight passes before he reluctantly gave up the search. Bryan has since dismissed my account of his heroism as an exaggeration, claiming, "You can't trust a politician. They'll lie every time." But I remember what I saw that day. I saw a courageous squadron commander put his life in grave peril so that a friend's family might know if their loved one was alive or dead. For his heroics and ability to survive them, the rest of the squadron regarded Bryan as indestructible. We were proud to serve under his command.³⁷

These thoughts concerning Bryan Compton's leadership were universal throughout the air wing. Perhaps Lieutenant Dick Wyman, a fighter pilot in VF-162 summed it best:

I received a Silver Star. After the ceremony, Bryan Compton said, "Goddamn, Dick, I'd like to have you in my squadron." That meant more to me than the medal. He was the best. If you had a tough mission, you prayed he was leading it. Funny thing was, Compton later made Admiral and during peacetime everybody hated him. What a mean, ornery bastard of an admiral he turned out to be! But on Yankee Station he was loved, because nobody was a better strike leader.³⁸

The Leadership Factor in CVW-16's losses

During the 1967-68 cruise, CVW-16, in particular VA-163, developed a reputation for aggressiveness and success. This was borne from the leadership ability of the commanding officers as well as the senior pilots. As professionals, they realized that the restrictions placed on them by Washington limited their effectiveness. As such, they recognized each lifting of bombing restrictions by President Johnson and McNamara as a chance to potentially influence the outcome of the war. According to McCain:

Until this moment we had found Johnson's prosecution of the war, with its frustratingly limited bombing targets, to be maddeningly illogical. . . . When orders came down to escalate the bombing campaign, the pilots on the *Oriskany* were ecstatic. As the campaign heated up, we began to lose a lot more pilots. But the losses, as much as they hurt, didn't cause any of us to reconsider our support

for the escalation. For the first time we believed we were helping to win the war and we were proud to be usefully employed.³⁹

By the fall of 1967, the air war was finally achieving the desired affect on the North Vietnamese. On average 500 Navy and Air Force aircraft were bombing North Vietnam each day, and at one point, after five successive days of bombing in September, Haiphong simply ran out of SAMs, much to the amusement of aircrew.⁴⁰ The *Oriskany* was launching two to three Alpha strikes a day against targets in the vicinity of Hanoi and Haiphong. VA-163 alone had already knocked out all the bridges to Haiphong, and was dropping 150 tons of bombs on Vietnam each day.⁴¹ As British Consul General in Hanoi John Colvin observed, “Hanoi was no longer capable of maintaining itself as an economic unit nor of mounting aggressive war against its neighbor.”⁴²

Of course, this success came with a price. According to Dean Cramer:

The squadron pushed availability--if the aircraft lighted off and dropped bombs, it was up. So we had a little better availability than other squadrons; we'd get more planes in the show. We had a lot of aggressive people, and those who weren't aggressive were forced to be players whether they were or not. You can't come back to the ready room after regularly downing the airplane, just can't do it. They were forced to play along.⁴³

Experience played a large part in developing quality leaders and airmen in Air Wing 16. As Dennis Weichman noted, “Experience was the key to confidence and survival. The first cruise involved a matter of getting used to combat, seeing and feeling what it's really like. Next time back, you built on that experience, really the big kid on the block instead of the new guy.”⁴⁴ This experience was often delineated by whether a pilot was from the Atlantic Fleet or Pacific Fleet. Pilots assigned to Atlantic Fleet units were often regarded as inexperienced, no matter what their background or rank. This belief and practice irritated many capable pilots who took a back seat until proving

themselves in combat. The steady attrition rate, coupled with regular rotations meant that if a pilot from the *Oriskany* survived his first cruise, he automatically graduated to lead the tougher missions on his next cruise.⁴⁵

VF-111 serves as an excellent example of this disparity between the experience levels. Led by Commander Bob Rassmussen, a former Blue Angel and highly experienced pilot, VF-111 was one of the most experienced Crusader squadrons of the war by 1967. Pilots in VF-111 had accumulated over 12,000 total hours in the Crusader, and had flown over 1,600 combat missions. But this experience did not include the junior aviators, some of whom only had 150 hours in the aircraft. In fact, on 17 December 1967, Lieutenant Commander Dick Schaffert was flying an Iron Hand escort mission when his flight was jumped by four MiG-17s. Schaffert was able to fend off the MiGs until other *Oriskany* F-8s arrived, whereupon Lieutenant Dick Wyman succeeded in downing one of the MiGs, in what has become an epic aerial engagement.⁴⁶ That Schaffert was able to defend himself and his wingman can be attributed in part to the fact that he was flying his 276th combat mission of the war.⁴⁷ A lesser experienced pilot most certainly would not have been able to survive an engagement that pitted him against four enemy aircraft.

Junior pilots became reluctant to fly with certain senior officers who they felt were becoming too aggressive. Commander C.A.L. Swanson, the commanding officer of VF-162, had been Dick Wyman's flight leader when Wyman shot down a MiG-17 in December 1967. During the battle, Swanson made a wrong move, which gave Wyman and not him an advantage and eventually the aerial victory. According to Lieutenant Commander John MacDonald, a pilot in VF-162, "After Wyman got the MiG, though, Swanson began taking a lot of chances. He hung around after strikes trying to suck a MiG

in. It was guts balls [*sic*]. But a guy who did that was just asking for it. A lot of pilots weren't anxious to fly with him from then on."⁴⁸

Sometimes, junior pilots were reluctant to fly with the aggressive Bryan Compton as well. Dean Cramer spoke of VA-163's losses during the 1967 cruise:

The losses were nobody's fault, just a weird situation. Certainly we could probably blame Bryan with his over aggressiveness to a degree, but it wasn't always Bryan people were shot down with. Sometimes it was in twos, sometimes in another strike. So it wasn't Bryan per se. By fate, we ended up getting the primary targets over and over again. *Constellation* would go in, they wouldn't get the target, and we'd go in the next day when everything was stirred up and get the hell shot out of us, but we'd get the target. Whether it was true or not, we were kind of sweep up. When all else failed, just assign the target to us, and we went to some God damn targets. Three alphas a day, and all of them to the delta. God, forty or fifty SAMs were not unusual.⁴⁹

As discussed earlier, the most effective leaders were at the forefront, leading missions, making their junior pilots feel as if they too could survive continued exposure to North Vietnamese defenses. Perhaps the greatest negative impact leaders had on the pilots was when they became casualties themselves. Junior pilots invariably began questioning their own sense of invulnerability, because if it happened to such august personages, then what chance did they stand? Senior leaders throughout naval aviation paid a heavy price for their continued leadership of the air war from the cockpit.⁵⁰ In this regard CVW-16 was no different from other carrier air wings that participated in Rolling Thunder. Each deployment to the Tonkin Gulf resulted in losses amongst the senior leadership in the air wing (see appendices). Several losses in particular had great impact on the air wing, and serve as examples of how the loss of senior leadership negatively impacted pilots. These are: the loss of CAG Stockdale in September 1965; the wounding of Commander Wynn Foster in July 1966; and the loss of Commander Herb Hunter in July 1967.

Jim Stockdale's loss on 9 September 1965 deeply affected the air wing and *Oriskany*. Wynn Foster was Jim Stockdale's wingman on the day he was shot down. He described the mood felt throughout the ship upon his return, "We all lost a lot on the ninth of September, a grim day for Air Wing 16, and a terrible one for me."⁵¹ Concerning the affect Stockdale's loss had on the air wing, Foster said, "The loss of CAG shook the air wing emotionally; it just shattered us all. The man was dearly loved."⁵² Stockdale's absence was immediately felt throughout the ship and air wing, though his legacy continued to influence the *Oriskany* and her air wing. Air wing commanders that followed him were often unfairly judged against the standard that Stockdale had set.

Wynn Foster was the commanding officer of VA-163 when he was wounded on 23 July 1966 (see appendix B). While each loss affected the pilots, losses in the air war typically meant that a pilot had been killed, or captured and taken prisoner, and that he would not return to the ship. The nature of Wynn Foster's wound terrified the pilots in the air wing who were unaccustomed to such events. Frank Elkins described the effects of Foster's loss in his journal:

Falcon's [Foster] accident has given everyone a different twist in their bowels, a different fear. It's easier in some ways to see someone blown to bits instantly than to see a man lose an arm. I've always said it's easier to die for an ideal than to live for it. Dying takes only a moment's courage, while life is a battle against day-by-day eroding and grinding forces. To stand up to life and to hold to high standards sincerely is a more difficult price than an instant death. It's easier to go out in a glorious flaming surrender to death in favor of some cause than it is to boldly, drudgingly, daily stand up to be counted on the side of that you value most.⁵³

Foster's loss also typified the demoralizing effect the loss of a senior officer could have on a junior pilot. Wynn Foster's wingman during this mission was Lieutenant (Junior Grade) Tom Spitzer, who had just joined VA-163, and was on his first combat mission over North Vietnam. Though gravely wounded, one of Foster's main concerns while he

lay in the *Oriskany's* sick bay was the impact on Tom Spitzer. "With the squadron for only a week, Tom had had a traumatic introduction to combat as an eyewitness to his skipper's getting shot out of the sky. I was concerned that Tom might somehow think that my getting shot down was his fault."⁵⁴

Commander Herb Hunter's loss on 19 July 1967 (see appendix C) also seriously affected the air wing and his squadron. Hit while attacking the bridges at Co Trai, Commander Hunter attempted to land his badly damaged Crusader aboard the USS *Bon Homme Richard*. As a result of the damage to his aircraft, he hit the deck too fast, and hard enough to shear off the landing gear. Hunter was killed when his Crusader skipped the arresting gear wires and plunged over the side. His loss was the low point of the *Oriskany's* disastrous first two weeks of combat during July and August 1967.⁵⁵ The air wing had already been shaken by the loss and failed rescue attempt of three VA-164 pilots the day prior (see appendix C). That Hunter's loss came exactly one year to the day after VF-162's Lieutenant Dennison had been killed over the same target caused further trauma due to the popularity and capabilities of both individuals. By any measure, Hunter was an accomplished and excellent pilot--as a former Blue Angel, no one other than the commanding officer knew the F-8 as well as he. His death shook VF-162 and left many questions. Everyone wondered why such an excellent pilot took such an unnecessary and high odds risk. According to John MacDonald, "In a meeting the day before, the air wing commander had really laid it on about how we were losing too many airplanes. 'If you possibly can,' he said, 'bring that airplane back and try to get it aboard!' Herb was a professional. He was trying."⁵⁶ Herb Hunter's wingman, Lieutenant Lee Fernandez, was particularly affected by Hunter's death. He described watching Hunter's plane careen off

the flight deck, “I screamed as I saw his plane go off the deck into the water. I yelled with rage and disbelief that the war could do this to such a man. In a daze, I flew around to check the spot where he went down. . . .”⁵⁷ Lee Fernandez was never the same after Hunter’s death. In fact, shortly after this incident Fernandez risked court martial by requesting a termination of flying duties due to his status as a conscientious objector.⁵⁸

Quality leadership is an issue that is common throughout the military and CVW-16’s experiences during Vietnam provide a good case study. The problems faced by air wing leaders are examples of serious decisions being made about serious issues with extremely high stakes and without the benefit of hindsight. Looking at the various levels of involvement during Rolling Thunder, it is easy to see why leadership played such a significant role. Junior pilots such as ensigns and lieutenants did what was asked of them without question. They trusted leaders and senior decision makers to give them a mission with a purpose. Lieutenant commanders and commanders had the benefit of experience. Some had previous deployments to Korea or the Tonkin Gulf and had faced the challenge of overcoming their fears. Most senior pilots had ample hours of flying time that helped them handle the tasks thrust upon them. They led the junior pilots sometimes competently and sometimes in situations well beyond their capability. Sometimes they failed, but these leaders did the best they could, given what they were given. They all flew, fought and sometimes died, doing a job they had been asked to do. As professionals, they all struggled with the restrictions and the questionable decisions made by senior leadership, but did not rebel. Instead, they performed as best they could under the circumstances, continually hoping the Johnson administration would allow them to fight the war with

their full potential. As the restrictions placed on the air war were lifted, good leaders became even more important, and often meant the difference between life and death.

¹John Sherwood, *Afterburner: Naval Aviators and the Vietnam War* (New York: New York University Press, 2004), 292.

²*Ibid.*, 293.

³This quote is from a speech delivered by James Stockdale in 1988. He paraphrases Tom Wolfe's article to this shortened form. James Stockdale, *Thoughts of a Philosophical Fighter Pilot* (Stanford: Hoover Institution Press, 1995), 64. A full copy of the article can be read in Tom Wolfe's *Mauve Gloves & Madmen, Clutter & Vine*, 1976. I was able to find a copy of the article in The Library of America's Reporting Vietnam. Vol. 1, *The Truest Sport: Jousting with Sam and Charlie*, by Tom Wolfe (New York: Literary Classics of the U.S., 1998), 525-556.

⁴John Nichols and Barrett Tillman, *On Yankee Station: The Naval Air War over Vietnam* 2 ed. (Annapolis: Naval Institute Press, 2001), 34.

⁵Bob Arnold, "A Trip to the Suburbs," *The HOOK* (winter 1990), 48.

⁶Frank Elkins, *The Heart of a Man* (New York: W. W. Norton and Company, 1973), 69.

⁷*Ibid.*, 107-108.

⁸James Stockdale, *Thoughts of a Philosophical Fighter Pilot*, 105.

⁹On 8 July 1966, the Executive Officer of VF-111 turned in his wings the day before the *Oriskany* arrived on the line. As he was being flown off the ship in a transport aircraft, his seat became unbolted and he was severely injured during the catapult shot. The aircraft turned around and landed back aboard the *Oriskany* and he spent several hours in surgery, while they sewed him up and placed a steel plate in his head. The irony of his being injured after quitting in order to avoid combat was not lost on the members of the air wing. Zalin Grant, *Over the Beach: The Air War in Vietnam* (New York: W. W. Norton and Company, 1986), 64.

¹⁰Elkins, 81.

¹¹Email to the author from Wynn Foster, 19 September 2005.

¹²Nichols and Tillman, 42.

¹³*Ibid.*, 35.

¹⁴Elkins, 45.

¹⁵Ed Rasimus, *When Thunder Rolled: An F-105 Pilot over North Vietnam*. (California: Presidio Press, 2003), 104.

¹⁶James Stockdale, *A Vietnam Experience: Ten Years of Reflection* (Stanford: Hoover Press, 1984), 27.

¹⁷Jeffrey L. Levinson, *Alpha Strike Vietnam: The Navy's Air War 1964 to 1973* (California: Presidio Press, 1986), 241.

¹⁸The competition has always been extremely harsh--since the position was created in the 1920s, less than 1,000 men have held this coveted job. Robert L. Lawson, *Carrier Air Group Commanders: The Men and their Machines* (Pennsylvania: Schiffer Publishing, 2000), 35.

¹⁹Levinson, 58.

²⁰U. S. Grant Sharp, *Strategy for Defeat* (California: Presidio Press, 1978), 97-99.

²¹Lawson, 100.

²²Peter Mersky, *F-8 Crusader Units of the Vietnam War*, Osprey Combat Aircraft Number 7 (London: Osprey Publishing, 1998), 27.

²³Lawson, 101.

