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REPORT

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Contemporary
Historical
Examination of
Current
Operations
REPORT

SMC

BASE DEFENSE IN THAILAND

[redacted] 18 FEB 73

HQ PACAF

Directorate of Operations Analysis
CHECO/CORONA HARVEST DIVISION

Prepared by:
MAJ BARNETTE
CAPT BARROW
18 FEB 73
Project CHECO 7th AF, CDC

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CHAPTER III

PHYSICAL DEFENSES AND LIMITATIONS

Introduction

An effective base physical defense environment has as its goal four objectives: the detection, detention, and destruction of the enemy; and, of greatest importance, the preservation of vital resources while accomplishing the preceding objectives.

This chapter briefly considers four aspects of physical defenses as they existed in Thailand from 1968 to 1972. First, it examines active defense systems designed to aid personnel in the detection, containment, and response to an enemy intrusion. Then, the chapter details passive defense measures designed to protect personnel and vital resources during an attack. It explores the limitations imposed by natural conditions as well as political and economic constraints on the use of defensive devices. Finally, it briefly discusses some of the specific difficulties and achievements. No effort is made to duplicate concepts discussed in PACAFM 207-25.

Two CHECO reports on base defense concepts and measures in the Republic of Vietnam provide additional information.[123/]

Active and Passive Defense Measures

The first "ring of defense" within the bounds of USAF responsibility was the base perimeter, usually composed of fence lines and other integrated

defenses, all designed to expose the enemy to an increased risk of observation and detection. No base considered itself secure because of an impenetrable perimeter, for as one Chief of Security Police stated: "Fences only keep honest people and cattle out, they don't stop determined sapper squads."[124/]

Perimeter lines at most bases consisted of various combinations of rolls of concertina wire, "tangle-foot" barbed-wire barriers, and, occasionally, chain-link fences. Some bases placed trip-flares among the fences. These had wires which, when distrubed, would trigger the flare. (The figures on the following pages illustrate some of the typical perimeter defense concepts.) All bases (except Takhli RTAFB) had generally adequate lighting on the perimeter fences and several had NF-2 Light-All units to provide additional illumination as backup or in critical areas. Most of the bases had Xenon lights with the capability of lighting several hundred meters with either infrared or visible light; however, not a single base was able to fully utilize these units, either because of maintenance difficulties or insufficient manning. Most installations also had various night observation devices (NODs) such as starlight scopes or the more expensive tower-mounted NODs. Unfortunately, no base had sufficient numbers of these devices to permit visual observation of the entire base perimeter. To further aid in observation, herbicides were employed to assist in the difficult task of vegetation control. Use of these agents was limited by such factors as the ROE and supply problems.

Passive defenses for RAM attacks, such as revetments for aircraft and personnel shelters, differed widely. Aircraft dispersal, another effective passive protection measure, was limited by the severe restrictions on available ramp parking space. POL and MMS areas were likewise provided with what few revetments and whatever dispersal space was possible under the circumstances. Another example of the varied responses of defense planners was "stand-off" fencing. Designed to shield defensive bunkers from an RPG attack, this concept of defense initiated in early 1972 by 7/13AF SP had yet to be fully implemented at base level by June. Indeed, several bases had hardly begun the project.[135/]

A series of reports from the bases to COMUSMACTHAI detailed the multi-million dollar impact of upgrading the physical defenses of USAF/Thai bases since 1968. Also, the first attack caused defense planners to realize that adequate base protection required much more than a few armed sentries with rifles walking posts after dark behind a three strand barbed-wire fence.[136/] However, a fully standardized base defense posture had not yet been attained by mid-1972.

Limitations

Geographic constraints provided many problems in the USAF base defense posture in Thailand. Contiguous population centers at many of the bases severely limited opportunities for both observation and effective counterfire. Further, tropical vegetation aided by seasonal monsoon rains grew almost faster than it could be controlled. Dense jungles were rated as the greatest threat to the defenses at U-Tapao.[137/] Other natural features such as streams

and drainage ditches, known as "klongs," provided concealment and thus were natural points of entry for enemy sappers. Most bases relied on extra illumination to counter the threat in those areas. The extent to which vegetation has been cleared is graphically illustrated in the case of NKP. The photograph of that base on the following page shows the extent of vegetation inside the base perimeters in the early days of construction when the airfield was carved out of virgin jungle. An interesting comparison between NKP 1966 and NKP 1972 can be made by reference to the picture of that base that appears earlier in this report. (See Figure 6.)

