HISTORY

OF THE

6994th SECURITY SQUADRON

l January 1968 - 30 June 1968

RCS: AU-D5 (USS-1)

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Tan Son Nhut Air Base, Vietnam

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Commander

a land exhalted with hope and with golden promise toil and suffer and sometimes die in such a remote and distant place. The answer, like the war itself, is not an easy one. But, it echoes clearly from the painful lessons of half a century. Three times in my lifetime, in two world wars and in Korea, Americans have gone to foreign lands to fight for freedom. We have learned at a terrible and a brutal cost that retreat does not bring safety, and weakness does not bring peace; and it is this lesson that has brought us to Vietnam. ...

President Lyndon B. Johnson July 28, 1965

* * * * *



FOREWORD

This history covers the operational activities of the 6994th Security Squadron during the reporting period of 1 January 1968 - 30 June 1968. The histories of the detachments are presented as appendices; however, in some instances the material contained in the basic document is all inclusive. This was necessary to provide the reader with a complete account of the subject/activity.

This history has been presented in three chapters in accordance with the "Revised Format for USS-1 History," published by USAFSS. Appendix I, Sentinel Sara and Compass Dart Operational Summary, was added to present the unit's effectiveness in accomplishing its unique mission. Also included in the appendices is a brief history of the activities of the Airborne Radio Direction Finding Goordination Center (ACC).

This history was prepared primarily from files, interviews and project folders available at the unit. Many of the messages referenced as 6994th Security Squadron messages are quoting other correspondence to higher headquarters. Many of the activities reported were coordinated with local agencies (i.e., MACV, 7th Air Force, 509th Radio Research Group, etc.) in person by 6994th Security Squadron staff personnel and, consequently, may not be fully documented. This could not be avoided.

The research and writing was accomplished by Sgt Odom.

Ml suggestions and comments concerning this history should be directed to the Operations Officer.



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Chapter I

MISSION AND ORGANIZATION

Mission

The mission of the 6994th Security Squadron was to conduct Airborne Padio Direction Finding operations to provide direct support to the Military Assistance Command, Vietnam for the employment of tactical forces against enemy forces. The organisation accomplished its mission through the resources of projects Combat Cougar and Sentinel Sara.

Organization

(U) The 6994th Security Squadron was located at Tan Son Nhut AB, Vietnam. Its subordinate units were Detachments 1, Nha Trang AB, Vietnam and Detachment 2, Pleiku AB, Vietnam. The organization was administratively subordinate to the 6922nd Security Wing, Clark AB, Philippines.

The organization was operationally subordinate to Headquarters, 7th Air Force, Tan Son Nhut AB, Vietnam. However, due to its mission and its inter-service involvement, operational control was generally accepted as being exercised by MACV-J2.



Organizational Changes

Operations From Hue/Phu Bai Discontinued

During mid-October 1966, the squadron established a temporary operating location at Hue/Phu Bai AB, Vietnam. The activity, which consisted of two aircraft (Sentinel Sara and/or Combat Cougar "Z") and approximately 40 personnel, was collocated with the 8th Radio Research Field Station. The activity was tasked with a SIGNIT collection mission in the IMZ area. From activation, the activity was constantly plagued with a lack of logistical support for both personnel and aircraft. Also, the base was quite vulnerable to enemy attack. Due to the extreme importance of the mission, every effort was made to sustain the activity at the location. During late December, mission requirements dicated that an additional collection aircraft be staged to the DMZ area. This requirement was temporarily filled (pending outcome of action underway to place third aircraft at Hue/Phu Bai AB) by placing one Sentinel Sara and one Combat Cougar "Z" aircraft, each, at the Hue/Phu Bai operating location and Pleiku AB, and staging from each location to the DMZ area. On 31 January, following the outbreak of the "TET Offensives, the aircraft and personnel evacuated the Hue/Phu Bai location for fear of its being overrun by enemy forces. After moving to Da Nang AB, then to Mha Trang AB,



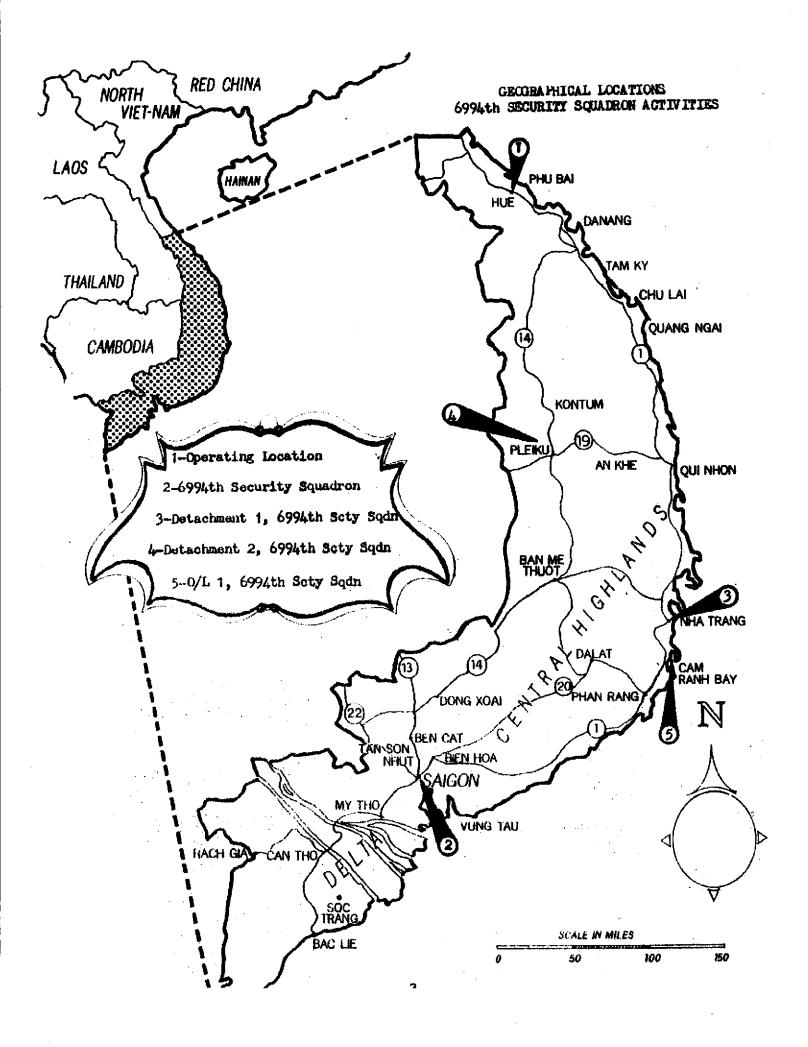
the decision was made to locate the entire effort at Detachment 2, 6994th Security Squadron, Pleiku AB, Vietnam. The 8th Radio Research Field Station immediately launched an effort to secure the return of the 7 activity to Hue/Phu Bai AB. On 16 February 1968, the Commander, 6994th 8 Security Squadron visted Hue/Phu Bai to evaluate the situation. The Commander, in reporting his findings to 7th Air Force, recommended that formalized agreements be negotiated and facilities be provided to support an operation of three aircraft at Hue/Phu Bai. The Commander, 7th Air Force, however, decided not to return the aircraft to Hue/Phu Bai AB until such time as adequate aircraft protection could be provided. The General stated:

"It is posing an unnecessary risk to two-of-a kind aircraft which are not readily replaceable should they be damaged, and the risk of losing such an important resource must be guarded at all times".

Gonsequently, the activity remained at Pleiku AB although valuable target time was being wasted en route to the mission area.

Calibration Site Activated

The squadron aircraft recalibration facility, designated OL-1, 6994th Security Squadron, was activated at Cam Ranh Bay. Although the facility became fully operational on 16 April, initial attempts to recal-



ibrate an aircraft disclosed several problem areas. Host of the problem 11 areas were successfully overcome and aircraft recalibration commenced. By 14 May, three aircraft had been recalibrated, however, on that date the facility became non-operational due to a malfunction in the airborne component. (Document 4 summarizes the activities).

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6994TH SECURITY SQUADRON

Operations Division
Organizational Chart

Operations Officer

ACC
(USAF OIC)

Airborns Operations

Airborns Operations

Airborns Operations

Airborns Operations

Reporting and Evaluation

Sentinel Sara

Standardization/Evaluation

"A" Flight

"B" Flight

"C" Flight



Chapter II

TASKING AND COLLECTION

Tasking

The squadron's Combat Cougar resources were tasked with ARDF and associated collection of VC and PAVN/NVA transmissions. Sentinel Sara aircraft were tasked with collection of PAVN/NVA communications in the DMZ area.

Gollection

Collection Carability

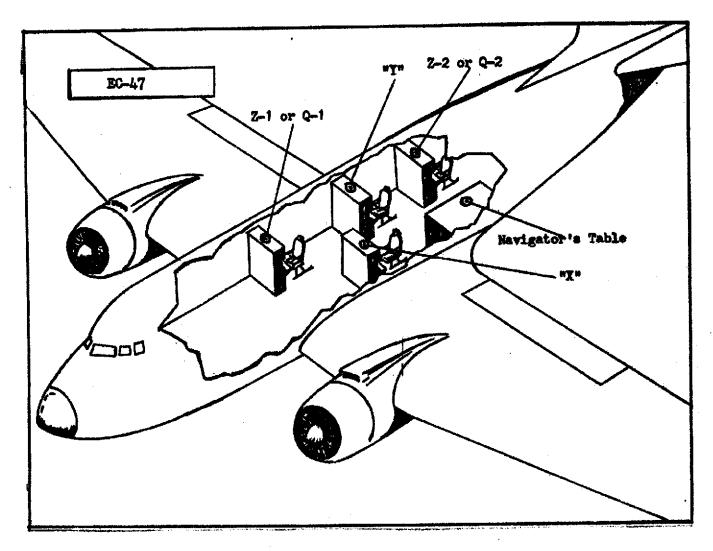
The squadron's collection capability consisted of airborne acquisition, monitor, record, ARDF and active ECM of AM radio signals in the 2-16 MHZ frequently range; acquisition, monitor and record AM/FM radio signals in the 10-260 MHZ frequency range.

Collection Facilities

The squadron's collection facilities were 50 aircraft.

Forty-eight of the aircraft were Combat Cougar EC-47's and two aircraft were Sentinel Sara RC-47's. Twelve of the Combat Cougar aircraft were "Z" configured; five were "Q" configured; and 31 were configured with the basic ALR-34 system (see chart 2). Of the 31 basic system aircraft, twelve were equipped with the necessary wiring for the installation of the "Z"





BASIC CONFIGURATION

X - ALR-34 (ARDF) 2-16 MHZ

Y - HF/HF Receive .5-30 MHZ

"Z" SYSTEM

- X ALR-34 (ARDF) 2-16 MHZ
- Y HF/HF Receive ,5-30 MHZ
- Z1 HF/HF Receive .5-30 MHZ or HF/VHF (AM/FM 10-260 MHZ)
- Z2 HF/HF Receive .5-30 MHZ

Q SYSTEM

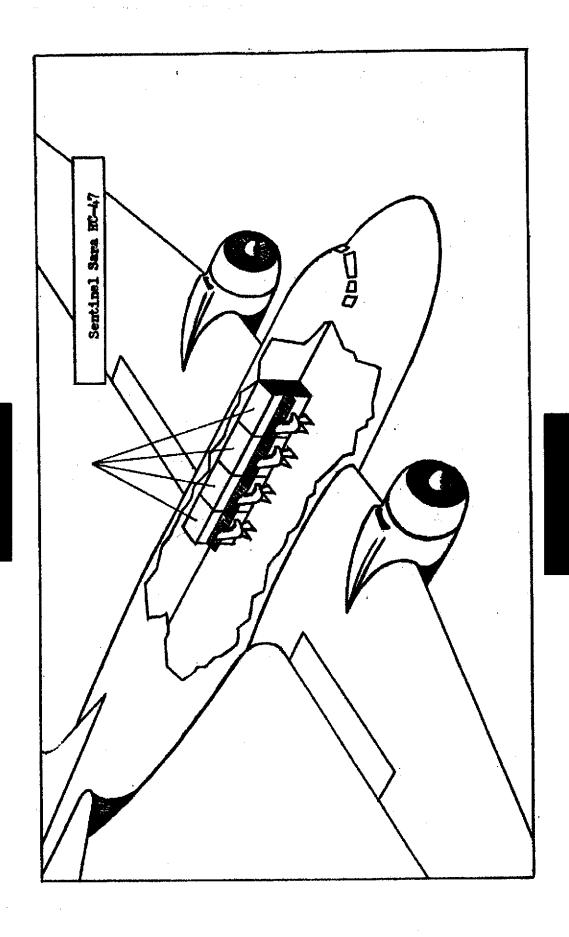
- X ALR-34 (ARDF) 2-16 MIZ
- Y HF/HF Receive .5-30 MHZ
- Q1 HP/HF/HF Receive-COMJAM 2-16 MHZ HF Receive 2-16 MHZ
- Q2 HF/HF/HF Receive-COMJAM 2-16 MHZ HF Receive 2-16 MHZ

system,

The two Sentinel Sara RC-47 aircraft were equipped with four SIGINT collection positions, each (see Chart 3).

