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Historical
Examination of
Current
Operations
REPORT

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THE ROYAL THAI AIR FORCE

3 SEPTEMBER 1971

HQ PACAF

Directorate of Operations Analysis
CHECO/CORONA HARVEST DIVISION

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DEPARTMENT OF THE AIR FORCE
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The counterinsurgency and unconventional warfare environment of Southeast Asia has resulted in the employment of USAF airpower to meet a multitude of requirements. The varied applications of airpower have involved the full spectrum of USAF aerospace vehicles, support equipment, and manpower. As a result, there has been an accumulation of operational data and experiences that, as a priority, must be collected, documented, and analyzed as to current and future impact upon USAF policies, concepts, and doctrine.

Fortunately, the value of collecting and documenting our SEA experiences was recognized at an early date. In 1962, Hq USAF directed CINCPACAF to establish an activity that would be primarily responsive to Air Staff requirements and direction, and would provide timely and analytical studies of USAF combat operations in SEA.

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ERNEST C. HARDIN, JR., Major General, USAF
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INTRODUCTION

This report examines the origin, growth, and activities of the Royal Thai Air Force (RTAF) from 1911-1971. The 1950-1971 phase is emphasized since the RTAF developed rapidly during that period. Although some facets of command, strategy, and tactics emerge, the report is primarily a historical synopsis of significant events and activities of the Royal Thai Air Force.

The material is presented chronologically by topic. Where appropriate, a topic is described in its entirety before preceeding to the next one.

Chapter I is a brief history of Thailand and provides a framework for the reader to sharpen his perspective before examining the material that follows. Appendix I contains additional background information concerning key leaders of the RTAF. Chapter II describes the first 50 years of the origin, growth, and modernization of the Air Force. Chapter III further examines the growth of the force. Chapter IV describes the major activities of the RTAF while Chapter V deals with special combat operations. Chapter VI, the final chapter, summarizes much of the material in the previous chapters but some new information is added as well. The Epilogue contains a final note on the RTAF and Thailand.

A large part of the study is based on factual data that is well-documented. However, the flavor of the report in general and many statements in particular are based on opinions of United States Advisory Group,

Thailand (TAFAG) personnel. In this regard, the researcher followed procedures outlined in Air Force Manual 10-2. Those advisory personnel interviewed were considered experts in their fields, unprejudiced, and up-to-date. Many had served more than one tour in Southeast Asia, and the experience of the Chief of TAFAG in this area dated back to 1959.

CHAPTER I

A HISTORICAL SYNOPSIS OF THAILAND

The Thai people take pride in their record of independence. They attribute this independence to the Thai tradition of expediency. In their view the wisdom of expediency enables them to ally with the winning side in international affairs. By bending like bamboo in the wind they are able to preserve their country's independence and maintain a cultural and political tradition which dates back some seven centuries.[1/]

The Thai people originated in the vast region of Southeast China, South of the Yangtze Valley, where they founded the independent Kingdom of Nancho in 650 A.D. In 1253 A.D. Nancho was conquered by the hordes of Kublai Khan. A mass migration took place southward into the area called Siam (Thailand). These migrants settled in the fertile Chao Phya River valley where they founded Sukhothai--capital city of the first integrated Siam Kingdom--known as the "cradle of Thai civilization." The most important Sukhothai ruler was King Rama Khamhon, who in 1275 developed the Siamese alphabet.[2/]

In 1350 King Rama Tibodi formed a new dynasty and established his capital at Ayudhya. Thirty-three kings ruled during the next 417 years. Ayudhya fell in 1767 and was almost totally destroyed by invaders from Burma. General Phya Tak Sin managed to escape the city with 500 followers. Within a year he was crowned king and raised a force sufficient to reclaim Ayudhya. He established his capital at Dhonburi, across the river from

the Bangkok of today. King Tak Sin was succeeded by one of his generals, Chao Phya Chakri. He founded the present Chakri dynasty and, as King Rama I, established his capital at Bangkok in 1782.[3/]

Thailand was ruled by an absolute monarch until 1932. At that time the country was beset with economic problems and was ripe for change. A revolution was instigated by a coalition of military and civilian leaders. King Prajadhipok was a weak, shy man and agreed to a constitution for the Thai Nation. The constitution provided for legislative, executive, and judicial branches of government and a National Assembly. For a provisional period, one-half of the Assembly was elected; the rest were appointed by the King.[4/]

The locus of power thus shifted in 1932 from the King and the artistocracy to a succession of groups of military officers and associated civil officials. Their power resulted from positions of influence in the armed forces, police, and bureaucracy. The people were accustomed to autocratic rule and never asserted the power of enfranchisement. In general they remained disinsterested in the affairs of government. National elections were instituted, but the coup d' etat remained the means of replacing one regime with another. After 1932, 25 coups or attempted coups occurred and thus set the pattern for changes in government. Political parties were allowed to exist only periodically and became a means of promoting the personal ambitions of their leaders rather than advancing the interests of the people. The composition of the national legislature

was controlled by the ruling group. Even the legislature's limited powers were never fully developed or employed. Each of the seven succeeding constitutions served only to announce government policies and legitimize government authority.[5/]

King Prajadhipok abdicated in 1935, having lost the confidence of the Thai elite. His ten-year old nephew, King Anakha Mahidol (or Rama VIII), succeeded him in June 1946. Shortly after returning from school in Switzerland, where he had resided throughout World War II, the young king was found dead. He had been shot while asleep. He was succeeded by King Bhumibol Adulyadej, who was born in Cambridge, Massachusetts.

King Bhumidol was a charismatic ruler. Supported by his beautiful Queen, Sirikit, and their talented children, he achieved popularity with the people of Thailand. Potentially he represented the unifying force which might enable the Thai people to control the communist insurgents.[6/]

As mentioned earlier, Thailand traditionally accommodated the strongest outside power encroaching the area. Prior to the 1850s the power was China; from then until the 1930s, it was Britain and British India.* In the late 1930s, Siam's orientation shifted toward an ascendent Japan but, since 1945, Bangkok has been closely associated with the United States.[7/]

*Others point out that France was an Indochina power during this period. (See Donald E. Nuechterlein, Thailand and the Struggle for Southeast Asia [Cornell University Press, 1965])

The skill of the Thai leaders in furthering national interests through expediency was never more evident than in World War II. The day before Pearl Harbor they denied the Japanese permission to pass through Thailand to Burma and Malaya. The Japanese crossed anyway, after overcoming nominal resistance. Premier Phibun Songgram quickly signed a treaty of alliance. This hesitant collaboration with the Japanese succeeded in sparing Thailand the devastation suffered by Burma. The Thais viewed this action as the only means of preserving the remnants of Thai independence. Encouraged by the early defeats of the Allies in December 1941, Phibun declared war on the United States and Britain.[8/]

Very soon an extensive anti-Japanese underground was established which centered around Phibun's rival Pridi Phononyoung. Pridi resigned as Finance Minister at the time of the alliance with Japan. He secretly approved the action of the Thai Ambassador, Prince Seni Promoj, who refused to deliver the declaration of war against the U.S. It was denounced as unrepresentative of the will of the Thai people. These actions were effective and important elements in the emergence of postwar Thailand as a "liberated" country--instead of one that had been defeated. In 1944, as Japanese military reverses indicated defeat, Phibun resigned and Pridi's Free Thai group came to power. Phibun returned to power in a bloodless coup in November 1947. After the postwar agreement had been finalized, attempted coups by Pridi in 1949 and 1951 were defeated. Increasingly, two participants in the 1947 coup became the strong men of Thailand: Phao Sriyanaond, Deputy Chief of Police; and Marshal Sarit Thanarat, Commander

of the First Army.[9]

In 1957 Sarit triumphed. He exiled Phao and Phibun and established a strong, harsh, but stable regime. With Sarit as Prime Minister, the National Assembly was dissolved. Political parties and labor unions were outlawed. Newspaper censorship was instituted, and some members of the opposition were executed. Meanwhile, Sarit maintained control over the Army. Thus he avoided the mistakes of predecessors who allowed their influence within the military to weaken after achieving high political office. Thai political stability was further enhanced by restoration of good relations between the government and the monarchy. The young king and beautiful queen became a source of national pride. They traveled widely at home and abroad and added to Thai prestige.

Marshal Sarit initiated an ambitious program of economic development which made impressive gains. He also achieved personal financial success. His fortune at the time of his death in 1963 was estimated at $100 million.[10]

Sarit's deputy, Field Marshal Thanom Kittikachorn, Commander of the Army, continued to dominate the scene. The tremendous influx of American dollars undoubtedly added to the power and success of the military regime.[11]

In 1971 one of the two most powerful men in the Thai Government was Field Marshal Thanom. In addition to occupying the principal political position of Prime Minister, he also held the position of Supreme Commander of the Armed Forces and Minister of Defense. He was a popular and charismatic leader. The second strong-man was General Prapas Charusathien. He

was Deputy Prime Minister, Deputy Supreme Commander of the Armed Forces, Commander in Chief of the Royal Thai Army, and Minister of the Interior. As Minister of the Interior, he controlled the National Police Force and appointed and supervised local government officials.[12/]

Thailand was straightforward in its resistance to Communist aggression in Southeast Asia, and it supported Western positions in international and regional affairs. For example, Thailand joined with the U.S., Great Britain, Australia, New Zealand, the Philippines, France, and Pakistan to form the Southeast Asia Treaty Organization (SEATO) in 1954.

The SEATO alliance was tested during the 1962-1963 period. Communist forces of the Pathet-Lao moved toward the Thai border, against the Royal Lao government. Military forces from the United States, Great Britain, Australia, and New Zealand were deployed to Thailand. However, Thailand was dissatisfied with the SEATO response. To allay this concern, in March 1962, Secretary of State Rusk and Foreign Minister Thanat Khoman issued a joint statement in which the U.S. declared its treaty obligation to Thailand to be individual as well as collective.[13/]

In 1966, the U.S. Ambassador to Thailand reaffirmed the U.S. commitment:[14/]

> *And in pursuit of the goal of a just, and generous, and comprehensive peace, my President has pledged the fullest support of the United States so, all should be aware that it is not the present, common danger alone that now unites us. What joins us together, now and for the future is - - - our common heritage of freedom, our common sense of justice, our common devotion to human betterment and self-determination. Thailand and America*

share equally, both now and for the future, a deep unswerving commitment to the independence and peaceful progress of all Southeast Asian nations.

And this commitment most certainly will be filled!

The U.S. commitment to Thailand was reaffirmed again in 1966 by President Johnson:

President Lyndon B. Johnson's visit gave an undisputable indication of the U.S. support to Thailand's struggle against Communist aggression. On 28 October (1966), at a banquet given by the King of Thailand, the President assured King Bhumibol that Thailand "can count on the U.S. to meet its obligation under the SEATO treaty." He also added strongly, "America keeps its commitments." President Johnson demonstrated to the Thai people and to the world through his visit that the U.S. backed the Thai battle against Communism "to the hilt" as the U.S. was doing in Vietnam.

And President Nixon pledged support in July 1969 and again in 1971.[15/] Later Secretary of State William Rogers added that close U.S.-Thai relations were a key factor in the security and development of Southeast Asia.[16/]

In spite of these pledges the Royal Thai Government (RTG) was aware of growing disenchantment in the U.S. over involvement in Southeast Asia. The RTG was also aware of new developments in the diplomatic world.

Superficially at least, Red China-U.S. relations began to thaw in 1971 with "ping pong" diplomacy.* Also, the U.S. removed some trade restrictions against Red China. A natural parallel was the urging by some that Thailand begin trade with China. Already there had been agreements for international air travel between Thailand and other European Communist block nations. After all, the Thais retained the wisdom of their ancestors...bamboo bends with the wind.[17/]

It is against this historical background that the following chapters trace the origin, development, and modernization of the Royal Thai Air Force (RTAF). The next chapter examines the first 50 years of RTAF history.

*The Red Chinese made overtures to the U.S. by giving an American table tennis team a warm and friendly reception.

CHAPTER II

THE FIRST 50 YEARS

The Beginning

Military aviation in Thailand began in 1911 when three Thai Army officers entered pilot training at the Nieuport Company in France. After receiving their flying certificates in 1913, the new aviators returned to Thailand.[18/]

Thailand purchased four Nieuport monoplanes and three Breguet biplanes in November of 1913 and established the Army Aviation Section under the supervision of the Army Engineering Inspector. A temporary runway and hangars were constructed in a rice field south of Bangkok, and training of field mechanics began.*[19/]

The Aviation Section expanded to group status, was designated as the Army Aviation Group, and relocated from Bangkok to Don Muang in March 1914. This date was observed officially as Royal Thai Air Force Day.

Flight training, under the direction of Wing I, began at Don Muang in 1915 with eight student officers. Wing I remained responsible for flying training until 1938 when the Flying Training School became a separate organization. Late in 1941 the school was moved to Korat where

*This airfield later became the site of the Royal Bangkok Sports Club, a center for horse racing and golf in the heart of urban Bangkok.

it remained for 28 years. The low rate of pilot output continued until Thailand's entry into World War II, except for an increase at the end of World War I.

World War I

Thailand declared war on the Central Powers in July 1917, sending an expeditionary force to Europe. This force included a contingent of the Aviation Group. During the war a number of officers and men were sent to France for instruction in flying, maintenance, administration, and other ground activities in support of aviation. Almost 100 officers qualified as military pilots at the French Army Flying Schools at Istres and Avord. Many of these pilots also received training at the Bomber School at Le Crotoy, the Reconnaissance School at Chapelle-la-Reine, the Gunnery School at Biscarosse, and the Fighter Conversion Courses at Piox.

Thai pilots flew their first combat missions over the Western Front in support of Allied Expeditionary Forces. Since these missions occurred during the closing weeks of the war, the Thais gained little combat experience.

Between the Wars

The Aviation Group grew to air division status by 1918. It consisted of three wings under the supervision of the Army Chief of Staff. In 1926 the Air Division was removed from Army control and placed directly under

the Minister of Defense.

In 1937 the RTAF emerged as a separate branch of the Royal Thai Armed Forces. This marked the beginning of a rapid expansion phase which was to continue in succeeding years. The organization was similar in many respects to that existing in 1971. (See Figure 1)

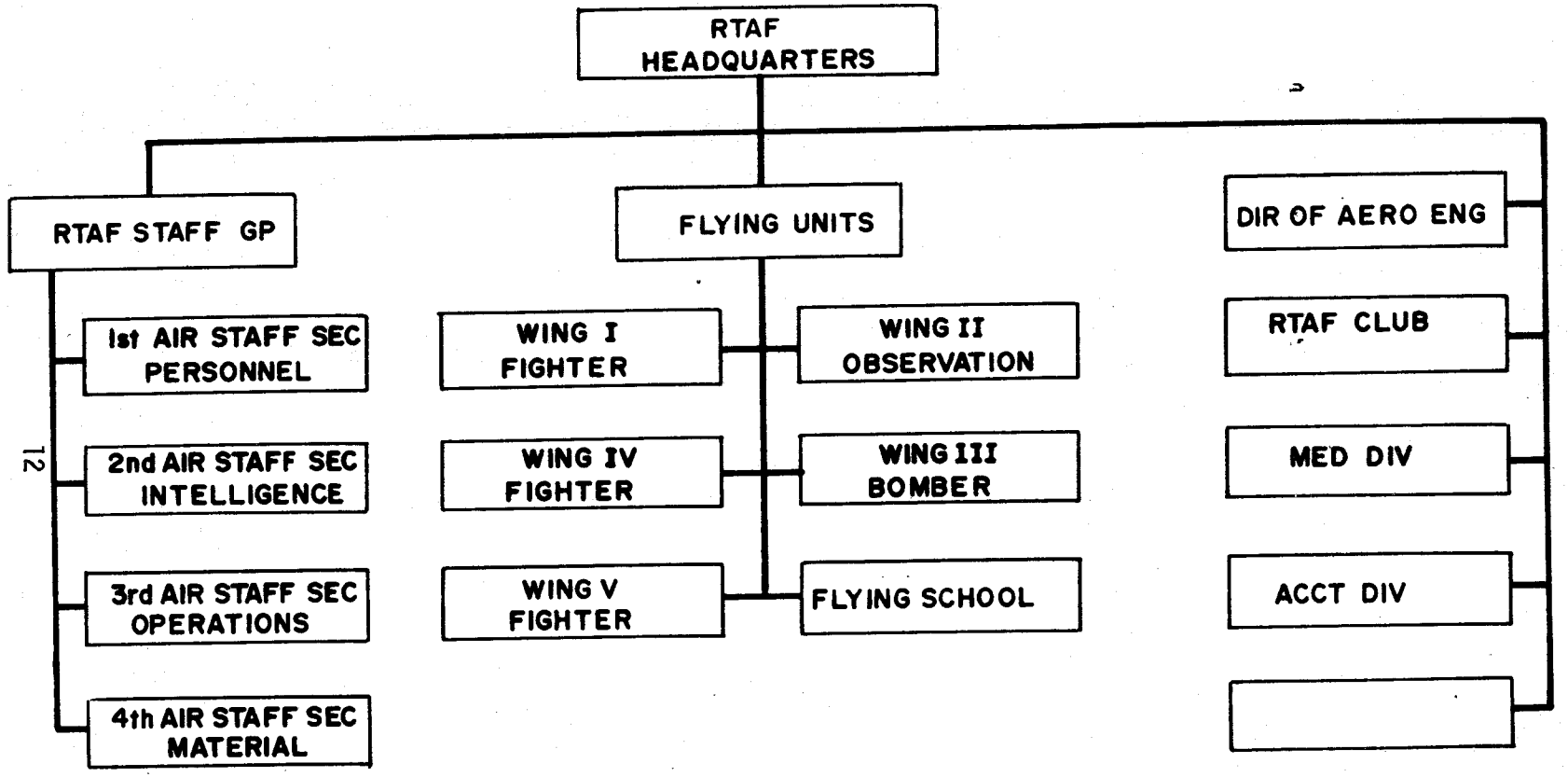
In 1915 Thailand began producing aircraft on a small scale in maintenance workshops. The Breguet biplane, with an imported engine, was the first to be constructed. Its maiden voyage occurred in May of 1915.

The growth and progress of the workshops paralleled that of the flying units. The practice of constructing aircraft from indigenous materials and using imported engines resulted in such Thai-built aircraft as the Nieuport, the Spad, the Avro 504N, the Vought Corsair 100, and the Curtiss Hawk 3.

The workshops also constructed aircraft designed and built entirely by Thai personnel. These were the Boripatr bomber produced initially in 1927 and the Prajatipok fighter produced initially in 1929.

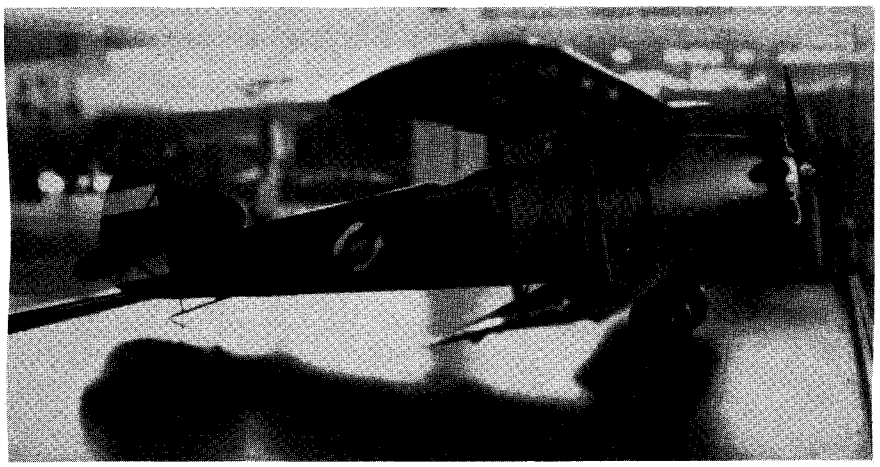
FIGURE 1

ORGANIZATION OF THE RTAF, 1937



SOURCE: HISTORY OF ROYAL THAI AIR FORCE, JUNE 1969, FOREIGN DIVISION

DIRECTORATE OF INTELLIGENCE, RTAF

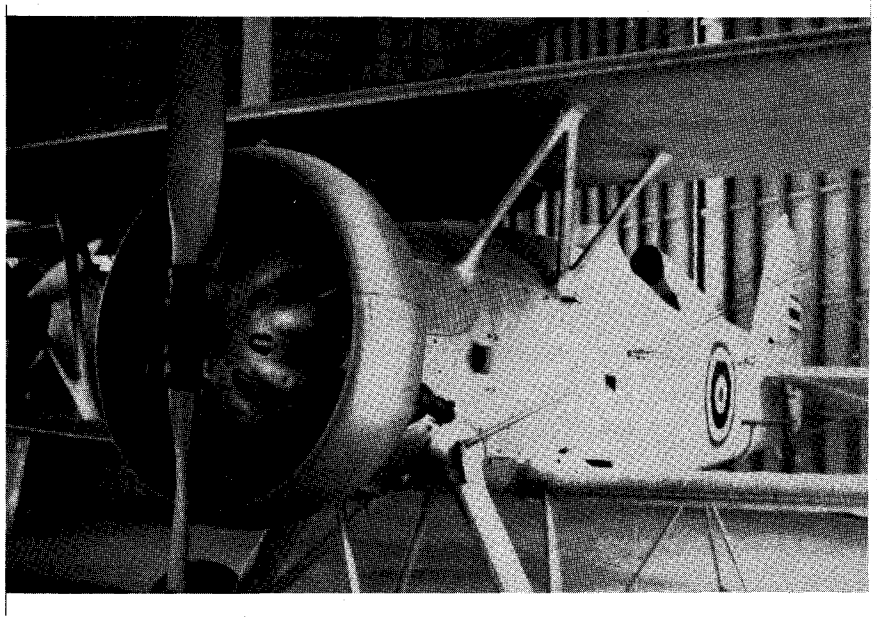


MODEL OF PRAJATIPOK FIGHTER, RTAF MUSEUM

FIGURE 2

A number of aircraft were purchased for examination and trial from 1930 through 1933. These included the Heinkel HD43 fighter, the Bristol Bulldog IIA, the Boeing 100E, and the Vought V100 Corsair. The Corsair was selected and a license obtained to manufacture the aircraft in Thai workshops. The Directorate of Aeronautical Engineering, RTAF, was created as a result of this activity.

In addition to Thai produced aircraft, others were obtained from foreign countries and used during World War II. These were the Corsair V83; Curtis Hawk 2, 3, and 75; the Martin 139W; Fairchild 24J and W40; the Mitsubishi M100 (Nagoya); Nakashima NA17 (Ota); Hayabuza 2-TAI; and the Tachikawa 89.



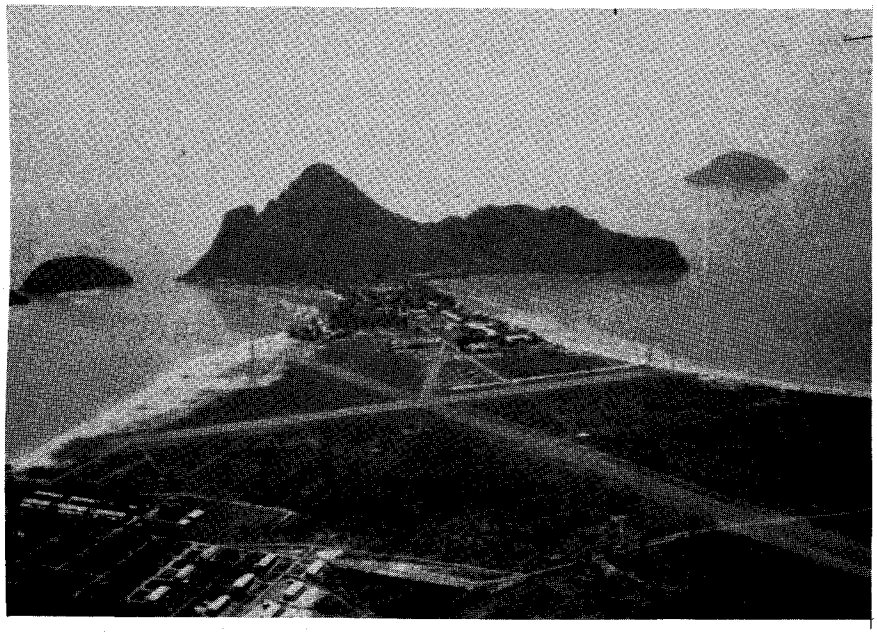
BOEING P-12E, RTAF MUSEUM

FIGURE 3

World War II

The RTAF entered combat again in January 1941 when the Thai and French governments disagreed over the border between Thailand and French Indochina. Air battles were fought over the disputed areas until May when a truce was arranged between the two combatants by the Japanese.

With the outbreak of World War II in the Pacific, the Japanese occupied French Indochina with virtually no opposition. Thailand was invaded on 8 December 1941 and a number of pitched battles occurred. Along the eastern border, Thai fighters from Wing I at Bangkok fought heroically against larger formations of superior Japanese Zero-Sen Aircraft. The Thais inflicted a number of casualties before being decimated. With this loss, Thailand formed an alliance with Japan. To the south, Wing V at Prachuab had not received word of the alliance. As a result a battle was fought with Japanese air formations over the Gulf of Thailand. Almost one-half of the Thai flyers were killed.