²⁴Lieutenant colonel Ludden assumed command of the air wing until a replacement air wing commander could meet the ship in the Tonkin Gulf. He was eventually relieved by commander Robert Spruit in October 1965, whereupon he resumed his duties as the commanding officer of VMF-212. Although Marine squadrons have been a continuous part of carrier air wings, no Marine has commanded a Navy air wing since. However, under the United States Navy and Marine Corps TACAIR integration plan, Colonel Douglas Yurovich assumed command of Carrier Air Wing 9 in early 2006.

²⁵Grant, 31.

²⁶*Ibid.*, 32.

²⁷Wynn Foster, *Captain Hook: A Pilot's Tragedy and Triumph in the Vietnam War* (Annapolis: Naval Institute Press, 1992), 107.

²⁸Grant, 35.

²⁹John S. McCain and Mark Salter, *Faith of My Fathers*, (New York: Random House, 1999), 183-184.

³⁰Levinson, 199.

³¹Wynn Foster, "The Saints of VA-163," *The HOOK* (winter 1990): 43. The majority of these strikes were against targets in Hanoi and Haiphong, with the majority of them concentrated in the last three weeks of October 1967. During this time frame, the *Oriskany* was averaging two to three Alpha strikes a day.

³²Levinson, 199.

³³*Ibid.*, 200.

³⁴The other pilots for this mission were Lieutenant Commander Jim Busey, Lieutenant Commander Dean Cramer, Lieutenant Commander Jerry Breast, Lieutenant Vance Shufeldt and Lieutenant Junior Grade Fritz Schroeder.

³⁵VA-163, *Command History 1967* (Washington, DC: Naval Historical Center, Aviation History Branch), 25.

³⁶McCain and Salter, 183.

³⁷*Ibid.*, 184.

³⁸Grant, 235.

³⁹McCain and Salter, 186.

⁴⁰Levinson, 188.

⁴¹McCain and Salter, 182.

⁴²James Stockdale, *Thoughts of a Philosophical Fighter Pilot*, 70.

⁴³Levinson, 201.

⁴⁴*Ibid.*, 131.

⁴⁵Email to the author from Wynn Foster, 19 September 2005.

⁴⁶Dick Wyman was awarded a Silver Star for downing one of the MiG-17s, while Dick Schaffert received a Distinguished Flying Cross for surviving this engagement and protecting his wingman.

⁴⁷Micheal O'Connor, *MiG Killers of Yankee Station* (Wisconsin; New Past Press, Inc., 2003), 101.

⁴⁸Grant, 238.

⁴⁹Levinson, 199.

⁵⁰During May 1965, while part of CVW-2 on the USS *Midway*, VF-111 lost two commanding officers within a nineteen day period. During 1965, the USS *Coral Sea's* Carrier Air Wing 15 lost three commanding officers and the air wing commander, Pete Mongilardi.

⁵¹*Ibid.*, 108.

⁵²Levinson, 83.

⁵³When Frank Elkins' journal was published, his wife changed the names throughout. Foster is called Falcon in the published journal. Elkins, 68-69.

⁵⁴Wynn Foster, *Captain Hook, A pilot's Tragedy and Triumph in the Vietnam War*, 193.

⁵⁵As told to the author by C.A.L. Swanson, 9 September 2005.

⁵⁶Grant, 162.

⁵⁷*Ibid.*, 161.

⁵⁸Though it was highly contentious, Lieutenant Fernandez's flight status was revoked as requested and he was sent home without a court martial. Unlike previous *Oriskany* Commanding Officers, Captain Holder became deeply involved in many air wing issues. Captain Holder wished to court martial Fernandez, while the air wing commander and his commanding officer tried to avoid a potential public relations flap. They believed Fernandez would point to the experience of VF-111's executive officer in 1966, when he turned in his wings without repercussion. Grant, 195.

CHAPTER 5

CONCLUSION

It was late July 1967, . . . The welcome we'd received was bloody. . . . The entire air wing was in a state of mild shock. Even the seasoned veterans from the prior cruise couldn't recall anything like the intensity of air defenses we were running into. Some of the pilot comments were: "Jesus, there were so many gun flashes at the target it looked like Los Angeles at night--except it was daytime," and "Where the hell do they get all those missiles? They've got to be exhausted just pulling the trigger so often."

Bob Arnold, "A Trip to the Suburbs"

Operation Rolling Thunder began as a series of raids against specified targets in North Vietnam. It evolved into the longest and costliest air campaign in American history. The original plan called for strikes that would gradually increase in force until the government of North Vietnam stopped supporting the insurgency in South Vietnam. Policy makers continually thought that the level of bombing necessary to achieve this goal would soon be reached. During the campaign the number of sorties and tonnage of bombs dropped expanded significantly with the beginning of each phase.

Civilian and military planners of the campaign did not anticipate that Rolling Thunder would last for three and a half years, with thousands of tactical aircraft dropping hundreds of thousands of bombs, and involve the loss of almost 850 aircraft over North Vietnam. The campaign evolved through a series of reactions to North Vietnam's continued and increasingly conventional intervention in South Vietnam. Rolling Thunder never followed a carefully designed course or set strategy, but simply developed out of a kind of impotent rage that American policy makers felt towards the North Vietnamese.

Roughly 850 American aircraft were lost during Rolling Thunder.¹ The Navy alone lost 382 aircraft over North Vietnam during the three years. Carrier Air Wing 16 lost eighty-six aircraft during this time, *accounting for nearly a quarter of the Navy's losses*. While Carrier Air Wing 16's losses were great, they were not alone in their suffering. All aviation units whether Air Force, Navy or Marine took casualties during Rolling Thunder. The restrictive nature of the air war and the increasingly capable North Vietnamese defenses meant that each mission was virtually guaranteed to cause casualties among units. What made CVW-16 the exception to the rest of naval aviation is that they suffered horrendous casualties on each deployment. Other carrier air wings flying the same missions during the same time frame took losses, but did not experience the same high casualty rates.²

The significant losses experienced by CVW-16 while flying from the *Oriskany* can be attributed to several factors. Foremost was the strategic divide between those running the war, and the pilots flying the actual missions. The restrictions placed on pilots by senior military leadership and the politicians they advised caused unnecessary losses and destroyed morale. These restrictions were a direct result of a strategic disconnect with the tactical level. The *Oriskany's* pilots found themselves fighting a total war against the North Vietnamese, who were also waging total war, while American leadership in Washington, D.C. sought to fight the war in limited terms. Airpower could not be successfully used to send political signals to Hanoi. North Vietnam construed the message differently than policy makers had intended. North Vietnamese leaders saw that America lacked the determination to seriously threaten their support of the insurgency or the will to see the war through to the end. This led to North Vietnam's response, which

was an escalation of the violence, which in turn led directly to higher casualties among American pilots.

The second factor had to do with unfortunate timing, as the deployments made by the *Oriskany* coincided with the most dangerous phases of Operation Rolling Thunder. The Johnson administration's gradual application of force meant that each successive deployment of the *Oriskany* arrived in the Tonkin Gulf just as bombing restrictions were ending. In addition, the Navy's shortage of aircraft carriers meant that there was little chance of altering the deployment dates in order to share the risk. In 1965, the *Oriskany* arrived on station as Rolling Thunder began in earnest. In 1966, the *Oriskany* again arrived just as Rolling Thunder 50 began attacks against POL targets. By 1967, the public debate over restrictions applied to the air campaign resulted in the lifting of many target restrictions and off-limits areas. By October 1967 Rolling Thunder had reached a crescendo and as a result, the *Oriskany's* pilots paid a heavy price as they ventured into heavily defended areas previously declared off limits. These three deployments also coincided with the summer monsoons, which provided the clearest skies over North Vietnam. This was the best time frame for flight operations and the numbers of sorties and losses increased dramatically.

Finally, Air Wing 16 had aggressive leaders. These leaders realized the difference between America's goals and limited aims, and the totality of their involvement. To put it succinctly, in a limited war, the soldier on the ground doesn't half die after stepping on a mine, nor does the pilot half fall out of the sky when shot down by a SAM. As the war continued to escalate, Navy pilots found themselves fully committed. They responded in the only ways available to them-- courage and professionalism. Ironically, this led to

further casualties as they pressed home their attacks in North Vietnam in deference to Washington's limitations. While the USS *Oriskany's* pilots never lost the will to fly and fight, their frustration with the war steadily rose. It took extraordinary leadership, professionalism, and courage for the aviators of Carrier Air Wing 16 to continue flying their missions.

Strategic Leadership Failures

Though he inherited the budding conflict in Vietnam, President Johnson and his administration are primarily responsible for the decisions that escalated the United States military commitment in Vietnam, while at the same time imposing the limits with which that military power could be applied throughout Indochina. It was Johnson and his staff that continually sought the middle ground, trying to look tough on Communism, while in reality fighting the war in such a manner that they actually strengthened North Vietnamese resistance.³

It is unrealistic however, to blame the Johnson administration for all these failings, as the military leadership also deserves a significant portion of the blame. While the Joint Chiefs of Staff, Pacific Command, and Military Assistance Command Vietnam were not well-served by their civilian superiors, they also failed to serve their country well. They not only supported the administration's decision to enter an open-ended land war in Asia, but they submitted, without effective protest, to civilian-imposed restrictions on military operations that they believed would cripple any chance for a decisive end to the war in Vietnam. Rather than confront the White House and the Secretary of Defense and place their careers on the line, senior military leaders chose to go along with civilian

decisions they regarded as ruinous to any prospect for victory and likely to cause an unnecessary expenditure of American lives.⁴

This failure of American strategy in Vietnam found its roots in the development of thermonuclear weapons. Many military professionals in the late 1950s and early 1960s believed that previous notions of strategy and force were rendered obsolete. These strategists believed that the fear of escalating conflicts which could possibly culminate in nuclear war would prevent total war as witnessed in the Second World War. Thus nuclear weapons and the associated premise of limited war had an extremely corrosive effect on the United States military, which became focused on defense economics and the attempt to achieve the maximum deterrent at the least cost. Throughout this period, the Department of Defense became preoccupied with technical, managerial and bureaucratic concerns. It was this preoccupation that led to sortie counts in North Vietnam, and attrition warfare in South Vietnam. These numbers became strategic dogma and further served to mask the real American goals. The cost was high. When the country needed it the most, the senior leadership of the military was incapable of providing what the nation needed the most, a coherent national strategy for Indochina.

The United States contributed to its own defeat in Vietnam by fighting the war they wanted to fight rather than the one at hand.⁵ The United States was prepared to fight the Soviet Union, an industrialized first world nation-state. Its war strategy, tactics and weapons were developed and implemented to that purpose. Planning and conducting limited military operations in a third world country with a first world strategic mindset and organization doomed to failure many operations in Vietnam, of which Operation Rolling Thunder is one of the most tragic examples.

The failure of American strategy in Vietnam meant that any part of that strategy was doomed to fail, including Rolling Thunder, no matter how successful it may have been at the tactical level.⁶ This strategic failure was further compounded by the mismanagement and inter-service squabbling that typified Rolling Thunder. These failures made leadership critical, especially at the operational and tactical levels. Junior leaders throughout the military were forced to make increasingly serious decisions about serious issues in a life and death environment. The high loss rates of Carrier Air Wing 16 during Rolling Thunder highlight strategic leadership failures. The cost of flawed strategic leadership was paid in blood. Only air wing leadership, at the tactical level, prevented even greater losses among their pilots.

Lessons learned, relearned and mislearned

Only nine months after the *Oriskany's* hangar deck fire, the USS *Forrestal* suffered an equally tragic fire. On the morning of 29 July 1967, an electrical malfunction caused a Zuni rocket to ignite as the *Forrestal's* air wing prepared to launch on their fourth day of Rolling Thunder missions.⁷ The stray rocket hit an A-4 Skyhawk's fuel tank causing a chain reaction of explosions and fire on the flight deck. The fire rapidly grew out of control because the aircraft on the flight deck were armed and fueled for an upcoming mission. The fire was fed by over 40,000 gallons of aviation fuel, bombs and other ordnance. World War II and Korean War era bombs being used because of ordnance shortages exploded prematurely, blowing holes in the flight deck which allowed burning fuel and bombs to reach six decks below. The fire was not brought under control until the next day. The losses were devastating: a total of 134 men were dead, sixty-two were injured, twenty-one aircraft were destroyed, and another thirty-four were damaged.

The *Forrestal* limped to the Philippines and eventually back to the United States. The *Forrestal* never returned to the war in Vietnam, though she eventually returned to fleet service after a seven month, \$72 million refit.

The Navy conducted an investigation of the safety practices and procedures onboard aircraft carriers to find out why these disasters occurred. The classified report was released in October 1967. It became known unofficially as *The Russell Report*, after its author, retired Admiral James Russell. The report was critical of the conditions under which aircraft carriers were forced to operate during operations off Vietnam. It found that the Navy's carriers were faced with a tempo of operations that stretched their personnel and material resources to the limit. It referenced the dangerous congestion caused by the large numbers of strike aircraft that had to be loaded on board aircraft carriers to meet wartime commitments, especially among the smaller *Essex*- class carriers such as the *Oriskany*. These carriers, the report stated, had inadequate provisions for handling or storing the large quantities of ordnance necessary for Rolling Thunder missions. The report also declared that existing regulations specifying the type of ordnance, the quantity authorized on each carrier, and where ordnance could be stored were out of date or absent altogether. Finally, it stressed the difficulty of fighting a fulltime war with peacetime manning levels, including the ability to ensure adequate training when personnel shortages were compounded by short turnaround times between deployments to the Tonkin Gulf.⁸ It concluded that the Navy's carriers were "fighting a very real, but undeclared, war with something less than complete support from the nation."⁹

The Russell Report shocked the Navy. Instead of being criticized by outsiders, naval aviation found itself being censured by a panel of carrier aviation experts led by a

highly respected naval aviator. The investigators accurately identified the major problem facing naval aviation in Vietnam: that high-tempo operations were being conducted with minimal resources and personnel requirements. The consequences of this had not only severely affected CVW-16, but the operations of the Navy in general. It also exposed naval aviators to greater dangers than those they already faced on a daily basis.¹⁰

The success or failure of airpower in Vietnam cannot be the measure of success of the men who flew and fought. While much of the blame for Operation Rolling Thunder's failure falls squarely on the senior leadership of the military and the politicians they advised, the conduct of the men who flew and fought over North Vietnam at great risk to themselves is beyond reproach. They deserved much better than they got. For these reasons, the contributions and lessons learned by CVW-16 during the war over Vietnam are distinct and important to today's military.

After signing the Paris Peace Accords in 1973, President Richard M. Nixon did away with the draft and adopted a professional, standing military. He did so based on the willingness of the aviators flying and fighting in Vietnam.¹¹ The air war over North Vietnam was fought by professionals who had a vested interest in seeing a successful conclusion to the war. While the United States became further divided over its involvement in Vietnam, the pilots taking part in Rolling Thunder saw the late summer of 1967 as the decisive point of the air campaign. Aviators intensified their efforts, despite the limitations placed on them. Squadrons took even more casualties than before, which caused greater frustration with the war, yet they persisted in their attempts to stop North Vietnam's support of the war in South Vietnam. Their contributions gave President Nixon a solid reason to implement the professional military as it exists today.