Follow-on Aircraft

COMINT aircraft in SEA. On 27 December 1967, the requirement was approved for the additional aircraft within the CCP program. However, on 30 December 1967, MAGV stated that these aircraft should possess an ARDF capability. This change in requirement was made and the additional aircraft were transferred to the TEWS program. Ten aircraft were programmed to be equipped with the AN/ALR-35 ARDF system and collection positions to meet the requirement. The aircraft were to be C-47Q type which have a greater performance capability due to their being equipped with larger engines. The first aircraft was to deploy during late May 1968. Sementh AF, however, was not prepared for the increase in aircraft and stated that the earliest they could support the aircraft would be 30FT69. The decision was subsequently made to allow five of the aircraft to enter SEA as MOA; two of which would replace the present Sentinel Sara aircraft. (The Sentinel 7



follow-on aircraft (43-19029) departed CONUS during June. Tentative plans were to utilize this aircraft for front-end crew training while the disposition of the remaining aircraft was being determined. Those

43-19029	42-24304
43-15204	43-49771
43-30730	43-49 206
45-1133	42-43704
43-49570	45-1131

aircraft scheduled to be deployed under the follow-on program were:

Aircraft Replaced

(U) On 17 April 1968, aircraft 43-49126 was transferred from the 360th TEWS to the 361st TEWS as a replacement for aircraft 44-77016 which 10 was lost on 12 March.

Aircraft Modifications Maintenance/Losses

Two activities that involved a major loss of sirframe availability were the KY-8 wiring modification and IRAN. Also, considerable loss of air-frame availability, and loss of one aircraft, was incurred by enemy actions that inflicted damage to the aircraft and/or equipment. An increase in the capability was realized by installation of the KY-8 system; the installation of two more "Z" systems (bringing the total to 12); and the availability





of additional VHF receivers.

KY-8 Wiring Modification

The remainder of the Combat Cougar aircraft (15) completed wiring modification for the KY-8 system at Itazuke AB, Japan and were subsequently equipped with the KY-8. This particular modification involved 20 aircraft and was accomplished from 24 November 1967 to Pebruary 11 1968.

IRAN Accomplished as Scheduled

Nine aircraft completed scheduled IRAN at China Airlines,
12
Taiwan. The average time required for the aircraft to undergo the activity was 50 days (not including the time required for removal and reinstallation of the back-end squipment). Seven aircraft were scheduled for
14
IRAN during 1 and 2 QF169. Future IRAN was to be accomplished at another
location, which had not been specified.

Aircraft Receive Battle Damage

- Considerable damage was inflicted on the Combat Cougar aircraft during enemy attacks on the air bases. Also, one aircraft was lost and another extensively damaged by enemy AAA fire.
 - Although all four installations housing the Combat Cougar and



Sentinel Sara aircraft came under enemy attack during the TET offensive, only the aircraft at Tan Son Nhut AB were damaged. This damage was not a direct result of enemy action, but was the result of indiscriminate firing by friendly forces during the attack. Nine aircraft were damaged; 14 however, only four received damage to the ALR-34 system. Three of the aircraft had been repaired within 24 hours; one within six days; three 16 within 14 days and the remaining two within 20 days.

On 17 February, an enemy rocket attack on Tan Son Nhut AB in17
flicted damage to eight aircraft. Four of those aircraft were repaired
almost immediately and three more were operational within ten days. One
aircraft, 43-16055, was damaged extensively and had not became operational
by 30 June. The airframe damage was repaired on 9 May 68, but the air-craft
18
remained NOR-S for ALR-34 components.

On 12 April, aircraft 44-77016, from Nha Trang AB, was hit by enemy anti-aircraft fire while flying a mission in area 3. The aircraft was crash landed at Ben Het, a small special forces camp, and later 19 classed as a total loss.

On 24 April, aircraft 43-15979, from Pleiku AB, sustained a hit in the tail section from probable 37MM anti-aircraft fire while flying a 20 mission in area 1. The aircraft recovered at Nahkon Phanom AB, Thailand,

where it remained until repaired and declared operational on 25 June 68.

On 27 February, one aircraft at Tan Son Nhut AB was damaged by rocket fire during an enemy attack on the base. Eight days were required 22 to restore the aircraft to operational status.

On 20 June, one aircraft at Nha Trang AB received heavy shrapnel damage from an enemy rocket attack on the base. Fourteen days were re
quired to restore the aircraft to operational status.

Final "Y" Console Installed

Combat Cougar aircraft 43-45112, the first aircraft assigned to to program, was not wired to receive the acquisition console. During the installation of the KY-8 wiring, the aircraft was wired for the console and on 24 February 68, the console was installed.

VHF Receivers Obtained on Loan

On 25 January, eleven G-175H receivers were received from the 6940th Security Wing on a loan basis (6 Months). The Combat Cougar aircraft were wired to accept the G-175J receiver, which was considerably different from the G-175H. One G-175H receiver was installed (Aircraft 42-24313) to test the feasibility of the installation. The installation required considerable modification to the console; therefore, further

installation was forestalled rending receipt of the programmed G-175J model receivers. The G-175H receivers were retained for use should mission requirements dictate their installation.

KY-8 Malfunctions

During early March the squadron commenced changing over to the KYK-5/KYK-3 automatic keyers for the KY-8's. K rash of KY-8 malfunctions was incurred by this changeover, due to the KYK-3 becoming lodged in the KYK-5. Since the squadron did not have maintenance authority for the KYK-5, the units that malfunctioned were shipped to Det 4, AFCD for 26 maintenance. This action resulted in a shortage of KYK-5's. USAFSS sent a TDY team to the squadron to investigate the situation. The problem was readily identified and maintenance technicians instructed on the proper adjustment methods to improve the situation. The TDY team 27 also visited Det 4, AFCD to discuss the problem with their technicians. Locally, the operators were instructed on the procedures to follow when a KYK-3 became lodged in the KYK-5, to preclude damaging the unit.

FM Transmitter Interference

Commencing during mid 1967, the Combat Cougar and Sentinel Sara aircraft were equipped with a secure voice communications system. This system was comprosed of a KY-8 utilized with an FM-622 transceiver for



FM-VHF communications, or an AN/ARC-136 transceiver for AM-UHF communications. When keyed, the FM transceiver produced serious interference on the ALR-34 and acquisition positions. The interference, which affected both the visual display and the audio level, varied in degree from complete blockage to minimal interference. For all practical purposes, it Since the FM rendered the equipment useless during FM transmissions. was utilized extensively for mission support, a considerable reduction in mission effectiveness was incurred by this interference. Similar interference was generated by the ARC-136; however, it appeared to be of less intensity. The ARC-44 FM transceiver, which the FM-622 replaced, created interference of neglegible intensity. This set was not, however, compatible for use with the KY-8. The problem was cited to USAFSS during September 1967. In January 1968, the squadron executed a check of the degree of interference by position, by frequency at 5 MHZ intervals, in response to request by USAFSS. A replacement blade antenna kit was expected to improve the situation. This kit had not been received, FM Transmission Intercepted by TV

On 25 April 68, an FM transmission was picked up by a TV set in an EM barracks at the An Khe DSU. The plaintext transmission which stated:

"We have a U/I no C/SS on 47..", appeared to be a ground to air tip-off.

However, since a Detachment ! aircraft had been working with the station at An Khe earlier, and the circumstance surrounding the incident was extremely vague, the rossibility of the transmission having been originated by the aircraft was considered. The point of concern was that the operator who originated the transmission could have initiated the communication by a KY-8, with all indications that he was transmitting in cipher text. As a result of the incident, a technician from Detachment 4, AFCD was dispatched to Nha Trang AB to check out the KY-8 of the aircraft in
35
volved. The transmission of 25 April was subsequently determined to have 36
been a transmission error by an Army radio-telephone operator. The AFCD technician did, however, determine that the aircraft in question possessed malfunctioning aircraft intercomm equipment that could conceivably allow intercomm conversations to be transmitted. As a consequence, all aircraft within the Combat Cougar inventory were thoroughly checked.

Special Collection Projects

<u>USAF ARDF Activities - Thailand/Laos</u>

As early as August 1966, increasing communist activities in Thailand, the communists' use of Laos to infiltrate into both Thailand and South Vietnam, and continuous possibility of communist terrorists attacks against U.S. airfields/installations in Thailand prompted requests

for ARDF support. Three distinct requirements were brought to light in the ensuing discussions:

- 1. # CAS/MACTHAI requirement for ARDF coverage of central Laos and the contract of the coverage of the central Laos and the coverage of the central Laos and the coverage of the central Laos and the
- 2. A MACV requirement for continuing ARDF coverage of the Tiger Hound and Steel Tiger areas of Laos.
- 3. A 7/13th AF requirement for ARDF support in panhandle Laos and the Barrel Roll region of Laos.

Several deviations occured in the specific requirements 40 for ARDF support. Some of a temporary nature were met. However, the basic requirements were considered to remain in existence. The original CAS/MACTHAI requirement was partially satisfied by the placement of three U.S. Army U-S ARDF aircraft at Udorn during late 1967. Combat Cougar ARDF aircraft from Detachments 1 and 2, 6994th Security Squadron continued to provide partial ARDF surveillance of the MACV areas of Laos. However, the 7/13th AF requirement was not met.

USAF DSU in Thailand Proposed

On 23 January 1968, 7th AF, in a message to DI, PACAF, cited the continually increasing 7/13th AF requirements for ARDF support in Laos,

the USAF attempts to develop/enlarge an ARDF/SIGINT data base on the MVN L1 infiltration system in Laos, and the problems hampering their effort.

In addition to an insufficient number of "Z" aircraft of facilitate their utilization to assist in developing a data base, the absence of a DSU to support the area was also pointed out. Since the primary interest was USAF's and the data was to be used for USAF targeting, it was proposed that a USAF DSU be established. Also, it was suggested that sufficient programmed ARDF resources be scheduled to meet this requirement. In summary the message stated:

"... These requirements are designed to increase the base for 7/13th AF target recommendations and to enlarge their existing capability to provide warning of impending enemy military actions in Laos as well as threats against USAF forces based in Thailand. In light of these requirements, we believe that the best utilisation of Compass Dart Z or similarly configured follow-on platforms would be basing a limited number of such aircraft in Thailand for exclusive use over Laos. ... Further, request your consideration of our proposal for a USAFS5 DSU in Thailand. Such a facility, particularly if located at Makhon Phanom, would serve in direct support of Air Task Force and through direct land-line, to both 7th and 7/13 AF". ..

On 11 February 1968, DIO, 7th AF requested that the 6994th
Security Squadron provide preliminary suggestions and views regarding the

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proposed DSU to be presented to AFNIN and PACAF. A baisc concept was 43 prepared. By 28 February 1968, a complete concept of overations had been developed by 7th AF through coordination with the 6994th Security Squadron and was forwarded to PACAF. This concept also outlined actions that had been undertaken by 7th AF to improve the ARDF/SIGINT effort in Laos during 44 the interim period. In response AFSSO PACAF, although recognizing the 45 obvious benefits of the proposal stated:

"... Careful review of MACV's recent single analysis organization and their joint service arrangements now in being will show probability of a unilateral Air Force ARDF/SIGINT analysis unit is remote."

PACAF further suggested that to preclude interservice rivalry and in the interest of getting the job done the best approach would be to join in the work to be done. Views regarding integrating USAF processors into 46 field processing sites were solicited. Meanwhile, USAFSS voiced full agreement with the proposal and outlined the support that they could provide with 90 days notice.