PRACHUAB RTAFB

FIGURE 4

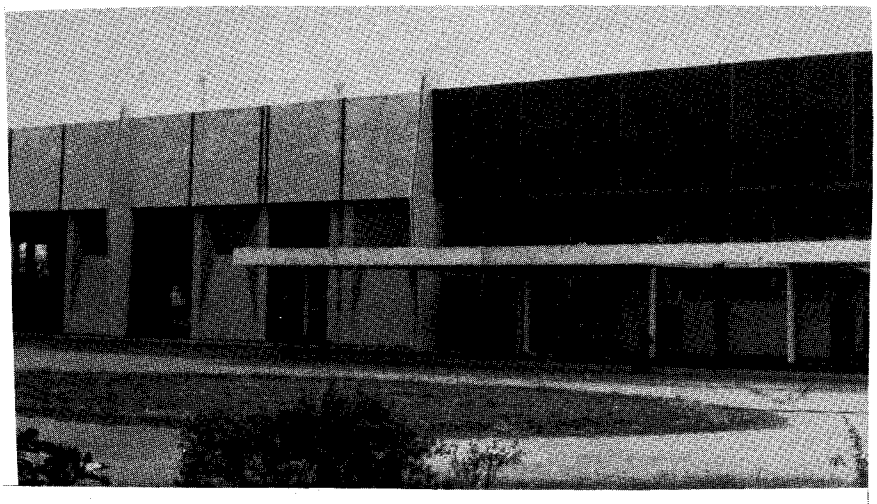
Prachuab also became the scene of the major ground engagement in the invasion. In an "all-out" battle lasting several days, over 400 Japanese soldiers were killed by the RTAF Security Forces who defended from bunkers.

MEMORIAL TO RTAF PERSONNEL KILLED IN JAPANESE INVASION. PRACHUAB RTAFB

FIGURE 5

Air Chief Marshal Swasdi, a squadron commander at Koke Kathiem at the time, provided a personal account of the invasion. He evacuated his

squadron to Lom Sok and held out for several days. His squadron was one of the two RTAF units which were the last to capitulate. Marshal Swasdi was imprisoned in the Officer's Club at Koke Kathiem. He was approached each day by the Japanese and given a choice between flying with them or imprisonment. He made the choice of many of his countrymen: fly with the Japanese and avoid internment. He became a Japanese fighter squadron commander in the latter stages of World War II and on several occasions engaged American aircraft.[20/]



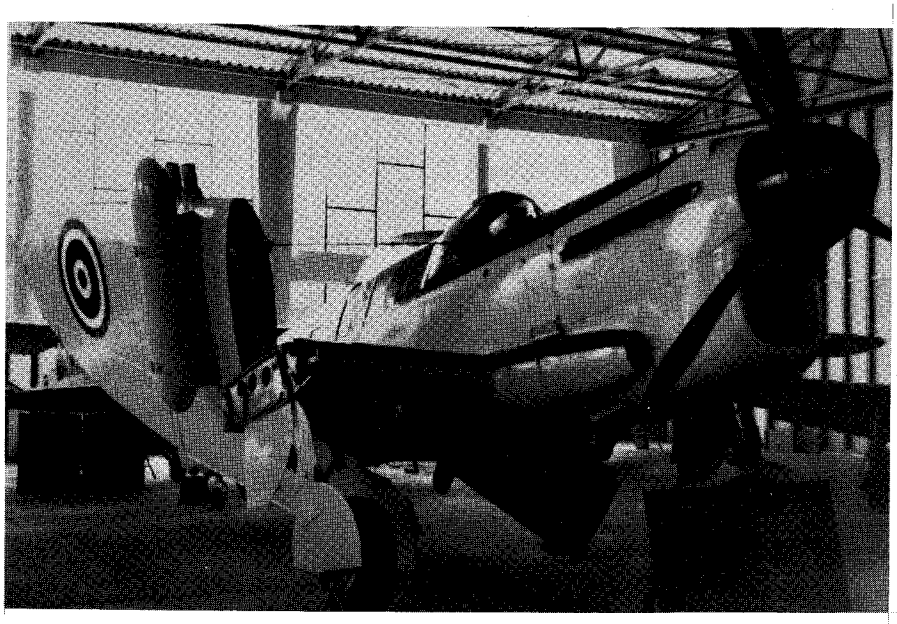
RTAF MUSEUM, DON MUANG RTAFB

FIGURE 6

After the invasion the RTAF operated under the control of Japanese occupation forces. The Royal Thai Military Academy continued to train and commission officers, and the Flight Training School continued to produce pilots. Many of the prominent leaders in the RTAF of 1971 graduated from these schools during the occupation period.[21/]

Modernization: The Late 1940s

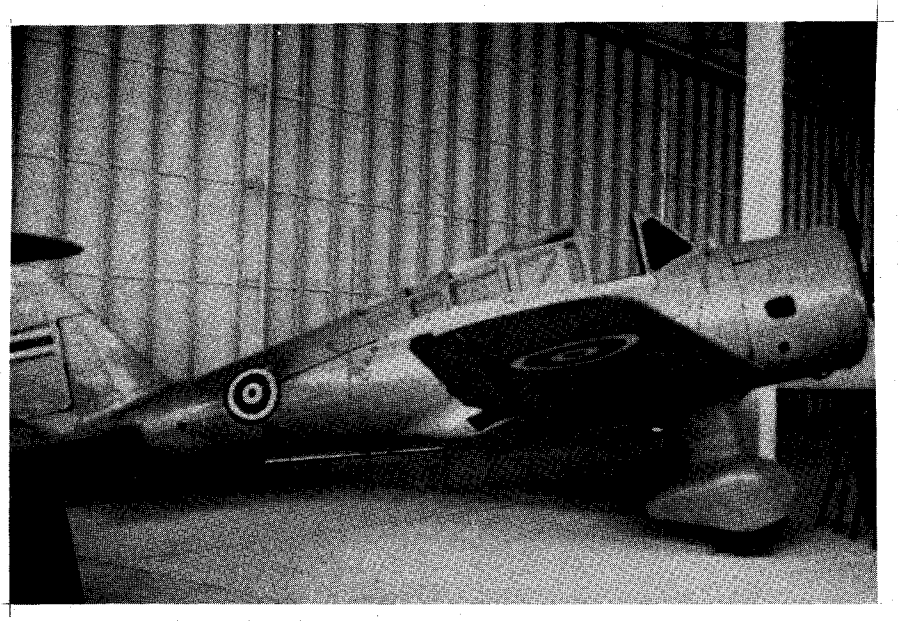
Thailand began to modernize its air force with fighters abandoned by the Japanese after their surrender in 1945. Mitsubishi A6M2 Zero-Sen fighters were added to the old Curtis Hawk 3 and Corsair V100 aircraft which were still the first line aircraft in the RTAF.



FAIREY FIREFLY, RTAF MUSEUM

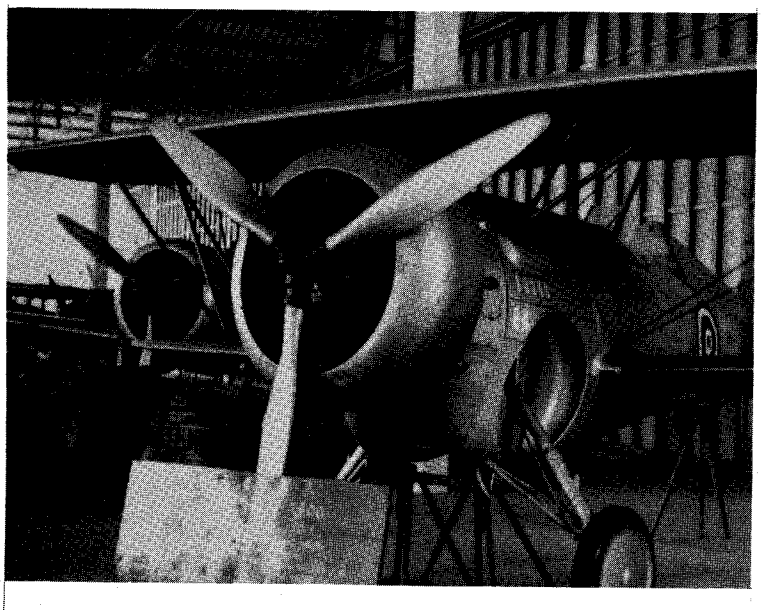
FIGURE 7

The RTAF continued to modernize, and in 1948 acquired surplus aircraft from the U.S., Canada, and the United Kingdom. Aircraft obtained were Miles Magister primary trainers, North American Texan (T-6) basic trainers, Douglas C-47 transports, Tiger Moths, Canadian-built Chipmunk trainers, and reconditioned Spitfire FR MK 14s. These replaced the older Hawk 3, Corsair V100, and Japanese aircraft. Acquisition of aircraft, expansion of facilities, and improvement of training programs continued as Thailand entered the 1950s. This improvement was necessary, in part, to meet the growing communist threat.



TACHIKAWA ADVANCED TRAINER, RTAF MUSEUM

FIGURE 8



CURTIS HAWK 3, RTAF MUSEUM

FIGURE 9

[redacted] [redacted]

The Growing Communist Threat

The Communist Party of Thailand was established in 1942. At an assembly in 1952, it officially declared a policy of armed revolution. During the fifties approximately 300 Thai party members attended lengthy political courses in Red China. Though forewarned by a party assembly in 1961, insurgent activity increased. In 1962, party members formed local branches in Northeast, North, Central, and South Thailand. In the School of the Communist Party of Thailand at Hoa Binh near Hanoi, 470 Thais were trained from 1962 through 1965. Subjects taught in the school included propaganda, recruiting, organizing, and military tactics. Extensive guerilla training was conducted in Laos and Red China throughout the sixties. Approximately 650 Thais received this training in Red China between 1962 and 1969.[22/]

Radio Peking in November 1964 announced the formation of the Thai Independence Movement and, in January 1965, the formation of the Patriotic Front of Thailand. The Chinese Foreign Minister predicted that a War of National Liberation would break out in Thailand before the end of 1965. In 1965, insurgent activity increased. On 1 January 1966 it was announced that the two front groups had united and were switching from an armed struggle to a People's War. Incidents increased from 45 in 1965 to almost 1900 in 1969. During the last six months of 1970 the number of countrywide incidents (1381) was greater than in the previous six months (1188) or the same period in 1969 (1017). The acceleration of insurgency in Thailand in the late sixties was attributed by many Thai leaders to

[redacted]

the extensive cooperation of Thailand with the United States in allowing U.S. flight operations out of RTAF bases. During 1970, 552 deaths were attributed to communist insurgents.[23/] Communist terrorist (CT) activity as of December 1970 is shown in Figure 10.

The Thais viewed the problem with concern, as indicated by coverage in Bangkok newspapers. Excerpts from the Bangkok Post over a five day period were as follows:[24/]

> *6 April 1971, Krabi: "Communist terrorists have threatened to attack and burn down the police station at Plaipraya soon, marking the first sign of communist activities in this southern province."*
>
> *7 April 1971, Udon Thani: "Government forces, consisting of soldiers and policemen clashed with a band of terrorists for 30 minutes."*
>
> *8 April 1971, Chian Rai: "The joint operation between the Third Army and the Royal Thai Air Force so far has found the bodies of 13 communist terrorists and believe that at least 60 communists were killed when an RTAF plane dropped a bomb on them."*
>
> *9 April 1971, Phatthalung: "Policemen fought off a terrorist attack on the police station after a fierce 90 minute gunbattle."*
>
> *10 April 1971, Nakhon Si Thammarat: "Joint police and military forces were continuing a sweep to flush out communist terrorists who killed two soldiers, three defense volunteers and injured six others."*

In early 1971, one of the most active insurgency areas was in northern Thailand, east of Chiang Mai in the provinces of Chiang Rai and Nan. A United States Air Force (USAF) advisor with the Direct Air

COMMUNIST TERRORIST STRENGTH, 31 DECEMBER 1970

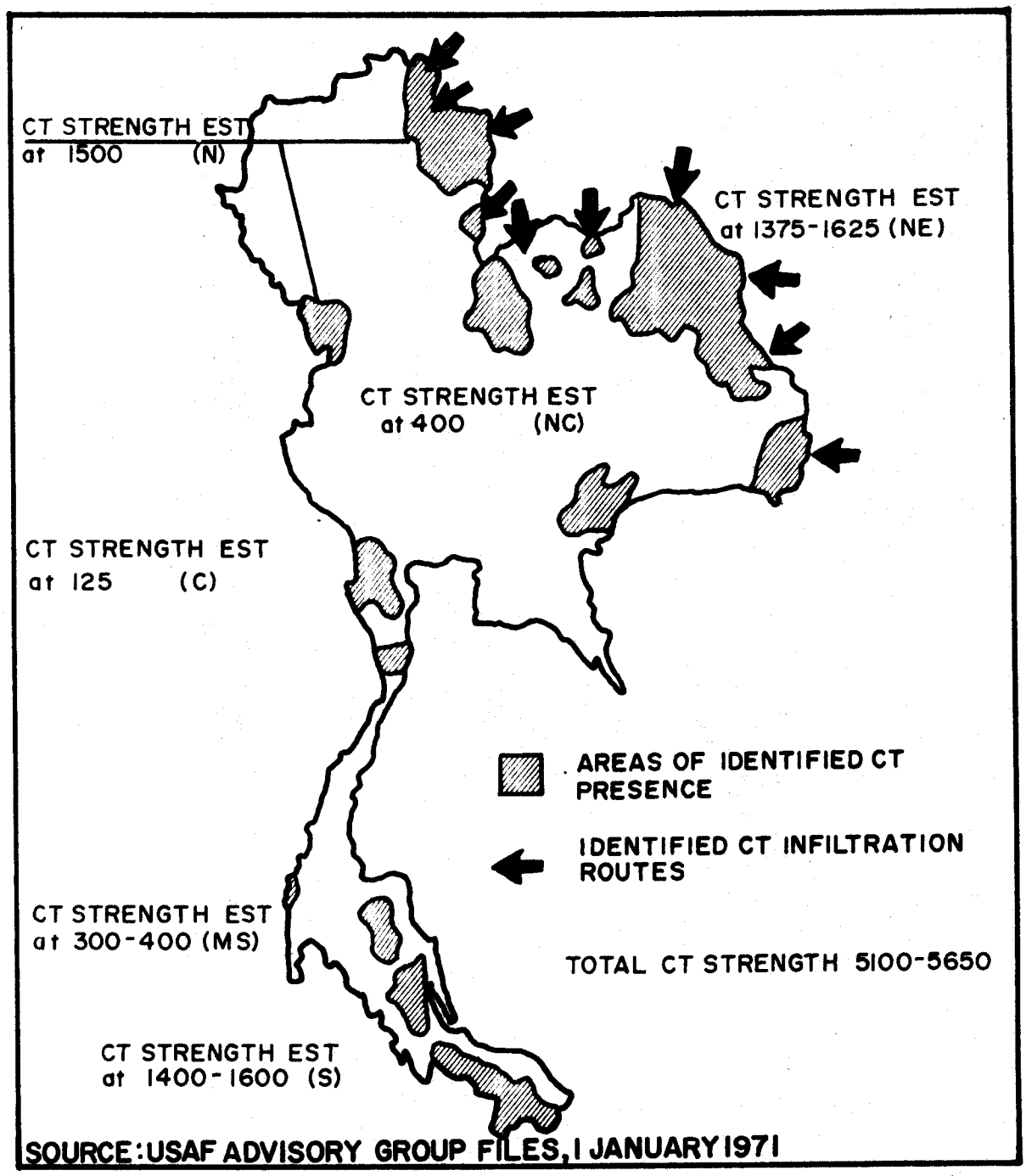


FIGURE 10

Support Center (DASC) for that area provided on-the-scene insight into the problem:[25/]

> *Northern Thailand is a series of lowland valleys separated by mountain ranges of very difficult terrain. There are very few roads through the mountains that are now safe.*
>
> *The terrain is so difficult that air power is very limited in what it can do; you can't see what you are doing for the most part...The insurgency is going to get worse; it has gotten worse in the last month. The RTA has had reverse after reverse. One problem is that they don't keep the pressure on the CTs (Communist Terrorists). They have a big operation involving all forms of their air power; they perhaps destroy a CT camp, capture documents and perhaps significant amounts of rice; but, then they go back and lay off until the insurgency builds up again to an intolerable level...The communist terrorist groups are steadily getting larger. The ambush that occurred last week (late March, 1971) was conducted by a group of approximately 100 CTs. You rarely saw a group of Viet Cong in Vietnam operating in groups this large...The Second Cavalry Regiment is assigned to Nan Province. The number of combat soldiers is just about equal to the number of CTs in the area. If you consider the number of Second Cavalry troops who are tied down to static defensive positions guarding roads, bridges and population centers, then the RTA is badly outnumbered; they do in fact have their backs against the wall. But numbers aren't the whole story; we have to fight on the guerilla's terms. I often think we incumber these people with needless organizations of conventional armies and air forces. We have a conventional army fighting guerilla warfare. The conventional RTAF might be fine if we wanted to take off and invade Laos in a big conventional operation; but, it doesn't work that way. That isn't the enemy.*
>
> *The most important thing now is a total sense of urgency on the part of the RTAF, the RTA, and particularly the RTG. They must resolve to do something about the insurgency right now. Otherwise, we can give them the finest, most modern aircraft; we can train the best pilots in the world;*

and we can set up the finest communication system possible; and it still won't be worth a dime.

The Thais recognized the consequences of a growing communist insurgency. Better aircraft, equipment, facilities, and qualified personnel were required to meet the threat. It was with this foresight that Thailand sought the assistance of the United States.

Meeting the Threat: 1950-1960

The United States assistance in the modernization and expansion of the RTAF was motivated largely by the growing communist threat. U.S. aid against the insurgency was provided through the Military Assistance and Advisory Group (MAAG) and its administration of the Military Assistance Program (MAP).[26/] The U.S. and Thailand signed a formal military assistance agreement on 17 October 1950.*

In 1951 the initial shipment under the U.S. Military Assistance Program arrived in Bangkok. Aircraft included in this shipment were F8F Bearcats, T-6s, Stinson L-5 Sentinels, Piper L-18 Super Cubs, Cessna O-1 Bird Dogs, Cessna 170s, and Beech C-45s. The first T-33A jet trainers arrived in Bangkok in 1957, and in 1958 the first jet combat aircraft--the Republic F-84G Thunderjets. Helicopters obtained during this period included Westland Sikorsky S-51 Dragonflys purchased from England, and

*In March 1950 the MAAG consisted of nine officers and 11 enlisted men. Spurred by the Viet Minh invasion of Laos in the Spring of 1953, the MAAG was expanded to a Joint United States Military Advisory Group (JUSMAG). By 1957 JUSMAG personnel strength was 286.

Sikorsky S-55 and Hiller 360X helicopters--obtained from the United States.

During the first decade of MAP support the RTAF received 368 aircraft. Trainer, helicopter, transport, photo reconnaissance, and jet and conventional fighter aircraft were provided. Auxiliary equipment included aircraft spare parts, special and general purpose vehicles, C-11B Link Trainers, an F-86 Cockpit trainer, crash-rescue and fire fighting equipment, a mobile oxygen generator, a jet engine test cell, and petroleum, oil, and lubricants (POL).[27/]

As the RTAF acquired more U.S. aircraft and equipment it patterned more of its operations after the USAF. The increasing similarity of the RTAF and USAF was also evident in RTAF training programs.

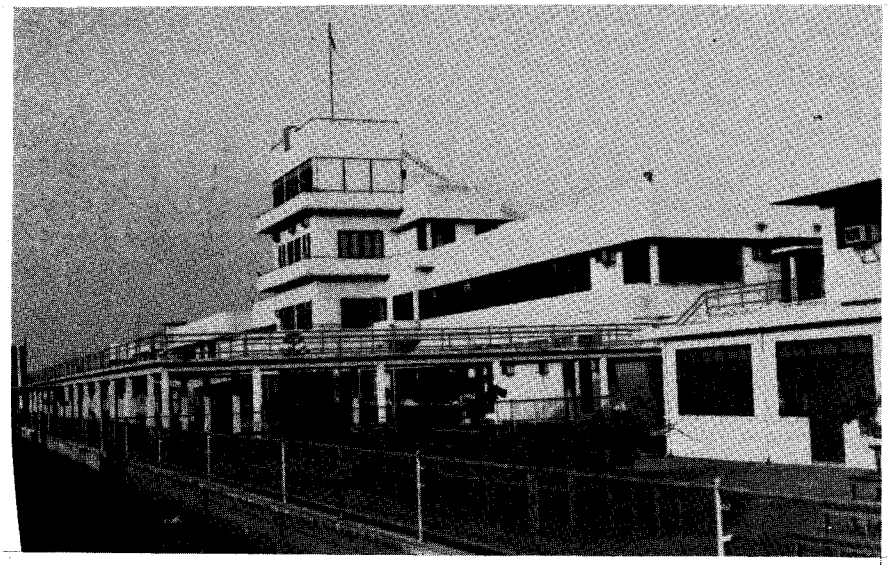
The RTAF operated five major school programs consisting of the Air Force Academy, Squadron Officers School, Air Command and Staff School, Airmen Technical Training School, and Flying Training School. The English Language Laboratory, which was provided by the MAP, became a major part of this training system. Training for RTAF personnel was also conducted in the United States. By 1960 approximately 600 RTAF officers and airmen had completed courses of study in the United States, primarily in flying and technical courses. An equal number participated in orientation and on-the-job training visits to PACAF bases, units, and installations. Technical representatives and Mobile Training Teams (MTT) supplemented this effort by providing in-country training.[28/]

RTAF flight training was similar to that conducted in the USAF. Pilot transition programs included transport and fighter aircraft. The

[redacted]

combat crew training program for jet fighter-bomber crews included instruction in night, navigation and instrument procedures, and gunnery and combat tactics. An instrument ground school and trainer program were also in operation. After completing instrument ground training, pilots were given instrument flight checks.[29/]

In addition to new and improved training programs, aircraft facilities were upgraded. Plans called for a modern communication and aircraft control system for the air defense of Thailand. To be included were radar, ground communications, ground-to-air communication, and navigational aids. An interim radar, communications, and navigational aids system was in operation.[30/]



RTAF HEADQUARTERS, DON MUANG RTAFB

FIGURE 11

[redacted]

result of U.S. assistance, the expansion and modernization of the RTAF eclipsed that achieved in previous periods.

CHAPTER III

THE RTAF GROWS UP

Modernization and expansion of the RTAF continued during the decade of 1961-1971. Some important elements in this process were airfields, better aircraft, materiel support, base security, radar warning capability, the USAF model of air operations and support, and a training and educational system.

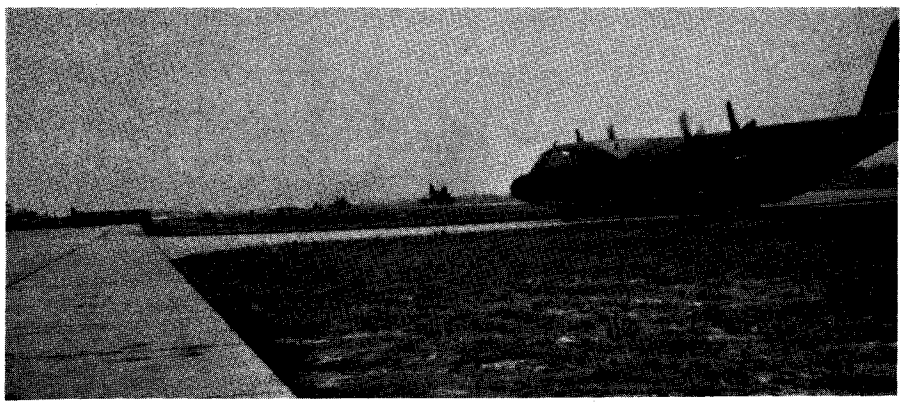
Modern Airfields for Thailand

As outlined in Chapter II, airfields were constructed at Don Muang, Takhli, Udorn, Ubon, Korat, and Koke Kathiem. Building continued in the mid-sixties and new air bases were constructed at U-Tapao, Nam Phong, and Kamphaeng Saen.* Facilities were expanded at ten other locations. Major efforts were at Don Muang, Korat, Nakhon Phanom, Takhli, Ubon, and Udorn.** 32/

The air base at Nam Phong was intended to accommodate three tactical fighter squadrons. After construction had started in 1966, the U.S. Secretary of Defense decided not to deploy the three squadrons. Nevertheless, construction continued* and base facilities were completed in late 1971. 33/

*The air base at U-Tapao was one of the largest and most modern airfields in Southeast Asia. It was built at a cost of $93 million. 34/ (See Appendix II for a more detailed description of the air base.)
**Approximately $251 million had been authorized for construction during the period, fiscal year (FY) 64 through FY 69.

* FALSE! NO CONSTRUCTION WHATSOEVER UNDERTAKEN BETWEEN 1967-70. FIELD HAD 10,000 CONCRETE RUNWAY, TAXIWAYS & RUNUP PADS, — NOTHING ELSE. VBB

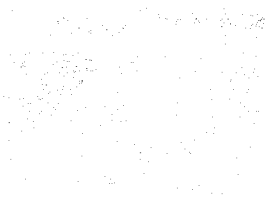


THE BUSY FLIGHT LINE AT UDORN RTAFB

FIGURE 13

The RTAF in 1971 listed 12 airfields as main operating bases. Seven of these could support large jet transports and high performance jet fighters. These were: Don Muang, Takhli, Korat, Ubon, Udorn, Nakhon Phanom, and U-Tapao. The other five could support conventional and light jet operations. These were: Koke Kathiem, Chiang Mai, Prachuab, Sattahip, and Kamphaeng Saen. All were equipped with modern navigational aids, control towers, and approach systems.[35/] (Navigational aids and control towers and their locations are listed in Appendix II.)

The RTAF designated 14 airfields as forward operating bases. These were strategically located throughout Thailand and varied greatly in their



support capability.[36/] (The forward operating bases and their locations are listed in Appendix II.)

Aircraft

The accelerated pace of modernizing aircraft in the RTAF inventory which began in the late 1950s continued in the following decade. Some of the older aircraft were retired and some were lost in combat, but the number of operational aircraft in 1971 constituted more airpower than at any previous time in RTAF history. (See Table 1) The F-86, T-33, and T-6 are becoming difficult to support and, therefore, fairly costly to operate in relations to their capability. Future plans call for the replacement of these aircraft by the A-37 which will moderize the force with a more capable air-to-ground weapon system and an excellent training aircraft.