Among the lessons that can be drawn from CVW-16's experiences are the success of the operational and tactical level leaders. The failure of strategic level leadership meant that the need for effective leaders at these lower levels grew significantly. Vice Admiral Stockdale addressed this matter during part of a speech he gave in 1988:

The matter of dealing with deep personal motivations is going to get more and more critical when the psychological stresses of air combat increase as higher-performance and very expensive aircraft are being shot at with evermore lethal munitions and as our legalistic society closes in on people with the guts to try to put unsuitable-for-combat aviators in their place.¹²

This highlights a key issue in today's military: how to maintain the motivation of highly trained and highly skilled leaders in a volunteer military organization. Naval aviation's experience in Vietnam is in many ways analogous to that of the all-volunteer force at war today in Iraq and Afghanistan. The number of deployments made and missions flown during Rolling Thunder rapidly deteriorated personnel strength in CVW-16 and naval aviation as a whole. As the United States military continues its commitments in the Global War on Terror, it faces many of the same challenges, including an increasing rate of military operations. Military units already facing their third and fourth deployments to Southwest Asia are likely addressing the same issues faced by CVW-16 during Operation Rolling Thunder. Technology may have changed over the years, but the resolution and commitment of adversaries in war has not. In order to prevent the reoccurrence of the issues faced by CVW-16 during Vietnam, the military must gain knowledge from their hard learned lessons and sacrifices.

¹The actual number of aircraft lost during the campaign is difficult to determine. Each service had combat and operational losses, the latter being due to mechanical failure, weather, accident or pilot error. These figures vary accordingly. It is generally accepted that 850-900 aircraft were lost during Operation Rolling Thunder.

²It is beyond the scope of this thesis, however Air Force squadrons flying F-105 Thunderchiefs from Thailand suffered similarly high casualty rates. This was the result of several factors, foremost being the Air Force's disastrous personnel policy that placed unqualified pilots in leadership positions. For more information on the results of this policy, see Jack Broughton's *Thud Ridge* (Philadelphia: Lippincott, 1969) and *Going Downtown: The War Against Hanoi and Washington* (New York: Orion Books, 1988), as well as Ed Rasimus' *When Thunder Rolled: An F-105 Pilot over North Vietnam* (California: Presidio Press, 2003).

³Jeffrey Record, *The Wrong War* (Annapolis: Naval Institute Press, 1998), xix.

⁴Ibid.

⁵Ibid.

⁶John T. Smith, *Rolling Thunder: The Strategic Bombing Campaign North Vietnam, 1965-1968* (Surrey, Great Britain: Air Research Press, 1994), 239.

⁷For a detailed account of the fire, read Gregory A. Freeman's *Sailors To The End: The Deadly Fire on The USS Forrestal and The Heroes Who Fought It* (New York: Harper Collins, 2002).

⁸Wynn Foster, *Fire on the Hangar Deck: Ordeal of the Oriskany* (Annapolis: Naval Institute Press, 2001), 161.

⁹Ibid., 160.

¹⁰ Ibid., 161.

¹¹John Sherwood, *Afterburner: Naval Aviators and the Vietnam War* (New York: New York University Press, 2004), 293.

¹²James Stockdale, *Thoughts of a Philosophical Fighter Pilot*, 70.

GLOSSARY

- Alpha Strike (Alfa Strike). Large strike involving virtually all of a carrier's tactical aircraft, typically to one location and sometimes in coordination with other carrier air wings. As the war intensified three alpha strikes a day were common.
- ALQ-51. Deception jammer made by Sanders Associates capable of covering E/F frequency bands. Fitted as standard in A-3, A-6, RA-5C aircraft. "Shoehorned" into A-4, F-4 and F-8. See Shoehorn.
- Atoll. The NATO designation for the Soviet K-13 missile, the counterpart of the AIM-9.
- Bandit. An enemy aircraft.
- BARCAP. Barrier Combat Air Patrol. A fighter patrol designed to protect the aircraft carrier. Flown 24 hours a day throughout the war and considered boring work.
- Bingo. A predetermined amount of fuel needed to return to base or an alternate airfield.
- Blackshoes. A derogative term used by aviators to describe surface and shipboard personnel. Aviators wear brown shoes, while surface warfare officers wear black.
- Bolter. When an aircraft misses the arresting cables while attempting to land aboard the aircraft carrier.
- Break. A maximum performance turn used for defense against SAMs or aircraft. Also a prescribed flight pattern used when aircraft return to the ship (heading into the break).
- Browns shoes. Opposite of Blackshoes. See Blackshoes.
- Bullpup. (AGM-12) Air-to-surface missile fired and directed by radio control to the target.
- Bureau Number. (BuNo) Akin to a serial number. Each naval aircraft is assigned a number by the Bureau of Aeronautics when purchased. By referencing an aircraft's BuNo, it is possible to determine the manufacturer, date of manufacture, and other pertinent information.
- CAG. Commander Air Group (wing). Up until 1962, air wings were known as air groups and commanded by a senior commander who had previously commanded a squadron. In spite of the change in terminology, air wing commanders were referred to as CAG in honor of the tradition. See CVW.
- CAP. Combat Air Patrol. An air patrol over an area with the purpose of intercepting and attacking hostile aircraft before they are able to reach their objective.
- Chaff. Narrow metallic strips cut to length and dropped to create false images on radar screens.

CINCPAC. Commander in Chief Pacific. A Navy four-star admiral in charge of all United States military forces in the Pacific.

CINCPACFLT. Commander in Chief, Pacific Fleet. In charge of all naval forces in the Pacific. Reports directly to CINCPAC.

CNO. Chief of Naval Operations. Most senior uniformed officer in the Navy.

Cold Catapult shot. An attempt to launch an aircraft via the steam powered catapults on the aircraft carrier, in which insufficient steam pressure had been set. Cold catapult shots invariably ended with the aircraft launched into the water with high prospect of injury and/or death of aircrew.

CVW. Carrier Air Wing. Combination of aircraft aboard each aircraft carrier, led by a senior commander. See CAG.

CVW-16. The carrier air wing assigned to the *USS Oriskany* during Rolling Thunder. It included: two F-8 Crusader fighter squadrons; two A-4 Skyhawk squadrons; one A-1 Skyraider squadron and various supporting detachments with associated aircraft.

Dixie Station. Point off the coast of South Vietnam in the Gulf of Tonkin designated for carrier ops in South Vietnam, Laos and Cambodia. Dixie station existed for the first few months of the war, until sufficient aircraft arrived in South Vietnam to take over mission requirements from the Navy. See Yankee Station.

Feet Wet. The radio call made when transiting from overland to over water flight.

Feet Dry. The radio call made when transiting from over water flight to overland flight.

Guard. Emergency radio frequency (243.0 MHz UHF). Monitored by all aircraft and ground stations for aircraft in emergency situations.

IFF. Identification, friend or foe. An aircraft transponder that gives a unique return to a radar interrogation.

Iron Hand. Code name for missions flown against SAM sites. Usually flown by an A-4 Skyhawk carrying Shrike missiles. Considered one of the most dangerous missions flown during the war. Known as Wild Weasel in the Air Force.

Iron Triangle. Nickname for the highly defended area between Haiphong, Hanoi and Thanh Hoa.

Jink. An irregular flight path with constantly changing altitude and direction. Used to prevent a predictable flight pattern, making it difficult for gunners to track the plane.

Loose Deuce. A tactical formation flown by Navy aircraft during Vietnam. It consisted of two aircraft flying abreast of each other, with the wingman usually 500 to 1,000 feet higher

than the lead aircraft. If contact with an enemy aircraft occurred, whichever aircraft had the tactical advantage assumed the lead.

Mk82/83/84. 500/1000/2000-pound general purpose bombs used during Vietnam.

MER. Multiple-ejector bomb racks. A device designed for carrying multiple bombs on a single bomb rack.

Must Pump. Naval Aviation candidates pushed through training as fast as possible due to a shortage of pilots as the war intensified.

Nugget. A first-tour aviator with little or no experience, regardless of rank.

Over the beach. Flying overland, feet dry.

USS *Oriskany* (CVA-34). The USS *Oriskany* was an *Essex* class aircraft carrier built during World War II. Updated in 1956 to 27C standards, which included an enclosed bow, an angled flight deck and new steam catapults. By the Vietnam War the 27C class carriers were on their last deployments, being replaced by newer aircraft carriers such as the *Kitty Hawk* class. Due to the shortage of carriers, the 27C class carriers made deployments throughout the end of the Vietnam War.

Pop-up point or Pop-up. Maneuver where an aircraft comes in low and fast, then pulls up rapidly in order to gain altitude for dive bomb delivery.

Red Crown. Code name of Navy GCI ship located in the Gulf of Tonkin.

RHAW Gear. Radar homing and warning equipment that points out the direction of radars and warns of changes in missile launch and guidance status.

Route Packages. Six arbitrary geographic areas established in North Vietnam to allow for better coordination between Navy and Air Force strike packages. Most US losses occurred in Route Package VI, the area around Hanoi and Haiphong.

SA-2. Soviet-built surface to air missile. A radar-guided high-altitude missile that could reach Mach 2.5 and carried an 86-pound warhead. Generally the higher its target the better the missile performed.

SEVENTHFLT. United States Navy's Seventh fleet. Operations on Yankee Station fell within the Seventh Fleet Area of Operations, which extended from Hawaii, westward to the Indian Ocean.

Shoe horn. Navy operation to install ALQ-51 deception system in small tactical aircraft that had not been designed to carry it.

Shrike (AGM-45). An air-to-surface anti-radar missile fired at SAM sites. See Iron Hand.

Sidewinder (AIM-9). Air-to-air heat seeking missile.

Sortie. A flight of a single aircraft that, in accordance with duties of a combat mission, penetrates into airspace where enemy fire is or may be, encountered.

Steel Tiger. The covert bombing campaign over Laos to destroy enemy forces and materiel being moved southward at night into South Vietnam. However, since circumstances made it a highly sensitive and controversial matter because of the neutrality of Laos, target approval had to come from Washington. Additionally, the U.S. ambassadors in South Vietnam, Laos, and Thailand were involved in controlling these U.S. air operations.

TACAN. Tactical Air Navigation system. A device in an aircraft that gives range and bearing to a radio station.

TARCAP. Target Combat Air Patrol. A Navy code name for patrols flown in the vicinity of the target area during a strike.

TF-77 (Task Force 77). The US Navy's carrier strike force in the Gulf of Tonkin. CTF-77 directed Yankee Station activity, with several carrier groups (CARGRUs) under its command.

Up North. Common Navy aircrew phrase used to designate North Vietnam.

VA. Attack squadron. Attack squadrons on the USS *Oriskany* flew A-4 Skyhawks or A-1 Skyraiders.

VF. Fighter squadron. Fighter squadrons on the USS *Oriskany* flew F-8 Crusaders.

VMF(AW). Marine fighter squadron. Fighter squadrons on the USS *Oriskany* flew F-8 Crusaders.

Walleye (AGM-62). TV guided air-to-surface glide bomb. Introduced in March 1967, the pilot could see the target and guide the weapon through a TV lens installed in the nose of the weapon.

Yankee Station. Spot in the Gulf of Tonkin south of Hainan Island at which carriers maintained position for strikes into North Vietnam. Yankee Station was located at 17 degrees, 30 minutes North by 108 degrees, 30 minutes East. See Dixie Station.

APPENDIX A

1965 WESTPAC

The Information in this appendix has been derived from multiple sources. Rene Francillon's *Tonkin Gulf Yacht Club* and Chris Hobson's *Vietnam Air Losses* serve as primary sources of this data. Further amplifying information maybe found in the Center For Naval Analysis' *List of Aircraft Lost in Southeast Asia* and various unit histories. Data for each loss is given in the following format: Date; type of aircraft with BuNo, side number and squadron; pilot if known and their status.

Homeport departure/return: Alameda, 5 April 1965-16 December 1965

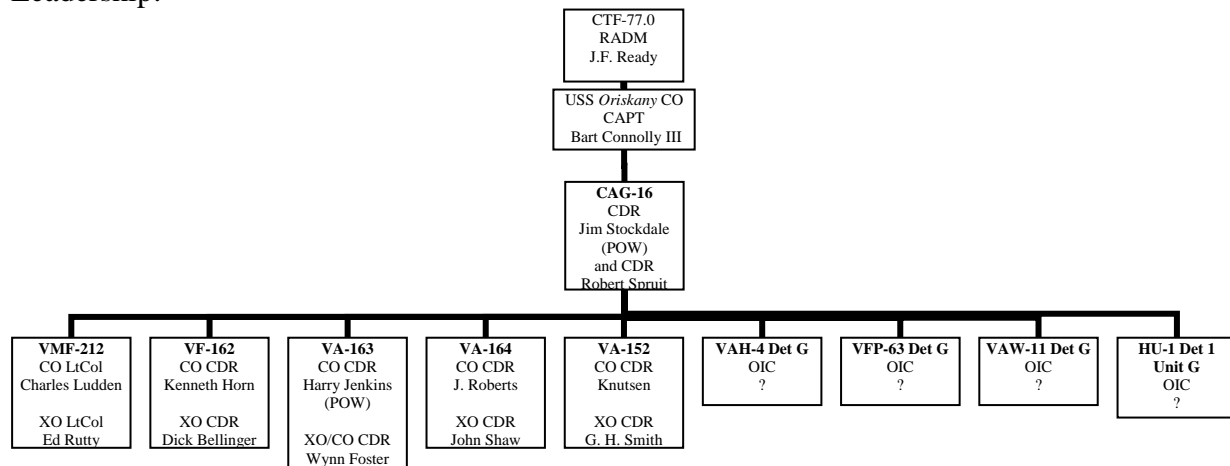
In-chop / out-chop: 27 April 1965-6 December 1965

Line Periods: 8-31 May; 11 June-18 July; 10 August-10 September; 30 September-18 October; 29 October-25 November
 Total: 141 days on the line

Squadrons:

<u>Squadron</u>	<u>Aircraft</u>	<u>Call Sign</u>
VMF(AW)-212	F-8E	Sea Grape
VF-162	F-8E	Super Heat
VA-163	A-4E	Old Salt
VA-164	A-4E	Magic Stone
VA-152	A-1H/J	Locket
VAH-4 Det G	A-3B	Holly Green
VFP-63 Det G	RF-8A	Cork Tip
VAW-11 Det G	E-1B	Over Pass
HU-1 Det 1 Unit G	UH-2A	

Leadership:



Combat Losses (15):

26 August 1965: A-1H (139720, AH592) of VA-152; LT(jg) Davis, POW.

A flight of A-1s was on a night armed reconnaissance mission, looking for trucks along coastal roads in the southern portion of North Vietnam. Near Xuan Noa, fifteen miles from the DMZ, the flight lead spotted what looked like a truck park and initiated a dive bombing attack. LT(jg) Davis' aircraft was hit in the fuselage by AAA and he bailed out. His wingman saw no chute or post crash signal and reported that it was unlikely that Davis had survived. LT(jg) Davis was reported KIA, though he had survived and was captured. Davis was repatriated in 1973.

29 August 1965: A-1H (134619, AH 586) of VA-152; LT Taylor, KIA.

LT Taylor was shot down by intensive AAA while providing a CAP for a downed F-105 pilot near Son La in Route Package V.