Other constraints were imposed by various economic and political considerations. There was a relative scarcity of resources and money which forced defense planners to establish priorities in the areas of the base they were able to defend in depth. Thus POL and MMS areas had to compete with aircraft, which past experience had shown were more lucrative targets.

Local USAF base commanders' emphasis on defense often varied. For example, prior to the June 1972 attack, the base commander of Ubon RTAFB directed that a triple concertina barrier be removed from an area between aircraft revetments and the base perimeter, just 100 meters beyond. The directive ordering the removal of the fence was part of a current "base beautification" effort. This very area became the penetration point for the sapper attack.[138/] Occasionally, higher command also diverted defense resources to areas with higher threat estimates. Barbed-tape, considered the most effective anti-penetration barrier available for use along

perimeters,[139] was scheduled for installation at U-Tapao RTNAF in late 1971. In November, PACAF directed that the tape be held for possible diversion to vulnerable Vietnam bases.[140] Four days after the January 1972 attack, 13AF directed that the tape still at U-Tapao RTNAF be employed in that base's defense.[141] Thirteenth Air Force further indicated that the tape sent to Vietnam would either be replaced or redirected back to U-Tapao.[142]

Construction projects, such as fence barriers, defensive bunkers, and observation towers, frequently had to await the completion of higher-priority civil engineering work orders. The response to this difficulty often was an enormous SP self-help effort. Probably well over 50 percent of all defensive structures in Thailand were constructed solely by security police personnel. Higher headquarters, while commending such vigorous efforts, cautioned the field not to rely exclusively on self-help but to utilize regular Air Force supply and civil engineering channels whenever possible.[143]

The U.S. Embassy's ROE also provided several limitations on physical defenses. The original 1968 ROE prohibited the use of flareships. This was changed in 1969, and flare drops and the use of 81mm mortars were approved for illumination as long as the "trash" didn't impact outside the base. Soil sterilization and herbicide use was also approved in 1969, but these were subject to extensive coordination with local RTG authorities and final permission from the Embassy. They could only be used on areas within the perimeter and under no circumstances could the vegetation control agents be used to clear areas of observation to fire off-base.[144] This lengthy

process, and the inability to go beyond the fences, significantly limited the use of those agents at many bases.[145/]

The 1969 ROE required advance approval of the Ambassador for all "new weapons" introduced into Thailand.[146/] This rule was used to limit the previously-discussed, command-detonated pop-up mines. The Embassy limited their installation to the launcher tubes. The actual mines and detonation circuitry could not be installed until a "Yellow" (or higher) Security Alert Condition was in effect. This stricture led CINCPACAF to cancel the planned use of such mines when several efforts to secure fewer limitations from the Embassy proved unsuccessful.[147/] Finally, in May 1972, PACAF permission was obtained to undertake a limited test of the mines at U-Tapao, subject to the ROE restrictions. CINCPACAF then requested that Headquarters USAF seek greater freedom in their use and directed that no further bases would be armed until the ROE were modified.[148/]

Base Analysis

Korat RTAFB. Vegetation control was a serious problem at this base in 1972, especially in the critical RTAF area near the end of the runway. The dense growth offered opportunity for concealment in the area contiguous to the unrevetted KC-135 parking ramp. Further, vegetation was thick in many sectors of the concertina wire on the perimeter. The base had received Embassy permission to use herbicides and had just begun that program in June.

The perimeter was heavily wired with trip-flares to assist in detecting intruders. Unfortunately, there was no use of NODs despite their availability. Additionally, most of the perimeter observation towers were unusually low and several were set back from the perimeter, thus hindering effective observation of parts of the perimeter lines. Also, in June 1972, the base began the construction of 81mm mortar pits.

Physical protection in the MMS area had the potential of becoming highly effective. Higher towers and adequate fencing surrounded the area; unfortunately, several sections of lights were inoperative because required parts were on back order from supply. Large areas of the defense perimeter were dangerously darkened.[149/]

Nakhon Phanom RTAFB. NKP also had the usual rainy season vegetation problems, but heavy use of herbicides kept the growth under control in the fenced areas. Interior vegetation was usually kept closely cut. Lighting around the straight perimeter was excellent and NF-2 Light-All units were placed at the drainage ditches which went through the fences. High observation towers located close to the perimeter afforded excellent visibility at all points.