Since the groundwork had been laid for future developments, correspondence on the subject diminished until late March when the 6994th Security Squadron proposed that USAFSS negotiate with USASA to organize



one or more joint processing facilities to be manned with existing authomas. The 6994th Security Squadron offered to provide 12 analysts from their existing resources. That action was prompted largely by indications that MACV had decided to equip the 12 remaining group "A" aircraft with "Z" positions and the Army's inability to process the current volume of traffic. This proposal was in line with PACAF's recommendation regarding the proposal to establish a USAF DSU (see above).

Combat Cougar Deploys to Thailand

On 9 January 1968, JCS approved a CINCPAC request for authorization to conduct ARDF operation over Laos in support of an urgent CAS/49

MACT requirement. To fullfill this requirement, arrangements were made for the Combat Cougar coverage in MACV Area One to be replaced by two

MACT U-8's to be staged from Nakhon Phanom. The freed Combat Cougar air50

craft would then deploy to Udorn to meet the MACT requirement. The coverage was requested to support Site 85 (Barrel Roll Area, vicinity 20-00N/51

103-00E) which was in imminent danger. The Combat Cougar aircraft was scheduled to provide coverage for a two week period commencing 11 March 52

68. However, Site 85 was overrun by enemy forces on 9 March and the requirement was switched to Site 36 (Barrel Roll Area, vicinity UH 4110).



The first mission was flown in support of Site 36 on 14 March 68. On 22 March, at the request of MACV, the two U-8 aircraft were returned from Area One and replaced the Combat Cougar aircraft providing coverage for Site 36. Representatives from MACV-J2 stated that they terminate the 55 Combat Cougar support because:

",...We cannot afford the loss of coverage in Area One".

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In subsequent reporting of the activity to CINCPAC, MACV stated:

"The MACT U-8 aircraft operating in MACV Area One flew 49 hours time over target and obtained only six fixes, all of which were unidentified. These results are unsatisfactory, since MACV aircraft operating in this area usually average 12 fixes per sortie, three of which are identified."

In summarizing the MACV (Combat Cougar) support to MACT, MACV stated:

"From the ARDF operations point of view MACV ARDF sorties flown in support of Site 36 were considered to be extremely satisfactory. Forty-two fixes were obtained during 26 hours time over target. However, only one of the fixes was identified fixes reflects the limited tech data base available on the targets in the operating area".

The MACT (U-8) support to Site 36 was discontinued on 29

March after one of the aircraft encountered ground automatic weapons
58

fire in the area. CAS Vientians requested immediate reinstatement of
59

the coverage, which CINCPAC approved. Since the Combat Cougar coverage



was desired, MACT and MACV arranged for a Combat Cougar aircraft to again be replaced by two MACT U-8's. The U-8's were to be staged from Da Nang. This would enable them to obtain tech surport and effect crew 60 interchange with the aviation commany there. The Combat Cougar aircraft was deployed to Udorn for the period 3-16 May. This period was subsequently extended until 1 June at which time the MACT U-8's returned to Udorn to assume the support until 1 July. CAS Vientiane desired that 62 the support be continued. However, CINCPAC stated:

"While the desirability of comprehensive Laos-wide ARDF coverage is recognized, there are not sufficient assets within CINCPAC to provide coverage on a continuing basis below 19 degrees North latitude, but flights above 19 degrees restricted to a case-bycase basis".

Technical Support Assistance Proposed

On 16 May 68, USAFSS issued a proposal that an effort to further develop the data base support for ARDF operations be made through 63 use of USAFSS resources to augment U.S. Army (ASA) resources. Detachment 4, 6922nd Security Wing facilities could support the increase in personnel and the 6994th Security Squadron could provide the personnel 64 from its current resources. However, the plan was viewed with limited skepticism, since it could possibly have an adverse effect on the efforts

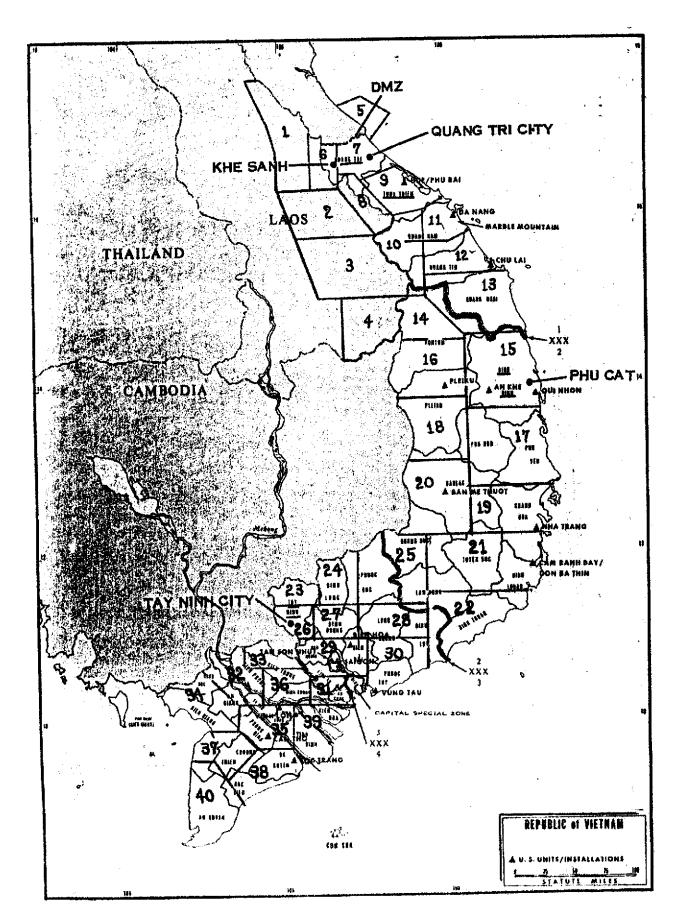


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underway to establish a USAFSS DSU in Thailand. Also, continuous improvement in the target identification rate had been reflected during the second deployment of the Combat Cougar aircraft to Udorn. While providing USAFSS with the information requested relative to their proposal, the 6922nd Security Wing suggested that a more feasible solution to this problem was to establish a Technical Support Assistance Team 66 (TSAT). The TSAT would develop proficiency in technical support functions. The TSAT would accompany the deployed airborne operation to assist in the preparation of flimsies, cherry sheets, post mission reporting, etc. The TSAT would support the Combat Cougar mission requirements and assist the ASA analysts with analysis and preparation of technical support.

Cambodian RT Intercept - Project Simone

During December 1967, a requirement was generated for an airborne intercept platform to attempt to prove or disprove suspected overflights of SWN by Cambodian tactical aircraft. MACV refused to utilize Sentinel Sara or Combat Cougar resources for the project (which was designated "Simone") due to their high priority mission commitments. The U.S. Army's Ceflien Lion attempted the mission; however, MACV also removed them for a higher priority mission. The 6994th Security Squadron was highly desirous of securing this mission for USAF resources and, after



formal tasking was denied by MACV, made plans to conduct an informal
67
hearability test. The plan failed to materialize due to USAFSS denying
the squadron the loan of a qualified French-Cambodian linguist. Their
denial was based on an immending attempt by the U.S. Army to intercept
68
the suspected communications from a ground site on Nui Ba Den mountain.
This test was subsequently conducted for a two-week period, but did not
yield reflections of the activity. The Phom Penh tower was easily moni69
tored by the facility. On 6 June, the 6922nd Security Wing suggested
that indications of a change in the posture of the Cambodian Air Force
warranted renewed emphasis on-securing the Cambodian air mission for
70
Combat Cougar. However, when approached on the subject the 7th AF replied:

"In light of current relationships with Sihanouk, 7th AF DI is not concerned with any alerts, border patrols, or other activity mounted by the Cambodian Air Force".

"Seventh Air Force will not, therefore, make any overtures to MACV for the purpose of diverting any ARDF resources, time, or positions to the Cambodian air problem".

SIGINT Support of Muscle Shoals

During December 1967, the squadron was tasked with collection of SIGINT data in support of the Dye Marker/Muscle Shoals

25

program in the areas of major infiltration activities. The ultimate mission was to assess, through SIGINT, enemy awareness of, reactions to, and 72 countermeasures to the anti-infiltration barrier system. From early December 1967 until early January 1968, daily "Z" missions were flown in MACV Area One for that specific purpose. Also, the missions in Area Six and Seven were alerted to the mission. The traffic collected was dropped off at Hue/Phu Bai for processing. Negative reflections of any enemy awareness to the system were noted. However, the intelligence collected was extremely valuable to the project. No direct SIGINT support was provided the project, only the indirect support provided through the intelligence reports issued by USM-808 from data collected by the missions.

This proposal did not material75
ize due to the absence of a suitable receiving facility. The proposal to
establish an Air Force DSU in Thailand was directly related to this activity (See above).



Radio Telephone Collection

The collection (or lack of collection) of radio telephone communications was an item of continual concern. Prior to December 1967, the only
82
RT collection effort in SVN was being conducted by Sentinel Sara aircraft in
the DMZ area. Two major factors were restricting the RT collection effort:
a USAFSS-wide shortage of trained linguists and a lack of VHF intercept equip83
ment in the Combat Cougar aircraft. Too, it had not been established that the

enemy was utilising sufficient RT communications to justify a greater effort.

During early December 1967, the squadron added a VHF capability to all "Z"

84

configured aircraft at Detachment 2. The linguist capability was also increased by additional TDY personnel from the 6990th Security Squadron. Although this effort was launched as support for project Dye Marker/Nuscle

85

Shoals, it did mark the first major RT collection effort by the squadron.

A subsequent PCS influx of linguists enabled the squadron to conduct hearability tests in some other areas. These tests, however, yielded negative

86

results and the only source of RT continued to be from the IMZ area. During

late June, the "B" band (60-260 MHZ) tuners in the G-175J receivers were replaced by "E" band tuners (10-30 MHZ) and "A" band tuners (30-90 MHZ). The

addition of this HF FM capability, provided by the "E" band tuners, facilitated

87

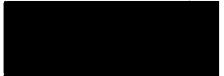
the intercept of RT communications below 30 MHZ that were tentatively identified as RIXX communications.

Use of Active ECM Imminent

During early January 1968, indications were that MACV J3 would, in all probability, implement their EW OPLAN 1-68, which could result in the 38 jamming of tactical communications. The situation became more serious with the beseiging of Khe Sanh, and the employment of the "Q" system aircraft in an

system aircraft to Detachment 2; therefore, the detachment was instructed to utilize factory-trained "Q" operators in the prospective target areas (MACV Areas 6, 7, 9, 11 and 12). The squadron also took follow-up action on pending modification to the "Q" consoles which had been submitted during November 1967.

90
General Westmoreland, however, decided not to employ the system and directed that it be retained in a constant state of readiness.



Charter III

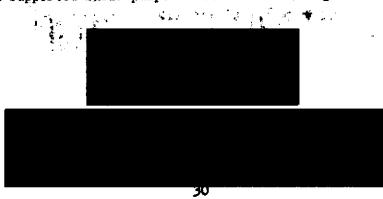
PROCESSING AND REPORTING

Processing

The squadron's processing mission consisted of the phases: airborne analysis of the traffic externals for target identification, and cursory analysis of messages for selection of exploitable and readable systems for air/ground transmission; and ground analysis, which consisted of a more detailed analysis of the traffic for further identification and message extraction. The processing effort was on a very small scale due to the limited availability of technical support documents. This effort did, however, contribute significantly to the SIGINT mission since the analysts occasionally developed data that significantly supplemented the Army's analysis effort. Forms and records were maintained, as necessary, to accomplish reporting requirements and resource managerial duties.

Airborne Analysts to be Replaced

Since the advent of the Sentinel Sara collection effort and the later addition of the "Z" capability to Combat Cougar aircraft, the utilization of the airborne radio intercept analyst had been under fire. The squadron had supported their purpose and was attempting to secure additional





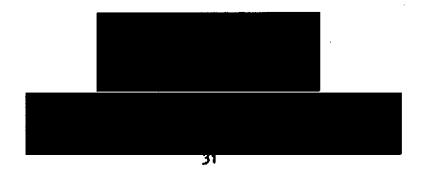
authorizations for #202XO manning. During September 1967, USAF made the decision to replace the A202XO personnel with A292X1 personnel. The squadron, although maintaining that a valid requirement for A202XO rersonnel existed, conceded that a trained A292X1 could accomplish the basic duties rerformed by 2 the A202XO while airborne. On 20 May the squadron advised the 6940th Technical Training Wing of the approximate training requirements for the 292X1 personnel. On 26 May, the squadron initiated a request for the 6940th to provide a TDY 4 team to visit Tan Son Whut AB to gather training data. This request was forwarded to PACAF for approval on 18 June. The team was expected to arrive at the squadron during early July.