29 August 1965: RF-8A (146828, PP 919) of VFP-63; LT McWhorter, KIA.

Shot down on the same day as LT Taylor, LT McWhorter was killed while flying North of Vinh. At about 8,000 feet, he and his wingman encountered heavy AAA. After taking evasive action, his wingman reported McWhorter's aircraft flying wings level, but without the canopy and ejection seat. Damage in the vicinity of the cockpit area indicated that AAA may have fired the seat and probably killed the pilot. The landing gear came down as a result of damage to the hydraulic systems, and the aircraft entered a gentle glide until it hit the ground. LT McWhorter's remains were returned in February 1987.

6 September 1965: A-4E (152042, AH475) of VA-164; LT Burton, recovered.

LT Burton's Skyhawk was hit by 37mm AAA while on a strike against the Hai Yen naval base near Thanh Hoa. Burton climbed immediately so as to reach the relative safety of the sea before the engine failed. Ninety seconds later, with fuel streaming and his aircraft on fire, his hydraulics failed, causing him to lose control of the aircraft. He ejected less than one mile from shore and was picked up by an Air Force HU-16 amphibian.

8 September 1965: RF-8A (146825, PP 918) of VFP-63; LT(jg) Rudolph, KIA.

The *Oriskany* lost its second photo reconnaissance Crusader of the cruise, when LT(jg) Rudolph was hit by AAA while looking for SAM sites near Thanh Hoa. Soon after crossing the coast he and his wingman were targeted. His wingman watched him roll inverted and the canopy fall away, but lost sight due to his own evasive maneuvering. He was unable to see if Rudolph ejected prior to the aircraft impacting 15 miles Northeast of Thanh Hoa. Though SAR efforts were launched, they were unsuccessful. LT(jg) Rudolph's remains were returned in December 1988.

9 September 1965: A-4E (151134, AH352) of VA-163; CDR Stockdale, POW.

CDR Stockdale was the carrier air wing commander of CVW-16 and was shot down on his 175th mission. He was leading a strike against the Thanh Hoa Bridge, but weather obscured the target. Stockdale then ordered his aircraft after secondary targets. He and CDR Wynn Foster, the XO of VA-163 decided to bomb railroad sidings fifteen miles

South of Thanh Hoa. After making one pass, he pulled up to make a second. During his pull up, he was hit by 57mm fire. With the aircraft diving at great speed in close proximity to the ground, he had little choice but to eject. He landed in the village of Tin Gia and was immediately captured. CDR Stockdale became the senior American POW and was later awarded the Congressional Medal of Honor for leading the American POW resistance.

5 October 1965: F-8E (150848, AH 227) of VF-162; LT(jg) Adams, recovered.

CDR Bellinger and his wingman, LT(jg) Adams were part of a BARCAP during a strike on a bridge at Kep. While crossing the coast at 30,000 feet, east of Haiphong, CDR Bellinger saw two SAMs streaking towards them. Although he radioed a warning, Adams never heard it and was unable to take evasive action. One of the missiles exploded just behind Adams' aircraft causing damage to the tail surfaces and a fire in the fuselage. LT(jg) Adams then flew his damaged aircraft forty miles back out to sea. His aircraft eventually exploded and he ejected through the inferno to be picked up by a helicopter and flown to the USS *Galveston* for medical attention.

31 October 1965: A-4E (151173, AH 466) of VA-164; LCDR Powers, KIA.

The ever increasing SAM threat caused the Air Force and Navy to cooperate in an effort to find a solution. The *Oriskany* detached a number of A-4s to Korat to fly as pathfinders for F-105 Wild Weasels. LCDR Powers led eight F-105s on a strike against a SAM sight near Kep as part of a larger strike package involving 65 Air Force and Navy airplanes. While bombing the SAM site, his aircraft was hit by AAA and burst into flames at 150 feet. He climbed and banked suddenly, ejecting at less than 200 feet. Although he was seen waving to his wingman, and his SAR beeper was briefly heard, attempts to contact him via radio were unsuccessful. His remains were returned by the North Vietnamese in November 1987. LCDR Powers was awarded the Navy Cross for this mission.

5 November 1965: F-8E (150665, WD 106) of VMF(AW)-212; Capt Chapman, POW.

VMF(AW)-212 the only USMC squadron on the *Oriskany* lost its first pilot while striking a bridge at Hai Duong, 30 miles east of Hanoi. Suffering a direct hit by 57mm AAA during his dive on the target, Capt Chapman's aircraft exploded. Although he was able to eject, he was immediately captured, becoming the first USMC POW in North Vietnam. He was repatriated in February 1973.

7 November 1965: A-4E (150071, AH 343) of VA-163; LCDR Wack, recovered.

A flight of *Oriskany* A-4s was attacking a SAM site 10 miles southwest of Nam Dinh. LCDR Wack assumed lead after the original strike leaders aircraft developed problems. LCDR Wack was hit by AAA during his roll-in on target. He successfully continued his bombing run and eventually managed to fly twelve miles out to sea before ejecting. LCDR Wack was picked up by an Air Force HU-16 amphibian. LCDR Wack was awarded the Silver Star for this mission.

9 November 1965: A-1H (137566, AH 590) of VA-152; LCDR Merchant, recovered.

A section of *Oriskany* A-1s were on a night armed-reconnaissance mission when they

found trucks thirty-five miles southeast of Vinh. During the attack LCDR Merchant was hit by AAA that damaged his engine. He was able to jettison his ordnance and fly the aircraft towards the sea. After his engine failed, he was able to glide the remainder of the distance and ditch his aircraft in the dark just off the coast. He was rescued by a Navy helicopter as North Vietnamese boats were approaching to capture him.

13 November 1965: A-4E (151067, AH 340) of VA-163; CDR Jenkins, POW.

CDR Jenkins, the CO of VA-163, and his wingman were searching for supplies on a river near Dong Hoi. As the river appeared not navigable, they decided to bomb a road junction south of Dong Hoi. While enroute to their new target, they flew over the village of Xuan Noa and spotted signs of recent vehicle activity. While flying low in an attempt to inspect the area, CDR Jenkins was shot down by 37-millimeter AAA. He immediately lost control and electrical power and ejected just short of the coast. Though SAR efforts were attempted, he was captured almost immediately. CDR Jenkins was repatriated in February 1973.

17 November 1965: F-8E (150675, WD 103) of VMF(AW)-212; Capt Chaimson, recovered.

A-4E (151083, AH 350) of VA-163; LCDR Bowling, KIA.

A-1H (135244, AH 588) of VA-152; LCDR Taylor, KIA.

On 17 November, the *Oriskany* along with other carrier air wings went back to the Hai Duong Bridge east of Hanoi with disastrous results. Within thirty minutes, CVW-16 had lost three planes of the four Navy planes lost at the Bridge. Capt Chaimson's F-8 was the first aircraft lost on the raid. Hit by 37mm AAA during his bomb run, his electrical system failed and he was unable to release his bombs. Even though he deployed his emergency back-up generator, it failed to work. As he flew back alone, he attempted to land on the USS *Bon Homme Richard* but ran out of fuel before he was able to. Capt Chaimson was recovered by a Navy helicopter. LCDR Bowling was the second aircraft lost by the *Oriskany* on this mission. The Operations Officer of VA-163, he had just dropped a load of snakeye bombs on the bridge and was flying a low-level high-speed egress when his aircraft was hit by AAA. The horizontal tailplane departed his aircraft and he rolled to the right and impacted the ground. Amazingly enough, LCDR Bowling managed to eject, but likely did not survive the ejection. Twenty-five minutes later, a section of A-1s from the *Oriskany* arrived to perform RESCAP for LCDR Bowling. One of these A-1s piloted by LCDR Taylor, the CVW-16 Operations Officer was struck by AAA while making a low-level search for LCDR Bowling. LCDR Taylor attempted to fly back to sea, but crashed in coastal marshes southwest of Haiphong. LCDR Taylor's remains were returned by North Vietnam in December, 1975. LCDR Bowling's remains were returned to a Presidential commission that was visiting Hanoi in March 1977.

Operational Losses (7):

25 May 1965: A-3B (138947) of VAH-4; all four crewmembers recovered.

The *Oriskany* lost her first aircraft of the 1965 cruise on 25 May 1965 when this A-3 crashed after suffering structural failure on the catapult shot. The A-3 was launching as a tanker in support of strike operations.

- 30 June 1965: A-1H (139708) of VA-152; pilot recovered.
The engine failed on this pilot's A-1 as he was being catapulted off the ship for a strike mission.
- 18 July 1965: A-4E (151089) of VA-163; LT Avore, KIA.
As LT Avore's Skyhawk was catapulted off the *Oriskany* for a mission over South Vietnam, his engine failed and he was forced to ditch the aircraft. The aircraft sank within seconds and he was unable to escape. This accident occurred on the last day of the line period for the *Oriskany*.
- 21 July 1965: A-1H (139636) of VA-152; pilot recovered.
During a post maintenance check flight, the engine failed and the pilot was forced to abandon the aircraft.
- 10 August 1965: A-1J (142012) of VA-152; LT(jg) Mailhes, KIA.
LT(jg) Mailhes failed to return from a night RESCAP mission over the Gulf of Tonkin. The cause of his loss was never discovered.
- 17 October 1965: F-8E (149198) of VMF(AW)-212; pilot recovered.
This was the first of four aircraft lost by VMF(AW)-212 during the 1965 cruise. The pilot struck the ramp while attempting to land following a BARCAP mission at night and in bad weather.
- 17 November 1965: F-8E (150875) of VMF(AW)-212; 1Lt Peil recovered.
In addition to the terrible losses incurred by CVW-16 on their Hai Duong raid, the air wing lost one more aircraft while returning from the raid. On final approach to the carrier, Lt Peil's F-8 struck the ramp and was destroyed. Lt Peil luckily survived the accident.

APPENDIX B

1966 WESTPAC

The Information in this appendix has been derived from multiple sources. Rene Francillon's *Tonkin Gulf Yacht Club*, and Chris Hobson's *Vietnam Air Losses* serve as primary sources of this data. Further amplifying information maybe found in the Center For Naval Analysis' *List of Aircraft Lost in Southeast Asia* and various unit histories. Data for each loss is given in the following format: Date; type of aircraft with BuNo, side number and squadron; pilot if known and their status.

Homeport departure/return: Alameda, 26 May 1966-16 November 1966

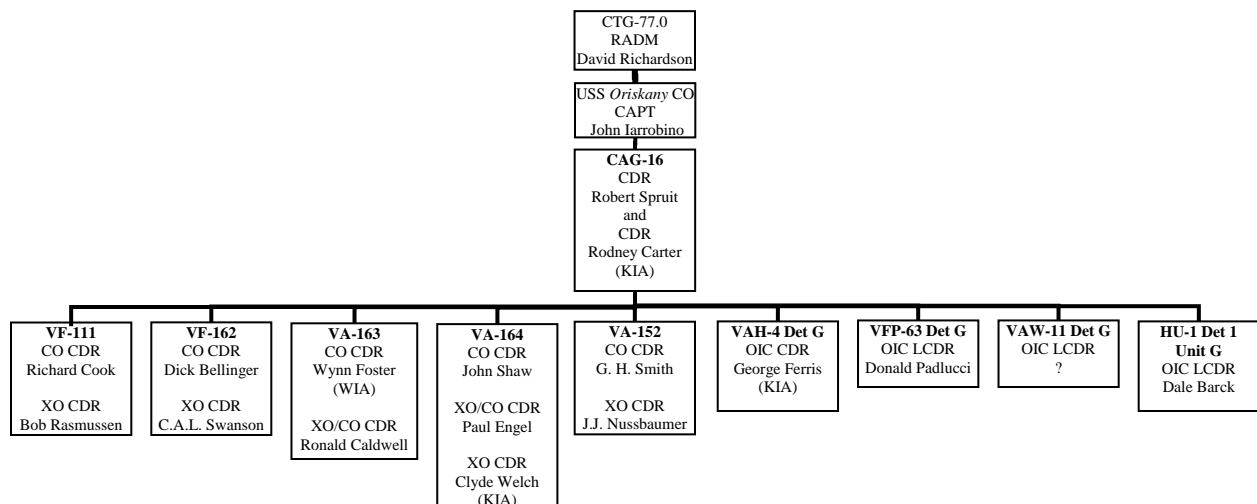
In-chop / out-chop: 11 June 1966-8 November 1966

Line Periods: 30 June; 8-27 July; 6 August-7 September; 24 September-26 October
Total: 87 days on the line

Squadrons:

<u>Squadron</u>	<u>Aircraft</u>	<u>Call Sign</u>
VF-111	F-8E	Old Nick
VF-162	F-8E	Super Heat
VA-163	A-4E	Old Salt
VA-164	A-4E	Magic Stone
VA-152	A-1H/J	Locket
VAH-4 Det G	A-3B	Holly Green
VFP-63 Det G	RF-8A	Cork Tip
VAW-11 Det G	E-1B	Over Pass
HU-1 Det 1 Unit G	UH-2A	

Leadership:



Combat Losses (16):

12 July 1966: F-8E (15092, AH 203) of VF-162; LT(jg) Adams, recovered.

During a strike on Dong Nham twenty miles northeast of Haiphong, LT(jg) Adams part of a TARCAP for the POL strike. SAM warnings forced the strike force to dive into small arms range and his aircraft was hit in the tailpipe by small arms fire. The fire spread quickly through the entire aircraft and he was forced to eject. He was picked up by a Navy helicopter escorted by four A-1s after spending forty-five minutes on the ground. LT(jg) Adams had been shot down by a SAM during the 1965 cruise and thus became the first aviator to survive being shot down twice. As a result he was reassigned to stateside duty.

14 July 1966: F-8E (150908, AH 202) of VF-162; CDR Bellinger, recovered.

CDR Bellinger, the commanding officer of VF-162 was shot down by a MiG-17 while escorting a strike against storage facilities at Nam Dinh. His flight of three F-8s was engaged by two MiG-17s twenty-five miles South of Hanoi. His Crusader was hit by cannon fire which badly damaged the starboard wing. When his hydraulics failed, he decided to divert to Da Nang rather than attempt landing aboard the *Oriskany*. Due to the lack of hydraulics, he was unable to in-flight refuel when his refueling probe would not extend. He was forced to eject when he ran out of fuel sixteen miles from Da Nang and was rescued by an Air Force helicopter. Zalin Grant's book *Over the Beach* gives a detailed account of this mission.

19 July 1966: F-8E (150919, AH 210) of VF-162; LT Dennison, KIA.

LT Denison was flying as part of the CAP assigned to protect strikers attacking the Co Trai Bridge when he was hit by an SA-2. The bridge was one of the main crossings South of Hanoi and was heavily defended with AAA and SAMs. Over thirteen missiles were fired during the raid. His aircraft was hit at 12,000 feet and was immediately destroyed. The wreckage came down near Hoang Xa, eighteen miles south of Hanoi. This mission and LT Dennison's loss are described in great detail in Zalin Grant's book, *Over the Beach*.