Organization

In 1971 the RTAF had 34,000 personnel to operate and maintain 325 aircraft and facilities at 26 locations. Flying units were organized into seven wings under the Tactical Air Command. (The organizational structure of major operating units is depicted in Figure 14. The overall organization of the RTAF is shown in Figure 15.)[37/*]

Wing I at Don Muang had been assigned the 11th Tactical Reconnaissance Squadron and the 13th Tactical Fighter Squadron. Squadron 11 was equipped

*The material in this section is based on the interview with Colonel William S Miller.

UNCLASSIFIED

ORGANIZATION OF MAJOR UNITS, RTAF, 1971

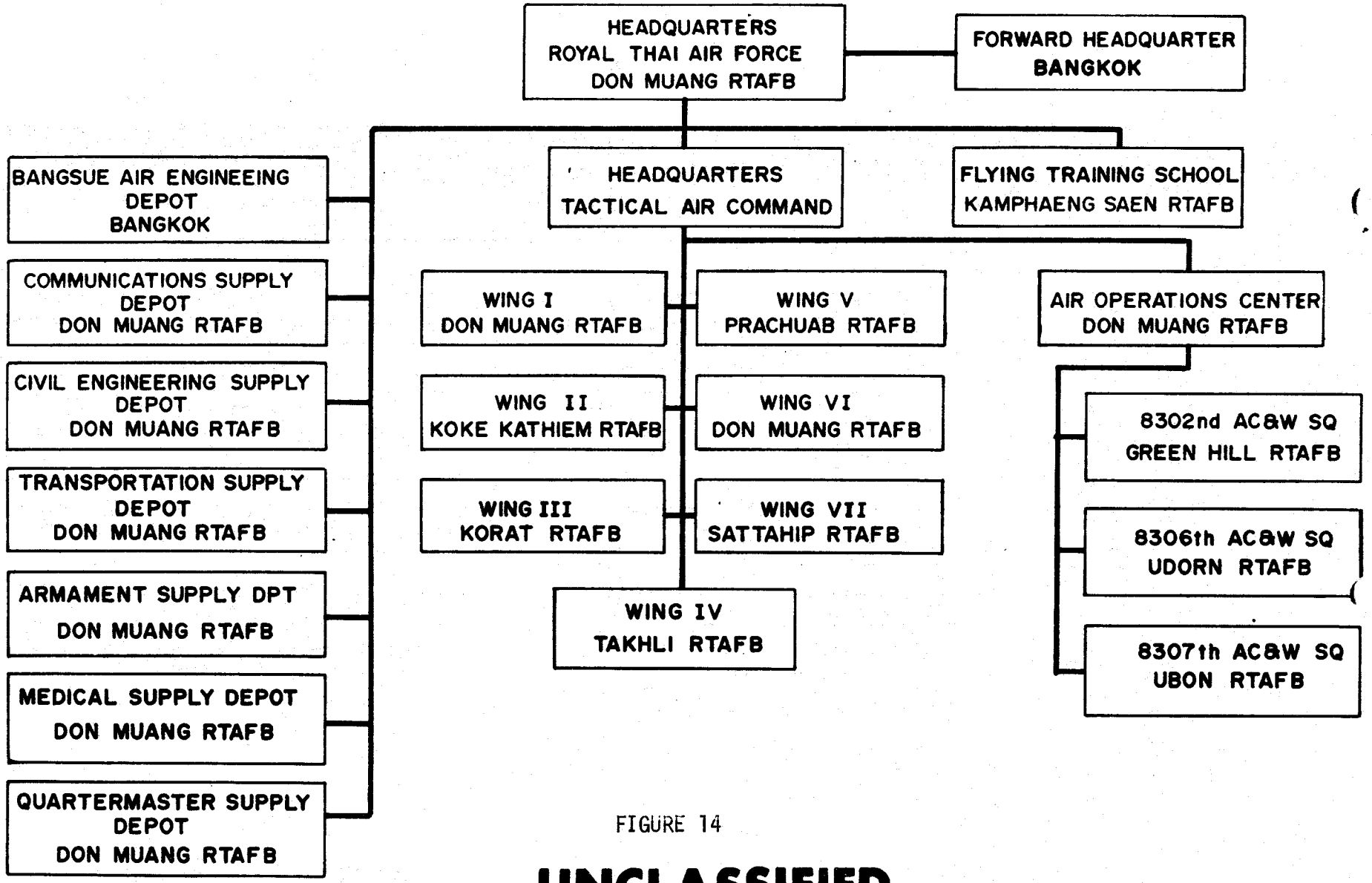


FIGURE 14

UNCLASSIFIED

SOURCE: USAF MILITARY ADVISORY GROUP FILES THAILAND, 1971

ORGANIZATION OF THE ROYAL THAI AIR FORCE

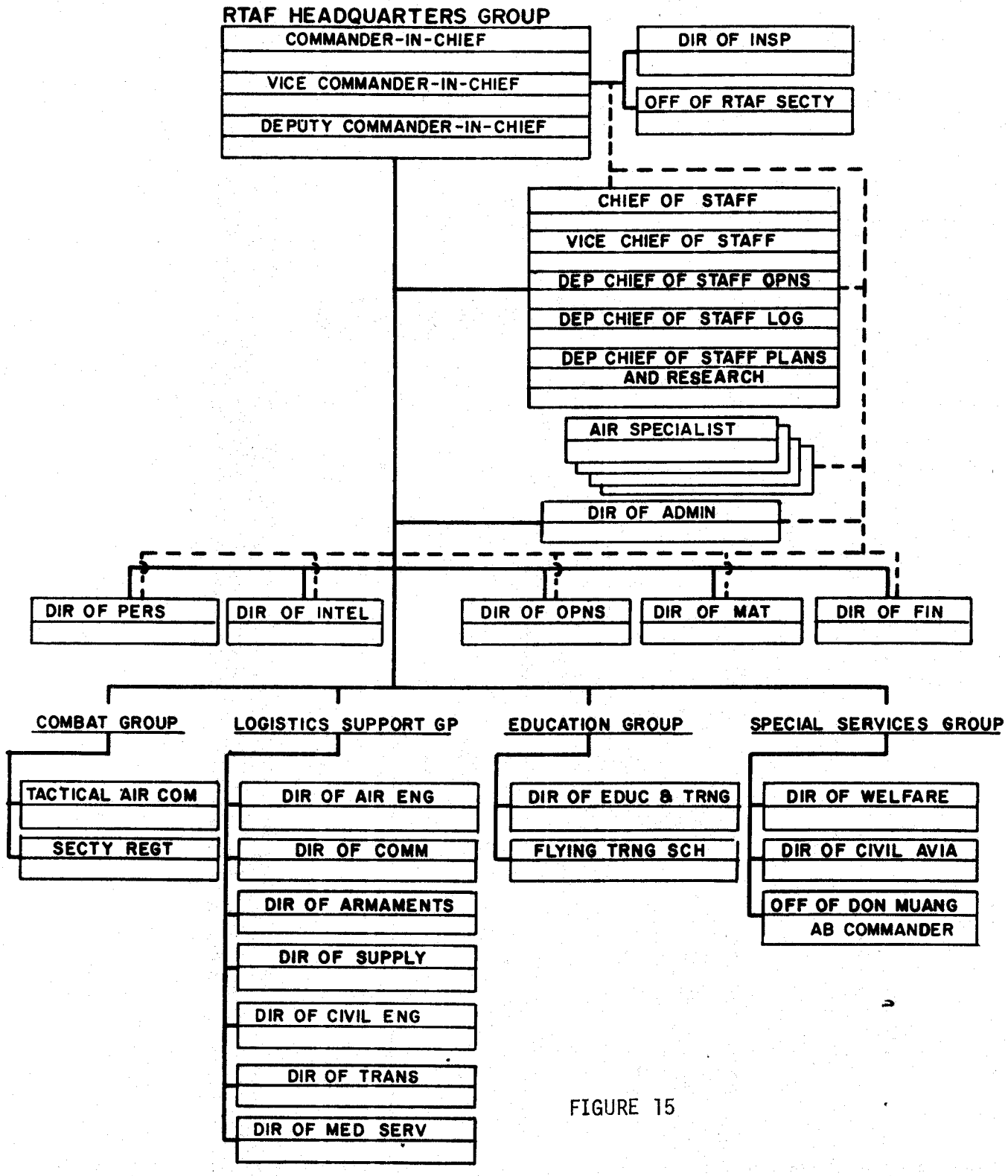


FIGURE 15

SOURCE: USAF MILITARY ADVISORY GROUP FILES THAILAND, 1971

TABLE 1

NUMBER AND TYPE OF AIRCRAFT, RTAF, 1971

Combat Aircraft	Total
T-33, RT-33	15
F-4, RF5	14
T-28	41
H-34	41
UH-1	23
F86F	17
T-6	14
C-123	13
C47	24
T-41	12
O-1	14
U-10	13
Training Aircraft	
T-6	25
T-37	9
T-33	10
H-37	7
DHC-1	17

SOURCE: USAF Military Advisory Group Files, Thailand, 1971

[redacted] [redacted]

with T-33 and RT-33 aircraft. Its mission was jet proficiency training and reconnaissance. Squadron 13, equipped with 14 F-4 and RF-5 aircraft, had missions of close air support, reconnaissance, and air defense.

Wing II was situated at Koke Kathiem RTAFB. It had four squadrons, three of which were deployed "up-country". The "up-country" squadrons were 221 at Chiang Mai, 222 at Ubon, and 223 at Udorn, and Squadron 224 at Koke Kathiem. Unit missions were close air support, interdiction, defensive and offensive counter-air, escort, and visual reconnaissance. All had T-28 aircraft, but Squadron 224 expected to receive OV-10A aircraft soon. Only 24 of the 41 T-28 aircraft were in use as 17 were on loan to Laos and Cambodia.

Wing III was located at Korat RTAFB. It was composed of three helicopter squadrons with 41 H-34 and 23 UH-1 helicopters. Squadron 32 had UH-1 aircraft while Squadrons 31 and 33 were equipped with H-34 aircraft. The wing missions were combat airlift, special air warfare support, search and rescue, helicopter training, and air evacuation.

Wing IV was at Takhli RTAFB and had one flying unit, Squadron 43. It was equipped with 17 F-86F aircraft and flew interdiction, close air support, and air defense missions.

Wing V was at Prachuab RTAFB and had one flying unit, Squadron 53. It possessed 14 T-6 aircraft and flew air support missions. The squadron was receiving T-28 aircraft from Squadron 224 since the combat role of T-6 aircraft was ending.

[redacted]

Wing VI, the transport wing, was at Don Muang RTAFB. Squadron 61 owned 13 C-123 aircraft and provided the major part of the airlift for the RTAF. Squadron 62 had 24 C-47 aircraft and performed airlift, VIP transport, gunship, and visual and infrared photo reconnaissance missions. The 12 T-41 aircraft of Squadron 63 were used for administrative and proficiency flying.

Wing VII had one flying unit, Squadron 71. It was located at Sattahip RTAFB and was equipped with 14 O-1 and 13 U-10 aircraft. The wing conducted Forward Air Controller (FAC) training and deployed aircraft and crews to approximately six operating locations in Thailand. It provided FAC and psychological operations support.

Unit locations are shown in Figure 16.

Materiel

With the accumulation of more sophisticated aircraft, improvement of maintenance capability became essential. RTAF maintenance could overhaul engines for T-6 and C-47 aircraft but engines for other aircraft were shipped to the CONUS for this repair. By 1971 equipment and skilled personnel had been acquired to overhaul the engine used in T-28 and H-34 aircraft. However, electroplating techniques and cylinder rework skills were still considered deficient.[38/]

Inspect and repair as necessary (IRAN) capability developed slowly. But by 1971 the RTAF performed IRAN on most of its aircraft. One USAF

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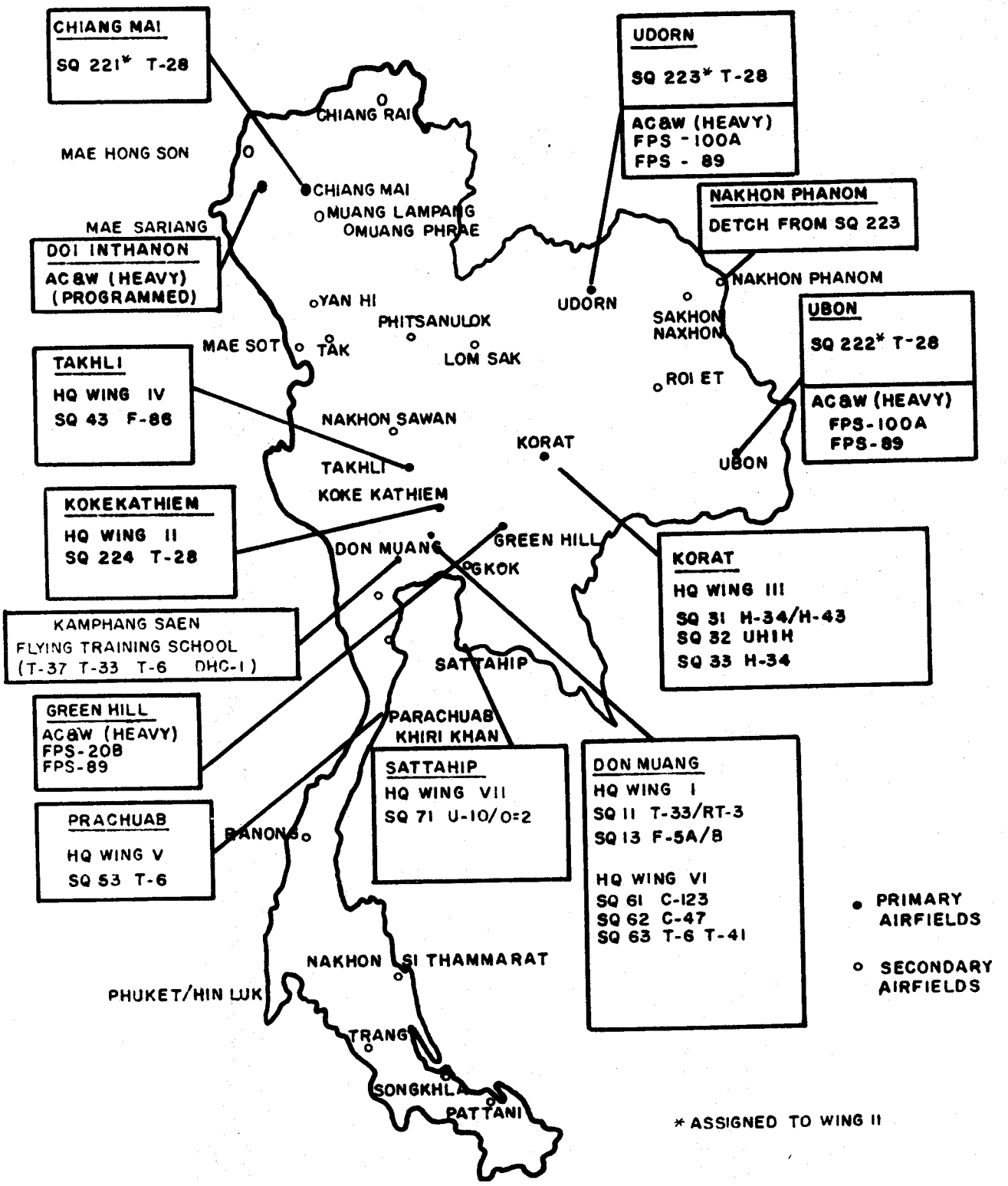
RTAF COMPONENT LOCATIONS



SOURCE: USAF MILITARY ADVISORY GROUP FILES, THAILAND, 1 OCTOBER 1970

FIGURE 16

[redacted]

officer who worked in this area with the RTAF commented:[39]

> *They turn out a good airplane. There has been tremendous improvement in the past three years. If pushed they can complete an IRAN cycle on a C-123 in three or four months. The personnel in general want to do a good job and to develop their capability. However, the working hours in the depot are usually only from 0830 to 1500, and we are often lucky to get more than four or five hours of productive work from an individual.*

One of the most significant developments in the area of materiel management was the creation of a Logistic Control Center (LCC). An LCC was required to assist in coordinating and directing actions to expedite relief of problem areas relative to supply, transportation, and maintenance. It started as a simple aircraft status-gathering activity and grew into an active problem-solving organization.[40]

The LCC operated 24 hours daily to expedite the operational readiness of aircraft. Senior RTAF officers were assigned as "Senior LCC Controllers" to make them aware of the benefits and operation of the LCC. Items controlled by the LCC were RTAF assets such as aerospace ground equipment, vehicles, construction equipment, POL, and munitions. The operation of the LCC was hindered by a lack of qualified personnel and the need for clearly defined authority and responsibility.[41] A typical appraisal of the LCC was:[42]

> *The LCC gives us good information. We know the status of aircraft and their location. This is a great improvement over the situation that*

[redacted] [redacted]

existed several years ago. Our main problem now is lack of authority. We need an officer of sufficient rank in the LCC to talk to the up-country units. The Thai system doesn't allow a delegation of authority, nor does it allow a junior officer to contact a unit commander in the field to tell him what should be done with his aircraft.

Base Security

The requirement for better security increased with the buildup of U.S. and RTAF resources and facilities at the major air bases in the mid-sixties. The Mutual Defense Assistance Agreement of October 1950 did not allow the arming of U.S. military personnel in Thailand. Thailand was responsible for the basic security of all installations within the country. However, the U.S. considered security inadequate in 1965 and recommended additional security forces be employed.[43/]

This recommendation was soon justified. An attack by six to eight insurgents occurred at Udorn on 26 July 1968. They were armed with AK-47 rifles, Russian-made grenades, and plastic explosive charges. Two USAF aircraft were significantly damaged--a C-141 and an F-4. A USAF helicopter sustained minor damage. One USAF airman, one Thai security guard, and two of the insurgents were killed.[44/]

Security policy was modified in 1968. Although the security of the U.S.-used military installations in Thailand was the responsibility of the RTG, the USAF assumed responsibility for protecting U.S. lives and equipment. Thus, security became a joint RTAF/USAF responsibility.

[redacted]

[redacted]

USAF air police provided the primary security at bases involving extensive USAF air operations, while the RTAF provided security in the surrounding areas.[45/]

The RTAF concept of base security was different from that of the USAF. RTAF Security Forces were divided into two separate organizations. One was the Air Police Force, which was responsible for law enforcement. It was small in number but composed of career personnel.

The other organization was composed of security battalions. They were responsible for base security. Although this force was relatively large, most of the men were unskilled conscripts. Consequently, its capability for protection remained limited.

Most of its personnel were assigned primary duties as clerks, truck drivers, or orderlies. Sentry duty at most bases was similar to an additional duty. At some bases security battalions numbered almost 1000 men, but only 20 to 25 security posts were manned. If a threat arose, the cooks and orderlies would take up arms to defend the base.[46/]

In order to improve the protective capability of the RTAF a security police school was instituted at Don Muang RTAFB. The first class of 69 trainees completed the two month course in July 1969. Training was comparable to that given at the USAF Security Police School at Lackland AFB. Additional training in counterinsurgency (COIN) oriented toward base defense, was being given at Lopburi by a U.S. Army Special Forces

[redacted]

unit. The goal was to produce a training cadre for each up-country base. By the end of December 1969, 317 students had completed the course at Don Muang.[47/]

A sapper attack in mid-1969 reaffirmed the need to improve the base security system. On 28 July sappers struck at Ubon. Two USAF C-47 aircraft and a GCA power unit were damaged with plastic charges. A USAF sentry and sentry dog were slightly wounded. Another attack at Ubon occurred on 13 January 1970, but prior warning had been received. Five CTs were killed, no base aircraft or facilities were damaged, and there were no Thai or U.S. casualties.[48/]

In January 1970 COIN base defense training was incorporated into the course at Don Muang and the class size was increased to 200. During 1970, 1000 students were programmed for the course.[49/]

An RTAF security battalion had been established at Koke Kathiem to provide, on a TDY basis, RTAF Security Force personnel for Udorn, Ubon, Nakhon Phanom, and Chiang Mai. They received training similar to that given at Don Muang. A class of 500 students completed training in January 1971 and was assigned predominantly to the TDY locations.[50/]

Security battalions were composed of about ten percent officers and career enlisted men. The remainder were conscripts who were serving two year service obligations. This caused a personnel turnover of almost half the force every year. Another problem was the AWOL and desertion

[redacted] [redacted]

rate of the conscripts. This was attributed to their poor pay and low status and ran as high as 30 percent in some units.

In 1971 the RTAF considered a plan to combine the Air Police and Security Battalions. A combined force could coordinate all base security activities more effectively. Also, Air Police officers and noncommissioned officers (NCOs) would add experience and capable leadership to the Security Battalions. However, the development of a well-organized, well-equipped, and well-trained base defense force in the RTAF was affected by political considerations. Such concentration of power was carefully evaluated by the RTG.[51/]

The development of a competent security force was essential to protect the men, aircraft, and equipment which, in turn, were required to counter the growing communist insurgency. Associated with this buildup was the development of a radar aircraft control and warning system (AC&W). An AC&W system was needed for air defense, employment of tactical fighters in ground operations, and airlift support.

A Radar Net

The initial construction of an AC&W system began in 1959 under the auspices of the Military Assistance Program. Sites were constructed at Don Muang, Korat, Udorn, and Phitsanulok. A communications network linked the sites with major air bases.[52/]

The deteriorating military situation in Laos in 1961 and early 1962 led to an increase in the U.S. military forces in Thailand. Concomitantly,

(This page is [redacted])

[redacted]

it was necessary to expand the Thai AC&W system to support air operations. This AC&W system was considered a valuable extension of the Pacific Air Forces (PACAF) AC&W Net.[53/]

The Commander-in-Chief of Pacific Forces (CINCPAC) approved an expansion plan on 8 July 1962. (See Appendix III for location and estimated operational dates of the AC&W.) The idea was to install long range radars at four sites and short range radars between the long range sites.[54/]

Reluctance of the Royal Thai Government (RTG) to support the plan*, funding problems, contract ammendments, and late deliveries of supplies delayed completion of the sites. None of the short range sites were constructed. Only three of the four long range radars were installed by 1967. Unfavorable public opinion caused the RTG to request that construction of the fourth site cease and the area be restored to its original condition. It was located near the Royal Summer Palace. By August 1971 the U.S. had not provided funds and equipment for construction of the site at a new location.[55/]

USAF mobile units were placed at strategic locations to supplement the radar coverage of the long range sets. In 1965 CINCPAC directed that

*The RTG was reluctant to support the plan because the proposed AC&W system was too elaborate for Thailand's singular needs. Also, upon U.S. withdrawal, the RTG would be faced with maintaining the system at an annual operating cost of $2 million. Virtually the same air support of counterinsurgency efforts could be provided with Forward Air Controller procedures. Complete coverage of Thailand could be provided using TACAN and low frequency beacons and homers, at an annual operating cost of $150 thousand.

USAF personnel be assigned to radar installations since RTAF-USAF responsibility was not clear. Later, the U.S. Joint Chiefs of Staff directed that 1,356 USAF tactical control personnel be assigned to augment operating personnel at long range, mobile, and MAP radar installations.* 56/

USAF personnel assumed actual control at jointly-manned radar facilities to ensure flying safety and effective support of USAF air operations. In 1970 RTAF personnel were being readied to resume control, and they fully operated and maintained facilities in the Bangkok area. In 1971 they were progressing toward self-sufficiency at other sites. 57/

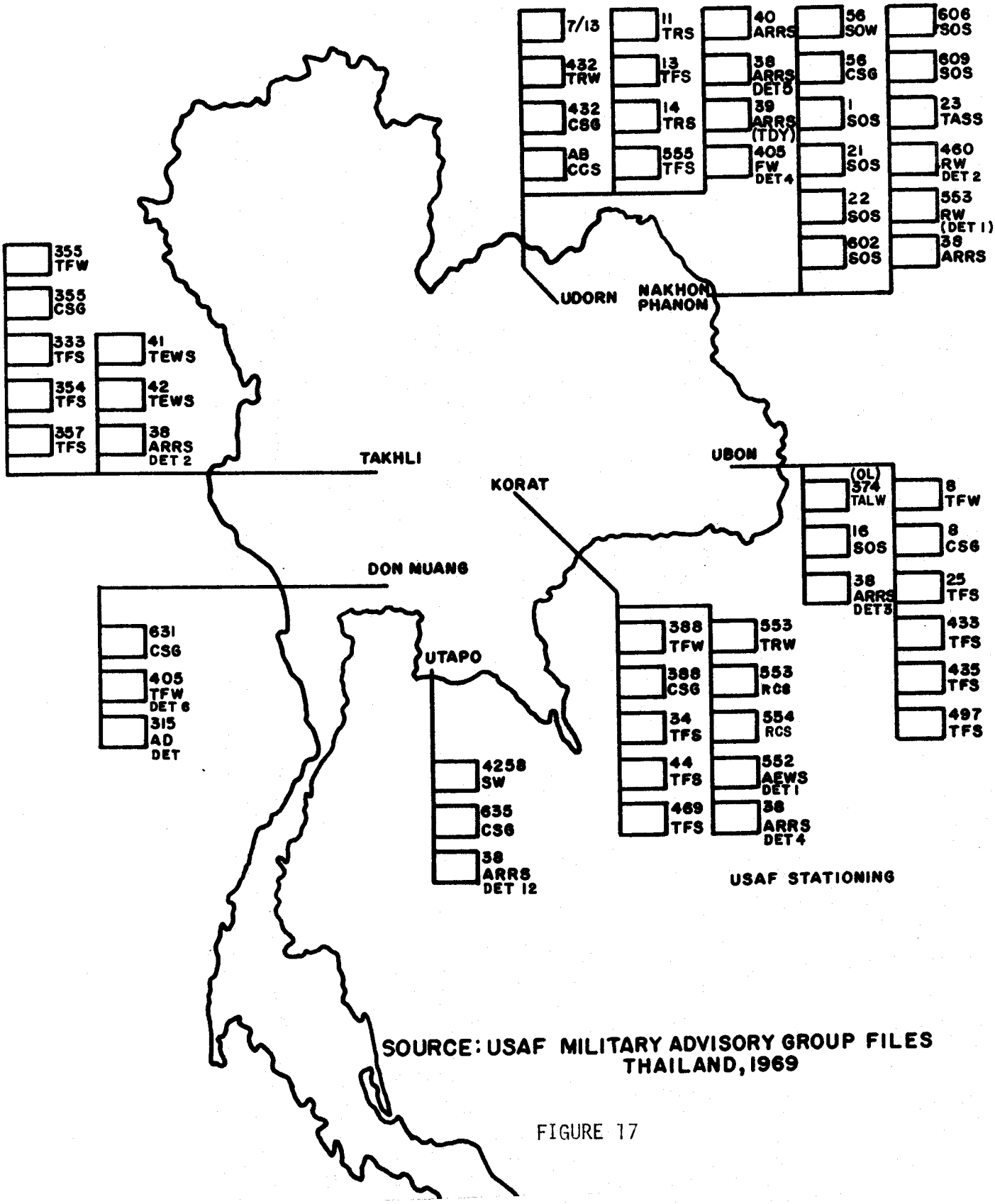
The construction of a radar net was just another aspect of growing American support which was helping the RTAF come of age. Modern aircraft, facilities, equipment, training programs, and the AC&W radar net were integral parts of the American presence and the growing air power of the RTAF.