Reporting

The squadron's reporting mission consisted of: (a) air/ground reporting of ARDF fix data; (b) Position Status Reporting; (d) Master Program change actions; (e) ARDF Recovery Reporting; (f) USAF Daily SENSOR Reporting; (g) Sentinel Sara Weekly Operational Summary Reporting; and (h) Electronic Warfare Daily Operational Management HILITE Reporting.

SENSOR Reporting Requirements Eased

On 21 February the 6922nd Security Wing informed the squadron of AFSSO PACAF's deletion of their requirement for the Daily SENSOR Report.



The report received by PACAF was issued by 7th Air Force, DIOW, from information provided in the 6994th Security Squadron Daily SENSOR Report. Coordination with 7th AF established that the SENSOR was still needed by their Head-ouarters for local staff briefings. The content requirement for the report was, however, reduced considerably.

Sentinel Sara Weekly Operational Summary Modified

During April, NSAPACREP, Vietnam tasked the CMA's with publishing a weekly summary of the activities of all airborne collection platforms, 7 including ARDF aircraft. This report provided interested agencies with an appraisal of the type coverage afforded a MACV area, the data collected, and 8 the intelligence reports generated from the data. Since the report was distributed to most recipients of the Sentinel Sara Weekly Operational Summary, the scuadron requested that the distribution, of the letter be expanded to include all addressees of the Sentinel Sara Summary, and the summary be disconguinted. The Airborne Collection Platform Weekly Report did not, however, fill PACSCTIRGN's requirements. They, therefore, requested reinstatement of the 10 Sentinel Sara Summary. The report continued to be issued, but those areas adequately covered by the Airborne Collection Platform Weekly Report were omitted. Direct Forwarding of ECME to USAFSS Implemented

During early December 1967, USAFSS approved direct forwarding

of DOMR HILITE Reports to their headquarters. The 6994th Security Squadron 11 was excluded from this procedure; however, during mid January the possibility of expanding the procedures to include the squadron was discussed. The 6922nd Security Wing suggested that the implementation be forestabled for 30 days while 12 existing draft instructions could be published in final form. The direct forwarding became effective during March.



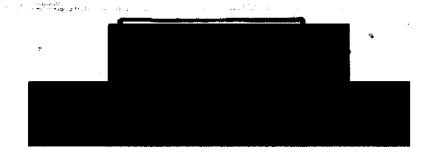
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- 2. Msg, CSAF 02176Z Mar 68.
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- 21. Det 2 6994th Scty Sqdn, Position Status Report Nr. 144, Dtg 251348Z Jun 68,
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- 29. Msg, 6994th Sety Sodn to PacSetyRgn, OPS 111115Z Jan 68.
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- 34. Msg, 6994th Scty Sodn to 6922 Scty Wg, OPS 280807Z Apr 68.
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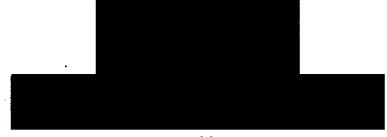


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- 63. Msg, PACSCTIRGN to 6922 Sety Wg OPS-A Dtg 172100Z May 68 quotes USAFSS TDC 162248Z May 68.
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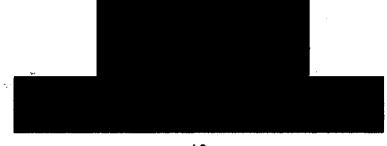
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Chapter III

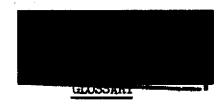
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A

AB

Air Base

ACC

Airborne Radio Direction Finding Coordination Center

4 F

Air Field

AFCD

Air Force Cryptologic Depot

AFSSO

Air Force Special Security Officer

ALR-34

Airborne Radio Direction Finding System (Compass Dart)

ARDF

Airborne Radio Direction Finding

ASAP

As Soon As Possible

B

BC

Body Count

BDA

Bomb Damage Assessment

C

CAS

Controlled American Source

C&D

Continuity and Development

CINCPACAF

Commander-in-Chief, Pacific Air Forces

CONUS

Continental United States

CSAP

Chief-of- Staff, U.S. Air Force

CTS

Close Tactical Support

D

DMZ

Demilitarized Zone

DODSPECREP

Department of Defense Special Representative

DSU

Direct Support Unit

B

Electronic Counter Measures

EW Electronic Warfare

F

FFV (II) II Field Force, Vietnam

FM Frequency Modulation (Used in reference to FM-622

transceiver)

H

HF High Frequency

Ī

IRAN Inspect and Repair as Needed

<u>J</u>

JCS Joint Chiefs-of-Staff

ĸ

KIA Killed in Action

KWM-2 HF Transceiver (nomenclature)

KY-8 Radio Telephone Encryption System (nomenclature)

KYK-3 KY-8 Automatic Keyer (nomenclature)

KYK-12 KY-8 Manual Keyer (nomenclature)

L

LOP Line of Position

М

MACTHAI U.S. Military Assistance Command, Thailand

MACV U.S. Military Assistance Command, Vietnam.



MAF, III

3rd Marine Amphibious Force

N

NRV

National Security Agency, Pacific, Representative, Vietnam

NVA

North Vietnamese Army (same as PAVN)

2 1 -

PACAF

Pacific Air Forces

PAVN

People's Army, Vietnam (same as NVA)

Q

иQи

HF Search/Comm Jam Position

R

RPP

Radio Finger Printing

RRB(N)

Radio Research Battalion

RRC

Radio Research Company

RRD

Radio Research Detachment

RRFS

Radio Research Field Station

RRG

Radio Research Group

<u>S</u>

SSLO

USAFSS Liaison Officer

SVN

South Vietnam



I

TEWS

Tactical Electronic Warfare Squadron

Ų

USARPAÇ

U.S. Army, Pacific

UMD

Unit Manning Document

USASA

U.S. Army Security Agency

Y

AC

Viet Cong

X

n Xn

ALR-34 Console

I

нүн

Search/Acquisition Position

Z

11Z11

Phase III Compass Dart Position or Aircraft

1/00

11/11/12 5910

PRICRITY.

d466798

6994TH SCTYSQ

USH-808 (ATTN LTCOL GARRANT)

DET 2, 6994TH SCTY SQ (ATTN CAPT PORTER)

Subj. Deployment to PHU BAI OPS JAN 68.

- REF TELECON BETWEEN LICOL GARRANT AND LICOL EVANS THIS DATE.
- 2. SEVENTH AF IS AGREEABLE TO PLACING A THIRD ACFT INTO PHU BAI AS SOON AS IT CAN BE ASSURED THAT THEY CAN BE OPERATED SAFELY UNDER EXISTING CONDITIONS. LITCOL ALBERS HAS BEEN TASKED WITH MAKING THIS DETERMINATION. IN THE MEANTINE WE ARE OPERATING ONE SS AND ONE COMPASS DART Z ACFT OUT OF PLEIKU INTO AREA SIX GIVING YOU EIGHT HOURS OF DAILY COVERAGE. WE HAVE ALSO PLACED EXPERIENCED SS CREWS ON ACFT 254 WHICH HAS AIREADY SHOWN AN ADDREASE IN PRODUCTION. FEEL THIS WILL ACCOMPLISH YOUR REQUIREMENTS UNTIL A THIRD ACPT CAN BE PLACED AT PHU BAI. ANY ASSISTANCE YOU CAN LEND TO IMPROVING FACILITIES WILL NO DOUBT EXPEDITE THIS ACTION. REQUEST YOU HAVE COL WILSON ADVISE 7AF DO, INFO 7AF DOOR AND 6994SCTYSQ IF ADROUATE SPACE IS AVAILABLE AND IS ALLOTTED TO HANDLE THREE ACPT AND/OR WHEN IT IS AVAILABLE.

11

JAN

68

3806

LtCol Evans

KELVIN E. EVANS, Lt Colonel, USAF Operations Officer

26 Feb 68

ONUL

Cirs

Trip he ort (inu bal)

7th AP (DI)

N \$406799

But was to determine the extent of mission degradation regulating of From redeployment of Sentinel Sava (2) and Compass Dart 2 (1) aircraft to Plaim.

- 2. Background: Until recent evacuation on 31 Jan 68, Sentinel Sara, formerly Drill Press, aircraft have for the past 16 months operated from the airfield at Phu Bai. The aircraft yere originally deployed on a 120 day test on an informal basis. That is, no support agreements were formalized. Billeting, messing, transportation, and technical support was furnished by 8th Radio Associate field Station. The Marines supplied fuel and very limited support for the aircraft. East space was a magging problem and aircraft were often parked in rand or dust. Revetments were never built. The aircraft were withdrawn to Pleiku 31 Jan 68 while base was under at the fear that 1t probably would be overrun.
 - 3. The collecation of the crews and aircraft with the data base had proved to be a profitable one. Back-end crew training period could be shortened, proficiency increased, and motivation improved by working directly with the ground station analysts and operators. The resultant data collected by the Sectional Sara and Compass Bart 2 configured platforms has been exceptionally high quality of which about 90% was unique. Moreover, upon taking off from the Bai the aircraft was in the target area and therefore guaranteeing maximum utilization of aircraft and error, compared to approximately 50% deadhead time when operating from Picilius.
 - 4. The Operations Division of the 8th Radio Research provided justification from a purely collection and timely processing point of view along with statistics to support the return of the sircraft to Phu Bai. Because of classification this message is on file in DION and is available at your request. The Commanding Officer, Colonel Manderly, clearly expressed his desire that crews and sircraft return and promised billeting, message and transportation support. In asseming the threat to the sircraft Col Manderly was quick to point out that no circraft has sustained any damage from enemy action while on Phu Bei airfield.

- 5. Conclusions:
 - a. The mission has suffered considerably as a result of the serve.
 - b. Reasonable logistic support can be expected from 8th Radio Mose such.
 - c. Revoted ramp space is needed.
- d. With the aircraft reveted they would be no more vulnerable than at any other base in South Viet Nam.
- 6. Recommendations:
- A. That support agreements be negotiated with both Army and Morinee to include immediate provision for PEP ramp space and bardened revetuents for three aircraft.
- b. That crows and aircraft be returned to Phu Bai to operate under control of 360th TEMS and 69,4th Sety Sq respectively as soon as agreements can be worked out.

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WYHAR R RELIDERS, Lt Col, USAF 1 arch 1501, IAPVIS 3/ALR 8030 066 (Acculated in 7th AF (DIOW)

Copy to: 7th AF (DIOW)

ROUTINE

02/0805 2 MAGE DESTION

6994SCTYSO

DET 2 6994SCTYSO

d4d9200

OPS MAR 68.

SUBJECT: RETURN TO HUE PHU BAI OF SENTINEL SARA.

GEN MOMYER MADE THE DECISION YESTERDAY THAT SENTINEL SARA WAS NOT GOING TO BE LOCATED BACK TO HUE PHU BAI UNTIL SUCH TIME AS ADEQUATE AIRCRAFT PROTECTION CAN BE PROVIDED. THE RATIONALF WAS THAT SINCE TIME OVER TARGET WOULD NOT BE INCREASED TO ANY GREAT DEGREE BY DEPLOYING TO HUE, IT IS POSING AN UNNECESSARY RISK TO TWO OF A KIND AIRCRAFT WHICH ARE NOT READILY REPLACEABLE SHOULD THEY BE DAMAGED. THAT THE RISK OF LOSING SUCH AN IMPORTANT RESOURCE MUST BE GUARDED AT ALL TIMES. GEN MONYER REACHED HIS DECISION EVEN THOUGH IT WAS POINTED DUT THE CREW TIME BEING EXPENDED AND THE MANNING PROBLEMS INVOLVED. HE REASONED THAT THOUGH THE THREAT WAS NO LESS AT PLEIKU, THE AIRCRAFT ARE REVETTED THERE AND ARE OFFERED SOME PROTECTION.