23 July 1966: A-4E (152100, AH 301) of VA-163; CDR Foster, recovered.

CDR Foster, the CO of VA-163 was leading a strike against a POL storage site seven miles North of Vinh, when his aircraft was hit in the cockpit by a 57-millimeter shell. Shrapnel from the shell destroyed the cockpit and severed his right arm just below the shoulder. Bleeding profusely and on the verge of losing consciousness, CDR Foster managed to fly his crippled aircraft out to sea and eject over the SAR destroyer, USS *Reeves*. He was picked up by a boat from the destroyer, which fortunately had a doctor on board. He was evacuated from there to the USS *Oriskany* and eventually stateside. A full accounting of his remarkable story can be read in his personal narrative, *Captain Hook*.

28 July 1966: A-4E (152077, AH 407) of VA-164; ENS McSwain, POW.

ENS McSwain was on an Iron Hand mission to destroy a SAM site reported at the mouth of the Song Ca River near Vinh. After firing his Shrike missiles at the site, McSwain began climbing to regain altitude. After reaching 12,000 feet, his airspeed had diminished

to less than 200 knots, when a SA-2 exploded near his aircraft. The aircraft fell out of control, possibly as a result of its stalling. ENS McSwain was released from captivity in March 1973.

7 August 1966: A-1H (139701, AH 501) of VA-152; LT Fryer, KIA.

LT Fryer was hit in the port wing by small arms fire while strafing trucks on an armed-reconnaissance mission thirty-five miles north of Vinh. Although he was able to reach the coast, LT Fryer did not survive when he ditched his aircraft a few miles off the coast.

11 August 1966: F-8E (150880, AH 112) of VF-111; LT(jg) Balisteri, recovered.

LT(jg) Balisteri was on an armed-reconnaissance flight over coastal islands in the vicinity of Haiphong when his F-8 was hit by ground fire ten miles south of Hon Gay. The aircraft immediately caught fire and Balisteri ejected as the aircraft rolled out of control. He was picked up by a Navy helicopter.

13 August 1966: F-8E (150866, AH 113) of VF-111; LCDR Levy, recovered.

LCDR Levy was also shot down in the same area as LT(jg) Balisteri, while on an armed reconnaissance mission. He was pulling up from his second attack using Zuni rockets against a barge, when hit by AAA. With no hydraulics, the nose of his aircraft pitched up and he was forced to eject. He was rescued five miles east of Dao Bat Ba by a Navy helicopter.

18 August 1966: F-8E (150300, AH 211) of VF-162; LCDR Verich, recovered.

LCDR Verich was hit while on an armed reconnaissance mission fifteen miles northwest of Vinh. He was pulling up from his third bombing run on a bridge and barges on a river, when he was hit by small arms fire. Though he began losing control of his aircraft, he was able to fly towards the coast. His aircraft became uncontrollable forcing him to eject five miles offshore. He was rescued by a Navy helicopter.

28 August 1966: A-1H (135231, AH 506) of VA-152; CDR Smith, recovered.

CDR Smith, the commanding officer of VA-152 was hit by AAA while flying along the coastline near Van Yen, 25 miles south of Thanh Hoa. His A-1 was hit in the fuselage and began to burn rapidly. He was able to bailout just offshore and was recovered by a Navy helicopter.

31 August 1966: RF-8G (146874, AH 602) of VFP-63; LCDR Tucker, recovered.

The officer-in-charge of VFP-63's detachment was shot down while attempting to photograph a foreign oil tanker and other ships in Haiphong harbor. As he approached Quang Yen, five miles northeast of Haiphong, his aircraft was hit by 37-millimeter ground fire. LCDR Tucker lost all his flight controls with the exception of his rudder and was forced to eject only 1,500 feet over Haiphong harbor. He landed in a shipping channel less than 150-yards from the shore and several junks began attempts to capture him. An SH-3 off the USS *Kearsarge* arrived within minutes to attempt a rescue. It was piloted by the commanding officer of HS-6, CDR Vermilya, and was escorted by LCDR Tucker's wingman, LCDR Teague. While Teague strafed junks in the area, the helicopter

flew at less than fifty feet and under constant fire from vessels and shore batteries. The rescue attempt was successful and LCDR Tucker was recovered in one of the most dangerous rescue missions of the war.

5 September 1966: F-8E (150896, AH 106) of VF-111; Capt Abbott (USAF), POW.

Capt Abbott's section of F-8s was attacked by two MiG-17s near Ninh Binh. Although both Crusaders were damaged, Capt Abbott's aircraft was destroyed, forcing him to eject. Capt Abbott was an Air Force pilot on exchange duty with VF-111. His right leg was broken during the ejection and although it was operated on by the North Vietnamese, it took over two years to heal. He was repatriated in March 1973.

6 October 1966: F-8E (150924, AH 201) of VF-162; LT Leach, recovered.

LT Leach was the wingman for a RF-8 Crusader while on a reconnaissance mission over Hon Gay harbor. Midway through the mission, his low fuel light came on, as a result of a fuel leak. Both aircraft immediately flew towards the sea, but LT Leach was forced to eject after running out of fuel seventy miles South of Hon Gay. He was recovered by a Navy helicopter.

8 October 1966: A-1H (137629, AH 510) of VA-152; LT Feldhaus, MIA.

A section of A-1s from VA-152 was on a road reconnaissance mission twenty-five miles southwest of Thanh Hoa, when LT Feldhaus' aircraft was hit by extremely heavy ground fire. Hit in the fuselage, his aircraft caught fire and crashed shortly thereafter.

12 October 1966: A-4E (152075, AH 411) of VA-164; LT Elkins, MIA.

LT Elkins was on a night road reconnaissance mission when his section was engaged by a SAM site near Tho Trang, 45 miles southwest of Thanh Hoa. LT Elkins saw the missile launch and began evasive maneuvering. He was either hit by an SA-2, or struck the ground while trying to outmaneuver the SAM. In 1973, his wife published his diary under the title "*The Heart of a Man.*" It provides an exceptional account of life aboard the *Oriskany* and of the air war over North Vietnam. In 1990, LT Elkins' remains were returned by the North Vietnamese.

14 October 1966: A-1H (139731, AH 511) of VA-152; ENS Thomas, KIA.

ENS Thomas was on a night road reconnaissance mission 25 miles southwest of Thanh Hoa, when his section spotted trucks on a road. ENS Thomas dove to attack the target with rockets. However he failed to pull out of the dive and was killed when his aircraft struck the ground.

Operational Losses (9):

29 July 1966: A-4E (152095) of VA-164; LT(jg) Ewoldt, KIA.

LT(jg) Ewoldt was killed in between line periods in a tragic accident. He was killed after flying into the water while attempting in-flight refueling in marginal weather.

23 August 1966: F-8E (150907) of VF-111; LT(jg) Meadows, recovered.

23 August began a string of five accidents in four days involving *Oriskany* aircraft.

LT(jg) Meadows was on a BARCAP mission when his engine failed, forcing him to eject. He was recovered by a Navy helicopter.

25 August 1966: A-4E (152084) of VA-164; LT(jg) Bullard, KIA.

LT(jg) Bullard was killed when his aircraft flew into water following a night catapult shot. He was launching on a night armed reconnaissance mission when the accident occurred.

25 August 1966: A-1H (135236) of VA-152; pilot unknown, recovered.

On the same night LT(jg) Bullard was killed, a faulty catapult shot resulted in the loss of this aircraft. The pilot was recovered after ditching.

26 August 1966: A-4E (152093) of VA-164; pilot unknown, recovered.

While on an armed reconnaissance mission, an electrical failure over North Vietnam forced the pilot to eject in Gulf of Tonkin.

27 August 1966: A-4E (150079) of VA-163; pilot unknown, recovered.

In a repeat of the day before, a Skyhawk on an armed-reconnaissance mission suffered an electrical failure over North Vietnam, forcing the pilot to eject in Gulf of Tonkin.

16 September 1966: UH-2B (152196) of HC-1; three crewmembers recovered.

23 October 1966: A-4E (150072) of VA-163; mid-air collision during armed reconnaissance mission, the pilot who is unknown, ejected and was recovered.

26 October 1966: Fire broke out on the hangar deck of the ship. Six A-1s and seven A-4s were on the flight deck having been readied for a night strike, but bad weather had postponed the launch. The ordnance on the aircraft had to be downloaded and stored until morning. The ordnance included magnesium parachute flares. As the flares were being stowed in a temporary storage compartment, one of the flares ignited due to mishandling. Flames and toxic fumes spread rapidly throughout the ship. A total of 36 officers and 8 sailors were killed in the fire, including 24 aviators of CVW-16. Three A-4s were damaged and one A-4E (151075) and two UH-2s (149774/150183) were destroyed.

Ships company casualties as a result of the hangar bay fire:

LT(jg) Dewey Alexander	Administration Department
LT(jg) Ramon Copple	Supply Department
CDR Richard Donahue	Medical Department
JOSN Robert Dyke	Administration Department
LCDR Omar Ford	Operations Department
LT Frank Gardner	Gunnery Department
LCDR William Garrity	Chaplain
SN James Gray	Deck Department
AA Greg Hart	Administration Department
LT(jg) James Hudis	Air Department

CDR Harry Juntilla	Operations Department
LT(jg) James Kelly Jr.	Security Division
SN James Lee	Administration Department
LCDR Walter Merrick	Chaplain
BM3 Donald Shanks	Deck Department
BM3 Alvin Shifflet Jr.	Deck Department
LT(jg) Frank Tunick	Supply Department
FN William Wallig	Administration Department

Air Wing Sixteen casualties as a result of the hangar bay fire:

LT(jg) Cody Balisteri	VF-162
LT Joselyn Blakely Jr.	HC-1
ENS Charles Boggs	VF-162
LT(jg) James Brewer	VA-164
CDR Rodney Carter	Commander CVW-16
LT(jg) William Clements	VAW-11
CDR George Farris	VAH-4
LT John Francis	VAW-11
LT Julian Hamond	VA-164
LT Lloyd Hyde	CVW-16 Flight Surgeon
LT(jg) William Johnson	VA-164
ENS Daniel Kern	HC-1
LCDR Norman Levy	VF-111
AZAN David Liste	VA-152
LT(jg) William McWilliams	VF-162
LT Clarence Miller	VA-163
LCDR Clement Morisette	VA-163
CDR John Nussbaumer	VA-152
LT(jg) Gerald Siebe	HC-1
LCDR James Smith	VAH-4
LT(jg) Thomas Sptitzer	VA-163
LCDR Daniel Strong	VA-164
ENS Ronald Tardio	VA-163
CDR Clyde Welch	VA-164
LT(jg) James Welsh	HC-1

APPENDIX C

1967-1968 WESTPAC

The Information in this appendix has been derived from multiple sources. Rene Francillon's *Tonkin Gulf Yacht Club*, and Chris Hobson's *Vietnam Air Losses* serve as primary sources of this data. Further amplifying information maybe found in the Center For Naval Analysis' *List of Aircraft Lost in Southeast Asia* and various unit histories. Data for each loss is given in the following format: Date; type of aircraft with BuNo, side number and squadron; pilot if known and their status.

Homeport departure/return: Alameda, 16 June 1967-31 January 1968

In-chop / out-chop: 26 June 1967-23 January 1968

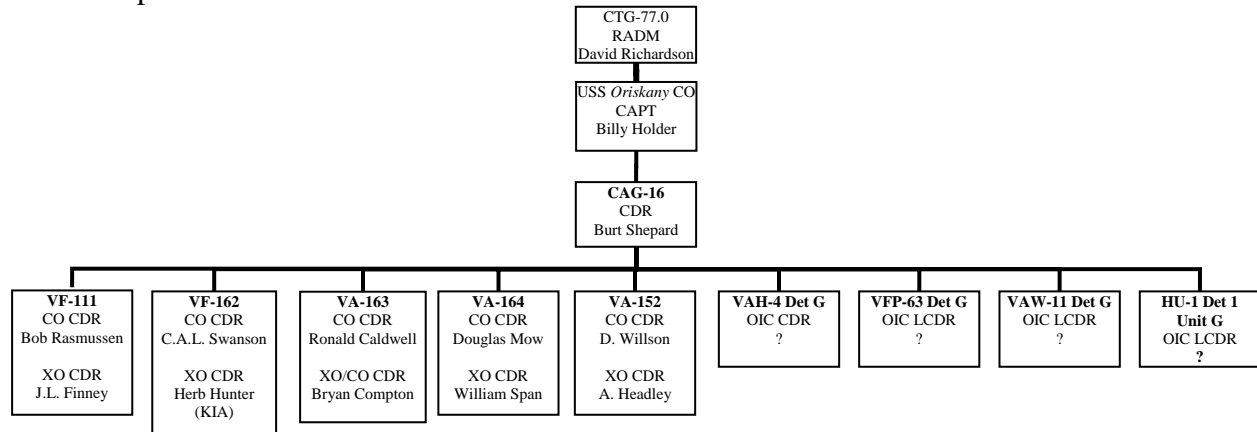
Line Periods: 14 July-7 August; 18 August-15 September; 5 October-2 November; 20 November-16 December; 31 December 1967-11 January 1968.

Total: 122 days on the line

Squadrons:

<u>Squadron</u>	<u>Aircraft</u>	<u>Call Sign</u>
VF-111	F-8E	Old Nick
VF-162	F-8E	Super Heat
VA-163	A-4E	Old Salt
VA-164	A-4E	Magic Stone
VA-152	A-1H/J	Locket
VAH-4 Det G	KA-3B	Holly Green
VFP-63 Det G	RF-8A	Cork Tip
VAW-11 Det 34	E-1B	Over Pass
HU-1 Det 1 Unit G	UH-2A	

Leadership:



Combat Losses (29):

14 July 1967: A-4E (152049, AH 407) of VA-164; LT(jg) Cunningham, recovered.

The *Oriskany* suffered its first loss during its first day on the line. LT(jg) Cunningham was hit by AAA while attacking barges on an inland waterway near Gia La, 15 miles southeast of Vinh. His A-4 was hit in the nose and parts of the damaged aircraft were sucked into the engine causing it to eventually fail. By the time he flew back to the *Oriskany*, his aircraft was on fire. Unable to land aboard the ship, he was forced to eject alongside. He was recovered by a Navy helicopter.

15 July 1967: A-1H (135288, AH 504) of VA-152; LT(jg) Cassell, KIA.

LT(jg) Cassell was on an armed reconnaissance mission along the coast near Thanh Hoa. After finding several small boats and barges, he commenced his attack. During his dive, LT(jg) Cassell's aircraft was hit by small arms fire from the boats. Although Cassell was able to radio that he'd been hit, his aircraft crashed into the water shortly thereafter.

16 July 1967: F-8E (150925, AH 201) of VF-162; LCDR Verich, recovered.

LCDR Verich was shot down his second time while leading a flight of three F-8s on a flak suppression mission. Their mission was part of a larger raid by A-4s on the Phu Ly rail yard thirty miles south of Hanoi. During their approach to the target, his division was attacked by a SAM site. Although he successfully evaded two missiles, a third SA-2 struck his aircraft as he descended through 5,000 feet. LCDR Verich ejected from his destroyed aircraft and came down only sixteen miles from Hanoi. LCDR Verich spent fifteen hours on the ground as CTF-77 staff officers debated whether he could be rescued. By nightfall, CAG Burt Shepard had finally convinced the admiral and his staff that LCDR Verich could be recovered. LCDR Verich spent most of his time hiding in the vicinity of a AAA emplacement. He was finally rescued by an SH-3 of HS-2 from the USS *Hornet*. For his part in the rescue, the helicopter pilot, LT Neil Sparks was awarded the Navy Cross. A full accounting of this episode can be read in Zalin Grant's *Over the Beach*.