The American Presence

As mentioned earlier, U.S. military advisors were present in Thailand during the early fifties. In the early sixties the USAF began deploying units to the area. By 1969, nine tactical fighter squadrons (F-4 and F-105), six reconnaissance squadrons, a strategic wing (B-52 and KC-135), a special operations wing, and support units were in Thailand. These units were manned by 50,000 military personnel. 58/ (The locations of USAF units are depicted in Figure 17.)

*MAP radar installations were jointly-manned.

USAF UNITS IN THAILAND, 1969



SOURCE: USAF MILITARY ADVISORY GROUP FILES
THAILAND, 1969

FIGURE 17

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The employment of USAF aircraft from bases in Thailand to counter hostile action in Southeast Asia was a sensitive issue. The official position was stated by Foreign Minister Thanat Khoman in 1965: "Americans were present by mutual agreement for the defense of Thailand."[59/]

This position was becoming untenable, partially because of a number of articles published in the U.S. about U.S. military activities in Thailand.* Under pressure by the U.S. ambassador to Thailand, Foreign Minister Thanat issued a statement in September 1966. He stated that U.S. bases had been built in Thailand to meet the strategic needs of the war in Vietnam, and that Thai and American aircraft were flying out of these bases. He did not discuss their mission, but stated that Thailand was pledged to military cooperation with the U.S. and SEATO powers for the defense of Southeast Asia.[60/]

The overall impact of the USAF presence in Thailand was to provide a model of modern air operations and an air base support system. This tended to overshadow certain potentially negative factors. For example, the USAF operation of joint facilities retarded Thai self-sufficiency. Perhaps more significantly, the national security of Thailand did not require the elaborate system of air operations and air bases established by the USAF. Furthermore, the RTG had neither personnel nor economic resources to maintain such a system. A major USAF withdrawal would require extensive

*Despite a ban on photographs of USAF personnel and operations and restrictions on press releases, at least 48 articles were published in 1965.

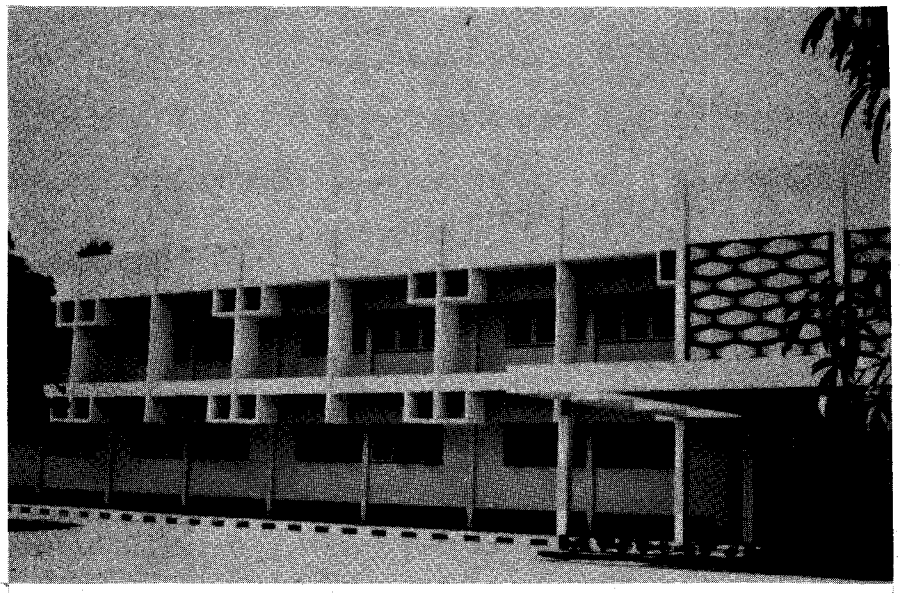
[redacted]

training of indigenous personnel and a recurring subsidy to maintain the operations, personnel, and facilities if the system were to survive.[61/]

If justification of the scale of operations was becoming a problem, it was not needed in the case of training programs and facilities. Indeed, most such programs were still undergoing plans for expansion.

Training and Education

Most people would agree that training and education were important elements in the development and modernization of the RTAF. Most assuredly, training by USAF advisors was crucial in this process, but the training and educational system within the RTAF was just as important.



SQUADRON OFFICERS SCHOOL, DON MUANG RTAFB

FIGURE 18

The RTAF system resembled the USAF model and consisted of officer procurement programs--the Royal Thai Air Force Academy (RTAFA), Officer Candidate School (OCS), and "officer training school;" flying, technical, English language, and on-the-job training (OJT); and professional military education--the Air War College (AWC), Air Command and Staff College (ACSC), and Squadron Officers School (SOS). Each of these programs played a unique, important, and interrelated part in the growing knowledge and skill of the RTAF. Some would say that the first step in this process began in those schools offering commissions in the RTAF. Perhaps the most elite of these schools was the Air Force Academy.

The Royal Thai Air Force Academy

The Royal Thai Air Force Academy (RTAFA) was founded in 1953. Classes of instruction actually started in 1955 in a temporary building at Don Muang. After the headquarters, academic buildings, and dormitories were completed in 1961, the RTAFA was moved to a permanent site near Don Muang. Other new buildings, laboratories, and facilities were added throughout the 1960s. The academy, in 1971, possessed an outstanding educational plant.[62/]

Candidates for the RTAFA were 20 years of age or less and graduates of the two-year Armed Forces Preparatory School.* Prerequisites for the preparatory school were completion of a tenth grade education and a rigid

*The prerequisites were in effect in 1960; the preparatory school was founded in 1958.

entrance examination. While only eight percent of the applicants were selected for the Preparatory School, 97 percent of its graduates were accepted by the Air Force, Military, Naval, or National Police academies. 63/

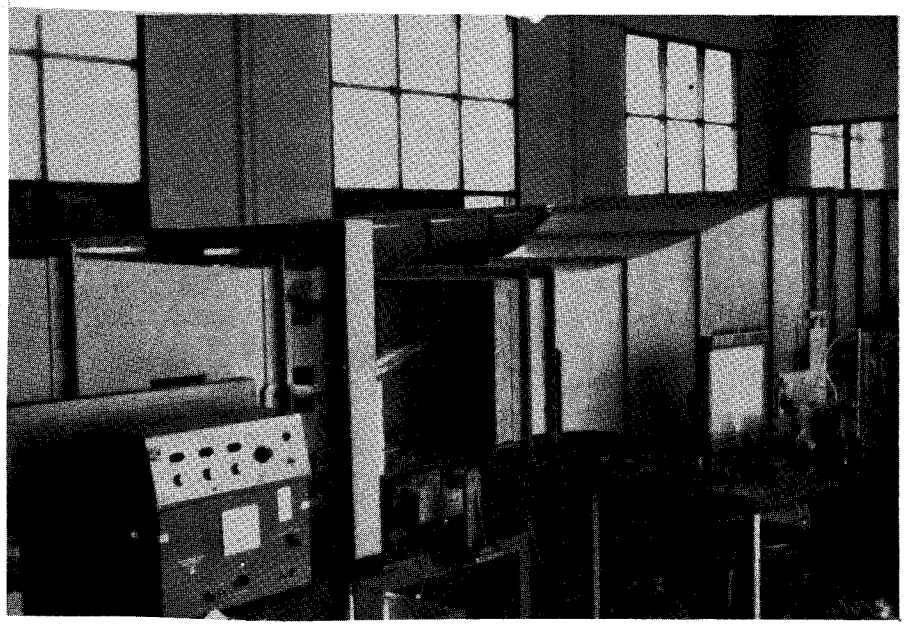
The Air Force Academy curriculum consisted of a five-year program. During the first two years cadets were instructed in humanities, social sciences, mathematics, basic science, applied science, and military science. The last three years were devoted primarily to engineering courses. It was possible to major in general engineering, aeronautical engineering, mechanical engineering, or electrical engineering. Upon graduation the cadet received a Bachelor of Engineering degree and was awarded a commission in the RTAF in the grade of second lieutenant.* 64/

The faculty and administration consisted of approximately 80 officers. Also a number of officers from Don Muang taught there part-time. All faculty members held degrees, primarily from RTAFA. The faculty included eight members with graduate degrees from universities in the United States or United Kingdom; two held doctoral degrees. 65/

In 1970 the Academy graduated 58 lieutenants. Of these, 47 entered pilot training. Since approximately 75 percent of RTAFA graduates entered pilot training, the planned freshman class enrollment for 1973 was increased to 150.** 66/

*USAF grades are used for ease of reading. The RTAF grades and their USAF equivalents are listed in Appendix VI.

**An increase in Academy enrollment would lead ultimately to an increase in pilots. In the long run this would reduce pilot shortages.



WIND TUNNEL IN AERONAUTICS LABORATORY
ROYAL THAI AIR FORCE ACADEMY

FIGURE 19

Another resource for RTAF officers was the Officer Candidate School.

The Officer Candidate School

The Officer Candidate School offered a 10-month program leading to a commission in the RTAF in the grade of second lieutenant. NCOs with 10 years service were eligible for OCS. After successful completion of a final examination candidates were commissioned. OCS graduates rarely advanced beyond the grade of major.[67/]

The school could train 360 students in three classes each year. However, the actual number varied with requirements.[68/] (See Table 2)

The RTAF also conducted a short program of officer indoctrination to commission civilians or NCOs with college degrees. Virtually all of these students had degrees in engineering, technical, or other scientific disciplines. The RTAF planned to consolidate this program with OCS for a more standardized officer training program.[69/] After commissioning, many officers began training in the Flying Training School.

TABLE 2

OFFICER CANDIDATE SCHOOL GRADUATES, RTAF, 1965-1970*

Year	Number of Graduates
1965	215
1966	192
1969	237
1970	240

SOURCE: RTAF Schools Branch files, January 1971, Don Muang RTAFB

The Flying Training School

The reader will recall from Chapter II that the flying school was moved from Don Muang to Korat in 1941. In May 1969 the Flying Training School began operations at new permanent facilities at Kamphaeng Saen. This move became necessary because the buildup of USAF operations had

*None were trained in 1967 and 1968.

overcrowded RTAF facilities at the old site.* [70/]

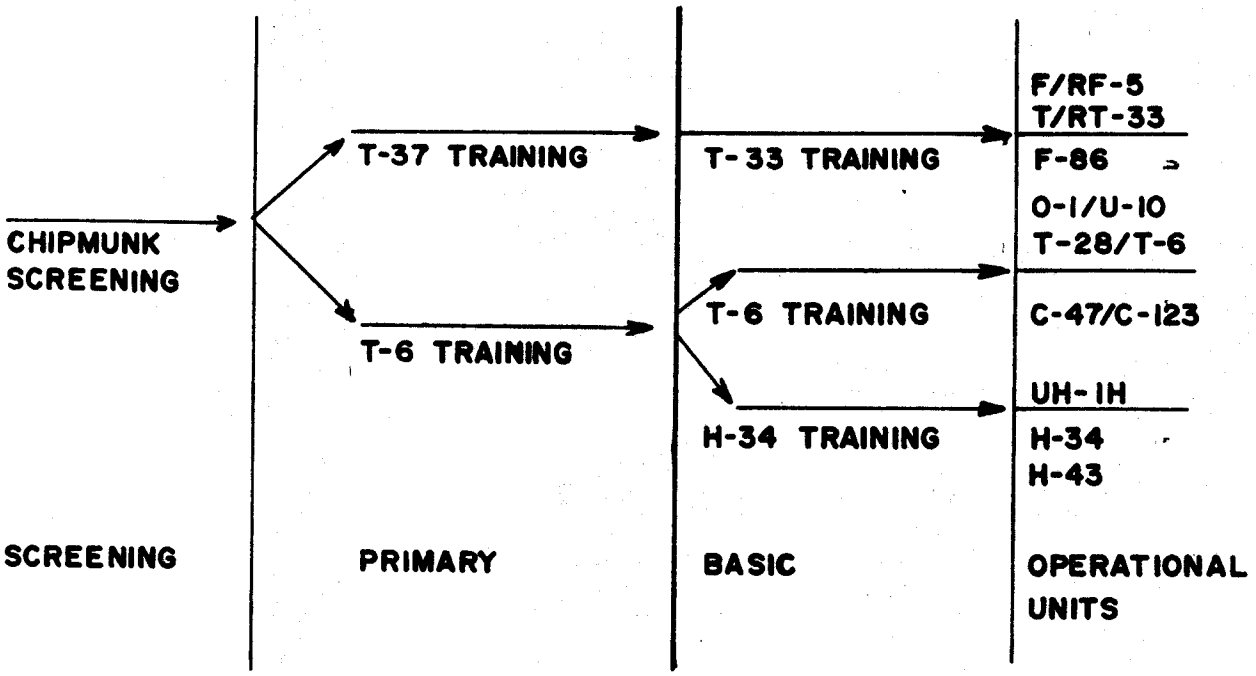
In the RTAF pilot training program of 1971, all trainees received 30 hours in Chipmunk aircraft as an initial six-week screening phase. Previously, two classes were given initial training in the T-41. However, the Chipmunk was considered a better aircraft for screening purposes, and the T-41s were sent to Don Muang for use by pilots who held administrative positions. [71/]

The top students entered T-37 jet training while all others went into the T-6.** After 90 hours of primary training in the T-6, pilots designated for helicopter training went into H-34 training. The first helicopter class at Kamphaeng Saen graduated in August 1970. [72/] (The training flow is depicted in Figure 20.)

In 1971 T-33 training was phasing out. Primary and basic training in the T-37 was replacing T-33 training. [73/]

All student pilots were officers from the Royal Thai Air Force Academy (RTAFA) or graduates of civilian universities who had been commissioned. The output of 70 pilots in FY 71 was short of the annual goal of 90. To alleviate the shortage, recruiting programs at civilian universities were intensified and enrollment at the Air Force Academy was being doubled. [74/] Another aspect of the training system was technical training.

*Aircraft assigned were 17 DHC-1 Chipmunks, 25 T-6s, 9 T-37s, 10 T-33s and 7 H-34s.
**Jet-qualified pilots received higher pay even if they were assigned to flying duties in reciprocating aircraft.



SOURCE: RTAF SCHOOL BRANCH FILES, JANUARY 1971, DON MUANG RTAFB

TRAINING FLOW OF RTAF PILOTS, 1971

FIGURE 20

INTRODUCTION TO THE CHIPMUNK, RTAF FLYING TRAINING SCHOOL

FIGURE 21

Technical Training

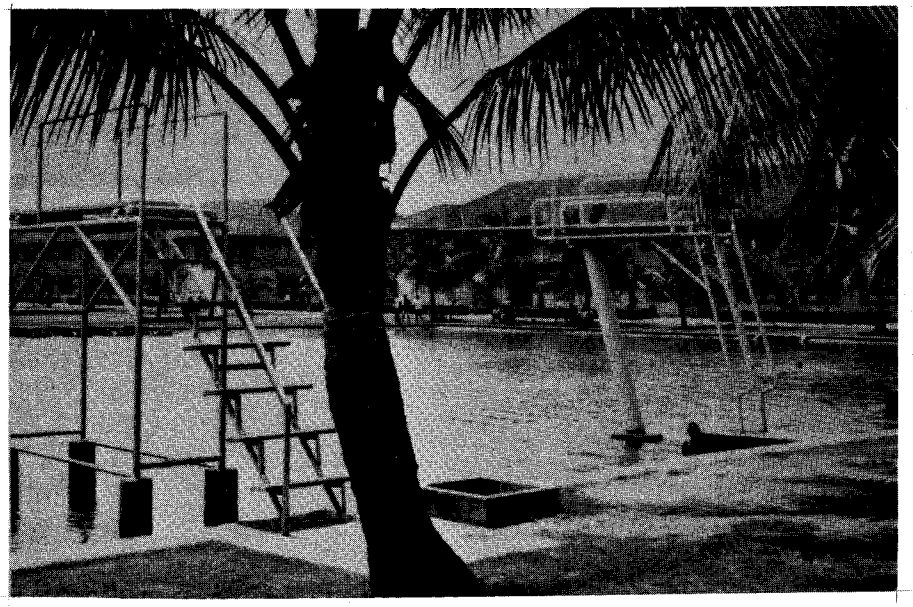
Training for airmen and NCOs was provided through the Airmen Technical Training School (ATTS), RTAF directorates and on-the-job training.[75/]

The ATTS offered training programs in 14 different courses, primarily in maintenance and communications-electronics areas. The courses varied in length from one to three years. The number of students ranged from 1,300 to 1,400.

The Directorates were authorized to recruit and train airmen. Most of directorate training took place in the Directorates of Aerospace Engineering and Communications. Much of the training duplicated the ATTS instruction; however, the courses were shorter.

On-the-job training for RTAF personnel was provided by the USAF. The training capability of the USAF exceeded the number of RTAF personnel available for training. However, many OV-10 maintenance personnel received this OJT.

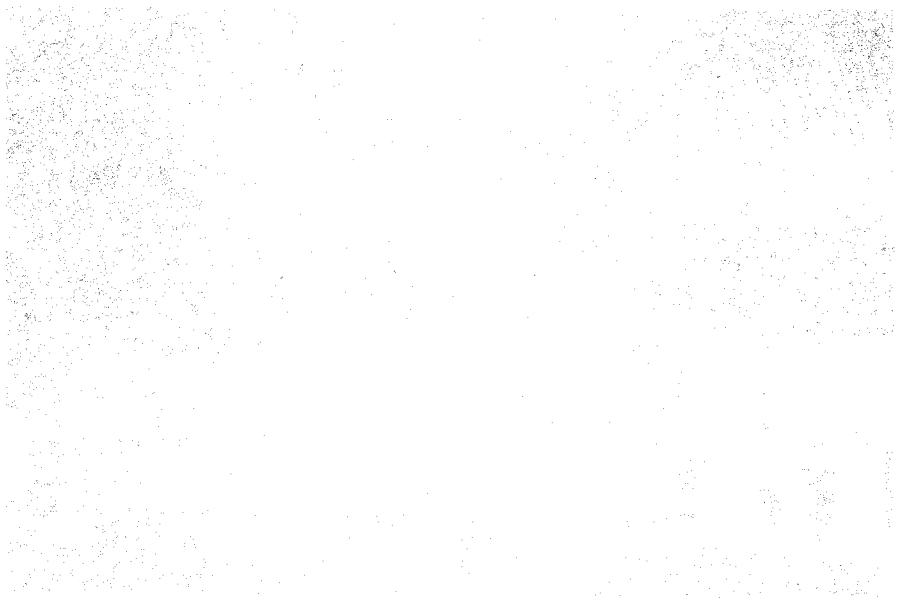
English language training was an integral part of the RTAF training and educational system. The English Language Training Center (ELTC) provided instruction for the following RTAF schools: Flying Training, RTAF Academy, Technical Training, Nursing, Directorate of Engineering, the Squadron Officers School, and the Air Command and Staff College.[76/]

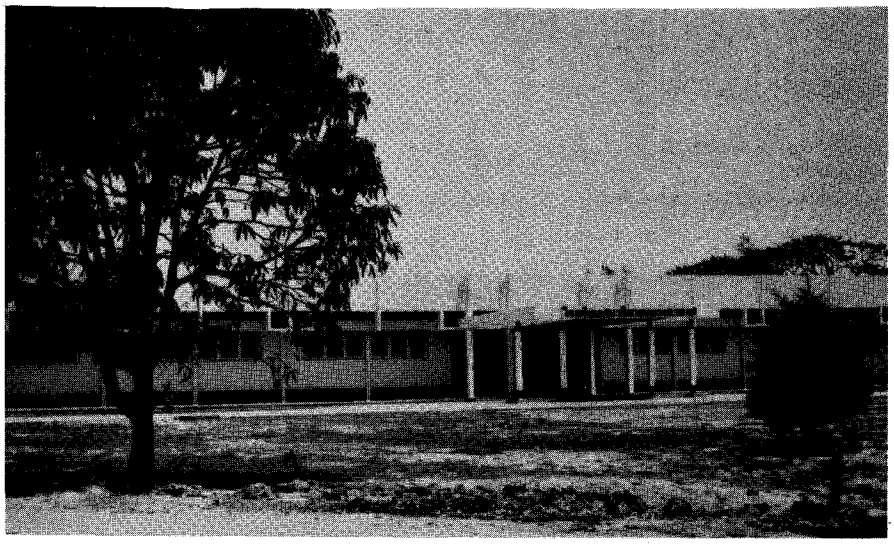


SCENE AT THE AIRMEN TECHNICAL
TRAINING SCHOOL, DON MUANG RTAFB

FIGURE 22

In addition to a comprehensive training system and the attainment of an officer corps that was largely college educated, the RTAF recognized the need for a professional education program. In the mid-sixties the RTAF established a professional military education system which was fashioned after the USAF model. The Air War College, Air Command and Staff College, and Squadron Officers School comprised this system.[77/] Information concerning prerequisites, courses, classes, and other data is summarized in Appendix IV.





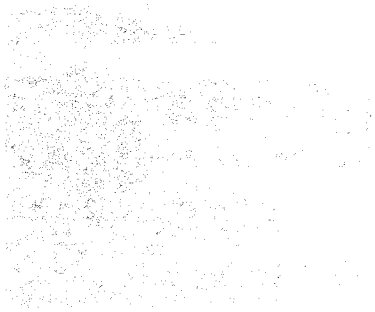
AIR COMMAND AND STAFF COLLEGE

FIGURE 23

Summary

In 1971, 34,000 personnel were in the RTAF. This young air force owned and operated 325 aircraft at various locations throughout Thailand. These facilities were constructed or expanded to improve the operational capability of the RTAF to counter the growing communist threat. Materiel, base security, and an air defense system were other improvements.

A corollary to these developments was the growing American presence. This presence was further evident in the training and educational system which was a prototype of the USAF model. This system was but another step in the process of insuring that the RTAF had the material resources, knowledge, and skill to destroy the enemy--the communist terrorists.



The next chapter discusses the employment of the RTAF in COIN operations between the early sixties and 1971. It examines RTAF aircraft; the organization and function of operational units; command and control; operational concepts; and various operational, funding, and support problems.

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CHAPTER IV

RTAF OPERATIONS IN THAILAND

The Composite Squadrons and Lucky Tiger

The need for RTAF units capable of support in counterinsurgency (COIN) operations was recognized in 1961. By early 1962 a plan was approved by the RTAF Commander-in-Chief. It provided for a composite squadron at Ubon, Udorn, and Chiang Mai.* Three more units were to be formed if needed.[78/] (See Table 3 for number and type of aircraft assigned.)

The first units were activated at Ubon and Udorn in late 1962. The third squadron was activated at Chiang Mai in August 1964. The Air Division at Koke Kathiem directed and supported the composite units. Maintenance support was provided from Don Muang and Koke Kathiem. Facilities, personnel, and equipment were progressively expanded at Koke Kathiem.[79/]

Flying and support personnel were assigned to the units on a TDY basis. At first they rotated every six months, then every twelve months. Support personnel were rotated in like manner and this aggravated supply and maintenance problems.**[80/] Maintenance at Koke Kathiem especially was considered poor.

In 1965 another composite squadron was activated to train aircrews of the other units. More intensive training was needed because the communists had accelerated their program to take over Thailand.[81/]

*Operations of RTAF composite units were similar to those of the USAF Air Commando Force.

**Aircrews and support personnel rotated at the same time causing a lack of continuity.

[redacted]

[redacted] [redacted]

TABLE 3

COMPOSITE SQUADRONS, TOTAL NUMBER
AND TYPE AIRCRAFT ASSIGNED, BY YEAR

Type Aircraft	Total Aircraft 1962	1965
T-28	18	39*
C-47	3	8
H-34	4	31*
U-10	12	12

Source: Quarterly V-12 Report, FY 3/63, USAF Advisory Group, Thailand

*Additional aircraft were available from Don Muang when needed.

In addition to regular aircrew training, the composite squadrons needed special air warfare training. Otherwise they would be unable to perform efficiently the task for which they were created--air support for the Royal Thai Government (RTG) COIN effort. In general, RTAF pilots were capable but inexperienced in supporting ground operations. 82/

To remedy this situation the USAF 606th Air Commando Squadron (ACS) was assigned to Nakhon Phanom in March 1966 under the project name "Lucky Tiger."* Lucky Tiger mobile training units worked and lived at each composite squadron. Training included civic action, maintenance, and joint exercises with RTA and Civilian-Police-Military (CPM) units. FAC procedures and tactics in night operations and night ordnance delivery were emphasized. Utterly false! Special air capabilities such as helicopter airlift, psychological operations, reconnaissance, and combat control were also covered. 83/

*False! Lucky Tiger was the deployment of the On-Mark modified A-26's for test & EVDL in SEA plus Laotian ITCMT. The test (interdiction) was so successful, the A-26's stayed and became part of the 606th which up until that time, was a civic action unit w/o any combat a/c.