2. IN VIEW OF THE ABOVE REQUEST YOU TAKE A GOOD LOOK AT THE POSSIBI-LITIES OF AN EXTENDED OPERATION OF THE SENTINEL SARA MISSIONS OUT OF 2 YOUR STATION FOR AN INDEFINITE PERIOD. THE MANNING PROBLEMS WILL BE MAR

68

LT COL EVANS

3706

· KELVIN E. EVANS, Lt Colonel, USAF Operations Officer

CIOUS Liment agreement	RESERVED FOR COMMITTE CATION CE	NTER
JOINT MESSAGEFORM		SociA
BOOK MULTI SINGLE		Service and the service and se
TYPE MSQ	YOURSED TON OG	
PRECEDENCE	111/20 11	
ACTION PROCESTRY	1 ato 1940 420 Las/	6342
FROM: 600/Set	ySq Tan Son Nhut AB Vietnam	SPECIAL INSTRUCTIONS
0//4500	NO.	
TO: USAFSS/CO	S/San Antonio Tex	a de la companya de l
INFO: PacSctyRg	n/LCG/Wheeler AFB Hawaii	
6922SctyN	g/MAT/Clark AB Phil	
Det 1, 69	94SctySq/MAT/Nha Trang AB Vietnam	
Det 2, 69	94SctySq/MAT/Pleiku AB Vietnam	
TAM	•	
Subj: Recalibration Site. Ref	ur msg CCS 222000Z May 68. The	The state of the s
following info is compiled for	ur ulitization; Ref PSR msg 242240Z	
May 68.		To any order of the control of the c
I. Summary: The ground calibr	cation station at Cam Rahn Bay became	App - Desiration
fully operational on 16 April 6	8. Aircraft 100 flew the first cal-	
ibration mission on 18 April an	nd finished on 23 April. The problems	
encountered are listed in secti	on IIB. The Sanders Representatives	And the second s
released the data for factory e	evaluation, but the Sanders main plant	The state of the s
could not evaluate the data due	to blanks at random intervals in the	DATE TIME
punched tape. Aircraft 688 beg	gain calibration flights on 24 April	27 MONTH YRAR
and finished on 4 May. No vali	May 68	
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R	spror in the nose and tell of alreras	-
P	TYPED (or stamped) NAME AND TITLE	
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(See IIB) Aircraft 665 began calibration flights on 5 May and finished on 8 May. One and one-half days of calibration time were lost to poor weather. Valid data was obtained and forwarded via registered air mail to Sanders. The registry number is 0046. Sanders has not forwarded any evaluation of this data. Aircraft 520 began calibration flights on 9 May and finished on 11 May. One day of calibration time was lost due to weather. Valid data was obtained

d forwarded to Sanders via registered air mail. The registry mumber is 0047. Sanders has not forwarded any evaluation of this data. Aircraft 480 began calibration flights on 12 May and the flights were discontinued on 14 May. No valid data was obtained due to the to the inability of the tracker head to lock on the I.R. Ground source.

IIA. Serveral problems were encountered at the ground site prior to it's becoming operational. The planning for the calibration ogram did not include the coordination of air traffic control procedures and air to ground communications frequencies with the 188st Communications Squadron at Cam Rahn Bay. This necessary coordination was completed two days prior to the first calibration mission.

IIB. Four major problems were encountered while calibrating aircraft. Three have been overcome and the fourth is the cause of our

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present delay. The original concept was for the aircraft to position its self within the calibration pattern by using the Bendix Doppler system. System was two miles in error for every twenty minutes of flight over water. The Bendix representative modified the Doppler with three possible overwater configurations and then went on a calibration flight to check Doppler operation. The Doppler was not accurate enough over water to meet the requirements of the calibration

ogram. The differentiating factor between the Doppler accuracy over the coastal water of New England and over the South China Sea is sea state. The Atlantic Ocean off New England is rough, providing a workable Doppler environment while the South China sea off Cam Rahn Bay is smooth causing large Doppler errors. A new flight profile was flown using the drift meter as a navigational aid instead of the Doppler. This new flight procedure was successful. The definition and correction of this problem took three days.

light crews required training and familiarization in the procedures required to fly the calibration pattern. A one hour briefing and two hours of flying the calibration pattern were required before a crew imefficiently proficient so data could be taken. Operational commitments precluded having just two crews fly all the calibration flights or training the crews in aircraft not being calibrated.

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Inexperienced flight crews flying calibration missions did cause considerable delay, and due to operational commitments the 361st TEWS was hesitant to train only a limited number of crews for the calibration flights. The results of a conference between the Commanders of the 361st TEWS and Det 1 6994th SSq was the implementation of the procedure recommended by Sanders of only experienced flight crews flying calibration missions inexperienced flight crews flying dalibration Missions is no longer considered a problem. A servey of the R.F energy in the vicinity of Cam Rahn Bay was not conducted prior to placing the calibration station at that location. A strong R.F. energy completely saturated the AIR-34 system, thereby preventing a successful calibration flight. A two day delay was encountered until the cause of the AIR-34 breakdown was determined. The investigation to overcome this problem revealed that the U.S. H.F transmitter on a varying schedule. The calibration pattern was goved 4 miles to the north of its orriginal location. No further significant R.F. interference has been encountered. The I.R. tracker head lost it is capability of locking on to the L.R. source while aircraft 480 was being calibrated. The tracker head was ground checked on the aircraft and in the shop in accordance with the limited operational checks recommended by Sanders. The maint-

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enance capability at Detachment level is very limited due to the absence of tech orders, published Maintenance Procedures and spare parts. Only preventitive maintenance is authorized to date. A message was sent to Sanders with a description of symptoms and the results of the maintenance checks that were performed. No answer has been received from Sanders and the Calibration Program will be at a standstill until the I.R tracker head is repaired. A problem que to aircraft 668 was experienced during calibration the malfunction could not be corrected and the calibration of this aircraft was discontinued. There was a ten degree difference between the target bearing readout provided by the AIR-34 system and the bearing readout provided by the calibration equipment. This error was apparent only at the nose and tail of aircraft 668. A delay line test was performed on aircraft 668. The test indicated that the system was operating normally. Aircraft 668 was test flown against s 'mown station without calibration equipment on board. The 10 degree error was again evident. The Sanders representative at the Detachment suggested that the error was caused by a phase shift of the signal prior to entering the AIR-34 system. A possible reason for the phase shift is some type of obstruction to the signal caused by the airframe. There was no definite answer to the cause

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of this malfunction. The aircraft has flown operational missions within the past three weeks, and for no apparent reason the ten degree error has disappeared. Sanders representatives are still pondering this odd malfunction.

- III. Problems needing command assistance: The lack of spare parts and established supply channels greatly hinders the successful operation of the calibration mission.
- V. The following is a complete list of spares on hand at Det 1, 6994th SSg.
- 24 DTS-411 Transistors manufactured by Delco
- 10 I.R. lamps for ground station
- 1 punch assembly
- 1 roll and depression unit
- 2 technical data and through maintenance procedures on the calibration system are required for a realistic maintenance capability at nit level. These publications are presently not available.

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presently possessed by the calibration team and the flight crews.

This estimated schedule is realistic only if spare parts and complete technical data are made available. Weather is an unknow variable.