18 July 1967: A-4E (151986, AH 404) of VA-164; LCDR Hartman, POW, died in captivity.

A-4E (151175, AH 415) of VA-164; LT(jg) Duthie, recovered.

A-4E (152034, AH 401) of VA-164; LT(jg) Wood, recovered.

18 July was a bad day for VA-164, as they struck the Co Trai railway and road bridge that had been bombed just five days prior. LCDR Hartman had just pulled up off the target when his A-4 was struck by AAA. With his aircraft on fire, he ejected 25 miles south of Hanoi. Because of the successful recovery of LCDR Verich just days prior, a SAR mission was organized while his wingmen orbited over LCDR Hartman's position. The orbiting aircraft soon became targeted by all AAA in the vicinity. Even with evasive maneuvering, the barrage fire was so intense that there was little chance of evading it, and within twelve minutes, LT(jg) Duthie's A-4 was also hit. With no flight controls and a failed oxygen supply, Duthie was forced to eject near Nam Dinh, 45 miles southeast of Hanoi.

During the attempted rescue of LT(jg) Duthie, another A-4 from his section was shot down. LT(jg) Wood was hit as he pulled out of his dive, following a Zuni rocket

attack. Hit in his fuel tank, Wood's noticed the fuel leak, jettisoned his ordnance and flew towards the coast. He ejected eight miles offshore and was recovered by a small boat from the SAR destroyer, USS *Richard B. Anderson*. The first rescue attempt for Duthie had been aborted due to heavy ground fire though both Navy and Air Force SAR forces continued their efforts to reach him. After several helicopters and their fixed wing escorts were damaged by ground fire, LT(jg) Duthie was finally rescued by an HH-3 flown by Maj York. Maj York was awarded the Air Force Cross for this rescue.

On 19 November, SAR efforts for LCDR Hartman resumed. An SH-3 of HS-2 from the USS *Hornet* was shot down by ground fire killing everyone aboard. After the loss of this helicopter, its four crewmembers and the loss of two A-4s, LCDR Hartman's rescue was called off. LCDR Hartman remained in radio contact throughout and was able to evade capture for over three days. He was killed upon being captured or died in a POW camp shortly thereafter. His remains were returned in March 1974.

19 July 1967: F-8E (150899, AH 206) of VF-162; CDR Hunter, KIA.

The bridges at Co Trai were attacked again on 19 November, with similar results to the previous day. Adding to the mystique of the target, VF-162 had lost an aircraft on the same date at the same target one year prior. CDR Hunter, a former member of the Blue Angels and the XO of VF-162, was the lead of the flak suppressors and was hit in the wing by 57-millimeter AAA. The hit ruptured the fuel tanks in his Crusader's wings and caused a loss of part of the aircraft's hydraulic systems. CDR Hunter and his wingman, LT Fernandez, flew towards the Tonkin Gulf and what they believed was the USS *Oriskany*, (in reality the USS *Bon Homme Richard*).

The Crusader was unique in that its entire wing rose to provide increased lift. However, due to the damage, CDR Hunter could not jettison his ordnance, in-flight refuel, or raise the wing for landing. At this early stage of cruise, the *Oriskany's* loss rates were exceeding their ability to re-supply, and in an effort to save the precious aircraft CDR Hunter attempted to land with his wing in a lowered position. When he attempted to land on the *Bon Homme Richard*, his aircraft hit the deck too fast and hard enough to shear off the landing gear. The aircraft skipped the arresting gear wires and plunged over the side. CDR Hunter was found floating under the water in a partially deployed parachute. A remarkable account of this tragic accident and its affects on the squadron can be found in Zalin Grant's book, *Over The Beach*.

20 July 1967: A-4E (150097, AH 312) of VA-163; LT Kuhl, recovered.

LT Kuhl was shot down during a series of strikes on the My Xa POL storage facility fifteen miles northwest of Haiphong. LT Kuhl was hit by AAA twelve miles east of Hon Gay. After feeling shrapnel hit his aircraft, his engine began to vibrate and shortly thereafter, his cockpit filled with smoke and he lost his radio. He flew towards the SAR destroyer and ejected once the aircraft became uncontrollable.

25 July 1967: A-4E (149961, AH 304) of VA-163; LCDR Davis, KIA.

LCDR Davis was lost on a night armed reconnaissance mission near Ha Tinh, twenty miles south of Vinh. After spotting a convoy of trucks, LCDR Davis and his wingman began strafing under the light of parachute flares. It is unclear whether he was shot down

by small arms fire, or flew into the ground during this dynamic night time mission. After two failed attempts, his wreckage was finally located, and in 1997 a joint North Vietnamese/American team recovered his remains.

31 July 1967: F-8C (146984, AH 110) of VF-111; LT(jg) Zuhoski, POW.

LT(jg) Zuhoski was the thirteenth plane lost by the *Oriskany* since the ship arrived on Yankee Station in mid-July for its third cruise of the war. LT(jg) Zuhoski was the escort for an Iron Hand mission east of Hanoi, when his Crusader was hit by an SA-2. As he was climbing through 11,000 feet to avoid a volley of missiles, he was hit in the fuselage by a SAM. As his Crusader was consumed by fire, he ejected and landed in the village of Ngu Nghi, ten miles east of Hanoi. As was becoming typical of pilots thrown into the fray, LT(jg) Zuhoski was on his first operational tour after achieving his pilot wings. He had joined VF-111 in March 1967, was married on 3 June and departed on the *Oriskany* on 16 June 1967. He was eventually repatriated in March 1973.

4 August 1967: A-4E (150052, AH 313) of VA-163; LT(jg) Bisz, KIA.

LT(jg) Bisz was shot down while attacking a POL storage site at Luc Nong. His flight was attacked by a SAM site eight miles northwest of Haiphong. The site launched a volley of four missiles. As he maneuvered to avoid the missiles, his aircraft was struck at about 10,500 feet. No one in his flight saw any parachute and it was assumed that LT(jg) Bisz had been killed when the missile struck. However, the Navy officially listed him as captured. Only recently has the Navy accepted that he was in fact killed on this raid.

31 August 1967: A-4E (152028, AH 315) of VA-163; LT(jg) Carey, POW.

A-4E (149975, AH 310) of VA-163; LCDR Stafford, POW.

A-4E (151991, AH 402) of VA-164; LCDR Perry, KIA.

During the latter part of August, the Navy began efforts to isolate Haiphong harbor. As the ships bringing supplies into the harbor could not be attacked and the harbor could not be mined under the ROE, the only alternative was to cut all lines of communication out of the city. The *Oriskany* launched ten Skyhawks from both VA-163 and VA-164 to attack the railway bridge at Vat Cach near Haiphong. Thirteen miles southwest of Haiphong, the formation had a volley of SAMs shot at them. One of the SA-2 missiles exploded directly in front of LCDR Stafford and his wingman, LT Carey. The force of the explosion blew LCDR Stafford out of his cockpit, while still strapped to his ejection seat. Though badly injured, he was fortunate to survive due to the automatic functions of the ejection seat, which functioned properly and deployed his parachute. LT Carey was shot down on his first mission over North Vietnam. The explosion destroyed the engine of his Skyhawk and he ejected as the aircraft was consumed by fire. Both were quickly captured and eventually repatriated in March 1973.

LCDR Perry was leading the flight of VA-164 aircraft when he was also hit by an SA-2. Losing fuel, he turned towards the sea. Two miles off the coast, his aircraft became uncontrollable and he ejected. LCDR Perry was seen hanging limply in his parachute and when he entered the water, he never surfaced. Though a SAR helicopter was already on scene, the crew was unable to rescue him. When the rescue swimmer reached him, he was already dead from a chest wound. Because the body was entangled in the parachute

lines and the North Vietnamese were shelling the helicopter with mortars, the rescue swimmer had to leave LCDR Perry's body in the water. His remains were returned in February 1987. Several accounts of this mission and the effects it had amongst the attack squadrons on board the *Oriskany* can be read in John McCain's book, *Faith of My Fathers* and Jeffrey Levinson's book *Alpha Strike Vietnam*.

5 October 1967: F-8C (146938, AH 114) of VF-111; ENS Matheny, POW.

ENS Matheny was lost on a strike against a pontoon bridge at Nho Quan, twenty miles southwest of Nam Dinh. Matheny was in a turn at 10,000 feet when his aircraft exploded into a mass of flames. He attempted to glide to the Tonkin Gulf, but was forced to eject over land and was captured. It is unknown whether he was hit by AAA, or if his aircraft had suffered a catastrophic engine failure. ENS Matheny was released in February 1968, along with two other officers as part of a propaganda campaign by the North Vietnamese.

7 October 1967: A-4E (152086, AH 413) of VA-164; LT Hodges, KIA.

LT Hodges was part of an Iron Hand mission searching for a SAM site South of Hanoi. At 11,000 feet, fifteen miles south of the city, the flight spotted the launch of two SA-2 missiles, which were tracking them. LT Hodges was slow to respond and probably never saw the missiles. The first SA-2 missed the flight, but the second missile struck LT Hodges' aircraft. His Skyhawk burst into flames, rolled right and crashed into a karst near Hoang Xa. No ejection was attempted by LT Hodges. His remains were recovered by a joint Vietnamese and United States effort during 1995 and 1996.

9 October 1967: A-4E (152085, AH 416) of VA-164; LT(jg) Cunningham, recovered.

LT(jg) Cunningham had just finished attacking a pontoon bridge at Nao Quan and was crossing the coastline when his engine suddenly flamed out. He attempted to restart the engine several times, but was forced to eject after descending through 3,000 feet. He was rescued by a Navy helicopter. It is thought that his aircraft was struck by small arms fire as he was pulling up from his attack on the well defended bridge.

18 October 1967: A-4E (152048, AH 402) of VA-164; LCDR Barr, KIA.

LCDR Barr was part of an Iron Hand flight protecting a larger strike on the Haiphong shipyards. His Iron Hand flight engaged a SAM site near the port, but the site was well defended by numerous AAA emplacements. As LCDR Barr attacked the SAM site, his Skyhawk was hit by AAA and exploded. No parachute was seen. LCDR Barr's remains were returned by the Vietnamese in 1988 and 1989.

22 October 1967: A-4E (150116, AH 306) of VA-163; LT(jg) Dooley, KIA.

LT(jg) Dooley was shot down during an Alpha Strike on the Haiphong railway yards. Although he was able to drop his bombs on his first run, his aircraft was seen streaming fuel during his pull-up. His aircraft then began a descending turn and eventually crashed into the Cua Cam River. No attempt at ejection was seen.

24 October 1967: A-4E (149963, AH 311) of VA-163; LT(jg) Foulks, recovered.

LT(jg) Foulks was also shot down during a raid on the Haiphong railway yards. He had

just bombed the target and was south of Haiphong, heading for the coast at 6,500 feet when he was hit by AAA. Though he lost his engine, the aircraft was controllable and Foulks was able to glide three miles out to sea prior to ejecting. He was recovered by a Navy helicopter after spending several minutes in the water.

25 October 1967: A-4E (150086, AH 315) of VA-163; LT Krommenhoek, KIA.

Airfields had previously been off-limits due to ROE, but Phuc Yen was attacked for the first time on 24 October. On 25 October the *Oriskany* sent aircraft back to re-attack the airfield. LT Krommenhoek was shot down during this restrike. As the formation approached the target, they were met by a barrage of AAA and SAMs. The last time Krommenhoek was seen, was as his aircraft rolled in on the target. A search of the target area after the raid was not possible given the strength of North Vietnamese defenses in the area. LT Krommenhoek was declared KIA ten years later.

26 October 1967: A-4E (149959, AH 300) of VA-163; LCDR McCain, POW.

F-8E (150310, AH 206) of VF-162; LT(jg) Rice, POW.

The *Oriskany* lost two aircraft during strikes against the Hanoi thermal power plant on the morning of 26 October. Although the plant had been previously destroyed by aircraft from the *Oriskany* in August (during which members of VA-163 were awarded two Navy Crosses), it was again operational. LCDR McCain was in the lead division and was struck by an SA-2 while diving on the target. The missile blew off McCain's starboard wing while he was close to the ground and he was lucky to eject in time. Both his arms and his right leg were broken during the ejection and McCain almost drowned when he landed in a small lake next to the target. LCDR McCain was captured and was eventually repatriated in March 1973. McCain's father became CINCPAC in July 1968 and his status as the son and grandson of famous Navy men was used by the Vietnamese for propaganda purposes. An account of this mission can be read in John McCain's book, *Faith of My Fathers*.

LT(jg) Rice was shot down during a follow-up strike about an hour after the raid in which McCain was lost. Rice's flight of four Crusaders was reduced to three when one aircraft was forced to return to the ship with a malfunction. In the target area, his flight which was the flak suppression element was engaged by a SAM site. The flight began evasive maneuvering, but Rice's aircraft remained targeted by two SA-2 missiles. He was hit while inverted at 15,000 feet while performing a "Split-S." His port wing was blown off forcing him to eject. LT(jg) Rice landed in Hanoi and was immediately taken prisoner. He was repatriated in March 1973.

2 November 1967: A-4E (151985, AH 414) of VA-164; LT(jg) Knapp, KIA.

LT(jg) Knapp was lost while on an armed-reconnaissance mission north of Vinh. After spotting trucks near Cho Giat, thirty miles north of Vinh, the pilots began their attack run. LT(jg) Knapp began a Zuni run from 9,000 feet and his aircraft never recovered from the dive. He never attempted to eject and is believed to have been killed during the dive. Villagers near the crash site apparently recovered his remains and buried him nearby. In 1982, the Vietnamese returned Knapp's identification card, but to this point his remains have not been located.

5 December 1967: F-8C (146907, AH 102) of VF-111; LT Meadows, recovered.

LT Meadows was flying as an escort for a reconnaissance mission along highway 1A, when his Crusader was hit by small arms fire. The hit went unnoticed until both aircraft were heading out to sea and he suddenly lost one of his flight controls. Hydraulic fluid was seen streaming from the aircraft which eventually caught fire. LT Meadows was able to fly to the southern SAR destroyer before he lost his remaining flight controls and his engine. He ejected near the destroyer and was recovered by a Navy helicopter.

2 January 1968: F-8C (146989, AH 106) of VF-111; LT(jg) Taylor, recovered.

LT(jg) Taylor was escorting an RF-8 mission near Thanh Hoa when his aircraft suffered a total electrical failure. It is believed that AAA had hit his aircraft and destroyed his engine. He was able to dive his aircraft and maintain airspeed to glide as far as the coast. His aircraft eventually stalled and he ejected seven miles from the coast. A section of Skyhawks provided protection from North Vietnamese junks in the area while he waited for a Navy helicopter to rescue him.

4 January 1968: F-8E (150865, AH 206) of VF-162; LT(jg) Minnich, MIA.

LT(jg) Minnich was part of a TARCAP for a strike against a bridge at Hai Duong. While orbiting near the target at 15,000 feet, his aircraft was struck by a SAM. The Crusader caught fire and began to spin, crashing ten miles north of Haiphong. LT(jg) Minnich's remains were returned in December 1985.