MSgt.

[redacted]

[redacted] [redacted]

Training phased down in late 1967 after proficiency of the RTAF was sufficient and by 1969 only a squadron and maintenance advisor were required. 84/

Composite squadrons never duplicated USAF Air Commando operations and were disbanded in 1967. Problems in management of aircraft, maintenance and logistic support, and personnel were too complex for the RTAF. Also C-47s were withdrawn from the composite units and controlled by the

FIGURE 24

COMBAT AIR PATROL OVER THAILAND-LAOS BORDER

[redacted]

wing commander at Koke Kathiem. The H-34 helicopters never became part of the composite units. The composite squadron organization ended in mid-1967.[85] (See Appendix V for a detailed account of the reorganization.)

The T-28 Squadrons

The RTAF received their first complement of 38 T-28 aircraft in 1962. These aircraft formed the major strike capability for the composite squadrons in COIN operations. The aircraft performed well in spite of a critical shortage of maintenance personnel and facilities.[86]

The combat capability of the T-28s improved after they were modified with a higher performance engine-propeller combination. However, configuration problems continued to plague the RTAF. For example, nonstandard radio equipment often made it difficult or impossible to rendezvous with FAC aircraft. Frequently the T-28s were not even equipped to use TACAN. A program to standardize the airborne avionics system for the T-28 aircraft was underway in 1971.[87]

A shortage of T-28 aircraft still existed in 1971. Of the 60 authorized, only 41 were available.* However, funds from the FY 71 and FY 72 budgets for the A-37 program were diverted for the purchase of 15 additional T-28s.[88]

The T-28 was the backbone of the RTAF from 1962-1971. Nevertheless, there were criticisms. T-28 missions did not respond rapidly enough in support of COIN operations. This was caused by three factors: (1) the

*Of the shortages, 10 were on loan to Laos, seven to Cambodia, and two had recently crashed.

time required to obtain approval for a strike through the air request system; (2) flying time to the target area; and (3) the occasional slowness of RTAF personnel in responding to the "scramble." Firefights between ground forces and the insurgents usually did not last over 30 minutes so a rapid air response was needed. By 1971 the RTAF had not set up an airborne alert system as a possible solution to the problem, except for preplanned operations.[89]

In spite of some criticisms, T-28 operations were considered successful. The aircraft was inexpensive and easy to maintain. RTAF pilots flew the aircraft well and put their bombs on target.[90]

Generally, T-28 pilots commented favorably about the aircraft:

> *For the RTAF COIN effort, the T-28 is the best aircraft they have. The experience level of the pilots is high and they can put a bomb where you want it.* [91]

> *. . . with the possible exception of the A-1, I don't think there is an aircraft that can do the job better than the T-28.* [92]

> *Greater payload, range and loiter time would help, but on the whole the T-28 is an excellent aircraft for the COIN effort.* [93]

All Weather Problems

In the early sixties the USAF began to develop an all weather air defense system in the RTAF.[94] It was similar to that used in the U.S. Some questioned the wisdom of providing such a system to a developing country. It was complex and seemed beyond the technical, managerial, and economic capacity of the Thais.[95]

The F-86L was chosen as the all weather interceptor for the RTAF, an aircraft that had enjoyed limited success in the USAF in a similar role. The first 17 aircraft were delivered in December 1962, and one more was added in November 1963.

T-28 AIRCRAFT, UBON RTAFB

FIGURE 25

[redacted] [redacted]

The program was managed badly from the start. The RTAF had inadequate logistics support, and the USAF made little provision for such support. The USAF did not provide aerospace ground equipment, spare parts, or E-4 Radar Fire Control System test equipment. The flight simulator arrived after the aircraft and without essential spares and necessary schematics.[96/]

A mobile training team was assigned to help with maintenance but it arrived and departed during the spring of 1963 with few apparent results. Vital test equipment was still unavailable a year after the aircraft arrived.[97/]

By December 1963 RTAF personnel were ready to discontinue the program. Many of them were not enthusiastic about the F-86L from the start.[98/]

The USAF tried to preserve the program by providing maintenance and needed supplies. This enabled the F-86 squadron to participate in the SEATO Exercise "Air Boon Choo" in April 1964. The squadron placed eight aircraft on daily alert status. Of 58 scrambles only one ground abort occurred. (These flights were made without a requirement for an operational airborne radar and fire control system.)

After the SEATO Exercise, direct U.S. assistance was halted. As a result the in-commission and operationally ready rates dropped sharply until the program almost came to a standstill.[99/]

The USAF advisor reported the following situation:[100/]

> *The problems of Squadron 12 remain the same except in depth of deterioration. The combat ready rate for the F-86L aircraft averaged 18.4 percent for this*

[redacted]

[redacted] [redacted]

quarter as opposed to the 26 percent reported for last quarter. Management and supervision--coupled with the lack of interest, direction, and firm mission requirements from RTAF Headquarters--are the key factors. Nothing else prevents the wing from maintaining a 70 percent in-commission rate. Sufficient numbers of U.S. trained and knowledgeable personnel are located in positions of responsibility in Wing I and throughout the RTAF organizational structure. In spite of this, no attempts are made to change the status quo.

In early 1965 the squadron began to fly small-scale air defense exercises. Because the E-4 Automatic Fire Control System did not function, the pilots manually fired the 2.75 rockets and Sidewinder (AIM-9) missiles.[101/]

A rash of accidents also plagued the program. A midair collision destroyed two aircraft. Another was lost when the pilot bailed out shortly after take off due to an apparent fire. Another was destroyed in a gear-up landing.[102/]

In an attempt to inspire some interest on the part of senior RTAF officers, USAF advisory personnel conducted two live rocket firing demonstrations utilizing the E-4 Automatic Fire Control System. Some of the officials expressed enthusiasm and renewed efforts to get the E-4 system to an acceptable in-commission level. New supervisory personnel were assigned to the wing and the squadron. Also, another USAF training team helped with the E-4 System.[103/]

[redacted]

In December 1966 five pilots were qualified in the F-86L. However, operational readiness remained low and high inflight radar failures continued.[104/]

In early 1967, two F-86L aircraft were kept on air defense alert at Don Muang. But with the diversion of 350 maintenance personnel into the F-5 program, the ability of the RTAF to keep two F-86L aircraft on air defense alert became marginal.[105/]

The program was abolished in 1967. This decision was summarized in the TAFAG V-12 Report:[106/]

> *The RTAF has had to allocate an undue amount of its limited technical resources to attain a marginally acceptable capability with the F-86L equipped squadron. The cost in manpower, money and logistical support has caused a drain of RTAF resources far out of proportion to the effectiveness achieved. Extended discussions between the RTAF and the Air Force Advisory Group (AFAG) concerning this situation had resulted in an RTAF decision to phaseout the F-86L aircraft. On 1 July 1967 the Commander in Chief, RTAF, directed the squadron to cease all flying.**

Helicopters in the RTAF

The usefulness of helicopter airlift in COIN operations was recognized from the start. In the insurgency areas, roads were poor in the dry season and impassable in the wet season. Also, slow overland movement of forces would alert the enemy and allow escape. The answer was to deploy and resupply the ground forces by air--via helicopters.[107/]

* Bull! They were flying out of Takhli in 1968 when I was in SEA. WBB

The RTAF acquired a few H-43 and S-55 helicopters in the late 1950s. By late 1962, they also had 11 H-34 helicopters (provided by MAP). Initial RTAF experience in operating and maintaining the H-34 was unfavorable. But they made consistent progress and improvement, and the helicopter squadron became operationally ready in June 1965. It was used extensively in COIN operations.[108/]

In 1966 insurgent activity increased. Consequently, the U.S. provided additional helicopter support.* Direct U.S. action was necessary until the USAF could train an RTAF helicopter wing. The RTG believed that U.S. assistance was appropriate since increased communist activities were attributed to Thailand's cooperation in U.S. military operations from Thailand.[109/]

The Commander of the U.S. Military Assistance Command, an Army Major General, wanted to use a 700-man U.S. Army helicopter company until the RTAF wing was ready. However, this might have aggravated the traditional tension existing between the RTAF and the Royal Thai Army.[110/]

Ambassador Martin preferred not to increase the American presence in Thailand and he opposed bringing in 700 more U.S. troops. Instead, more USAF helicopters were used to expedite RTAF helicopter training. Also the USAF deployed six CH-3C helicopters plus crews to support Thai COIN operations.[111/]

*The RTG believed that their greatest handicap in COIN operations was an insufficient number of helicopters.

[redacted] [redacted]

Additional UH-1H helicopters were provided through the MAP in 1968 and 1969. Of these, 25 went to the RTAF and 25 to the RTA. This represented a compromise as to which service should have rotary wing airlift.[112/]

In addition to helicopter airlift, the RTAF had roles in training, support, and maintenance. The RTAF was responsible for training helicopter personnel although some were trained in the U.S. The RTAF provided support and depot maintenance for all UH-1 helicopters, including those in the army and national police force.[113/]

The increased employment of helicopters in COIN activities caused pilot shortages. These shortages were reduced by starting trainees in the helicopter program after they completed 30 hours in the Chipmunk and 90 hours in the T-6.[114/]

By the end of 1970 the RTAF had 40 H-34 helicopters (seven of these were permanently located at the Flying Training School) and 23 UH-1H helicopters.[115]

RTAF Counterinsurgency Operations

The RTG in 1965 developed a civilian-police-military concept to counter the increasing communist insurgency. It combined civilian agencies such as the Departments of Highways and Health with national and border police forces and military forces.[116/]

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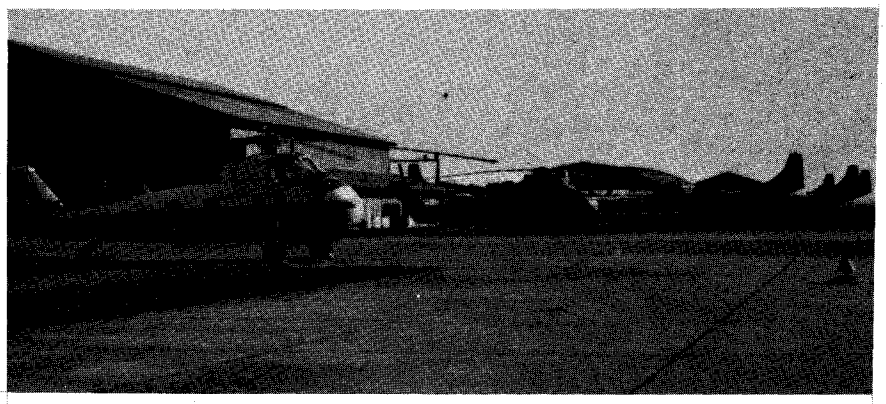
FIGURE 26

THE FLIGHT LINE AT DON MUANG RTAFB
H-34 HELICOPTERS FOREGROUND, C-123s
IN BACKGROUND



The army remained the central power under this concept. General Prapas, the RTA Commander was also Minister of the Interior and Deputy Prime Minister. He directed suppression activities against the insurgents through four regional headquarters located in North, South, Central, and Northeast Thailand. These regional headquarters coordinated and controlled the activities of subordinate provincial organizations. By early 1971, approximately 7,800 RTA troops were committed to active counterinsurgency roles, with another 2,200 engaged in national development projects.[117/]

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The joint COIN effort was an unstable merger of RTAF and RTA activities. The two had traditionally operated as autonomous forces. The RTA and the National Police, commanded by General Prapas, constituted the real military and political force in the country. The RTAF was a poor second.[118/]

To counteract this power struggle, the Advisory Group encouraged closer working relationships between the RTAF and the RTA. This resulted in several joint training exercises during the late 1960s. As a consequence of this experience, the commander of the RTA 3d Army stressed cooperation with and use of RTAF assets when he faced insurgents in Northern Thailand.[119/]

The RTAF and RTA joined in exercise Lub I Loet during the first three weeks on 1966. A 1,350-man force, supported by RTAF helicopters and police, swept an area and reportedly killed 14 and captured 17 communist insurgents. Documents, supplies and a few old weapons were seized.[120/]

The RTAF participated in another joint exercise in 1969. The air strike missions during this operation represented the greatest concentrations of RTAF assets ever employed at one time.

Most of the RTAF efforts were concentrated in the tri-province area of Loei, Phitsanulok, and Phetchabun where there was intensive CT activity. Air strikes in southern Thailand occurred for the first time in 1970 when the RTAF hit CT positions 12 miles north of the Malaysian border.[121/]

[redacted]

The RTAF supported the COIN mission with airlift, strikes against ground positions, aerial resupply, medical evacuation, and flare drops. Direct Air Support Centers (DASCs) controlled tactical aircraft in each army area. The Air Operations Center (AOC) exercised central control from Don Muang.[122]

T-28s played a major role in COIN operations. As mentioned in the section, "T-28 Squadrons," the distance between alert aircraft and target areas limited the effectiveness of air support. Because of intense insurgent activity in the Chiang Rai and Nan provinces, four T-28s were deployed daily to the Chiang Rai airfield which reduced flying time to the target areas.[123]

Various other aircraft were employed in COIN activities as well. The results of an AC-47 mission are described below.[124]

> *Generally, targets in the north are of two types: suspected enemy locations, or abandoned structures in villages evacuated by the mountain tribesmen. The purpose of destroying these structures is to deny the CT use of shelter and storage areas. BDA (bomb damage assessment) is practically nonexistent, with the exception of structures, because of a lack of sweeping operations by ground forces. Unverified reports from the RTA indicate one AC-47 strike on 12 February 1968 resulted in "over 100 CT" KBA (killed by air). Ground fire in the area has been reported as moderate to heavy with indications that 12.7mm crew served weapons are possibly being used.*

About 22 RTAF helicopters were deployed daily throughout 1969 for COIN operations. They provided most of the airlift for resupply and medical

evacuation for the outposts and base camps. Since helicopters were sustaining battle damage from small arms, five T-6 aircraft were used to fly cover. The T-6 aircraft were extremely effective in the escort role.

Limited use of jets continued throughout 1969, including F-86F aircraft. In addition, two F-5 aircraft from Bangkok made the first F-5 ordnance delivery on CT positions in Thailand on 12 June 1969.[125/]

During the first three months of 1966 the RTAF flew 1,049 sorties in COIN action. In the same period in 1967 the number of sorties was 2,695. More than 40 aircraft were deployed daily throughout 1970. During the last six months of 1970, the RTAF flew 9,210 sorties in COIN operations.[126/] (See Table 4, RTAF Sorties, COIN operations, 1970.)

TABLE 4

RTAF SORTIES, COIN OPERATIONS, 1970

Type Aircraft	Number/Type Sorties
H-34, UH-1	7,293 (Helicopter Airlift)
T-28, F-86, F-5, AC-47	261 (Combat Air Patrol)
O-1, U-10, T-6, T-28	657 (Visual Recce)
T-6, T-28	341 (Helicopter Escort)
H-34, UH-1	301 (Medical Evac)
H-34, UH-1	78 (Civic Action)
T-6, T-28, F-86, F-5, AC-47	106 (Air Strike)
U-10	118 (Psy Ops)
RT-33, O-1	23 (Photo Recce)
O-1	32 (FAC)

Source: Developments in Thailand, USMAC THAI/JUSMAGTHAI quarterly report, FY 71 and FY 72.

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A Tactical Air Control System and FACs

Prior to 1965 the Royal Thai Army had the responsibility to develop and establish a workable tactical air support system. A limited amount of MAP support had been provided for this purpose. Army elements provided communication equipment for FACs and air liaison officers (ALOs) and an army communication net for air strike requests.[127/]

In June 1965 Thailand's Minister of Defense directed the RTAF to establish a tactical air control system (TACS) similar to that used by the USAF and U.S. Army.* Under the TACs, the RTAF assumed possession of RTA air ground communication equipment. The initial plan for the system envisioned three Direct Air Support Centers (DASCs), 13 ALOs, and 13 FACs.[128/] By June 1966, the following progress was reported:[129/]

> *Although it is neither manned nor equipped adequately to operate as a full scale TACS, the RTAF now has a basic organization that is performing the normal TACS functions in support of civil, military, and police operations in communist suppression activities throughout Thailand. An adequate mix of tactical aircraft by type (helicopters, reconnaissance, fighter, airlift) have been allocated for call by direct air support teams (DAST) within this system. With the establishment of the TACS, the RTAF made a major improvement in their command/control procedures. The CINCRTAF has delegated scramble authority to the Director of the Air Operations Center (AOC) for a specified number of sorties daily, for both tactical fighter and tactical supply aircraft.*

*Under the TACS system the USAF owned, maintained, and operated all equipment.

[redacted]

[redacted] [redacted]

In November the RTAF established a TACS in Northeast Thailand to support COIN operations. A DASC was established at Sakhon Nakhon with Tactical Air Control Parties (TACPs) and ALOs at Udorn, Ubon, and Nakhon Phanom. A radio jeep (MRC-108) was provided for each site. Two mobile training teams assisted the RTAF in establishing, operating, and maintaining the DASCs and the TACP/ALOs. By the end of 1966 an operational TACS was in effect in Northeast Thailand.[130/]

Training of RTAF forward air controllers began in early 1967 in a USAF unit.* With the reorganization of composite squadrons into tactical squadrons in 1967, the RTAF FAC School was activated under the 71st Tactical Air Support Squadron (TASS) at Sattahip RTAF.** The first class graduated in December 1967. Twelve of the 15 graduates visited Vietnam, observed operations at all levels, and flew combat missions with USAF FACs. Three of the pilots were then assigned to a newly established TASS operation in northern Thailand.[131/]

FACs were trained in U-10 aircraft. In October 1967 eight O-1As replaced the U-10s. The U-10 had been used as a FAC aircraft on three air strikes but was severely limited because of poor cockpit visibility and lack of rocket launchers for target marking. The TASS commander commented on the requirement for marking rockets:[132/]

*Eight were trained initially.

**Details of the reorganization are summarized in Appendix V.

[redacted]

[redacted] [redacted]

We have to use rockets for marking in that area, because the jungle is often 150 feet thick. We would never see a smoke grenade. . . . It is a difficult business. We never see the enemy. We mark and put in ordnance where we think he might be.

Armament rails were mounted on the eight O-1s for 2.75 inch marking rockets. Three of the O-1s were equipped with portable FAC UHF radios as a temporary expedient so they could communicate with RTAF fighter aircraft. Two of these were deployed to Chiang Klang in early February 1968 along with four additional FACs. The FACs established a daily visual reconnaissance program and controlled air strikes. In April 1968 two O-1 aircraft and three FACs were deployed to Nakhon Phanom (northeast) to support the 2nd Army.[133/]

Paralleling these activities was a great deal of effort to improve direct air request procedures. The primary emphasis was centered on establishing the RTAF AOC at Don Muang as the focal point for all air requests.[134/]

Twenty-five AN/MRC-108 radio jeeps were received in late 1968. Additionally, the number of O-1s authorized for the 71st Tactical Air Support Squadron was increased from 15 to 25. However, there was a critical shortage of O-1 aircraft. Three of the original eight had been lost due to crash damage.

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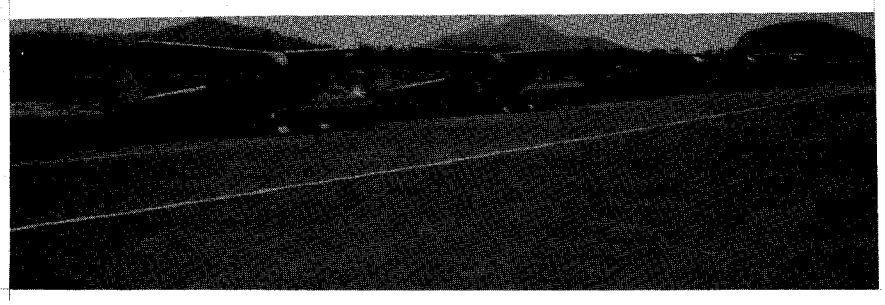

O-1 AND O-10 AIRCRAFT, SATTAHIP RTAFB

FIGURE 27

In April 1969 the RTAF borrowed four O-1s from the RTA, but this brought the total available to only nine. The FACS had been expanded by this time to include two other DASCs. One was at Lom Sak in Central Thailand and the other was in South Thailand at Nakhon Si Thammarat. In June 1969 there were a total of four DASCs and 16 TACPs in operation to support varied RTG elements in the field.[135/]

The O-1 aircraft shortage was so critical that action was initiated to install target marking rocket launchers on five more U-10 aircraft, even though the U-10 was not a satisfactory FAC aircraft. However, this

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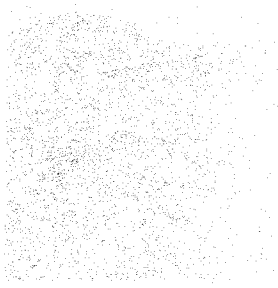

action was not taken. Three O-1s were received from the USAF, two more O-1As were borrowed from the RTA, and it appeared that five O-1s would be available from Philippine MAP excesses.[136/]

The Philippine O-1 aircraft did not materialize and the shortage of FAC aircraft continued to be a critical problem. In an effort to provide coverage where it was needed in northern Thailand, DASC 3, supporting the Royal Thai 3rd Army, was moved successively from Chiang Klang to Lampong to Nan and was finally collocated with the 3rd Army Tactical Operations Center at Phitsanulok.[137/]

A U.S. Advisor at DASC 3 commented on the problem:[138/]

> *We have four O-1s to cover six provinces, an area about as large as the III Corps area in South Vietnam. When I flew O-1s there, we had 30 to 40 O-1s, 20 to 30 OV-10s and about 30 O-2s. I still didn't feel I could physically cover all the area I should have covered.*

The Chief of the Thailand Air Force Advisory Group (TAFAG) lauded the success of the RTAF in establishing an effective TACS:[139/]

> *Marshal Kamroon, Deputy Chief of Staff for TAC (Tactical Air Command), an aggressive officer with a fine background, has been able to put the emphasis where it should be in the TACS. The decision process is timely; the communication system is effective. There are enough capable personnel to run the system, and the overall system will be effective as long as it isn't made too technically complicated. . . . The Thai TACS should not be configured like that of the USAF. They don't need the sophistications, the complex equipment,*

[redacted] [redacted]

and all the "tie-ins" with radar. They should operate very basically, using principally their 29 Mark 108 Forward Air Control Vehicles.

In 1970 the AOC was realigned in the RTAF organizational structure and made directly responsible to the Tactical Air Command. (See Figure 28 for location of TACS/Direct Air Support Element as of 1970.) Many facility improvements were made in the AOC, including construction of an underground command center with a giant vertical display board. All significant air traffic in Thailand was tracked on this board.[140/]

A USAF officer working with the AOC was impressed with the center and expressed admiration for the Thai Commander:[141/]

Group Captain Paitoon is an exceptionally dedicated man. He is brilliant in tactical and military matters. He has flown every type of RTAF aircraft except the F-5. He has commanded the AOC for four years and has built it from an AC&W air defense type operation to a center that is very effective in the command and control of tactical air operations, which is by far the most important mission of the RTAF today.

Supersonic Fighters

In 1965 the long-range plans of the Military Assistance Program were to provide F-5 aircraft to Southeast Asian countries.* The RTG became interested in the program after learning other countries would receive the F-5.