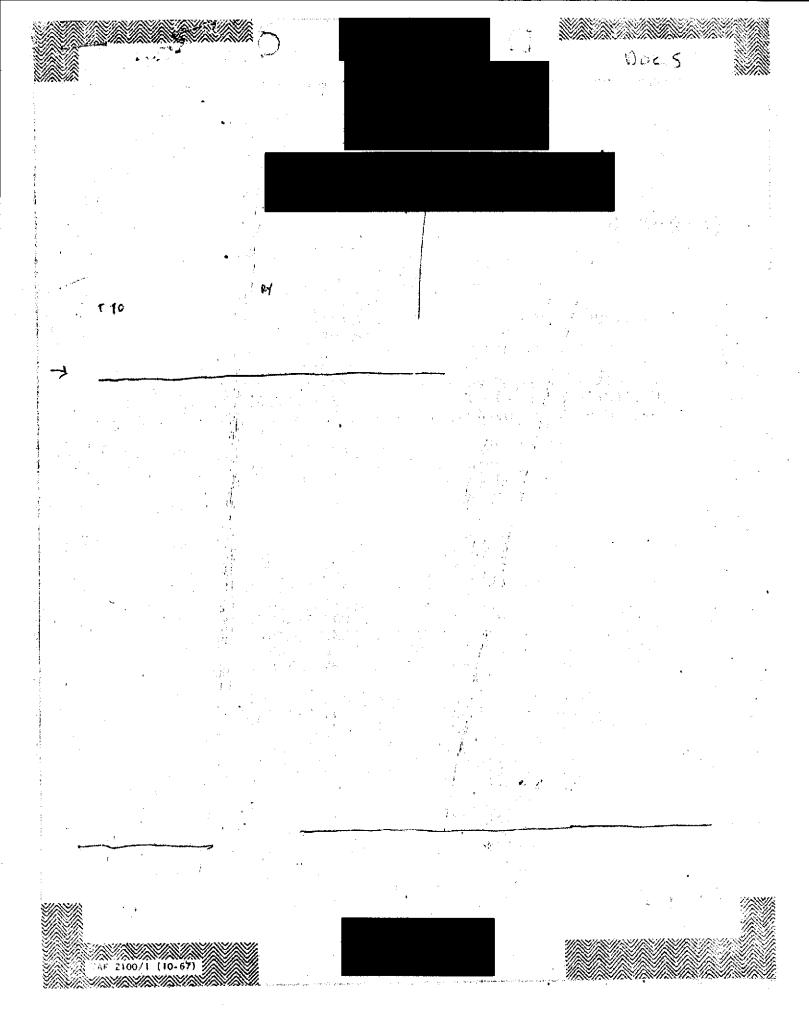
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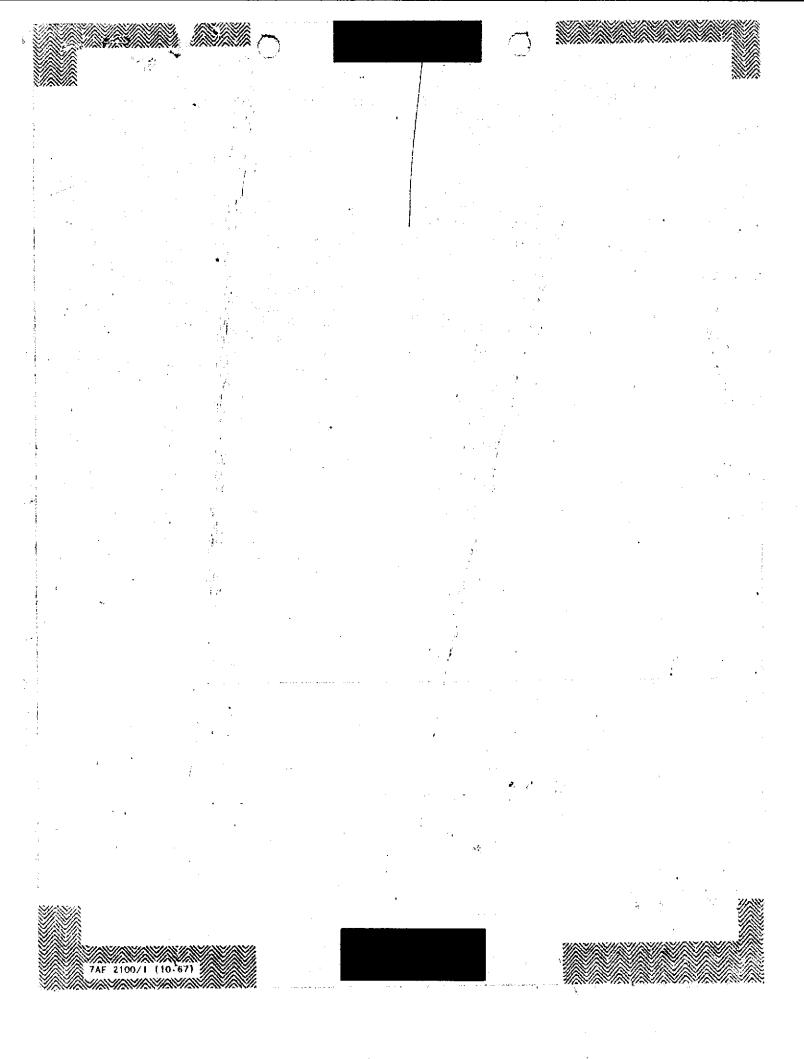
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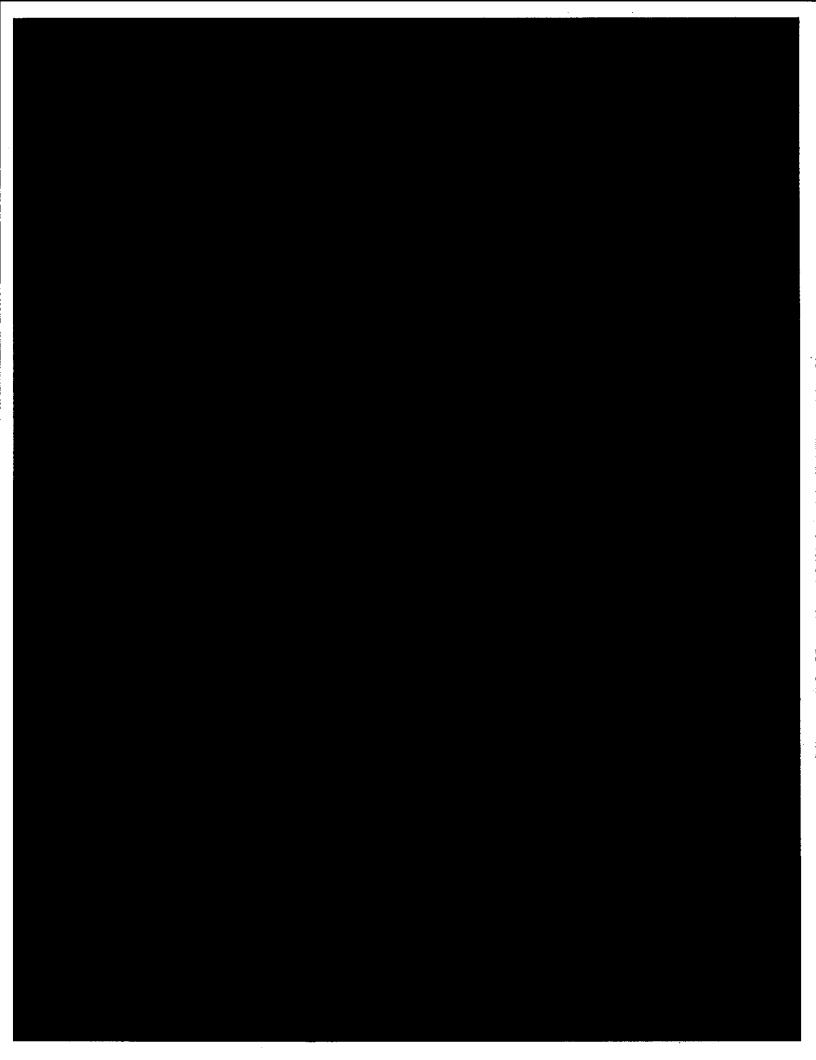
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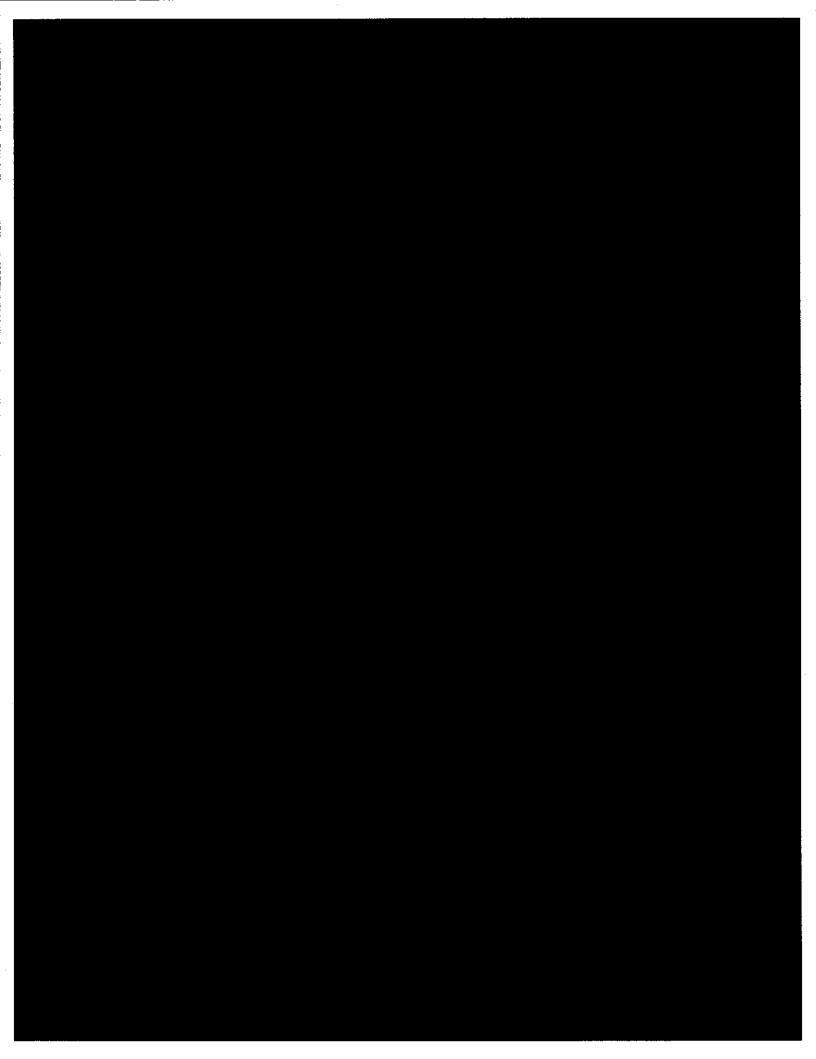
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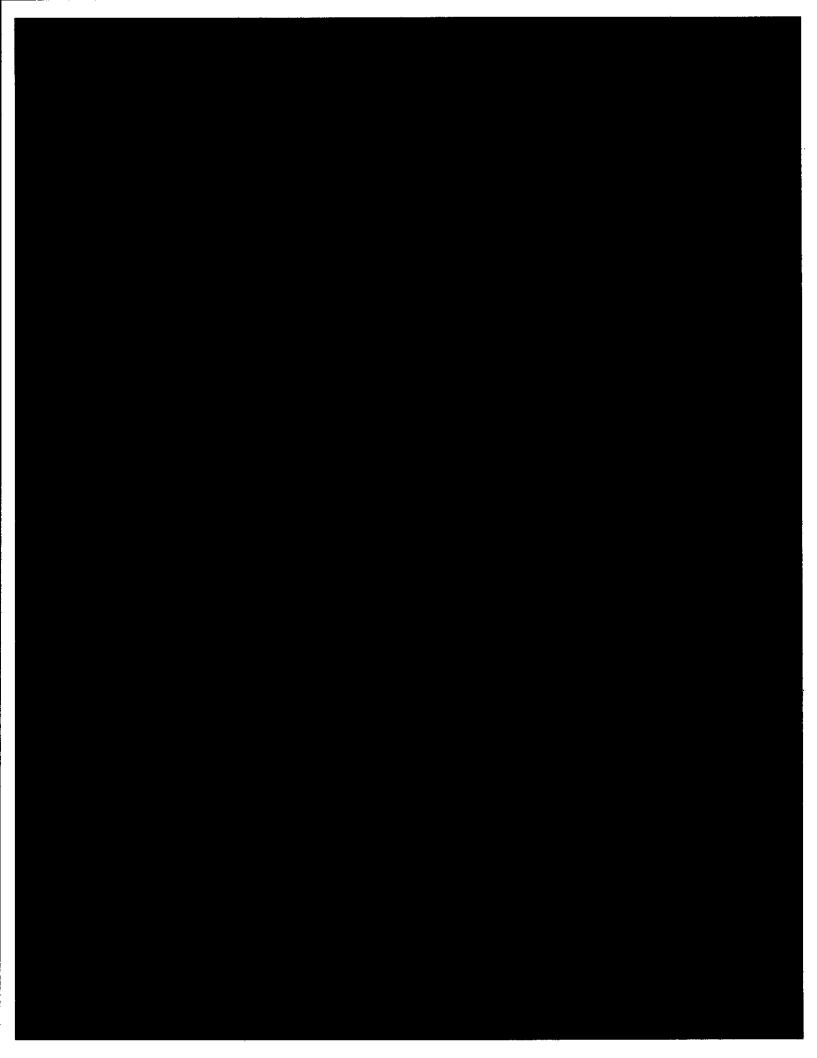
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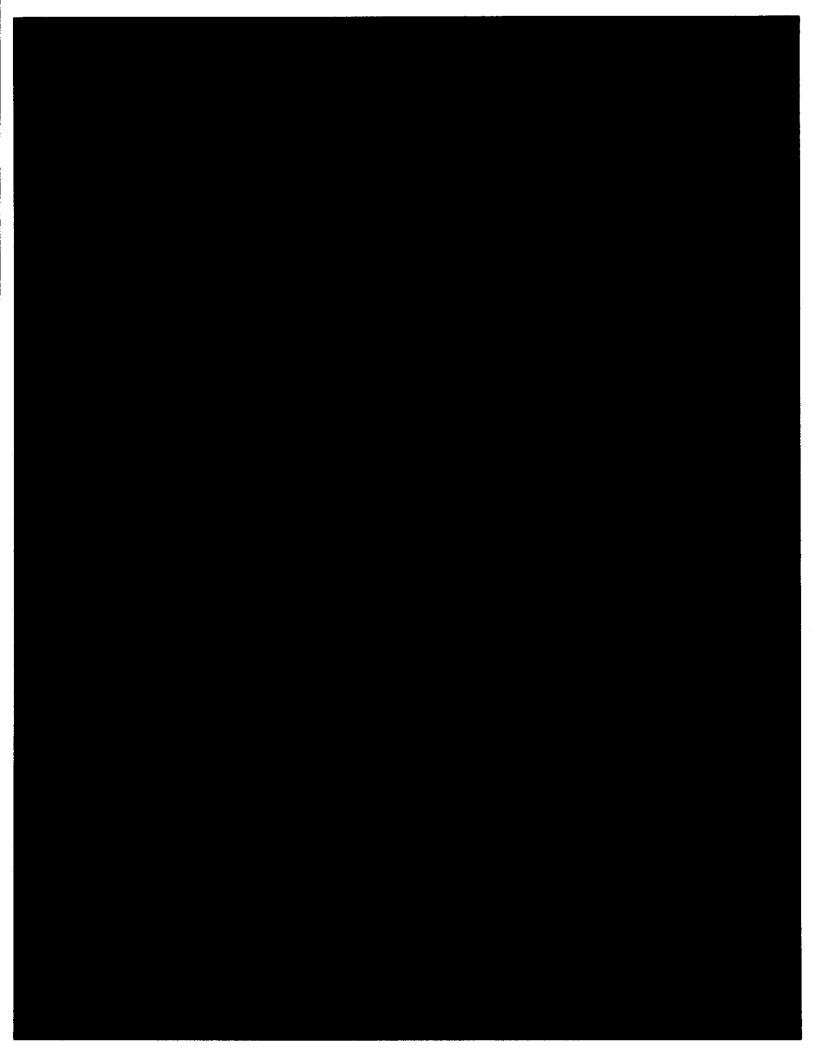