5 January 1968: A-4E (150131, AH 303) of VA-163; LT(jg) Foulks, KIA.

Although he had survived being shot down on 24 October 1967, LT(jg) Foulks was lost while on a night armed reconnaissance mission twenty-five miles south of Nam Dinh. After spotting a convoy of trucks, his section began their bombing runs. His flight lead lost sight of him after recovering from his own bombing run. LT(jg) Foulks was either shot down or flew into the ground while on his bombing run. His remains were returned by the Vietnamese in December 1988.

11 January 1968: A-4E (151152, AH 404) of VA-164; LCDR Weichman, recovered.

LCDR Weichman was shot down while on an Operation Steel Tiger mission. Steel Tiger was the code name for the covert bombing of Laos. He was on his third pass over the target, a small bridge ten miles north of Ban Don Pang, when his aircraft was hit by small arms fire. With his engine vibrating excessively, he was able to fly back across Laos and the southern portion of North Vietnam to Tonkin Gulf. He eventually lost control as fire from the engine burnt through control cables, forcing him to eject short of the *Oriskany*. He was rescued by a Navy helicopter.

Operational Losses (10):

12 July 1967: A-4E (150102) of VA-163; LT Wood, survived.

The *Oriskany* lost its first aircraft two days prior to officially starting its line period on Yankee Station. LT Wood was launching on a training sortie, while the *Oriskany* was enroute from Subic Bay to Yankee Station, when his Skyhawk was catapulted with

insufficient airspeed to remain flying. His aircraft crashed into the water after he successfully ejected. He was recovered by a helicopter from the *Oriskany*.

20 July 1967: F-8E (150916) of VF-162; LT Nunn, recovered.

As he was preparing to be catapulted off the *Oriskany* for a RESCAP mission, LT Nunn inadvertently took his hand off the throttle to signal to the catapult officer. At that moment, the catapult fired, causing the throttle to pull back. With no power on the aircraft, he had insufficient airspeed to fly away following the catapult shot and the aircraft flew into the water. Amazingly, LT Nunn ejected underwater and was rescued with minor injuries.

28 July 1967: KA-3B (142658) of VAH-4; ENS Patterson, KIA; AE2 Hardie, KIA; pilot unknown, recovered.

ENS Patterson and AE2 Hardie were killed when their KA-3B suffered a dual engine failure while on a tanker mission over the Tonkin Gulf. Unable to restart the engines, the crew bailed out of the aircraft and only the pilot was found and rescued.

8 September 1967: F-8C (146929) of VF-111; pilot unknown, recovered.

An F-8 on an armed reconnaissance mission suffered an electrical failure that resulted in the loss of power. The pilot was able to eject and was recovered.

10 September 1967: A-4E (150047) of VA-163; LT Landroth, recovered.

A Skyhawk was being launched for a tanker mission when its engine failed during the catapult shot. The pilot ejected safely and the aircraft crashed into the sea in front of the *Oriskany*.

11 September 1967: F-8E (150910) of VF-162; LT Shaw, recovered.

While on an armed reconnaissance mission, LT Shaw realized that two of his bombs could not be dropped. Rather than risk an attempt to land the aircraft on the *Oriskany*, he was told to divert to Da Nang with its long runway. Due to navigational errors, he ran out of fuel prior to reaching Da Nang and was forced to eject.

8 October 1967: E-1B (148132) of VAW-11; LT(jg) Zissu, KIA; LT(jg) Roggow, KIA; LT(jg) Wolfe, KIA; ATC Pineau, KIA; Seaman Guerra, KIA.

The E-1B Tracer was lost on a combat mission over the Gulf of Tonkin. As was typical for larger support aircraft, the crew landed at Chu Lai to refuel for another mission prior to recovering back aboard the *Oriskany*. The E-1 took off from Chu Lai in poor weather and proceeded towards Da Nang and eventually the *Oriskany*. Radar contact was lost as the aircraft approached Da Nang. Contact was briefly reestablished showing the aircraft dangerously off course near mountainous terrain 10 miles northwest of Da Nang. The crew acknowledged emergency instructions to turn, but radio and radar contact was again lost. A SAR mission was launched in the poor weather and wreckage was eventually discovered at the base of a cliff in the mountains. However, the crash site was in terrain that was impossible to reach and the crews' remains were never recovered.

21 October 1967: KA-3B (142655) of VAH-4; four crew unknown, recovered.

A KA-3B was launching from the *Oriskany* for a logistics mission when JATO bottles attached to the fuselage ignited. Control of the aircraft was lost and the crew was able to bail out successfully.

19 November 1967: F-8C (147004) of VF-111; LT Van Orden, KIA.

LT Van Orden was killed when his Crusader crashed into the water as a result of a catapult failure.

1 January 1968: A-4E (151133) of VA-164; LT Schindelar, recovered.

LT Schindelar suffered a total electrical failure while on an armed-reconnaissance mission. The failure locked his flight controls and he was forced to eject over the sea.

APPENDIX D

CHRONOLOGICAL HISTORY OF ROLLING THUNDER

The following is a chronological history of Operation Rolling Thunder. Data concerning targets and issues was compiled from several sources including Grant Sharp's *Strategy for Defeat*, Commander in Chief Pacific's *1968 Report on the War in Vietnam* and John Smith's *Rolling Thunder*.

Rolling Thunder 1 (20 February 1965):

Cancelled because of political unrest in South Vietnam. It was to have been an attack on a North Vietnamese naval base and barracks.

Rolling Thunder 2, 3, and 4:

Also cancelled.

Rolling Thunder 5 (2 March 1965):

Attacks on an ammunition depot at Xom Bong and Quang Khe naval base. At this stage of Rolling Thunder, the targets were to be attacked on the specified day, by the specified number of sorties, and could not be re-attacked later. Targets were clearly stated, with only a limited number of alternates if bad weather covered the primary target. The participation of the South Vietnamese Air Force was also a condition for target selection at this stage of the campaign.

Rolling Thunder 6 (15 March 1965):

This involved a series of attacks on targets in the southern part of North Vietnam, including the ammunition depot at Phu Qui and the radar installation on Tiger Island, twenty miles off the coast.

Rolling Thunder 7 (19-25 March 1965):

This stage of Rolling Thunder saw the introduction of armed reconnaissance missions, and the participation of South Vietnamese aircraft was no longer required. Targets were also released in weekly packages. Five targets including barracks at Vu Con were listed during Rolling Thunder 7.

Rolling Thunder 8 (26 March-1 April 1965):

Targets selected for this package consisted of nine radar sites providing coverage of North Vietnam. The VNAF struck an army barracks and three armed reconnaissance missions were flown. All targets were below the 20th Parallel except the radar station on the island of Bach Long Vi, which was seventy-five miles off the coast. The Navy struck this radar station on 26 March, but it was not destroyed, necessitating a re-attack on 29 March, during which four aircraft were lost.

Rolling Thunder 9 (2-8 April, 1965):

This package concentrated on lines of communication in the Southern half of North Vietnam, and included attacks on the Thanh Hoa and Dong Phuong Bridges. The Bridge at Thanh Hoa was

attacked for the first time on 3 April 1965 and resulted in the loss of two Air Force F-105s. This phase also resulted in the first photographs of a North Vietnamese SAM site, fifteen miles Southeast of Hanoi.

Rolling Thunder 10 (9-16 April 1965):

Lines of communication continued to be the emphasis during this package. Bridges at Qui Vinh and Khe Khien were targeted. The number of armed reconnaissance missions was increased to twenty-four missions per day.

Rolling Thunder 11 through 14 (17 April-12 May 1965):

Lines of Communication remained the main target during these packages as did North Vietnamese Army bases south of the 20th Parallel.

Bombing Pause (12-18 May 1965):

Initiated in order to collect information to evaluate the results of Rolling Thunder.

Rolling Thunder 15 (18-24 May 1965):

The resumption of bombing resulted in one raid north of the 20th Parallel against army barracks at Quang Suoi. The remaining missions were armed-reconnaissance missions flown against specific areas.

Rolling Thunder 16 (25-31 May 1965):

The total number of armed-reconnaissance sorties flown during a twenty-four hour period was increased to forty, with no more than 200 per package. The total number of sorties flown against North Vietnam in May increased to 4,000 from 3,600 during April.

Rolling Thunder 17 (1-7 June 1965):

This package resulted in an increase of armed reconnaissance sorties to 260.

Rolling Thunder 18 through 47 (8 June-24 December 1965):

The targets of these packages continued to be transport and military, though the campaign began its gradual expansion. Small numbers of targets in the northern half of North Vietnam were struck, including targets in Route Pack VI. The restricted areas around Hanoi and Haiphong and the buffer zone along the Chinese border were established. The Joint Chiefs of Staff exempted Iron Hand missions from the overall sortie limitations imposed in the biweekly Rolling Thunder program. Total sorties flown during 1965 numbered 55,000.

Bombing Pause (24 December 1965-31 January 1966):

After the Viet Cong announced a Christmas "Truce" in South Vietnam, Secretary of State Dean Rusk proposed that bombing operations against North Vietnam be suspended for twenty-four hours. The hope being that North Vietnam would respond in kind, and bombing would then be suspended to allow for peace talks. On 26 December, CINCPAC commented to the JCS on the difficulties faced by a commander when a cease-fire was extended on short notice. It was pointed out that the advantage of a cease-fire benefited the North Vietnamese, and that any future cease-fire should be planned in detail well in advance. Admiral Sharp proposed that aerial observation

of key North Vietnamese installations should continue during the cease-fire.

Rolling Thunder 48 (31 January-28 February 1966):

The campaign resumed with limited operations mainly due to poor weather during the month of February. Armed-reconnaissance sorties were again restricted to below the 21st Parallel.

Rolling Thunder 49 (1-31 March 1966):

During this package, most of North Vietnam was opened up for strikes, though weather continued canceling missions. The total number of sorties flown during March was 8,000.

Rolling Thunder 50 (1 April-8 July 1966):

The initial plan proposed strikes against two types of targets: the entire Petroleum, Oil and Lubricants (POL) system and major industries in the northeast portion of North Vietnam. Planning began for eleven specific industrial targets and the POL system, however concern by Washington delayed the attacks. Authority to attack the POL system was eventually given, and it became the eventual emphasis of this package, though permission was not given to strike targets until 29 June 1966. Armed reconnaissance was allowed over all of North Vietnam, including Route Package VI except for the restricted areas. The first use of B-52 bombers over North Vietnam occurred when they struck the Mu Gia pass along the Ho Chi Minh trail. The total number of sorties flown during April increased to 10,000.

Rolling Thunder 51 (9 July-11 November 1966):

POL continued to be the primary target of this package, with the addition of several small bridges and one bypass. CINCPAC promulgated a plan of action in late July to maximize destruction of North Vietnam's remaining elements; however the only targets allowed by Washington for Rolling Thunder 51 were bridges. Armed reconnaissance missions along the northeast rail line forced its closure for most of September and October.

Rolling Thunder 52 (12 November 1966-23 January 1967):

This package expanded the target list to include power stations, cement plants and steel works but these targets were removed from the list before they could be attacked. Monthly sorties were increased to 13,200 during this package. The total number of sorties flown during 1966 was 148,000.

Bombing Pause (24-26 December 1966 and 31 December 1966-2 January 1967):

A cease-fire was directed for Christmas and the new year, though CINCPAC asked that it be for no longer than forty-eight hours to limit North Vietnam's advantage.

Rolling Thunder 53 (24 January-22 February 1967):

The previous target list was continued with minor changes. Extremely bad weather as a result of the monsoon season precluded full-scale attacks on fixed targets and greatly reduced armed-reconnaissance sorties.

Rolling Thunder 54 (23 February-22 April 1967):

Targets in this package included the Thai Nguyen Steel Works Plant north of Hanoi, the

Haiphong cement works, and several power stations. In all, sixteen targets vital to North Vietnamese industry were added to the target list. Estuaries and inland waterways up to the 20th Parallel were listed as candidates for mining. The middle of April generally marked the end of bad weather over North Vietnam, and by 21 April, all the Rolling Thunder 54 targets had been struck.

Rolling Thunder 55 (April 23-May 1, 1967):

On 23 April, the execute order for Rolling Thunder 55 was received. Armed reconnaissance operating areas remained constant, while the overall fixed targets increased dramatically. For the first time, selected targets were authorized for strike within the ten mile circle around Hanoi. This included airfields at Kep and Hoa Lac, the power transformer in the center of Hanoi and other industrial targets in the center of the city. By 28 April, all but one of the targets had been struck.

Rolling Thunder 56 (May 2-July 19, 1967):

Good weather over North Vietnam permitted maximum effort against all authorized targets. Ten new targets were added to the list, including a power plant in the center of Hanoi. Rolling Thunder 56 concentrated on the supply lines connecting Hanoi and Haiphong to Communist China, with the overall purpose of isolating Haiphong from Hanoi and both cities from the rest of North Vietnam.

Bombing pause (23-24 May 1967): A cease-fire was enforced for twenty-four hours in observance of Buddha's birthday.

Rolling Thunder 57 (25 May 1967-1 June 1968):

The summer of 1967 resulted in the heaviest bombing of North Vietnam during Rolling Thunder. Sixteen new targets, all in Route Package VI, were added to the list during this phase. In a political move to preempt the Stennis Hearings occurring in Congress, President Johnson added twenty more targets to the list in August. The main effort was the continued attempts to isolate Hanoi and Haiphong, although by the end of August, Washington had again placed all targets in Hanoi on a restricted status. Sortie totals for August 1967 were 11,634. During September, seventeen new targets were added to the list. In October, eight more were added, and the restriction placed on targets in Hanoi was lifted. More targets were added in November, but poor weather due to the monsoon season impacted the campaign. No new targets were added during December, but targets on the list were hit when weather permitted. Weather was the dominant factor influencing Rolling Thunder operations throughout North Vietnam in December. The total number of sorties flown during 1967 was 108,000, although 9,740 of these had been to targets on the authorized list, the remainder being armed-reconnaissance.

Bombing Pause (24-25 December 1967):

Twenty-four hour cease-fire enforced for observation of Christmas.

Bombing Pause (31 December 1967-2 January 1968):

On 30 December, South Vietnam announced that a New Year cease-fire would be in effect. The cease-fire included a twelve hour extension which the South Vietnamese government had added in response to the appeal made by Pope Paul VI to make 1 January 1968 a "Day of Peace."

Rolling Thunder 57 (Continued)

The weather during the first three months of 1968 curtailed operations over North Vietnam. February's weather was the worst of any month during Rolling Thunder. There was an average of only three days per month on which strikes could be accomplished. Eight more targets were added to the list during this time. On 31 March, President Johnson announced the curtailment of Rolling Thunder operations. Bombing was to be restricted to below the 19th Parallel, and concentrated on North Vietnam's transportation system.

Rolling Thunder 58 (July 2-November 1, 1968):

Sortie rates continued at the same rate as before, but were restricted to Route Packages I, II, and the Southern portion of III. This meant that the bombing was extremely heavy in this area, and the transportation system was heavily hit. President Johnson ended Rolling Thunder with an announcement that halted the bombing of North Vietnam on 1 November 1968.

APPENDIX E

HANGAR DECK FIRE 26 OCTOBER 1966

On 26 October 1966 a disastrous fire broke out on the hangar deck of the USS *Oriskany*.¹ When the fire was finally put out, forty-four men had been killed, including twenty-four pilots from the air wing, one of whom was the new Air Wing Commander. Three A-4s were damaged, and one A-4 and two helicopters were destroyed.