*The F-5, a Mach 1.4 aircraft, was equipped with rockets, bombs, guns, and napalm. It was considered effective in air-ground operations. Its use in air defense was limited to daylight, visual missions. However, an all weather capability as well as a photo reconnaissance system was under development. [142/]

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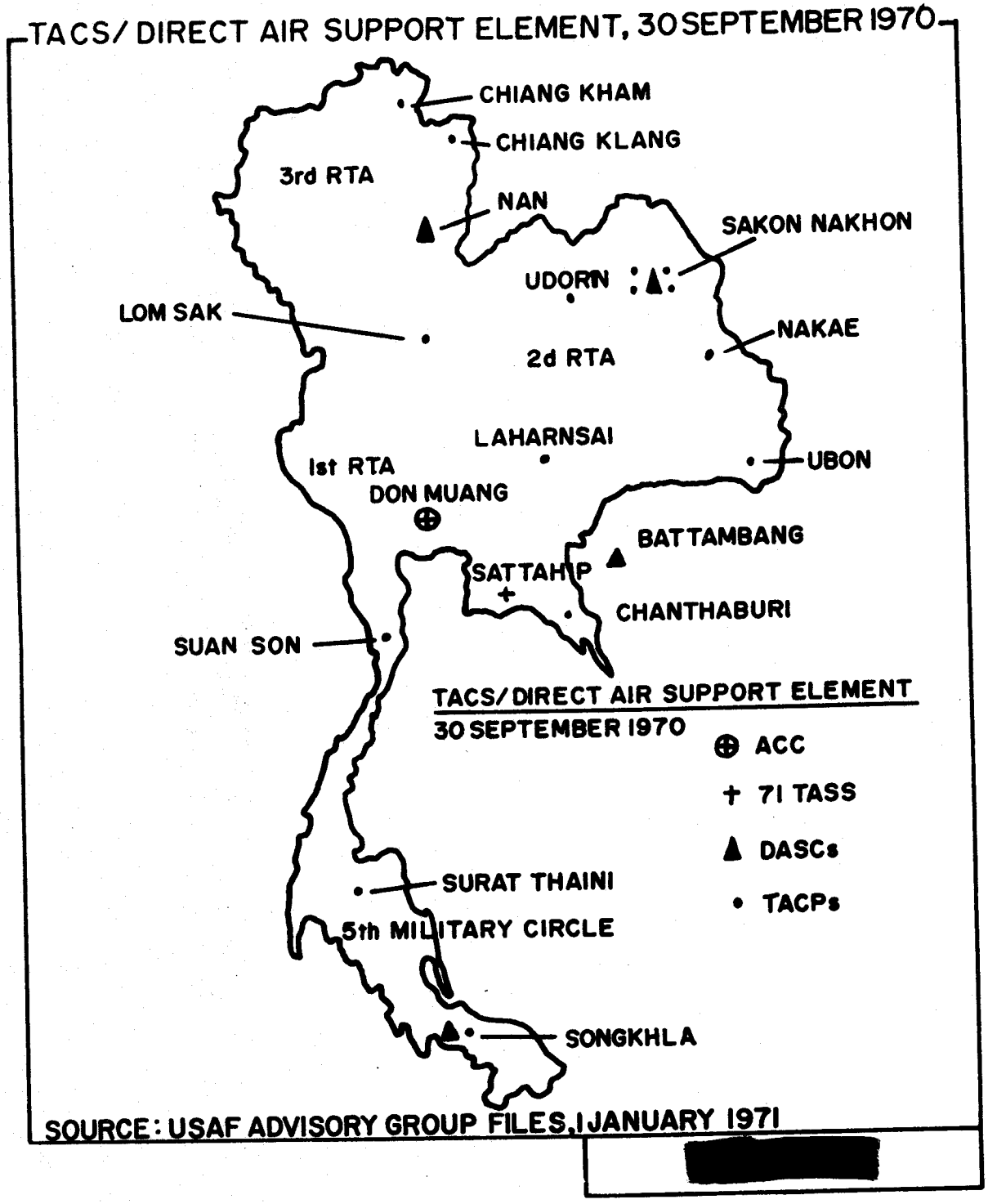

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FIGURE 28

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Thailand's position was conveyed by Air Chief Marshal Dawee while discussing deployment of U.S. aircraft to Thai bases. The U.S. Ambassador reported:[143/]

> *Dawee responded . . . Both the King and Prime Minister were deeply concerned at overcrowded conditions . . . and the increasing tendency to crowd RTF forces off their own facilities, with no concurrent or visible benefits to those forces. The King, he noted, had specifically pointed out to the cabinet that Thailand had always been quick to say "yes" to U.S. requests, whereas there was little evidence of rapid U.S. action in response to Thai requests . . . This condition was particularly true, said Dawnee, with respect to the RTAF who are still trying to fly obsolete F-86s and would be even more difficult to handle in light of the public announcement that the first F-5 deliveries would be to the Philippine Air Force. . . .*

In 1966 the U.S. delivered two F-5 aircraft as the initial contingent of a squadron of 18.* By 1970, 15 had been delivered, with the final three due in 1971.[144/]

In 1968 two F-5s were placed on five minute air defense alert at Don Muang during daylight hours. In 1969 F-5s made their first air strike on communist terrorist positions in Thailand. The F-5 was a prestige addition to the RTAF and was used in fly-by ceremonies for President and Mrs. Nixon and an air strike demonstration for the King.[145/]

By 1970 only 11 of the 15 F-5s remained. Four aircraft were lost in a single year. One stalled at 200 feet after losing an engine on take-off.

*These were delivered to Thailand in 1966 as a "good faith" gesture; other F-5s would be delivered as they became available.

[redacted]

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Another was destroyed when the pilot landed short of the runway. One was destroyed when the pilot ejected because of a gear malfunction, and another was lost on a combat mission.[146/]

MAP plans were to provide additional F-5 aircraft to SEA countries, with the possibility that Thailand would get another squadron. However, some estimated the operating cost of the F-5 at $500 an hour and questioned whether the U.S. could afford to subsidize a large counterinsurgency role for the aircraft.[147/]

"Phantom Tracks" and Gunships

Throughout 1967 there were persistent reports of low, slow flying aircraft crossing the borders of eastern Thailand at night. These reports came from unidentified radar sightings known as "phantom tracks" and from reports of unidentified aircraft by ground observers. The RTG theorized that helicopters were being used to infiltrate troops and to resupply the local terrorists.[148/] There was no official announcement clarifying the mystery of the "phantom tracks." AC-47 aircraft attempted to intercept the intruders but failed.[149/]

Although the AC-47 was not successful as a night interceptor, it was effective in other phases of the RTG COIN efforts. Throughout 1970 and early 1971 the AC-47 aircraft flew air strikes in Thailand and Cambodia. Plans were to double the number of AC-47 aircraft in the RTAF inventory to a total of eight.[150/] C-47s, widely used in airlift operations, were also in the RTAF inventory. The C-47 role is examined in the next section.

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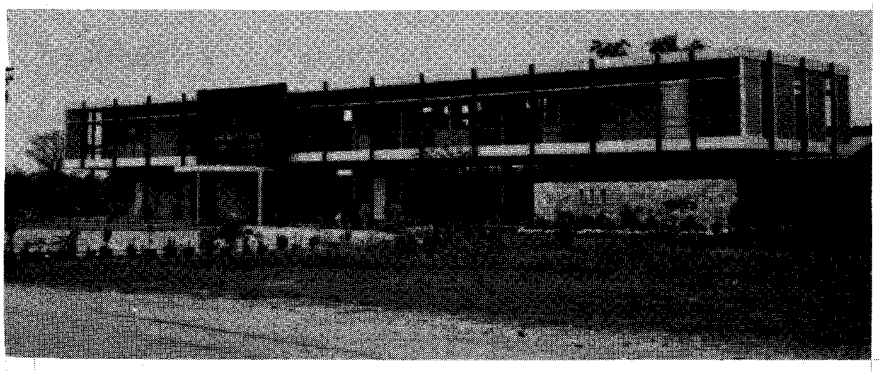
Transport Aircraft

The C-47 was the primary transport aircraft of the RTAF from the time it was initially acquired in 1948 until C-123 aircraft arrived in the mid-sixties to take over much of the airlift role.[151/]



WING VI HEADQUARTERS, DON MUANG RTAFB

FIGURE 29

The first eight C-123 aircraft were delivered in 1964. Training of Thai aircrews and maintenance personnel was accomplished by a USAF detachment from Nakhon Phanom. USAF personnel worked with the RTAF on the C-123 project until 1968. In April 1971 the RTAF had 13 C-123 aircraft at Don Muang with two permanently deployed to the United Nations Command in Japan. Additionally, Thai crews operated two USAF-provided C-123s in Vietnam.[152/]

[redacted]

C-47s were used as gunships and infrared photo reconnaissance aircraft. However, in April 1971 the RTAF still operated 15 C-47s as transport aircraft.[153/]

On every working day the RTAF flew a scheduled shuttle flight that went to each main RTAF base. The C-47 and C-123 aircraft were used for this shuttle.[154/]

In addition to airlift and other combat mission, the RTAF also flew intelligence gathering missions.

Intelligence Operations

Squadron 11 began aerial reconnaissance missions in 1968 with newly acquired RT-33 aircraft. EC-47 aircraft were used also.[155/]

RT-33 and EC-47 aircraft were acquired in 1968 and used in aerial reconnaissance and intelligence missions. Both were employed in counter-insurgency operations. EC-47s were successful in detecting campfires and concentrations of communist terrorists. EC-47 scanner and day photo missions were a standard part of the COIN effort.[156/]

In 1970 the RTAF photo reconnaissance capability increased as four RF-5A aircraft began operations. Also, plans in 1971 called for installation of cameras on T-28 aircraft for pre-strike and post-strike reconnaissance.[157/]

[redacted]

[redacted]

Many of the senior RTAF officers had little knowledge, experience, or interest in air intelligence operations. In an effort to overcome the apathy of senior officers regarding the importance of intelligence, a special course was presented in 1969 at the Intelligence School for a class of 20 selected senior officers.[158/]

Psychological Warfare

A Psychological Warfare School was established in 1969 and provided a 58-hour course of instruction for RTAF officers. The first class of 25 students graduated from the school on 25 July 1969. The course included civic action, leaflet procedures, loudspeaker operations, face-to-face communications, and general psychological considerations of the RTAF COIN effort.[159/]

The RTAF installed psychological operations (PSYOPS) equipment on two C-47s and six U-10s. Each aircraft had a 1000-watt speaker microphone and a tape recorder. By September 1970 U-10s were used for most PSYOPS missions, with a U-10 serving a DASC and able to respond quickly to RTA requests.[160/]

Aircraft On The Way Out

The reduction of jet aircraft in the RTAF was viewed as necessary to bring operation and maintenance costs within the limits of the projected RTG and MAP funding. Thus, F-86F and T-33 aircraft were being phased out. The T-6 was also phasing out.[161/]

[redacted]

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The 17 F-86F aircraft at Takhli were the remnants of a fleet of about 50 that had been MAP-provided to Thailand.[162] In FY 70, only nine F-86 air strikes were flown in support of the RTG COIN activities. Accuracy of the F-86 against ground targets was inferior to that of the slower T-28. It could not operate from forward operating bases and this limited its usefulness. Also the cost of operating the F-86 was increasing because of age. Moreover, other aircraft such as the F-5 had better air defense capability than the F-86. The solution was to phase out the F-86 as A-37 replacements were received.[163]

The T-6 served the RTAF well for over 20 years as a trainer. It was also useful in escorting helicopters during COIN missions, and in early 1971 T-6 aircraft were still flying air strikes in southern Thailand. Plans were to phaseout the T-6 from a combat role as OV-10 replacements arrived.[164]

The T-33 had also served the RTAF well for jet training and proficiency flying. The RT-33 had been active in post-strike photo reconnaissance operations in Cambodia. In 1971 the T-33s were phasing out of the inventory.[165]

OV-10 Aircraft

The RTG purchased 16 OV-10s from the United States. They were scheduled for delivery in 1971. The purchase price of over $15 million represented the largest single expenditure ever made for RTAF aircraft.[166]

The OV-10 aircraft was a light attack fighter, with capabilities for FAC, photo and visual armed reconnaissance, cargo airlift, and troop

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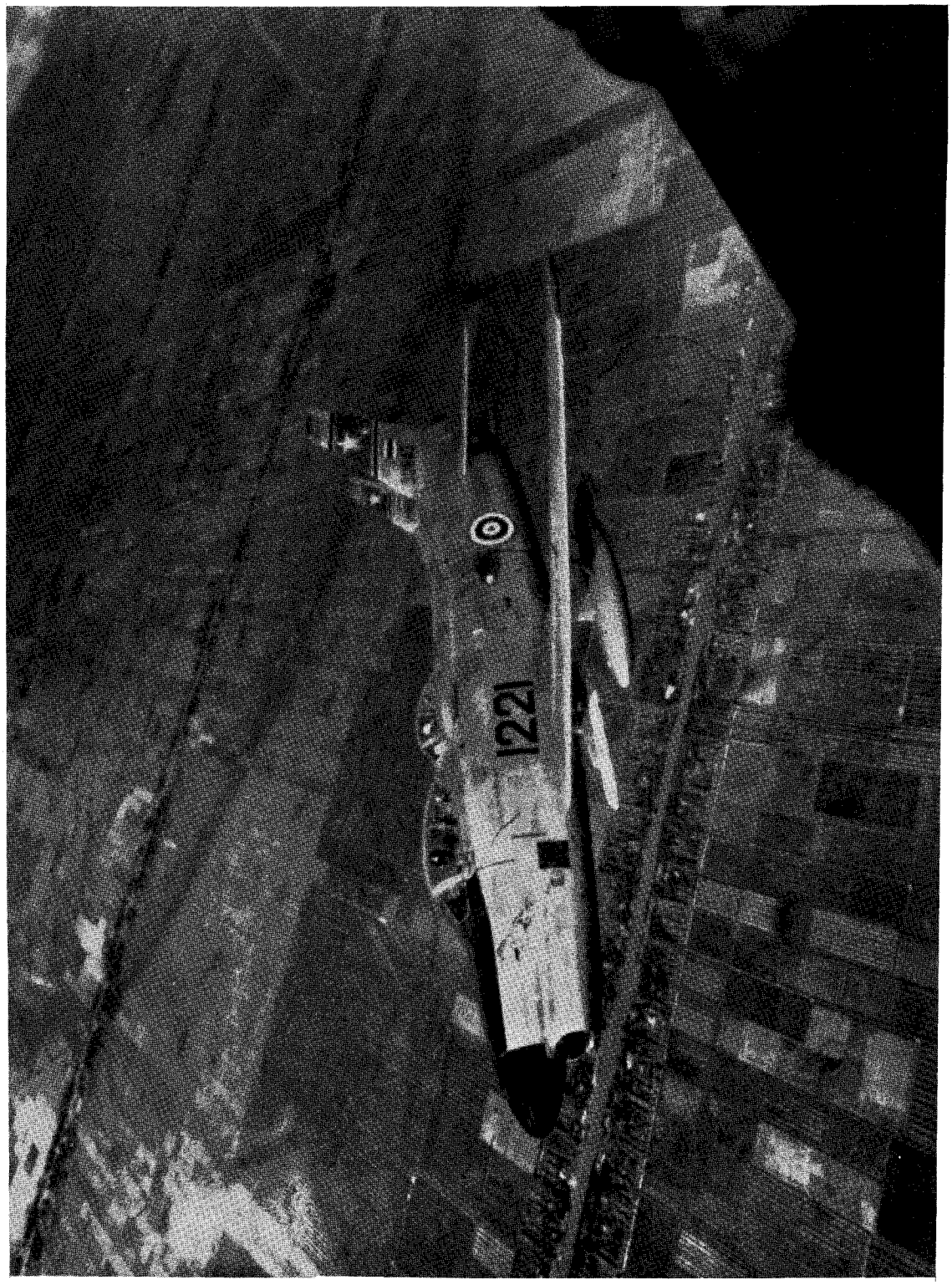


F-86L

FIGURE 30

transport. Maximum payload was about 3,600 pounds. It was equipped with 7.62mm guns.* The RTAF planned to use the OV-10s in COIN operations. Crews and maintenance personnel were trained for this purpose in 1970 and early 1971.[167/]

Summary

The primary role of the RTAF was close air support in COIN operations and composite squadrons were formed especially for this purpose. Various mixes of T-28s, helicopters, and other aircraft were combined in the squadrons and deployed against the communist insurgents. One composite squadron was responsible for the flying training of the other units. An air commando squadron trained the composite units in special air warfare operations. A Tactical Air Control System was established to direct air operations.

Each type of aircraft in the RTAF inventory had a specified role. The T-28 was the workhorse and became the backbone of the RTAF.

T-33s, T-6s and F-86Fs were phasing out of the RTAF inventory. Replacements were OV-10s, A-37s, and F-5s. The RTAF considered the F-5 a prestige aircraft and hoped to acquire 18 more. However, the RTG's need for this aircraft and the economic capacity to support it were questioned.

The RTAF also engaged in air operations in other countries. The RTAF role in Japan, South Vietnam, Laos, and Cambodia is examined in the next chapter.

*The Air Force Advisory Group (AFAG) attempted to add a .50 caliber gun since it was more effective in heavy jungle and used cheaper ammunition.

CHAPTER V

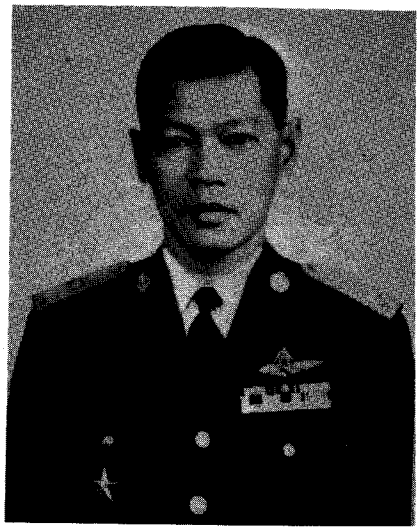
SPECIAL COMBAT OPERATIONS

United Nations Command

Thailand maintained an RTAF detachment in Japan from 1951 to 1971. The unit was under the control of the United Nations Command. By 1971 only the United States, Korea, and Thailand had forces in Japan.[168/]

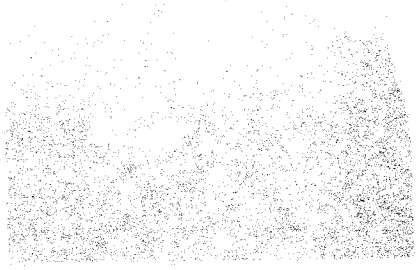
The detachment consisted originally of two C-47 transports, crews, and support personnel. In 1968 and 1969 the C-47s were replaced by C-123s. Personnel served one-year tours with half of the personnel rotated every six months.[169/]

RTAF units in other countries were involved in combat operations. This was true of the Thailand contingent in Vietnam.



AIR CHIEF MARSHAL SWASDI PONCHAMI
COMMANDER RTAF TACTICAL AIR COMMAND

FIGURE 31



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The Victory Units

In 1964 the RTAF sent a contingent of 16 officers and men to Vietnam to augment Vietnamese Air Force C-47 crews. The detachment was known as the RTAF Victory Squadron. Two years later the number of personnel increased to 27 and several were reassigned to a USAF C-123 squadron. This detachment was designated the RTAF Victory Flight or Victory II. Two USAF C-123 aircraft were brought to Don Muang, painted with Thai markings, and returned to RVN in July 1966 as a Thai contribution to the Free World Assistance Force. Unlike the original Victory group who flew only as copilots and separate crew members on the VNAF C-47s, Victory II flew Thai aircraft with Thai crews.[170/]

In 1966 an RTAF group of four copilots and five flight mechanics replaced Victory I and the unit was designated Victory III. In 1970 45 RTAF personnel were serving in Vietnam.[171/]

In addition to transport operations, RTAF FACs supported RTA forces in Vietnam. This support began in 1968 with four FACs and was increased to seven in 1969. They served one-year tours and by 1971, 19 had been sent to Vietnam. The RTAF FACs were praised for their outstanding performance.[172/]

Waterpump and Firefly

Waterpump was the code name for the USAF special air warfare detachment in Udorn that trained Laotian, Air America, and Thai "mercenary"

[redacted]

personnel for air operations in Laos.* (A primary mission of Air America was rescue of air crews downed in Laos.) Under Project Firefly, RTAF T-28 pilots flew combat missions against communist forces in Laos. These pilots, known as Fireflies, were detached from the RTAF as mercenaries. Thus, the RTAF was not involved directly in the Laos operation.[173]

Thai pilots knew little about close air support combat operations or aggressive flying techniques. They received two weeks of training in ordnance delivery, night flying, and instrument flying before becoming combat-ready. After two months of combat, they were rated the equal of any other fighter pilot.[174] Nonsense!

Typically, 12 Thai and 20 Lao pilots flew to Vientiane daily to complete a Firefly mission. After the aircraft were armed and the pilots briefed, several cyclic combat sorties were flown. Then the pilots returned to Udorn for the night.[175]

The number of Fireflies in Laos was limited to 20. Each flew 100 missions or six months of combat before returning to RTAF duties. However, many completed two 100-mission tours. They received a $250 monthly bonus for participating in the operation.[176]

*The deteriorating military situation in Laos in 1963 prompted the U.S. Secretary of Defense to send the special air warfare detachment to Thailand. The 38 personnel of the unit were volunteers; most were veterans of previous special air warfare operations and had recently flown a T-28 tour in Vietnam.

[redacted]

To support Project Firefly, the RTAF agreed verbally to supplement the Waterpump program. As a result, several classes of 10 RTAF pilots were trained by Wing II. By 1968 the RTAF found it increasingly difficult to support Firefly. RTAF pilot strength declined and the RTAF aggravated its pilot shortage by assigning most new majors (pilots) to staff jobs.[177/]

In 1969 the Commander of the RTAF TAC discontinued Firefly training by Wing II. A class of 10 RTAF pilots was sent to Udorn in November 1969 for T-28 training, much to the surprise of the USAF detachment. The 10 pilots returned to Wing II and were subsequently trained by the RTAF.[178/] Following this, the TAFAG was advised that the Firefly program could not continue without training support by the USAF detachment at Udorn--that the RTAF resources of T-28 qualified pilots was insufficient for this purpose. Nevertheless the RTAF desired that Firefly continue.[179/]

The TAFAG studied the matter for several months before concluding that (1) the Royal Laotian Air Force (RLAF) had a substantial pool of T-28 pilots, (2) the RTAF was short of pilots, and (3) there were no suitable means for training Thai Firefly pilots. Moreover, there had been reports that some of the Thai pilots were taking advantage of the "loose" arrangements at Udorn by reporting for flying at midmorning.[180/] The Commander of USMACTHAI recommended to the U.S. Ambassador that Thai participation in Firefly discontinue. This would alleviate the pilot shortage and training problems in the RTAF, at least in the short term.[181/]

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In June 1970 the U.S. Ambassador advised the Thai Supreme Command Headquarters that Firefly would terminate:[182]

> 1. It is requested that you notify the RTAF that the training of Firefly T-28 pilots is to be terminated. The class which the RTAF has scheduled to start 29 June at Koke Kathiem should be cancelled.
>
> 2. In addition, the RTAF should be notified that there is no requirement to replace the 20 RTAF pilots on temporary duty at Udorn for T-28 operations in Laos. Ten of these pilots terminate their TDY in July, and the other 10 are scheduled to terminate in October 1970.
>
> 3. The reason that this program is being terminated is that the RLG has advised us that the RLAF now has an adequate number of trained and qualified pilots to fly T-28 aircraft.

Thus the program ended. During the six years of its existence, well over 200 RTAF pilots flew combat tours in Laos. The program revealed deficiencies in RTAF fighter pilot training, but the combat participation served to correct these deficiencies. In 1971 every RTAF combat squadron had a number of experienced combat pilots, and virtually every key position was occupied by these pilots. RTAF officers spoke openly and with pride about their out-of-country combat experiences.[183]

As a group, the Thai pilots performed well. There was no doubt that the Waterpump program was a major factor in upgrading the professional competence of the RTAF to a level that would serve them well in their battle against the communists in Thailand.[184]

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FANK COUNTRY*

The army of the Republic of Vietnam (ARVN) and U.S. ground forces entered Cambodia in May 1970. Thailand's Air Chief Marshal Boon Choo anticipated RTAF involvement and approved a detailed plan for reconnaissance, supply, attack, and search and rescue missions.[185/]

On 3 July the RTAF deployed a 12-man Direct Air Support Team to Siem Reap, Cambodia. Later it was moved to Battambang, Cambodia, after an enemy attack on Siem Reap.[186/]

There was no formal agreement with Cambodia on RTAF operations and in a July 1970 meeting the Cambodians showed reluctance to give the Thais freedom of operation in Cambodia. In the agreement that was reached in September 1970, the Thais could operate in defined areas near the Thai borders, although all strikes had to be coordinated through the Direct Air Support Team (DAST code name: Vampire). For strikes outside these areas the target had to be validated by Cambodian ground forces on duty at the DAST. The DAST later was designated DASC 1 and remained at Battambang.[187/]

Generally, the RTAF flew two types of strike mission. On T-28 strikes, a single T-28 reconnoitered the area. A flight of three T-28s then struck with bombs and .50 caliber guns. Post-strike photos were taken by an RT-33 aircraft. On gunship strikes an AC-47, armed with 7.62mm "miniguns,"

*FANK is an acronym for Forces Armees Nationale Khmer, or Cambodian forces.

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operated against enemy troop positions. Occasionally a flight of two F-5s flew a mission, but on only one occasion was ordnance expended. On most of the strike missions search and rescue support was provided by a single UH-1 helicopter. Airlift missions were flown to Phnom Penh and Battambang. As of February 1971, the RTAF had flown 443 sorties in Cambodia.[188/] (See Table 5.)

TABLE 5

RTAF SORTIES IN CAMBODIA, FEBRUARY 1971

Aircraft	Sorties
T-28	151
AC-47	61
F-5	10
RT-33	40
RC-47	4
UH-1	52
C-123	114
C-47	11

Source: Report, subject: Charlie Mission Reports, 3 July 1970 through 20 February 1971

The RTAF was criticized for not flying more sorties; however, most critics were not aware of the rider on the FY 71 MAP funding appropriation bill which restricted the use of material provided through the MAP.*

*Munitions, equipment, supplies, or funds that arrived in Thailand after 30 June 1970 could not be used outside the borders of Thailand.

The Thais had only a three-month war reserve of supplies and munitions and were reluctant to expend this stock without assurance of replenishment. Had supplies and munitions been provided, one RTAF estimate was that they could have provided a sustained rate of 900 sorties per month in Cambodia.[189/]

The only RTAF combat loss in Cambodia was on 2 February 1970 when one of a flight of three T-28s was apparently hit by ground fire and crashed in Tonle Sap Lake. The pilot's body was recovered two weeks later. The RTAF flew only one T-28 multi-ship strike (on 20 February) in the two months following the crash.[190/] Marshal Panieng, the RTAF Director of Operations, stated that there was no reluctance to commit T-28 aircraft any place they were required in Cambodia.

The problem of operating in Cambodia was in the identification and validation of suitable targets by the Cambodian ground forces. According to the Thai DASC 1 Commander, "The Cambodians would see a group of people; they wouldn't know who they were, so they would say, 'bomb them'." In any case the AC-47 was a more effective weapon against people than were bombs dropped from a flight of T-28s.[191/]

The Chief of TAFAG, viewed discrimination in the use of bombs by the RTAF as a healthy sign. The Cambodians would certainly be critical of any misplaced RTAF bombs that injured friendly personnel. He saw no evidence of reluctance on the part of the Tactical Air Command in committing their forces, other than the economic factor concerning the war reserves.[192/]

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Thailand supported Cambodia in other ways. Five T-28 aircraft were loaned to the Cambodian Air Force in May of 1970. Two of these were later destroyed in early 1971 in a communist attack on Phnom Penh but were replaced by the RTAF. The Thais also assisted by transporting T-28 aircraft via C-123s from Phnom Penh to Thailand for major repair and maintenance.[193/]

The RTAF also helped train Cambodian pilots. Eight Cambodian students started undergraduate pilot training at Kamphaeng Saen RTAFB on 20 September 1970, with another four starting on 30 November 1970.