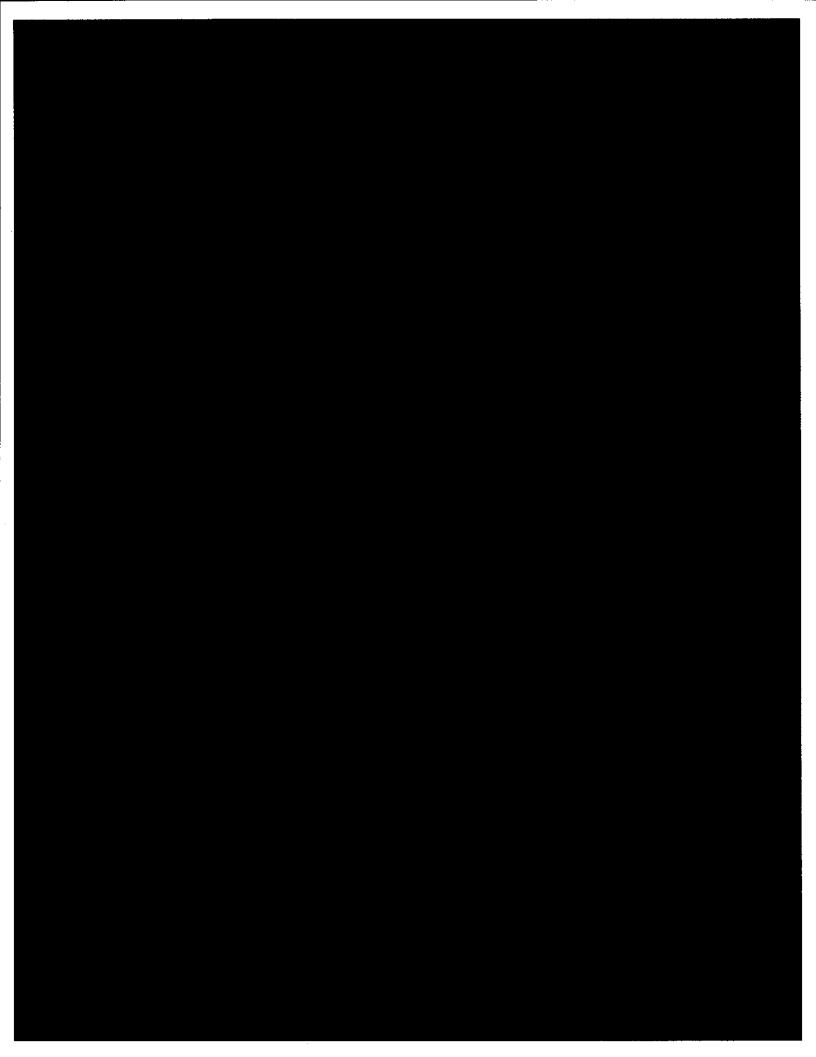


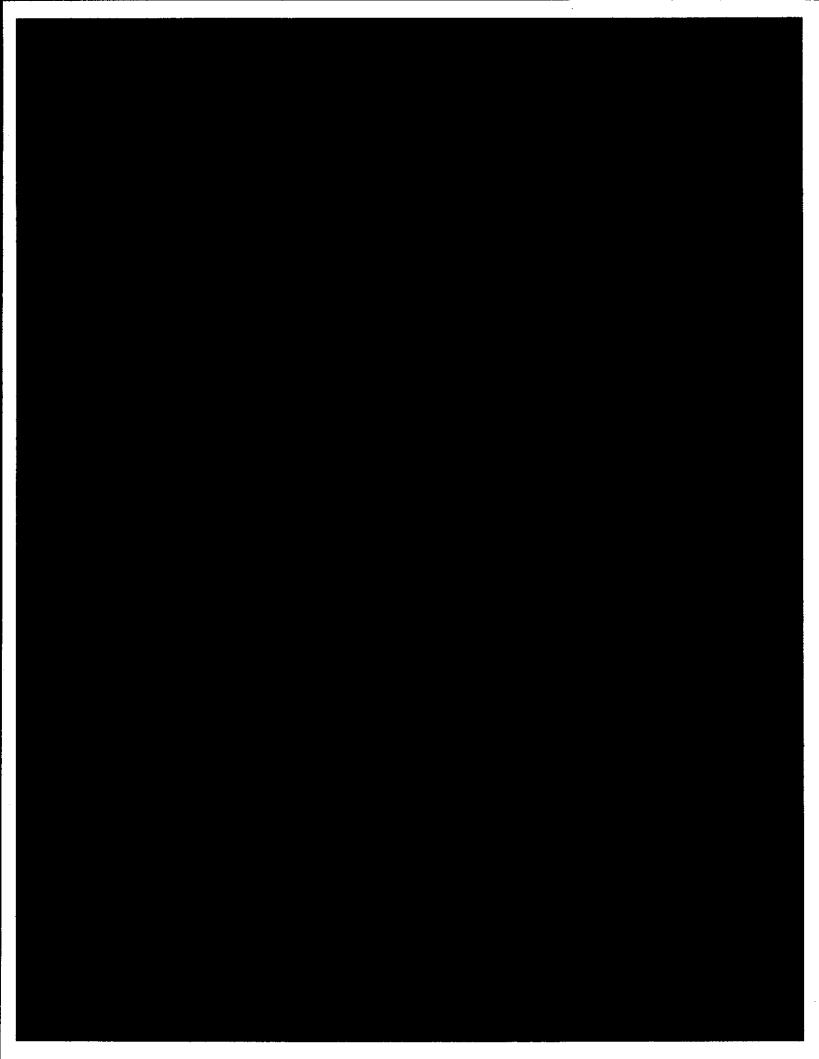


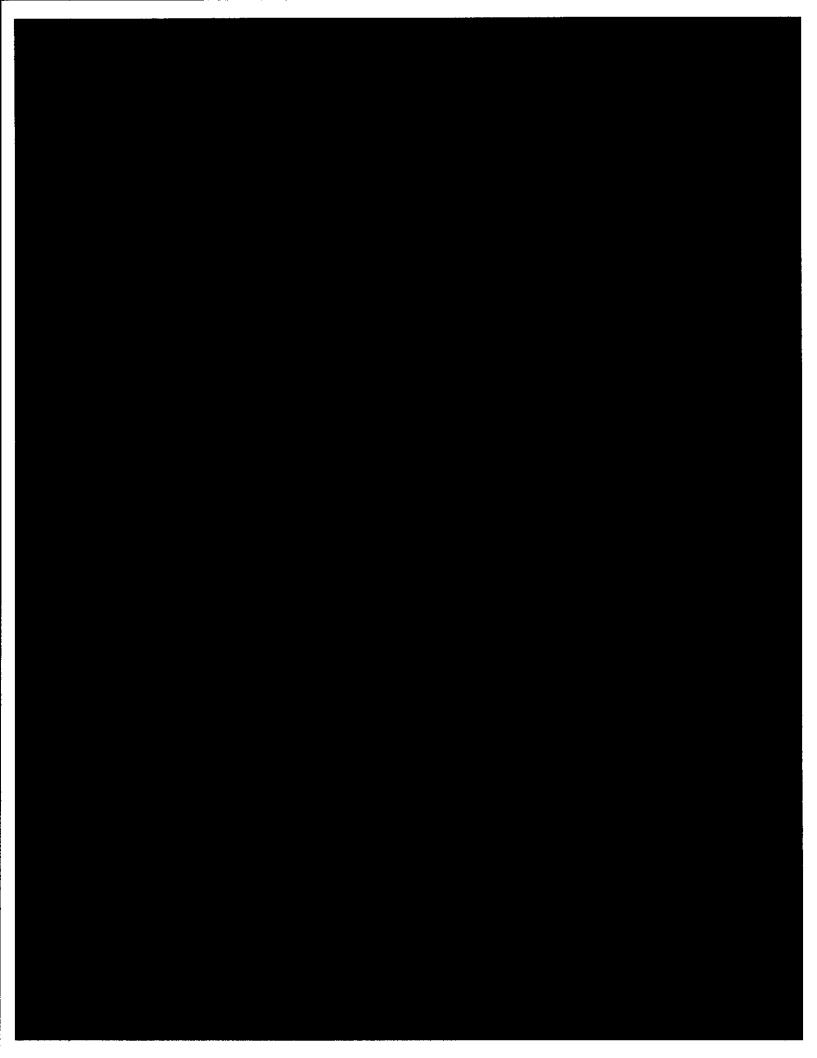


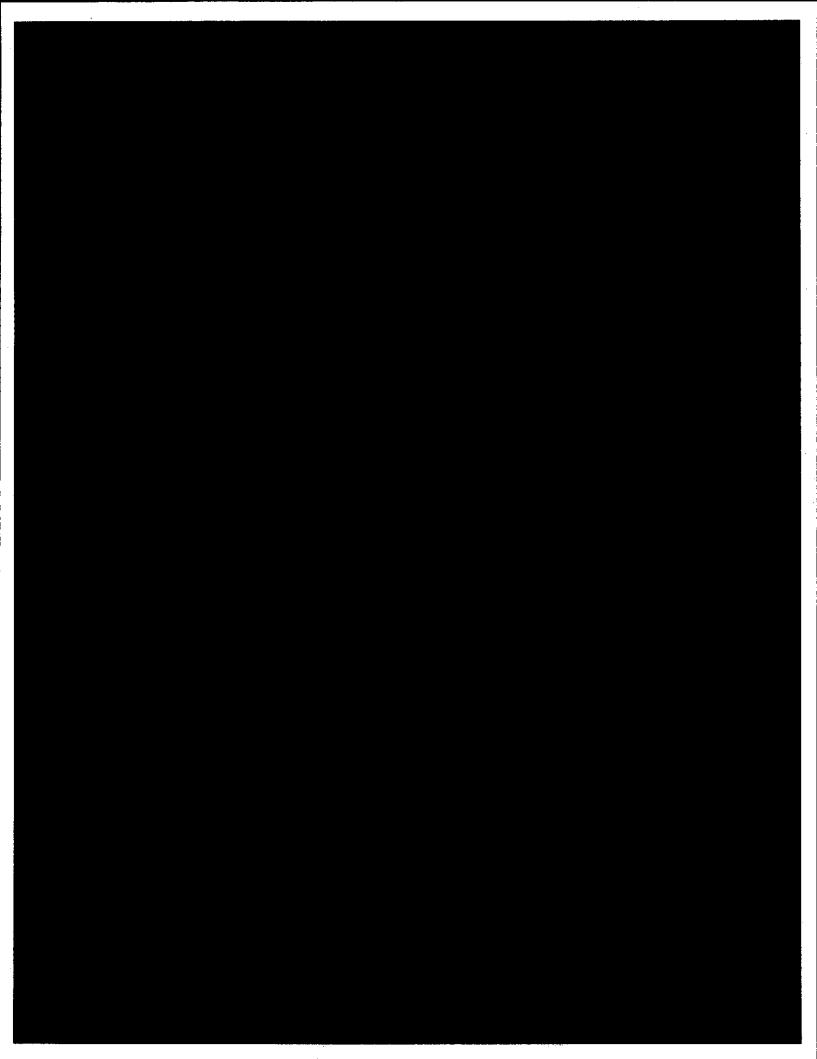












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SUBJA ARDE IN LAGS (C)

1. BUT TO REQUIREMENT FOR TARGETING INFORMATION FOR ALROHOUSED ATTACKS IN VICINITY OF SITE 35 (BARREL ROLL AREA), CINCEAC RAS DIRECTED ARDE. BE CONDUCTED IN THIS AREA: UN BELIEVE ORICINAL RECUIREMENT CAME FROM CAS VIEWTIAND. TO SATISFY REQUIREMENT, MACVEROPOSED TO PROVIDE ONE COMPASS BART ACET STAGING FROM UBORN DET TO COMPASS DART GREATER TIME OVER TARGET AND 360 DEGREE ARDE CAMABILITY.

AS SUBJECT 10 COMUSNACTHAL ASSISTENT TO REPLACE THE COMPASS
DART ACFT WILL EQUIVALENT ARMY SORTIES (TWO PER DAY) TO OPERATE IN
MOVERABLE ONE. AS YOU ARE ARARE, NACTHAL HAS AN TREE ARMY US ACCOMP
ACFT AT UDORN. PLAN IS THE BAVE MACTHAL ACFT STACE FROM NAWHON
FRANCH FOR OPERATIONS IN ARRA ONE.

2. CINCPAC CONCUPRED WITH MACY PROPOSAL AND HAS GRANTED APPROVAL TO FLY FOUR COMPASS DART ARDS MISSIONS PER WHEN IN THE SITE JJ. ARGA VICINITY OF 2D BEGRUES MORTH: 103 DEGREES HAST) FOR A TWO MEEN PERIOD. THIS IS SUBJECT TO MACY CONTINUING AND TIMELY EVALUATION THAT THE AA/MIG THERAT IS NOT PROHIBITLY.

3. AIR CRAFT MUST AVOID ALL PHOUN AND SUSPECTED AT AUD AAA DUFTUSES AND HAVE FULL SAR SUPPORT. ALL EXISTING BUFFER LONGS WILL BE OF SERVED AND AIRCRAFT VILL NO APPROACH WITHIN TWENTY FIVE MILES OF CHICUM OR MUW BORDERS. FLICHT SCHEDULES AND PROFILES WILL BE VARIED TO AVOID BETABLISHING FIXED TARGET TIMES. FLIGHTS WILL BE TERMINATED LYMEDIATELY UNDER ANY OF THE FOLLOWING CIRCUMSTANCES:

A. ACTIVE ENGAGEMENT OF AIRCRAFT BY ANY HOSTILE DEFENSES.

1. SATISFACTION OF REQUIREMENT.

G. PROUTH NOW - PRODUCTIVITY ON FIRST FOUR MISSIONS.

GONPAGE DART ACET ON TOW TO UDORN SO AS TO BE AVAILABLE FOR PIRST ARDE MISSION ON A MARCH. SPECIFIC ARDE TASKING WILL PROVIDED BY COMUSMACTHAI AND TECHNICAL CUPPORT PROVIDED BY USM-7. SEVENTH AF WILL AUTHORIZE TACH SORTIN OWLY THEN THEY HAVE DETERMINED THAT THE ARAZMIS THREAT IS NOT PROHIBITIVE FOR THAT SORTIN. ADDITIONALLY MAD HAS REQUESTED MACTHAI TAKE ACTION TO BAVE ARMY ARVE AIRCRAFT.