As previously mentioned, a limited BPS detection system was installed in 1971 around portions of the outer perimeter fence. Full coverage was planned for late 1972. The aircraft on the flight lines were generally

Fortunately, that posture was not tested.[158/] The greatest remaining problems in June were the inadequate numbers of vehicles and the lack of perimeter lighting.

Ubon RTAFB. In the opinion of the defense personnel at Ubon RTAFB in 1972, the proximity of the perimeter defenses to the primary resources constituted a serious weakness at this base. At the point of penetration in June, the perimeter was less than 300 feet from the AC-130 parking revetments. This area compression limited the effective application of the three-defensive-ring concept and seriously limited the fields of fire. The type of perimeter fences varied; some sections of the fence consisted of two lines of triple concertina wire, while, in other sections, the fence was much less of a barrier.

Lighting on the perimeter was adequate under normal conditions, but heavy rain frequently shorted out large sections of the lights. Back-up Light-All units were in short supply, even during periods of heightened security. Ordinarily, 81mm mortars were available to provide illumination when needed. Unfortunately, observation devices were in short supply, and the base only had 12 NODs available. Four Xenon lights were on the base, but were not used either because the unit or its generator was inoperative, or the special binoculars were not functioning.

A BPS intrusion detection system was programmed for October 1972, and plans had been made to fence the close-in defensive perimeter.

The MMS area, six miles off-base, was defended in-depth with good fighting positions and excellent observation towers. It was probably the most secure MMS area in Thailand.[159/]

Ubon had undertaken a unique approach to solve one of its problems, that of controlling off-base vegetation. The ROE prohibited the use of herbicides outside the perimeter, but Base Civic Action undertook the project of having vegetation cleared 100 meters from the MMS area fence and had additionally contracted with local villagers to clear 150 meters of dense underbrush from around the base perimeter. The project was inexpensive, cleared a wide field for observation, and put money into the local villages, thereby helping to create good will.[160/]

Udorn RTAFB. Udorn City abutted a large area of the base, creating detection problems. The perimeter was also very close to the aircraft at several points, denying the defenders the necessary "battle room" to employ the three-defensive-rings technique. Describing the situation there, the chief of security police stated: "Internal defense is inadequate because of the geographic problems. We are just too small!"[161/]

Deep drainage canals, or "klongs," created further limitations on the detection ability, but a BPS was scheduled for installation in December 1972 to help alleviate some of those problems.

As previously mentioned, a long section of the perimeter was shared with commercial airlines, specifically, Air America and Continental Airways.

This section was not defended in-depth, but fencing and some bunkers were present. More active defense of this sector was planned after July.

The POL area was in a corner of the base next to the town. Several of the fuel storage tanks were less than 100 feet from civilian housing. The MMS areas, both off-base, were very small and vulnerable to attack. The interior munitions were revetted, but the openings to several of the revetments faced the fence, greatly limiting the effectiveness of that protection against a RPG attack.

The flight line area was well revetted, but there was little use of wire fencing to give depth to the close-in defenses.[162/]

U-Tapao RTNAF. Unlike Udorn and Ubon, which suffered from too little battle space, U-Tapao defenses were almost engulfed by territory. Such a massive amount of real estate forced dilution of both people and resources committed to the defense effort. That dilution contributed to the weaknesses demonstrated in January 1972. However, by June, the defense concepts were altered and the main line of resistance was planned around the middle defensive positions. Construction of physical barriers in this region and installation of lighting still lagged. A BPS was scheduled to ring the close-in aircraft area defenses, the MMS area, and the POL site. Pop-up mines had also been approved for those areas.

The base had another unusual problem. There was a Thai village located on the base inside the perimeter. This created difficulties, especially in pilferage control.

Vegetation control was all but impossible over the entire reservation. Vegetation control was further hindered by the inability of the base to get herbicides through supply channels during the entire first half of 1972.

Despite the eighteen and one-half miles of perimeter, U-Tapao possessed only six NODs, and of those, only two were operative. The typical vehicle maintenance difficulties also existed.

Essentially, U-Tapao's defenses were being restructured in mid-1972 in response to the lessons learned during the January attack. The plans had been made and the defense forces were occupied in constructing the physical barriers to prevent another penetration attempt by the enemy.[163/]