In July 1970 the RTAF indicated a willingness to relocate the F-86F squadron from Takhli to Korat for Cambodian operations and to relocate the T-28 squadron at Koke Kathiem to Forward Operating Base (FOB) airfields near the Cambodian border. The relocation of T-28s to FOBs would have required runway extensions at Vattanna Nakom and Chantaburi. These actions did not materialize due, in part, to a lack of U.S. logistical support for RTAF operations in Cambodia.[194/]

Summary

Between 1951 and 1971, the RTAF had considerable experience in operations outside of Thailand. The RTAF performed airlift functions in Japan and transport and FAC functions in Vietnam. The RTAF gained valuable combat experience delivering air strikes against communist insurgents in Laos and Cambodia. Many veterans of Laotian operations occupied leadership positions in the RTAF of 1971.

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The next chapter summarizes some material previously discussed and examines the urgent requirement for more aggressive action by the RTAF to effectively counter the communist threat.

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CHAPTER VI

A SENSE OF URGENCY

Differences in Cultural and Political Structure

The RTAF, which some regarded as a prototype of the USAF, was inextricably woven into a cultural and political structure far different from the U.S. Many of the Americans who were intimately involved in RTAF operations did not seem to understand this difference.

U.S. forces were frustrated by the Thai philosophy of "mai pen rai," which means "never mind." This philosophy was applicable to embarrassing, difficult, or unstable situations. The Thai's idea of skillful human relations was to remain calm in all situations. Projects were completed, but in due course. To display any sense of urgency might cause the leader to lose face.[195/]

Yet there was a need for urgency to meet the growing communist threat. There was evidence during the past 20 years that the RTAF became progressively aware of this danger and the growing air force role in the struggle. The power of the RTAF had grown largely as a result of efforts to enable it to successfully combat the communist terrorists. The combat experience of the RTAF had increased. It had actively engaged the CTs at home and had sent units to South Vietnam, Laos, and Cambodia. But there was still an uneasy feeling on the part of USAF advisors that the RTAF did not fully grasp the urgency of effectively countering the communist threat.

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The U.S. Role Against the Insurgency

In two decades of alliance the U.S. expended over $2 billion in Thailand.[196/] The resultant addition and improvement of facilities, equipment, and aircraft enabled the RTAF to achieve the greatest level of air power yet attained in its short history.

The USAF advisory force played an important part in the development of the RTAF. The task of the 55 officers and 67 enlisted men of the advisory force was to advise 34,000 RTAF personnel. The work of the advisors was sensitive and the action of one incompetent advisor could overshadow the efforts of several good ones.[197/]

The Economic Question

The United States made a substantial contribution to the economy of Thailand in the two decades prior to 1971. Over $2 billion were invested in military projects. In addition to this sum, the money spent by U.S. military forces and their dependents affected the Thai economy. The Rest and Recuperation Program alone accounted for more than 100 million tourist dollars from 1965 to 1970. In 1968 total U.S. expenditures accounted for 5.3 percent of the Thai Gross National Product (GNP).[198/]

The withdrawal of U.S. military forces from Southeast Asia in general, and Thailand in particular, meant fewer U.S. dollars for Thailand. This began as other economic problems developed. Rice had always been the major product of Thailand; however, Thailand lost many of its traditional markets when the U.S. sponsored "Green Revolution" program increased world rice

yields. Rice prices declined to a 10-year low while inflation reduced buying power. Thus, those engaged in rice production (85 percent of the population) did not share the prosperity brought about by U.S. spending. In addition to low rice sales, prices were depressed in the tin and rubber markets--the other principal Thai exports.[199/]

In 1971 the GNP of Thailand was less than $7 billion--or less than one-tenth of the U.S. defense budget. The defense budget of Thailand was 3.5 percent of the GNP.[200/] The amount allocated to the RTAF, of course, depended on the needs of other military entities, and the total defense budget depended on the nation's economy and/or foreign aid. RTAF operations were thus limited by economic constraints. Given these constraints, the question arose as to whether the size and sophistication of the Thai Air Force would exceed the economic capability and the needs of this small nation.

Suppression of the Communist Insurgency

The most immediate and pressing problem for the Royal Thai Government in 1971 was suppression and control of the communist insurgency. Insurgents use terrain to achieve a secure base from which to operate. Such was the case in Thailand. The areas of major activity were mountains covered with jungle foliage and such areas limited the effective use of air power. In particular, aircraft suitable for an air defense system were of questionable value in the support of counterinsurgency operations.

The RTAF needed an aircraft which could be used effectively against the terrorists and yet one that satisfied the economic constraints of

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RTG/MAP funding. The war against insurgency was a war of attrition. It was a war that might continue 20 years into the future. Thus, the economic aspect was critical.

Several aircraft were effective in COIN operations during the decade prior to 1971. The T-28s, O-1s, C-47s, C-123s, and helicopters could continue to play an important role for several years.

The RTAF had some F-86 and F-5 aircraft and there was a possibility more F-5s would be received. However, in a war of attrition these aircraft were less cost effective and thus of limited value.

The OV-10 might prove a useful addition to the force but only time will tell. The requirement for a five or six thousand foot runway for normal operations limited the OV-10's use, and its cost of approximately one million made attrition a serious concern.[201/]

A Joint RTAF/AFAG evaluation program was underway in 1971 to find an inexpensive workhorse aircraft that could accomplish many of the missions of the aircraft mentioned previously: the transport role of the helicopters, an armed FAC role, the gunship role of the AC-47, and the helicopter escort role of the T-28.[202/]

The idea was not new. A study in the early sixties suggested that aircraft of the Turbo-Porter, Turbo-Beaver, or Helio-Stallion type might be more economical and more effective in COIN operations than the helicopters (which were urgently requested by the RTG).[203/]

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At Eglin AFB during January 1971, initial tests were conducted on one aircraft of this type--the OV-12.[204/]

> *The flight tests were conducted to determine the feasibility of side-firing a three-barrel 20mm cannon from a light aircraft. In order to execute the tests, the OV-12 (Fairchild Hiller TOL aircraft; the Pilatus Porter/Peacemaker) was mated with the XM-197 20mm gatling gun. . . . The target was completely saturated with shrapnel during all firings and received several bullet holes at the 2500 feet and 1800 feet slant ranges. Personnel viewing the test concluded that these results demonstrated that this system may be capable of hitting trucks or personnel from ranges beyond effective tripod mounted machine guns or small arms defense fire.*

This system (with an interchangeable .50 caliber gun), along with several other aircraft-gun combinations, was to be evaluated in 1971 by the RTAF/AFAG group. The cost, maintenance, and utility of the system made it appealing. It had a low operating cost--$30 to $35 per flying hour. The maintenance cost per flying hour was low, perhaps one-tenth of the T-28, and the OV-12 could use the hundreds of small airfields and strips throughout Thailand. It was within the speed range of helicopters, thus, in helicopter escort roles the OV-12 could provide suppressive fire with side-firing guns without having to mark or turn to get on target.[205/]

The Porter had been used extensively in Southeast Asia (although not in the gunship configuration) by Air America and the Thai National Police. The performance, durability, dependability, and survivability of this aircraft were impressive.[206/]

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Management in the RTAF

Management in the RTAF improved during the 1961-1971 period, but further improvement was needed. In particular, personnel management deserved special attention.

Personnel Management

The RTAF had grown from 21,000 to 34,000 personnel during the period 1961-1971.* Most of the growth occurred after 1966 as the size of the security forces was increased. Conscripts accounted for the greatest growth, increasing from 7,000 to 17,500. The number of NCOs remained about the same; thus the general experience level decreased over the decade.[207/]

The primary sources for RTAF officers were the Air Force Academy, Officer Candidate School, and colleges. Only Academy graduates enjoyed successful career progression.[208/]

Individuals who were high school graduates, or specialists with needed skills were eligible for appointments as noncommissioned officers. A few conscripts were selected as NCOs from volunteers who wished to stay in the RTAF upon completion of a two-year obligation.[209/]

Conscripts served two-year obligations and were not eligible for promotion above Airman Third Class. They were used for security guard duty and airfield defense activities. They also served as duty airmen, orderlies, and helpers in service organizations.[210/]

*Of the 34,000 personnel, 6000 were officers, 10,500 were NCOs and 17,500 were conscripts. There were 78 general officers. Of these, 49 were major generals or higher and 29 were brigadier generals.

Only a small number of female officers and NCOs were in the RTAF. The officers could not advance beyond the grade of lieutenant colonel.[211/]

Pay in the RTAF was low compared to most standards. (See Appendix VI.) With inflation increasing during the 1960s, the RTAF pay seemed even more inadequate. Many of the RTAF personnel in the Bangkok area had outside employment to supplement their military pay, and the booming economy in the Bangkok area offered good opportunities to skilled personnel.*

Retention of personnel was a continuing and serious problem. Some observed that the RTAF faced a problem similar to the USAF in the retention of personnel with skills and experience needed in the civilian economy. As in the USAF, military pay rates were not competitive with industry. The RTAF Director of Personnel was aware of this inequity and believed increases in military pay would improve retention.[212/]

Several steps were taken to improve the personnel posture of the RTAF. In 1967 the RTAF pay was increased in an effort to improve retention. Colonels and generals received raises from four to eight percent; majors and lieutenant colonels--11 to 12 percent; company grade officers--11 to 16 percent; and NCOs--10 to 20 percent.[213/]

*The Bangkok economy had an industrial base which was supplemented by a large tourist trade. Thus, it was less affected by depressed rice markets.

In order to decrease the loss of skilled personnel, aviation firms were enjoined from hiring ex-RTAF personnel within six months of their release.* Those serving in critical skills had their tours extended indefinitely.[214/]

In 1969, OCS was reactivated with an initial enrollment of 350 students.** Enrollment at the Airmen Technical Training School increased in early 1969 from 600 to 900, and to 1200 in mid-1969. Increases were primarily in maintenance and communications-electronics skill areas. Enrollment at SOS increased from 60 to 160 in 1969.[215/]

In an effort to alleviate a pilot shortage, several actions were taken. Academy classes were increased from 60 to 150 cadets, since approximately 75 percent of Academy graduates went to pilot training. A recruiting program was established to attract civilian college graduates into pilot training. This included radio, TV, newspaper coverage, and the use of young pilots for recruiting at universities.[216/]

Personnel management was deficient in several areas. Often, personnel were not assigned jobs which utilized their skills. Personnel accounting was accomplished manually and was inaccurate and personnel authorizations for RTAF organizations did not measure requirements accurately. Because of these factors actual training requirements were unknown.[217/] Problems existed in other management functions as well.

*This policy did not apply to conscripts.

**No personnel were trained in 1967 and 1968.

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General Management

Some management problems stemmed from the rapid growth of the RTAF during the 1960s. Others were a direct result of Thai culture, traditions, and political heritage. For example, delegation of responsibility and authority, as practiced in the USAF, was uncommon. This resulted partially from the unstable political situation where delegation of authority by a leader might invite his overthrow.

Other differences between USAF and RTAF management existed. With few exceptions people did not strive for efficiency, as they made little attempt to eliminate waste or duplication of effort. Efficiency and productivity were not assessed on the officer effectiveness report (OER), nor was the OER even considered by the promotion boards. The scheduled work week was 31 hours. There was no centralized maintenance control system to insure optimum utilization of resources. The seven logistics depots functioned autonomously with no control by a central agency.[218]

A USAF management engineering team made over 100 detailed recommendations for organizational and procedural improvements. The implication was clear--organize and manage the USAF way! It is unknown whether behavioral scientists have ever been consulted about the effects of cultural differences on an overall approach to Air Force management in Southeast Asia. It may be that some U.S. principles of management

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blend well with the Thai culture or political structure while others do not.* [219/]

Nevertheless, the RTAF had adopted several USAF management techniques and as measured by USAF standards, had improved in the late 1960s. [220/] Operational readiness rose from 58 percent in 1967 to 80 percent by 1971. RTAF personnel were capable of self-sufficiency in engine maintenance--all they needed was more equipment. Maintenance on T-28 aircraft was excellent as were the electronics shops. The AC&W capability was also rated good. [221/]

The RTAF had come a long way since 1911--especially in the period 1961-1971.

*For example the Thais were suspicious of the recommendation to contract with a commercial company for communication services for all military and government agencies (as is done in the U.S.). The Thai felt that such an organization would concentrate too much power in one man and provide him the means for upsetting the delicate balance of power which existed in Thailand.

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SUMMARY

Several observations crystallized while viewing the panorama of events which depicted the growth and development of the Royal Thai Air Force.

The culture and political system of Thailand were different from the United States. Traditionally, the Thais followed a course of expediency in international affairs--a natural course for a developing nation. Thus, a Chinese or Russian presence would probably emerge in Thailand if the Americans withdrew. However, a complete withdrawal was not contemplated since the United States had vowed to support Thailand against the communist insurgents.

The threat to internal security was recognized early. Consequently, the RTAF was given a major role of air support in COIN operations. The U.S. provided financial aid and training as the RTAF prepared for its role. This aid included better aircraft, modern facilities, equipment, better security forces, an air control and warning system, materiel support, and a training and educational system.

The national security of Thailand did not appear to require the elaborate system of air operations and air bases established by the USAF. Nevertheless, the USAF responded to the growing communist threat by increasing the air resources of the RTG. The RTAF that emerged from USAF efforts was similar in many respects to the U.S. model. Cultural and political differences and the economic capacity of the RTG seemed not to have been fully considered by the Americans. The RTAF was approaching self-sufficiency in operating

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the USAF system but would require a U.S. subsidy to operate the system in the foreseeable future.

In 1971 the RTAF, more powerful than at any time previously, continued the fight against the insurgents. And yet, the RTAF did not seem fully aware of the serious threat posed by the communist terrorists. Accordingly, a USAF presence was required to further develop a sense of urgency.

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EPILOGUE

Some regarded the Thai Air Force of 1969 as a big flying club.* In part, the elements characterizing this approach to air operations were present in 1971. RTAF pilots tended to be unconcerned with the operational readiness, sortie rates, and computers.[222/]

Fundamentally, however, the Thai pilot was well-qualified. Many spent two years at Preparatory School and five years at the Academy before completing flying school. With effective leadership they fought well. They bombed their targets as well as USAF pilots using the same weapons system.[223/]

USAF pilots continue to be genuinely surprised at the flying ability of Thai pilots. The American tends to forget that flying skill is primarily a function of motor coordination and visual acuity. Consequently, there is no reason to believe that pilots of one country possess flying skills superior to those of any other. Any predominant success of one group over another must be the result of greater experience and/or superior weapons systems.

Probably the greatest weakness of the RTAF was at the middle-management level (a problem not uncommon). The RTAF had many senior officers. Of 78 generals, only three or four were assigned outside of Bangkok and not one was combat-ready in a tactical aircraft.

Tasks were accomplished, but in due time. The system discouraged initiative and aggressiveness at the lower and middle levels with such traits reserved for top management.[224/]

* So was the RAF & USMAC 1919-1937

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As communist terrorist activity in the Chiang Mai area increased, the RTAF seemed more concerned--more aware of the urgency. But the USAF still provided much of the stimulus.[225/] The RTAF wanted to modernize and fight the USAF way but they lacked the economic resources to do so. For example, they could not afford a USAF-type air defense system. It remained for the USAF to insure that the modernization program was consistent with RTAF needs.

It also remained for U.S. policy makers not to forget a valuable ally. The U.S. commitment to Thailand was reaffirmed as U.S. officials pledged continued support and friendship. Yet it was easy to overlook the strategic importance of Thailand in the effort against communist aggression in Southeast Asia. In an interview with Admiral Moorer, Chairman of the U.S. Joint Chiefs of Staff--about the Indochina War--not one member of the press asked questions about Thailand.[226/]

The obligation of the United States to Thailand was eloquently stated by Major General Hal D. McGown, U.S. Army, upon his reassignment as Commander Military Assistance Command and Joint Military Assistance Group, Thailand:[227/]

> *I leave a friendly, strongly pro-American, emerging nation, faced with all the inherent problems of development yet with a national cohesiveness and stability which will enable it, with our moral and material help, to meet internal challenges and foreseeable external pressures, a nation unquestionably desirous of self-sufficiency, whose future role as a Free World partner is almost solely dependent upon the outcome of the Vietnam war and American determination to fulfill what the Thai consider to be a morally binding*

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commitment to meet an external aggression beyond their capability. For the United States Government to fail in this regard, or to waiver following a Vietnam of less than satisfactory conclusion in the Thai view, would be perfidious on our part. A lack of U.S. resolve would also force the Thai to accommodate with the communists, presaging the eventual incorporation of the whole Southeast Asia into the Communist Bloc. | DOMINOES AGAIN!

[redacted]

APPENDIX I

KEY LEADERS OF THE RTAF IN 1971

EXHIBIT 1

BOON CHOO CHANDRUBEKSA, AIR CHIEF MARSHAL

Air Chief Marshal Boon Choo Chandrubeksa has been the Commander-in-Chief of the RTAF since 20 April 1960. He graduated from the Royal Thai Military Academy in 1934 and from Flying School in 1936. During World War II (1942-1945) he was assigned to a squadron at Prachuab. He instructed at the Royal Thai Military Academy from 1945 to 1947. After attending the Royal Thai ACSC in 1949, he was promoted to the rank of Group Captain and subsequently attended the Royal Air Force College at Cranwell, England, for one year. He was appointed the Air Inspector General in 1954 with promotion to Air Vice Marshal. Subsequent appointments were as Deputy Chief of the Air Staff for Plans and Research in 1954, Vice Chief of the Air Staff with promotion to Air Marshal in 1956, and Chief of the Air Staff and Deputy Minister of Defense in 1957 with promotion to Air Chief Marshal in 1958. He is among the top leaders in Thailand, and there is little doubt that he is in command of the Air Force. His success and security in his position has been enhanced by close ties with the late Field Marshal Sarit, former Prime Minister, and with the present Prime Minister, Field Marshal Thanom Kittikachorn. Two of his six children are married to children of former Prime Minister Sarit. He has a dominating personality and has apparently refused opportunities to use his position for graft or personal gain. He has shown an increasing interest in the operational capabilities of the RTAF and has improved the Air Staff potential. He reaches a mandatory retirement age of 60 in 1973, but it is rumored that he will possibly move to the MOD within the next year. He is strongly nationalistic but admires and respects leaders in the USAF. He has extensive business interests and among a number of business positions serves as Chairman of the Board of Directors for Thai International Airways and for the Government Savings Bank and as a member of the Board for the Hanuman Brewing Company. He is considered a shrewd businessman, honest, and aggressive. He is fond of sports, and, before an illness in 1965, played golf every morning; he enjoys horse racing and owns a stable.

EXHIBIT 2

KAMOL THEJATUNGA, AIR CHIEF MARSHAL

Air Chief Marshal (ACM) Kamol Thejatunga has been Chief of the Air Staff since 15 March 1967 when he was also promoted to ACM. He is one of the most competent of the senior Marshals and Chief Marshals. He is an excellent organizer, shows initiative, is a hard worker and is completely devoted to his job. He is an excellent pilot and has had extensive senior staff experience. There is a good chance that he will eventually become Commander-in-Chief. After attending the RTMA, he graduated from the RTAF Flying School in 1938; he attended service schools in both the U.S. and England and speaks excellent English. He is one of the better senior officer golfers in the golf-conscious RTAF and plays almost every afternoon. He has no strong political ties. Mandatory retirement is in 1977.

EXHIBIT 3

SWASDI PONCHAMI, AIR CHIEF MARSHAL

Air Chief Marshal Swasdi Ponchami has been Commander of the Tactical Air Command since 1966 with promotion to ACM on 1 January 1967. He is intelligent, a good leader and well-liked by his fellow officers. He is an excellent pilot, highly qualified and experienced in tactical air operations and in flying both conventional and jet aircraft. His position as Commander of TAC is of considerable military and political significance. Since TAC controls the fighting aircraft of Thailand, ACM Swasdi would play an important role in time of war or in the event of a coup d'etat. He is considered a likely candidate to move up to the position of Chief of the Air Staff. He believes in "Free World" principles but is reported to be not very pro-American. After attending the RTMA, he graduated from the RTAF Flying School in 1936. He is considered an important potential leader in the RTAF, but reaches mandatory retirement age in 1974. He speaks good English and has studied in England and the U.S. including attendance at the USAF ACSC (1955-56). He is handsome, looks much younger than his actual age, and is always well-dressed. He has an agile mind and is friendly and personable.

EXHIBIT 4

PRASONG KUNADILOK, AIR MARSHAL

Air Marshal Prasong Kunadilok has been Deputy Chief of the Air Staff for Operations since May 1967. After attending the RTMA, he graduated from the RTAF Flying School in 1939. He is intelligent, competent, and has above average leadership ability. He enjoys a good reputation and is highly respected by his junior officers. He is not influenced by others. He has the education and experience necessary to perform high level operational and intelligence planning, and will probably advance to higher positions in the RTAF. He is very pro-West. His attitude toward the U.S. and England is good, and he may be counted on to give the U.S. his continued support. He detests Communism and feels the Free World must take stronger military action against it. He speaks good English and has served as an Air Attache in England and attended the ACSC at Maxwell AFB (1953-54). He is very loyal to his country and was with the "Free Thai" during World War II. He is sincere and likes sincere people. He lives a modest type of life at home, which suggests no outside income. Retirement is in 1975.

EXHIBIT 5

PANIENG KANTARAT, AIR VICE MARSHAL

Air Vice Marshal Panieng Kantarat has been Director of Operations of the RTAF since August 1963. After graduation from the RTMA in 1941, he graduated from the RTAF Flying School in 1942. He is competent, exercises good judgment, and is probably destined for high staff positions. His strength as a leader is hampered somewhat by unsureness and slowness in making decisions. He is one of the hardest working staff officers in the RTAF. He is a close friend of ACM Boon Choo. He will never go against the policies or feelings of ACM Boon Choo or ACM Kamol. He is extremely pro-West and extremely cooperative with the U.S. He is even more favorably disposed toward the United Kingdom having served as an attache in England. He has studied in England and the U.S. attending both SOS and ACSC at Maxwell AFB. He is neat, well-groomed, friendly, very courteous, personable and polished, though at times he appears to be aloof. He lives well, apparently having some income from his wife's family.

EXHIBIT 6

PRAESERT HUANGSUWAN, AIR MARSHAL

Air Marshal (AM) Praesert Huangsuwan has been an AM and Chief of Staff of TAC since 1 October 1966. He possesses above average ability as an officer, and is considered to have potential for higher positions in the RTAF. He graduated from the RTMA in 1935 and from flying training in 1936. He is mild mannered, soft spoken, and easygoing. He has attended several schools in the U.S. including the ACSC in 1952. He was very favorably impressed with the U.S. on his visits.

EXHIBIT 7

KAMRON LEELASIRI, AIR VICE MARSHAL

Air Vice Marshal Kamron Leelasiri has been Deputy Chief of Staff of TAC since 1 October 1970. Prior to that he was Commandant of the Flying Training School. After attending the KTMA, he graduated from flying training in 1941. In 1945 he served with the Japanese Flying Training School. His mandatory retirement is in 1980, so he could become prominent in the RTAF. He is industrious, demanding, and an excellent leader. He is respected by his associates and his subordinates. While he commanded the Flying Training School, it was probably the most professional and competently operated organization in the RTAF. He has well over 3000 hours of flying time. He speaks good English and has studied in the U.S. and Japan. He is patriotic and pro-West, and has expressed concern that some of the senior RTAF Marshals are more interested in themselves than in their country. He feels that the USAF Advisory Group is greatly assisting the RTAF, that the RTAF lacks drive and must be prodded, and that, if AFAG departs, the RTAF will "Go to Sleep."

EXHIBIT 8

SOONTORN SUNDRAKUL, AIR VICE MARSHAL

Air Vice Marshal Soontorn Sundrakul has been the Director of Aeronautical Engineering since 1965. He is one of the few non-Academy graduates who has succeeded in the RTAF. He graduated from the University of Washington in 1940 with a B.S. in Aeronautical Engineering and subsequently attended the Oakland Aviation School. He is a well-trained engineer and an expert on aircraft maintenance. Among RTAF officers, there is no one superior to him in his field. He is exceptionally well-qualified for the position he holds, and is reportedly being considered for three-star rank considerably ahead of his contemporaries. His future in the RTAF appears bright. He is pro-West and pro-U.S., but strongly feels that the U.S. should use all available resources to bring NVN to surrender. While attending college in the U.S. at the start of World War II, he was contacted by the Office of Strategic Services (OSS), and he furnished considerable information regarding the Thai people, weather, topography and many other subjects at a time when little was known about Thailand. He served with the OSS throughout World War II, in one case soliciting help from Indian villagers for downed U.S. air crews. He has made a number of visits to the U.S. for various purposes, and speaks excellent English. He is energetic, intelligent, has a quick wit, and possesses excellent leadership qualities. He serves on the Board of Directors of the Thai Airways Aircraft Maintenance Co., Ltd.