For the third time in four days, the evening's strike missions had been cancelled due to poor weather over North Vietnam, meaning that all ordnance had to be downloaded and stored before the next evening's missions. Mk-24 flares used by A-4 Skyhawks on night armed-reconnaissance missions were supposed to have been downloaded from aircraft and properly stowed. In part due to an undermanned ordnance section, this did not happen. The downloading and storage which should have occurred during the night shift was left for the day shift. The job of stowing roughly seventy flares fell upon two junior airmen, George James and James Sider. Despite being untrained in the correct safety procedures for the Mk-24 flare, these two sailors began the unsupervised task of stowing the flares.

The compartment being used to stow flares was at the forward edge of the hangar deck, while the seven skids full of flares extended aft into the hangar bay. As they unloaded each skid, the distance to the locker increased. In an effort to save time doing a job they felt should have been done by the night shift, James and Sider began passing the twenty-five pound flares to each

¹For a detailed account of the fire, including the many ordeals faced by crewmembers, the heroic actions that saved the ship and the aftermath, read Wynn Foster's *Fire on the Hangar Deck, Ordeal of the Oriskany* (Annapolis: Naval Institute Press, 2001).

other using an underhand toss. On one of these tosses, the lanyard used to ignite the flare caught on the hatch and ignited the two million candlepower magnesium flare. Sider panicked, threw the burning flare in the locker containing some 650 flares, closed the hatch and ran away. The resultant fire was immediately out of control.

Due to a rapidly changing operating environment, there were no firefighting materials, no equipment, and no techniques available to extinguish the new magnesium flares should they begin burning. Automatic sprinkling systems only made a bad situation worse, as the extremely high temperature of the fire instantly vaporized water into flammable hydrogen. Because flight operations had been cancelled, most pilots were using the respite to catch up on sleep in staterooms immediately forward of the hangar bay. Forced air ventilation systems were overcome by explosive pressure, and began pumping noxious fumes and smoke into these staterooms. A great majority of the casualties died in their rooms, unable to escape the conflagration created by the magnesium flares. Firefighters battled the blaze for over seven and one half hours until it was brought under control. Literally, the ship was only saved through the heroic efforts of her crew.

Due to the extensive damage and large loss of life, the *Oriskany* was taken off-the-line. The pilot ranks of the air wing had been decimated. Catapults used to launch aircraft as well as the forward elevator were rendered inoperable. Living spaces forward of the fire were uninhabitable. The *Oriskany* sailed into Subic Bay, Luzon, Republic of the Philippines on 28 October 1966 where wounded were offloaded. The *Oriskany* returned home to California on 16 November 1966 to a somber homecoming. The fire and loss of life created many challenges and further strained the carrier fleet. Every squadron in the air wing lost personnel, including commanding officers and executive officers, and this loss of life was certainly a blow to morale

and the leadership of the air wing. Further compounding the issue was the fact that the *Oriskany's* early departure from the Tonkin Gulf increased the operational tempo of an already over-tasked Navy. The Navy rushed to repair the *Oriskany* and retrain replacement pilots in less than six months before she was underway again. This extremely short turnaround was an issue itself as it meant less training for new inexperienced pilots, and considerably increased the amount of time personnel spent away from home.

The fire on the *Oriskany* was a result of several factors. First, the Navy in general was conducting the war with peacetime manning requirements. The Ordnance (G) Division onboard the *Oriskany* was manned with only seven sailors in what should have been a ten-man division. This shortage of personnel led to the untrained and unsupervised Sider and James mishandling ordnance. Second, the hectic pace of operations during Rolling Thunder meant that the undermanned crew of the *Oriskany* was pushed even harder. Four months prior to the accident, Lieutenant Frank Elkins wrote in his diary:

Night operations were cancelled after I wrote last night. A good thing. People are really getting worn down, particularly the ordnance crews who load tons and tons of ordnance on the aircraft, reconfigure for different kinds of weapons, fix discrepancies on the ordnance gear, and catch naps as best they can, behind the island, on aircraft wings, or under the gun mounts.¹

Finally, the *Oriskany* was one of the oldest carriers then operating. The pace and type of operations meant that there was no suitable place to store the Mk-24 flares. Instead of being stored in the ship's magazines like other ordnance, the flares were stored in an empty compartment forward of the hangar bay. All these factors combined to make shortcuts and mishandling inevitable--it was just a matter of time before accidents occurred. In fact, the fire on the *Oriskany* was the first of three fires involving similar circumstances with similar results.

¹ Frank Elkins, *The Heart of a Man* (New York: W.W. Norton and Company, 1973), 72.

APPENDIX F

AIRCRAFT OF CVW-16

When Rolling Thunder began, the Navy was in the process of transforming naval aviation. Older World War Two era carriers were being replaced by newer more capable ships. Older aircraft were also being phased out as new designs came on line. The USS *Oriskany* was one of the oldest aircraft carriers still in service, and as such was not capable of handling the newer aircraft which generally were larger and heavier. Thus CVW-16 deployed on the *Oriskany* with some of the oldest aircraft in naval aviation's inventory, and into a high threat environment.

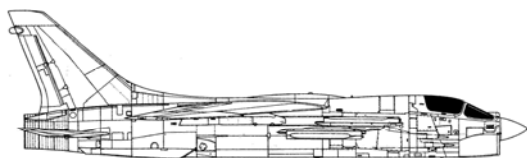


Figure 5. Ling-Temco-Vought F-8 Crusader (VMF-212 *Lancers*, VF-111 *Sundowners*, VF-162 *Hunters*)

The Korean War had reconfirmed many of the air-to-air combat lessons learned when fighter aircraft appeared in the First World War. However, due to leaps in aviation technology in the late 1950s and early 1960s, coupled with advances in missile technology and radars, military theorists became enamored with the idea that fighter aircraft would never dogfight again. It was thought that engagements would take place beyond visual range and that close-in dogfighting was a thing of the past.

Fighters developed for both the Navy and Air Force during the period were designed to destroy hordes of Soviet bombers before they reached the United States. This concentration on nuclear attack interception capabilities and an over reliance on technology meant that traditional fighter pilot skills atrophied. The Navy, however, retained one aircraft designed as a pure air superiority fighter: the F-8 Crusader. Known as “The Last of the Gunfighters,” the F-8 Crusader was the only Navy fighter aircraft armed with on-board cannons during the Vietnam War. The tactics and capabilities of the Crusader squadrons served the Navy exceptionally well during Vietnam. While squadrons flying interceptor aircraft struggled to counter the North Vietnamese air threat, F-8 squadrons flying during Rolling Thunder scored an impressive 18:1 kill ratio.

The Navy lost fifty-six Crusaders in combat over Vietnam, plus an additional sixty-six lost in operational mishaps. Overall, 12 percent of all Crusaders built were lost in Vietnam. VF-111 and VF-162 suffered the highest loss rates of any F-8 unit in Vietnam, losing ten and twelve aircraft during their deployments on the *Oriskany*.

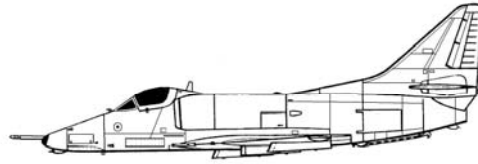


Figure 6. Douglas A-4 Skyhawk (VA-163 *Saints*, VA-164 *Ghostriders*)

The A-4 Skyhawk entered service with the Navy in 1956. Designed as a light attack aircraft, it went on to amass an unprecedented combat record. The Skyhawk flew more sorties than any other carrier aircraft during Rolling Thunder. Even though it was being replaced by newer aircraft like the A-6 and A-7, the Skyhawk was still flying at the end of the war in Vietnam. This participation however was not without cost: 195 Navy A-4s were lost in combat and seventy-seven more in operational accidents--31 percent of all the Navy's fixed and rotary wing losses during the war. The two squadrons flying the Skyhawk from the *Oriskany* lost thirty-eight A-4s--44 percent of *Oriskany's* losses during Rolling Thunder.

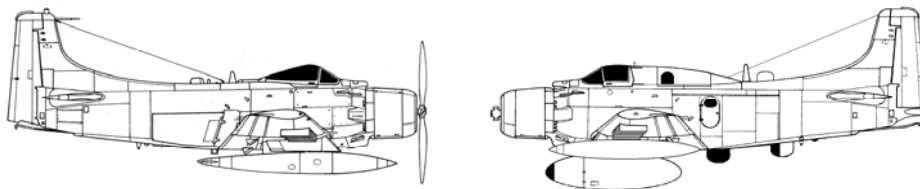


Figure 7. Douglas A-1 Skyraider (VA-152 *Wild Aces*)

Designed during the last year of World War II, the A-1 Skyraider entered service in 1946. The Skyraider was already considered obsolete when the initial retaliatory strikes occurred in Vietnam in 1964. A-1s continued to fly missions throughout Rolling Thunder, though the increasing capabilities of North Vietnamese defenses quickly relegated them to the southern half of North Vietnam. Because of the Skyraider's long endurance and ability to carry large amounts of ordnance, they became star performers in the RESCAP role. CVW-16 Skyraiders performed this role exceptionally well, to the point that they were often over tasked with supporting Air Force rescue efforts in the western half of North Vietnam. At one point during the 1965 cruise, over half of VA-152 was being tasked by the Air Force, and Commander Stockdale was forced to fly to Thailand to work out an agreement to lessen the workload on his air wing's Skyraiders.

The EA-1F was a four-seat version of the A-1 that provided electronic jamming for strikes over North Vietnam using the same technology it used during the Korean War. The jamming equipment carried was vacuum tube based and required skillful handling by the operators. The aircraft cruised at only 140 knots and had to be launched well in advance of any strike package it was protecting. They usually operated in pairs, flying just 5,000 feet above the North Vietnamese coastline. When a radar was detected, the

EA-1 turned towards it and jammed the radar. The fact that the EA-1 had to turn to face the radar in order to jam it, and then fly towards it over the coast, in a very slow aircraft, made them extremely vulnerable. While CVW-16 had no EA-Fs assigned, they were often supported by detachments from VAW-13. These detachments moved from one carrier to another in order to remain on-the-line when a carrier went off-the-line for port calls or at the end of a deployment.

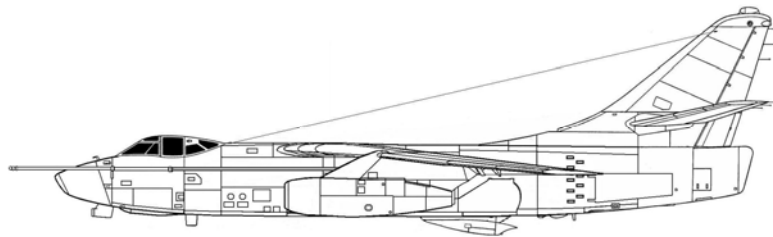


Figure 8. Douglas A-3B Skywarrior (VAH-4 Detachment G *Fourrunners*)

The Skywarrior first flew in 1952 and was intended for use as the Navy's strategic nuclear bomber. The introduction of ballistic missile submarines ended its role as a nuclear bomber, and it was relegated to a tanker/bomber. It was the largest aircraft operating on the carrier which limited them to small numbers. Crewed by three men, the A-3 did fly some bombing missions over both North and South Vietnam, but was proven more valuable as an airborne tanker. From these experiences, the Navy rebuilt the A-3 into two specialized variants: the KA-3B tanker and the EKA-3B tanker/tactical jammer aircraft, though they arrived too late to participate in Rolling Thunder. VAH-4 supported the air wing as best they could by providing some bombing sorties, but their most important contributions were the airborne tanking they provided. Also, because the EKA-3B had not yet been introduced to the fleet, CVW-16 strikes depended on the archaic EA-1F to provide tactical jamming for strikes over North Vietnam.

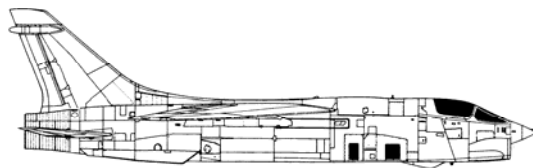


Figure 9. Ling-Temco-Vought RF-8A Photo Crusader (VFP-63 Detachment G *Eyes of the Fleet*)

The RF-8A photo reconnaissance version differed from the standard F-8 Crusader in that its guns, missiles and air-to-air radar were replaced with five high powered cameras. The RF-8 first entered service in 1957 and of the eighty-seven aircraft built, nineteen of them were lost in combat over North Vietnam.

The nature of Rolling Thunder and the restrictions in place meant that aerial reconnaissance was of paramount importance. It was necessary to know how effective a bombing raid had been--was the target destroyed, or would it need to be attacked again? If a bridge had been previously destroyed, had the North Vietnamese repaired it or erected a bypass? Pre-strike and post-strike photography was required for every strike during the war. The way targets were released piecemeal and the nature of North Vietnamese defenses made reconnaissance missions dangerous. Each detachment consisted of just a few aircraft and any loss greatly impacted operations of the air wing.

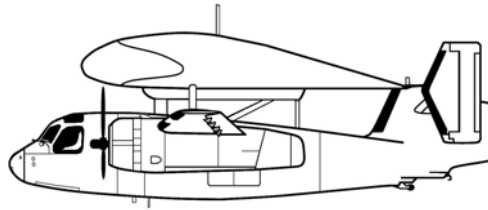


Figure 10. Grumman E-1B Tracer (VAW-11 Detachment G)

The E-1 provided Airborne Early Warning (AEW) for the Navy and CVW-16. Initially flown during the mid 1950s, the E-1B Tracer was already being replaced by Grumman's E-2A Hawkeye when Rolling Thunder began. The Tracer soldiered on for the duration of the war while slowly being replaced on the larger aircraft carriers. The Tracer crew consisted of a pilot, copilot/tactical director, and two radar operators. The sensitive electronics gear was carried in the fuselage, while the AN-APS-82 radar was carried in the radome above the aircraft.

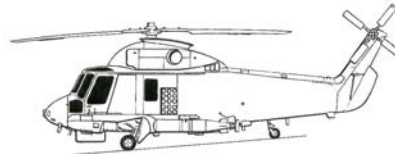


Figure 11. Kaman UH-2 Seasprite (HU-1 Detachment G)

The UH-2 Seasprite was first flown in 1959 and was delivered to the Navy in December of 1962. The UH-2 became the primary plane guard helicopter for the Navy and was used to great effect in that role. At the start of Rolling Thunder, the Navy had no real Combat Search and Rescue (CSAR) helicopter. While an excellent helicopter for operations close to the aircraft carrier, it did not have the range or self protection capability required for CSAR. Since it was one of the only two types available, it was used in this role.

The Navy established a northern and southern search and rescue zone in the Gulf of Tonkin. At each of these two stations, a destroyer was positioned and, when bombing

raids were being carried out, helicopters were moved into the landing pads of these destroyers in preparation to pick up aircrew shot down over North Vietnam or the Gulf. Primarily two squadrons, HC-1 and HC-7, flew these specialized missions. Though HC-7 was established late in Rolling Thunder, and flew a specialized helicopter with local modifications of extra armor, fuel and machine guns to for greater success in the CSAR role.

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