EXHIBIT 9

SENIOR OFFICERS OF THE ROYAL THAI AIR FORCE

ACM Boon Choo Chandrubeksa	Commander in Chief
ACM Siri Muangmanee	Vice Commander in Chief
ACM Harin Hongskula	Deputy Commander in Chief
ACM Swasdi Ponchami	Commander, Tactical Air Command
ACM Kamol Thejatunga	Chief of the Air Staff
AM Suan Sookserm	Vice Chief of the Air Force
AM Vongse Thanomkulabutr	Deputy Chief of the Air Staff for Plans and Research
AM Pravat Jiras Atitya	Deputy Commander, TAC
AM Prasong Kunadilok	Deputy Chief of the Air Staff for Operations
AM Presert Huangsuwan	Chief of Staff, TAC
AM Sirichai Watin	Deputy Chief of the Air Staff for Logistics
AM Usah Jayanama	Director of Education and Training
AM Tragool Thavaravej	Director of Medical Services
AVM Montree Harnvichai	Director of Personnel (Acting)
AVM Soontorn Sundrakul	Director of Aeronautical Engineering
AVM Bacharin Suracupt	Deputy Director of Education and Training
AVM Chanya Chunlajata	Commandant, Air Command and Staff College
AVM Prakong Pindhbutra	Director of Armament
AVM Sawai Chuangsuvanish	Director of Intelligence

AVM Panieng Kantarat	Director of Operations
AVM Chalerm Divaveja	Director of Civil Aviation
AVM Choo Suthichoti	Commander of Security Force
AVM M R Serm Sookswasdi	Director of Communications
AVM Kanchai Chandraroung	Director of Administrative Services
AVM Bansha Mekvishai	Commandant of the Air Academy
AVM Korn Kanittanon	Director of Civil Engineering
AVM Phayom Yensoodchai	Director of Air Inspection
AVM Prasit Sukrabaedya	Director of Finance
AVM Ra-Ving Samapunnavanitya	Deputy Director of Medical Services
AVM Ruangchai Kanchanabhogin	Director of Material
AVM Watchara Chutairusm	Director of Welfare
AVM Chupol Balankura	Deputy Chief of Staff, TAC
AVM Noi Panikbutr	Director of Bhumipol Hospital
GC Sansern Vanich	Deputy Director of Administrative Services
GC Dhamnoon Sakhakorn	Deputy Director of Air Inspection
GC Chumpol Padungkit	ADC to Commander in Chief
GC Rachai Phananan	Deputy Director of Personnel
GC Janya Sukontasap	Deputy Director of Intelligence
GC Surayute Nivasabute	Air Attache to Washington
GC Jarus Suruswadi	Air Attache to London
GC Choochoke Na-Nakorn	Air Attache to Manilla
GC Chamlong Punnakitti	Air Attache to New Dehli

GC Watit Holasut	Air Attache to Taipei
GC Prapa Wejpan	Deputy Director of Operations
GC Vera Thaikla	Deputy Director of Material
GC Upatham Sangkhakul	Deputy Director of Finance
GC Chakorn Dattananda	Director of Operations Division, TAC
GC Dakleow Susilvorn	Director of Material Division, TAC
GC Sak Tharechat	Director of Communications Division, TAC
GC Sawai Dhamrupa	Director of Air Ground Operations School
GC Paitoon Toboonme	Director of Air Operations Center
GC Amnuay Skulratana	Director of Don Muang Field Maintenance Center
GC Chote Bhanchareon	Director of Koke Kathiem Field Maintenance Center
GC Boonsom U-Ormsin	Commander, Wing I, TAC
GC Prayute Prachuabmoh	Commander, Wing II, TAC
GC Puchong Hosakrai	Commander, Wing III, TAC
GC Prayad Didyasarin	Commander, Wing IV, TAC
GC Tuantong Yodavudh	Commander, Wing V, TAC
GC Anake Lailert	Commander, Wing VI, TAC
GC Prapan Dhupatemiya	Commander, Wing VII, TAC

APPENDIX II

AIR BASE FACILITIES AND NAVIGATIONAL AIDS

EXHIBIT 1

U-TAPAO AIRFIELD

U-Tapao Airfield, situated within the Sattahip Royal Thai Naval Station complex, is designed to be one of the largest and most modern airfields in Southeast Asia.

Constructed to accommodate the largest military and civilian jet aircraft presently in use, the 11,500 foot long by 200 foot wide runway was completed 5 July 1966.

Work on the field by some 2,000 Thais and 130 Americans began in December 1965 following a careful appraisal by Thai and U.S. authorities of the communist threat to Thailand and to Southeast Asia.

In the future, aircraft using the U-Tapao Airfield will be fueled by hydrant pumping facilities located on the flight line. The main control tower is scheduled for completion in September, and will become fully operational in October. The first of four projected aircraft aprons, each covering 190,000 square yards, has been completed.

This new airfield facility, which can be easily converted to commercial use, will contribute immeasurably to the economic growth of the region and the nation, and will serve as a symbol of cooperation between the nations, Thailand and the United States of America.

SOURCE: Brochure published for dedication of U-Tapao on 10 August 1966.

EXHIBIT 2

NAVIGATIONAL AIDS

TACAN: Operational at Chiang Mai, Takhli, Korat, Ubon, Kamphaeng Saem, Don Muang; Udorn facility being relocated

VOR: Operational at Kamphaeng Saem, Programmed at Chiang Mai, Udorn, Koke Kathiem

VHF DF: Operational at Sattahip and Prachuab

UHF DF: Operational at Chiang Mai, Korat, Kamphaeng Saem; resiting at Takhli

SOURCE: Lieutenant Colonel A. J. Collins, USAF Advisor for RTAF Civil Engineering, Personal Notes, 19 April 1971.

EXHIBIT 3

CONTROL TOWERS

Control Towers:	Operational at Chiang Mai, Takhli, Korat, Ubon, Udorn, Kamphaeng Saem, Koke Kathiem, Sattahip, and Prachuab
Low Frequency Beacons:	Operational at Kamphaeng Saem, Takhli, and Chiang Klang
GCA:	Operational at Kamphaeng Saem

SOURCE: Lieutenant Colonel A. J. Collins, USAF Advisor for RTAF Civil Engineering, Personal Notes, 19 April 1971

[redacted] [redacted]

EXHIBIT 4

FORWARD OPERATING BASES

LOCATION	NAME	RUNAWAY DIMENSIONS (ft)	SURFACE
South East	Chantaburi	3000 x 200	Sod
North West	Chiang Rai	4900 x 90	Asphalt
Central East	Khon Khaen	4450 x 65	Asphalt
Central East	Loeng Nok Tha	9000 x 125	Asphalt
Central West	Lom Sak	3900 x 95	Laterite
Central East	Nam Phong	10,000 x 150	Concrete
North West	Nan	3660 x 122	Asphalt
Central West	Philsanulok	6000 x 195	Asphalt
South West	Phuket	4725 x 98	Asphalt
South West	Songhla	4965 x 65	Asphalt
South West	Surat Thani	2700 x 130	Laterite
Central East	Surin	1370 x 40	Sod
Central West	Tak	4650 x 147	Laterite
South East	Watthana Nakhon	3800 x 100	Laterite

In addition there were many hundreds of small airfields throughout Thailand suitable for helicopter, Short Take-off and Landing (STOL) and light aircraft operations.

SOURCE: Lieutenant Colonel A. J. Collins, USAF Advisor for RTAF Civil Engineering, Personal Notes, 19 April 1971.

[redacted]

APPENDIX III

AC&W SITES

[redacted]

[redacted]

EXHIBIT 1

LONG RANGE RADAR SITE	ESTIMATED OPERATIONAL DATE	SHORT RANG RADAR SITE	ESTIMATED OPERATIONAL DATE
Green Hill	July 1963	Phitsanulok	Operational
Udorn	January 1964	Bangsung	January 1964
Ubon	January 1965	Loei	March 1964
Chiang Mai	July 1965	Mukdahan	January 1965
		Lampang	July 1965

SOURCE: JUSMAGTHAI Fact Sheet, Thailand AC&W System, 15 June 1965

[redacted]

APPENDIX IV

PROFESSIONAL MILITARY EDUCATION

EXHIBIT 1

PROFESSIONAL SCHOOLS

SCHOOL	LENGTH OF COURSE	NUMBER OF CLASSES ANNUALLY	SIZE OF CLASS
Air War College*	10 months	1	20
Air Command and Staff College**	10 months	1	60
Squadron Officers School***	6 months	2	160

*Students divided their time between classes and normal duties so they were assigned RTAF jobs in the Bangkok area

**The honor graduates customarily attended the USAF ACSC and then served on the RTAF ACSC faculty

***Two honor graduates attended the USAF SOS and then served on the RTAF SOS faculty

EXHIBIT 2

PREREQUSITES FOR PROFESSIONAL MILITARY EDUCATION

SCHOOL	GRADE
AWC	Colonel, Brigadier General
ACSC	Major, Lieutenant Colonel
SOS	Captain

Completion of the appropriate school was essential to further advancement. However, female officers did not advance beyond the grade of lieutenant colonel.

EXHIBIT 3

FACULTY OF PROFESSIONAL MILITARY SCHOOLS

SCHOOL	NUMBER OF FACULTY
AWC*	6
ACSC**	12
SOS***	18

*All had university degrees and one held a master's degree.

**All were graduates of the RTAF ACSC, or its U.S. or United Kingdom equivalent.

***Six had attended the USAF SOS. The faculty of the SOS also served as the faculty for the OCS.

APPENDIX V

REORGANIZATION

EXHIBIT 1

REORGANIZATION OF THE RTAF

In mid-1967 a drastic reorganization of the entire RTAF was effected in an effort to bring under control serious problems in the management of RTAF aircraft and personnel and in the provisions of logistic and maintenance support. This reorganization ended the composite squadron approach although the concepts of SAW operations were not changed. Helicopters, FAC aircraft, gunships and airlift support were provided the T-28 squadrons by deployment from parent wings rather than by assignment to these squadrons.

Major effects of the reorganization into seven wings with 14 squadrons were as follows:

(1) Squadron 12, the F-86L all-weather fighter squadron under Wing I at Don Muang RTAFB, was deactivated as of 1 July 1967.

(2) The four tactical composite squadrons assigned to Wing II were reorganized into Tactical Fighter Squadrons and authorized and equipped with a single type aircraft, the T-28. Designations were initially the 20th, 21st, 22d, and 23d Tactical Fighter Squadrons; this was later changed to the 221st, 222d, 223d, and 224th TFSs. Locations were not changed.

(3) Wing VI at Don Muang RTAFB was totally reorganized with Squadron 61 being assigned all C-123 aircraft. Squadron 62, previously assigned T-6 aircraft for Hq RTAF proficiency flying, was assigned all

[redacted]

RTAF C-47 assets except for five at the Flying Training School. Squadron 63 assumed the proficiency flying mission previously assigned to Squadron 62. (T-6 aircraft were replaced in 1969 with T-41 aircraft, which had originally been MAP-provided for use in the Flying Training School.) All helicopters previously assigned to Wing I were assigned to Squadrons 31 and 33 of Wing III at Don Muang. Wing III was subsequently moved to Korat RTAFB in May 1969.

(4) Wing VII, with Squadron 71, became the RTAF's Tactical Air Support Squadron and FAC Training School and was located at Sattahip RTAFB.

[redacted]

APPENDIX VI

RTAF PAY STRUCTURE

EXHIBIT 1

RTAF PAY STRUCTURE

RTAF GRADE	USAF GRADE	MONTHLY BASE PAY IN U.S. DOLLARS
Airman (Conscript)		$ 3
Airman 3d Class (Conscript)		8
Airman 3d Class		34
Airman 2d Class		36
Airman 1st Class		41
Staff Sergeant		52
Tech Sergeant		55
Master Sergeant		58
Special Master Sergeant		69
Pilot Officer	Second Lieutenant	52
Flight Officer	First Lieutenant	69
Flight Lieutenant	Captain	97
Squadron Leader	Major	143
Wing Commander	Lieutenant Colonel	206
Group Captain	Colonel	260
Special Group Captain	Brigadier General	331
Air Vice Marshal	Major General	408
Air Marshal	Lieutenant General	487
Air Chief Marshal	General	572

FOOTNOTES

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2. (S) Report, subject: "Command History," 1966, by United States Military Assistance Command, Joint United States Military Assistance Group, Thailand (USMACTHAI/JUSMAGTHAI) (Command History)

3. (S) Ibid.

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5. (U) Handbook

   (U) John F. Cody, Thailand, Burma, Laos, and Cambodia, (Prentice Hall, 1966)

   (U) N. Farling, A Concise History of Southeast Asia, (Praeger, 1966)

6. Ibid

7. Ibid

8. Ibid

   (U) PACAF CSH Ltr, subject: Project CHECO Report, The Royal Thai Air Force, dated 5 Oct 71

9. Ibid

10. Ibid

11. Ibid

12. (S) Interview, topic: Royal Thai Air Force. With Colonel J. L. Herlihy, Air Force Advisory Group, Thailand, 16 April 1971. Note: All interviews were conducted by Lieutenant Colonel Monty D. Coffin (Interview, Herlihy)

13. (U) Handbook

14. (C) Statement, topic: "U-Tapao Airfield Dedication," August 1966, Biographical File, U.S. Embassy, Bangkok, Thailand

15. (U) Bangkok Post, 26 February 1971

16. (U) Bangkok Post, 28 March 1971

17. (U) Bangkok Post, 1 February through 20 April 1971

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18. (U) Report, subject: "Brief History of the Royal Thai Air Force," Foreign Division, RTAF. The material in Chapter II is summarized from the "Brief History" unless otherwise indicated.

19. (S) Interview, topic: Royal Thai Air Force. With Colonel William S. Miller, Deputy Chief, Air Force Advisory Group, Thailand, 26 March 1971 (Interview, Miller)

20. (C) Biographical Sketch, Air Chief Marshal Swasdi Ponchami, Embassy Files, 1971

21. (C) Ibid

22. (S) Command History 1966, 1969

23. (S) Report, subject: "Developments in Thailand," USMACTHAI/JUSMAGTHAI, Second Quarter, Fiscal Year 1970 (FY 2/70) (Developments)

24. (U) Bangkok Post, 6 April through 10 April 1971

25. (S) Interview, topic: Royal Thai Air Force. With Captain D. R. Ritter, USAF Advisor, RTAF Direct Air Support Center, Phitsanulok, 31 March 1971 (Interview, Ritter)

26. (S) Ibid

27. (U) Fact Sheet, JUSMAGTHAI (1950-1960), 1 September 1969

28. (U) Ibid

29. (U) Ibid

30. (U) Ibid

31. (U) Ibid

CHAPTER III

32. (S) Developments, FY 1/71 and FY 2/71

33. (S) Command History, 1966

34. (S) Developments, FY 1/68

35. (S) Notes, topic: "Royal Thai Air Force," Colonel A. J. Collins, Air Force Advisory Group, Thailand, 19 April 1971

36. (S) Ibid

37. (S) Interview, Miller

(S) PACAF DOON.Ltr, subject: Project CHECO Report, The Royal Thai Air Force, dated 1 Oct 71.

38. (S) Interview, topic: "Royal Thai Air Force." With Major R. N. Henry, Assistant Chief Maintenance Branch, Air Force Advisory Group, Thailand, 19 April 1971 (Interview, Henry)

39. (S) Ibid

40. (S) Report, topic: "V-12 (RTAF)," by Air Force Advisory Group, Thailand, FY 4/62 (V-12)

41. (S) Developments, FY 3/70, FY 4/70, FY 1/71 and FY 2/71

42. (S) Interview, Henry

43. (S) Command History, 1966

44. (S) Command Briefing, topic: Royal Thai Air Force, USMACTHAI, 1 April 1971 (Command Briefing)

45. (S) Interview, topic: Royal Thai Air Force. With Captain Dan Adair, USMACTHAI/JUSMAGTHAI, 29 March 1971 (Interview, Adair)

46. (S) Study, subject: Force Structure, by Air Force Advisory Group, Thailand, 1971 (Force Structure)

47. (S) Developments, FY 1/70 and FY 2/70

48. (S) Command Briefing

49. (S) Developments, FY 3/70

50. (S) V-12, FY 2/72

51. (S) Interview, Ritter

52. (S) Command History, 1965

53. (S) Ibid

54. (S) Fact Sheet, "Thailand AC&W System," 15 June 1965 (Fact Sheet)

55. (S) Command History

56. (S) Ibid

57. (S) Interview, topic: Royal Thai Air Force. With Colonel M. T. Dobbs, Air Force Advisory Group, Thailand, 15 April 1971 (Interview, Dobbs)

58. (S) Command Briefing

(S) Report, subject: "Command Status," June 1969, Hq 7AF, p. A-8

(S) Report, subject: "Command Status," Nov-Dec 1969, Hq 7AF, p. A-12

59. (S) Command History, 1967

60. (S) Ibid, 1966

61. (S) Interview, Dobbs

(S) Report, subject: "Pacific Air Forces (PACAF) Operations Assistance Team Visit, FY 71," 26 February 1971

62. (S) Report, subject: "Charlie Mission Reports," 3 July 1970 through 20 February 1971 (Charlie Mission Reports)

63. (S) Interview, topic: Royal Thai Air Force. With Colonel H. C. Aderholt, Chief, Air Force Advisory Group, Thailand 1971 (Interview, Aderholt)

64. (S) Ibid

65. (S) Ibid

66. (C) Memo for Record, "RTAF Professional Schools," Training Branch files, Air Force Advisory Group, Thailand, January 1971 (Memo, RTAF Schools)

67. (C) Ibid

68. (C) Ibid

69. (C) Ibid

70. (S) Royal Thai Air Force Flying School Pamphlet, Kamphaeng Saen Air Force Base, undated (1971)

71. (S) Interview, Miller

72. (S) Assistance Team Report

73. (S) Force Structure

74. (S) Ibid

75. (C) RTAF Schools. Unless indicated otherwise the source of the material in this section is from the RTAF Branch files

76. (C) Ibid

(S) Developments, FY 3/70

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78. (S) V-12, FY 3/63

79. (S) Ibid, FY 3/64

80. (S) Ibid, FY 3/63

81. (S) Ibid, FY 3/65

82. (TS) CHECO Report, Lucky Tiger Special Air Warfare Operations, Hq PACAF, 31 May 1967 (Lucky Tiger)

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83. (TS) Lucky Tiger

84. (S) CHECO Report, Counterinsurgency (COIN) in Thailand, 1969 (COIN in Thailand)

85. (S) V-12, FY 3/67 and FY 1/68

86. (S) Ibid, FY 3/63, FY 4/63, and FY 1/64

87. (S) Ibid, FY 3/71

88. (S) Ibid, FY 2/71

89. (S) Interview, topic: Royal Thai Air Force. With Major F. D. McMillen, USAF T-28 Advisor, Don Muang RTAFB, 4 April 1971 (Interview; McMillen)

90. (S) Interview, Aderholt

91. (S) Interview, topic: Royal Thai Air Force. With Major John P. Brooks, USAF Advisor, RTAF Squadron 222, Ubon RTAFB, 2 April 1971

92. (S) Interview, Ritter

93. (S) Interview, Adair

94. (S) V-12, FY 1/68

95. (S) Interview, Aderholt

96. (S) Command History, 1965

97. (S) V-12, FY 2/64

98. (S) Command History, 1965

99. (S) Ibid

100. (S) V-12, FY 1/65

101. (S) Command History, 1965

Information extracted from TOP SECRET documents is classified as SECRET.

102. (S) V-12, FY 3/65 and FY 4/65

103. (S) Ibid, FY 3/67

104. (S) Ibid

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107. (S) COIN in Thailand

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113. (S) Developments, FY 2/70

114. (S) Interview, Miller

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123. (S) V-12, FY 3/71

124. (S) Developments, FY 3/68

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127. (S) Command History, 1965

128. (S) Ibid, 1966

129. (S) V-12, FY 4/66

130. (S) Command History, 1966

131. (S) Developments, FY 2/68

132. (S) Interview, topic: Royal Thai Air Force. With Major Prakorb Commander, 71st Tactical Air Support Squadron, Sattahip RTAFB, 14 April 1971 (Interview, Prakorb)

133. (S) Developments, FY 4/68

134. (S) V-12, FY 1/67

135. (S) Ibid, FY 2/68 and FY 4/69

(S) Developments, FY 4/69

136. (S) Developments, FY 4/70

137. (S) Ibid, FY 3/79, FY 1/71 and FY 2/71

138. (S) Interview, Ritter

139. (S) Interview, Aderholt

140. (S) Developments, FY 1/71 and FY 2/71

141. (S) Interview, topic: Royal Thai Air Force. With Captain Amadeo Duran, USAF Advisor, Air Operations Center, Don Muang RTAFB, 19 April 1971 (Interview, Duran)

142. (S) Message U.S. Ambassador to Thailand to U.S. Secretary of Defense, 27 October 1965

143. (S) Command History

144. (S) Developments, FY 1/71

145. (S) Ibid

146. (S) Interview, topic: Royal Thai Air Force. With Major Harold J. Hoffman, USAF Advisor, F-5 Aircraft, Don Muang RTAFB, 14 April 1971 (Interview, Hoffman)

147. (S) Ibid

148. (S) COIN in Thailand

149. (S) Developments, FY 1/70

150. (S) V-12, FY 1/71 - FY 3/71

151. (S) Ibid, FY 3/64, FY 4/64

152. (S) Interview, topic: Royal Thai Air Force. With Captain J. E. Driscoll, USAF Standardization Evaluation Advisor, Don Muang RTAFB, 16 April 1971 (Interview, Driscoll)

153. (S) Interview, Miller

154. (S) Interview, Driscoll

155. (S) V-12, FY 2/68

156. (S) Interview, Aderholt

157. (S) V-12 FY 3/71

158. (S) Developments, FY 3/69

159. (S) V-12, FY 1/70

160. (S) Force Structure

161. (S) Ibid

162. (S) Interview, Miller

163. (S) Force Structure

164. (S) Ibid

165. (S) Charlie Mission Reports

166. (S) Developments, FY 2/70

167. (S) Interview, topic: Royal Thai Air Force. With Captain Gene Syarto, USAF Advisor for OV-10 aircraft, Koke Kathiem RTAFB, 17 April 1971 (Interview, Syarto)

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168. (S) Interview, Aderholt

169. (S) V-12, FY 2/69 and FY 4/69

170. (S) Command History, 1966

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178. (S) Firefly

179. (S) Letter, Air Vice Marshal Chalerm Divavija, RTAF to Chief Air Force Advisory Group, November 1969

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181. (S) Letter, COMUSMACTHAI to U.S. Ambassador, Thailand, subject: Thai B Team Operations, 14 April 1970

182. (S) Letter, George F. Muller, Counselor for Political Military Affairs, U.S. Embassy, Thailand, to Lieutenant General Kriangrak Chomanan, Supreme Command Headquarters, subject: Termination of Firefly, June 1970

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186. (S) Charlie Mission Reports

187. (S) CHECO Report, subject: The Cambodia Operations, 1 July 1970 - 31 October 1970 (Cambodia)

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192. (S) Ibid

193. (S) Interview, Miller

194. (S) Cambodia

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214. (S) Ibid, FY 4/67

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216. (S) Developments, FY 1/71 and FY 2/71

217. (S) Interview, Miller

(S) Interview, Dobbs

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223. (S) Ibid

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226. (U) Newspaper article, subject: "The Indochina War," press interview of Admiral Moorer, Chairman of U.S. Joint Chiefs of Staff, Stars and Stripes, 24 April 1971

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RESEARCH NOTE

The unpublished source materials for this report are recorded on CHECO Microfilm #506.

GLOSSARY OF TERMS

ACM	Air Chief Marshal
ACS	Air Commando Squadron
ACSC	Air Command and Staff College
ACW	Air Commando Wing
AC&W	Aircraft Control and Warning
AFAG	Air Force Advisory Group
AFLC	Air Force Logistics Command
ALO	Air Liaison Officer
AM	Air Marshal
AOC	Air Operations Center
ARPA	Advanced Research Projects Agency
ATTS	Airmen Technical Training School
AVM	Air Vice Marshal
AWC	Air War College
AWOL	Absent Without Leave
BDA	Bomb Damage Assessment
CAF	Cambodian Air Force
CAP	Combat Air Patrol
C-E	Communications-Electronics
CINCPAC	Commander-in-Chief, Pacific
CINCPACAF	Commander-in-Chief, Pacific Air Forces
CINCRTAF	Commander-in-Chief, Royal Thai Air Force
COIN	Counterinsurgency
COMUSMACTHAI	Commander, United States Military Assistance Command, Thailand
CONUS	Continental United States
CPM	Civilian-Police Military
CSAF	Chief of Staff, United States Air Force
CSOC	Communist Suppression Operations Command
CT	Communist Terorist
DASC	Direct Air Support Center
DOD	Department of Defense
FAC	Forward Air Controller
FOB	Forward Operating Base
GCA	Ground Controlled Approach
HQ	Headquarters
IRAN	Inspection and Repair as Necessary

JCS	Joint Chiefs of Staff
JUSMAG	Joint U.S. Military Advisory Group
KBA	Killed by Air
LCC	Logistic Control Center
MACTHAI	Military Assistance Command, Thailand
MAAG	Military Assistance Advisory Group
MAP	Military Assistance Program
MASF	Military Assistance Service Funded
MOD	Ministry of Defense
MTT	Mobile Training Team
NCO	Noncommissioned Officer
NKP	Nakhon Phanom
OJT	On-the-Job Training
PACAF	Pacific Air Forces
POL	Petroleum, Oil, and Lubricants
PSYOP	Psychological Operations
RLAF	Royal Laotian Air Force
RLG	Royal Laotian Government
RTA	Royal Thai Army
RTAF	Royal Thai Air Force
RTAFA	Royal Thai Air Force Academy
RTAFB	Royal Thai Air Force Base
RTARF	Royal Thai Armed Forces
RTG	Royal Thai Government
RTMA	Royal Thai Military Academy
RTN	Royal Thai Navy
RVN	Republic of Vietnam
SAR	Search and Rescue
SAW	Special Air Warfare
SEA	Southeast Asia
SEAITACS	Southeast Asia Integrated Air Control System
SEATO	Southeast Asia Treaty Organization
SECDEF	Secretary of Defense
SOS	Squadron Officer School
STOL	Short Takeoff and Landing

TAC	Tactical Air Command
TACAN	Tactical Air Navigation
TACP	Tactical Air Control Party
TACS	Tactical Air Control System
TAFAG	Thailand Air Force Advisory Group
TFS	Tactical Fighter Squadron
TFW	Tactical Fighter Wing
TO	Technical Order
UK	United Kingdom
US	United States
USAF	United States Air Force
VOR	Visual Omni Range