IN POSITION AT NAWHOR PHANOM IN TIME TO ASSUME ARDE MISSION IN MACU. AFEA ONE ON 11 MAR WITH THO SCRETTES PER DAY.

S.COMPASS DART ACET MILL BE DEPLOYED FROM PLEINU TO UNORN ON! MARGE.

OF HAVE INSTRUCTED 6924/GLPO TO PROVIDE COMPASS DART.

THRU DET 4) SURFICIENT DATA FOR INTERNAL MARNING CAPABILITY FOR THESE MISSIONS. WILL MEED YOU ADVISED AS THETHER INFO RECOMES WALLABLE

400

6922SCTYWG (OPS)

OPS MAY 68.

SUBJECT: ARDF OPERATIONS IN LAGS

计记录键 建分散型

FOILOWING MESSAGE FROM CINCPAC IS QUOTED FOR YOUR INFORMATION

QUOTE.

DTG: 212345Z MAY 68.

TO: COMUSMACY

CAS VIENTIANE

INFO: COMUSMACTHAI

NSAPAC

7Th AF

ARDF OPERATIONS IN LAGS

SSO MACV MAC 6401 INTEL/161204Z MAY 68

CAS VIENTIANE 211152Z MAY 68 (NOTAL)

3706

DONALD J. TWOMBLY, Lt Colonel, USAF Operations Officer

C. ADMINO CINCPAC 250119Z JAN 68 (NOTAL)

ON REF A REITERATES MACY PRIORITY FOR UTILIZING ASSIGNED ARDY ASSETS
TO SUPPORT COMBAT OPERATIONS IN SVN AND TO COVER INFILTRATION CORRIDORS.

THE BY REF B, CAS VIENTIANE REQUESTS PERMANENT TASKING OF ARDY ASSETS TO

SUPPORT CAS REQUIREMENTS.

ARDF COVERAGE OF SITE 36 BY EC-A7 UNTIL 1 JUNE WAS AUTHORIZED AS A SHORT TERM, HIGH PRIORITY REQUIREMENT TO PROVIDE COVERAGE TO THIS IMPORTANT AREA. SVN PRIORITY REQUIREMENTS NECESSITATES RETURN OF THIS AIRCRAFT AT THAT TIME. HOWEVER, COVERAGE OF SITE 36 IS AUTHORIZED USING MACTHAI U-8 AIRCRAFT UNTIL 1 JULY.

- 2. CURRENT AND PROGRAMMED ARDF ASSETS HAVE BEEN ASSIGNED TO MACV TO
 MEET STATED AND VALIDATED REQUIREMENTS IN LAOS AND SVN. CURRENTLY
 AVAILABLE ASSETS HAVE BEEN SORELY TASKED TO SATISFY GROWING
 INTELLIGENCE REQUIREMENTS. THESE REQUIREMENTS PRECLUDE THE DEDICATION
 OF ANY MACV ARDF ASSETS. OTHER REQUIREMENTS CAN ONLY BE SATISFIED WITHIN
 ESTABLISHED PRIORITIES AND AVAILABLE RESOURCES. IMPROVEMENT IN THE
 DAMAGE/MAINTENANCE SITUATION CITED IN REF A, AND THE FUTURE DEPLOYMENT
 OF ADDITIONAL ARDF ASSETS TO MACV MAY PERMIT GREATER FLEXIBILITY IN
 SATISFYING ALL ARDF REQUIREMENTS. EXCESS MACTHAI SORTIES CAN CONTINUE
 TO BE UTILIZED TO SUPPORT REQUIREMENTS IN LAOS.
- 3. FOR CAS VIENTIANE: WHILE THE DESIRPABILITY OF COMPREHENSIVE LACS-WIDE ARDF COVERAGE IS RECOGNIZED, THERE ARE NOT SUFFICIENT ASSETS WITHIN CINCPAC TO PROVIDE COVERAGE TO THE EXTENT CAS REQUESTS IN REF B.



REF C INITIATED PROGRAM IN LACS TO PROVIDE MAXIMUM CAS SUPPORT
WITHIN LIMITED RESOURCES. RECOGNIZING OPERATIONAL LIMITATIONS, ARDF
OPERATIONS WERE AUTHORIZED ON A CONTINUING BASIS BELOW 19 DEGREES N
LATITUDE, BUT FLIGHTS ABOVE 19 DEGREES RESTRICTED TO A CASE BY CASE
BASIS. PUTURE REQUESTS FOR ARDF COVERAGE SHOULD HE FORWARDED TO
COMUSMACY IN ACCORDANCE WITH PARAGRAPH BELOW.

FOR COMUSMACY: REF GAVE OPERATIONAL CONTROL TO COMUSMACY FOR ALL ARDF OPERATIONS IN LAGS. REQUEST THAT AMENDMENT TO MACY ARDF DIRECTIVE (381-23) INCORPORATE NECESSARY PROCEDURES FOR COMUSMACY, AS SINGLE MANAGER, TO PROCESS AND ESTABLISH PRIORITIES FOR SATISFICATION OF ALL ARDF REQUIREMENTS IN LAGS. COPIES SHOULD BE FURNISHED ALCON AT EARLIEST POSSIBLE DATE. FURTHER REQUEST THAT FULL CONSIDERATION BE GIVEN TO SUPPORT OF CAS REQUIREMENTS AS PRIORITIES DICTATE AND WITHIN AVAILABLE RESOURCES. REQUEST FOR FLIGHTS ABOVE 19 DECREES NORTH LATITUDE SHOULD BE FORWARDED TO SINCPAC WITH YOUR RECOMMENDATIONS.

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IMMEDIATE PRIORITY

6994SCTYSQ

PACSCTYRGN (OPS-A)

INFO: 6922SCTING (OPS)

DPS JUL 68.

SUBJECT: WHE RESOURCE. REF YOUR OPSA 290234Z JUNE 68. POLLOW

INFORMATION IS SUBMITTED:

1. REF PARA A. ALL VHF RADIO TELEPHONE COMMUNICATIONS INTERCEPTED

BY COMBAT COUGAR AIRCRAFT HAVE BEEN, WITH VERY MINOR EXCEPTIONS,
WITHIN THE DEZ AREA (MACY AREAS SIX AND SEVEN). BY RECHEST OF MRY

A TEST WAS CONDUCTED IN MACY AREA 14, IN AN ATTEMPT TO ASCERTAIN
THE EXTENT OF VHF COMMUNICATIONS IN THAT AREA AND ADJACENT TRIBURDER AREA. THIS WAS TERMINATED ON 15 JUNE 1968 AFTER AN
APPROXIMATE THREE WEEK DURATION WITH TOTAL OF TEN (10) MINUTES OF
INTERCEPT OBTAINED FROM 21 SORTIES FLOWN. THE FIRST WEEKS COVERACE
WAS IN THE APTERNOON FROM 1500 HOURS TO 1900 HOURS, THE REMAINING
SORTIES WERE FLOWN FROM 0530 HOURS TO 0940 HOURS. A FIVE DAY TEST
WAS ALSO CONDUCTED IN MACY AREA 29 COMMENCING ON 24 JUNE AND
1
TERMINATING 28 JUNE (DATES INCLUSIVE). NEGATIVE INTERCEPT WAS JUL
OBTAINED. THESE TESTS HAVE BEEN CONDUCTED IN SUSPECTED VHF COMM

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CAPT ANDERSEN

3706

DONALD J. TWOMBLY, Lt Colonel, USAF Operations Officer

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AREAS AS INDICATED BY COLLATERAL AND SIGINT SOURCES; NRV ALTHOUGH THESE TESTS CAN NOT BE INTERPRETED AS CONCLUSIVE OR INDICATIVE OF ALL MACY AREAS OF COVERAGE, MACY HAS NOT FOUND IT NECESSARY TO INCREASE THE REQUIREMENTS FOR VHF COVERAGE. CORRES-PONDENCE RECEIVED BY DET 1, 6994TH 55 FROM USM-604 AND NSA CITES CAPTURED DOCUMENTS AND POW REPORTS OF IMPENDING HE/VHF VOICE ACTIVITY IN AREA 12. DET 1 IS PRESENTLY FLYING 203'S ABOARD THE MISSION ACFT (CCZ) IN THAT AREA IN ORDER TO EXPLOIT THAT POSSIBILITY. 2. REF PARA B. INLIGHT OF THE ABOVE INKO WE DO NOT FEEL ADDITIONAL PURCHASE OF 175J RECEIVERS APPROPRIATE AT THIS TIME. THE NEW 175J RECEIVERS WILL BE INSTALLED UPON COMPLETION OF BENCH CHECK. THIS WILL FULFILL OUR MASTER PROGRAM REQUIREMENTS AND WILL ALSO GIVE MAGY INCREASED CAPABILITY/FLEXIBILITY TO TEST FOR POSSIBLE VHP VOICE COMMUNICATIONS IN OTHER MACY AREAS.

- 3. REF PARA C: 1. SEVEN G-175J RECEIVERS WERE RECEIVED BY THE 6994TH SS ON 15 NOV 67. AT THE PRESENT TIME SIX (6) RECEIVERS AT DET 2. 6994TH SS; FIVE OF WHICH ARE INSTALLED AND ARE BEING USED. FOR BACK-UP. ONE RECEIVER IS AT DET 1 AND USED IN CONJUNCTION WITH THE HF/VHF VOICE TEST IN MACV AREA 12.
- (2) ON 25 JANUARY 1968 ELEVEN (11) C-175H RECEIVERS WERE RECEIVED FROM THE 6940TH SCTY WC ON A SIX MONTH LOAN. ONE RECEIVER WAS INSTALLED IN AIRCRAFT 42-24313 TO CHECK THE FEASIBILITY OF

MODIFYING THE POSITIONS TO ACCEPT THE G-175H. HOWEVER, SINCE THERE WAS NO URGENT, IMMEDIATE REQUIREMENT FOR AUDITIONAL VHF RESOURCES, THE DECISION WAS MADE TO FORESTALL INSTALLATION OF THE G-175H PENDING RECEIPT OF ADDITIONAL G-175J RECEIVERS. (REF MASTER D PROCHAM REVIEW BOARD MINUTES, OUR OPS 190830Z AVRIL 68, NOTAL PACECTIRGN), AND 6922SCTING OPEN 230714Z AFRIL 68, (NOTAL PSR)),

(3) ON 30 JUNE THENTI-SIX (26) G-175J RECEIVERS WERE RECEIVED. RECIVERS HAVE NOT BEEN BENCH CHECKED. THE SHIPHENT HAS NOT A YET BEEN INVENTORIED TO DETERMINE WHAT TUNERS ARE INCLUDED.

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DET 1 6994SCTTSQ

INFO: DET 2 6994SCTYSQ

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OPS JAN 68.

"UBJECT: JAMMING. REF MY OPS 240500Z JAN 68 AND OPS 240940Z JAN 68.

ACTIVATE THE Q COM JAMMING CAPABILITY OF COMPASS DART IN THE ACTIVE MODE. A COMPREHENSIVE BRIEFING WAS DEVELOPED AND PRESENTED TO J2, J3, J6 AND COMUSMACY WHICH OUTLINED THE TARGETS, ACFT CAPABILITY AND POSSIBLE LOSS OF SIGINT IF ACTIVE JAMMING WAS TO BE EMPLOYED.

GEN WESTMORELAND HAS MADE THE DECISION THAT COM-JAMMING CAPABILITY BE HELD IN READINESS IN THE PASSIVE ROLE READY TO GO ACTIVE ON 24 HOUR NOTICE.

2. THE AREAS OF CONCERN ARE MACY AREAS 6, 7, 9, 11 AND 12. THEREFORE, THE DECISION HAS BEEN MADE TO HOLD THE Q BIRDS AT TSN UNTIL
THE TYPEWRITER TABLE IS MODIFIED TO ENABLE PERMANENT INSTALLATION
OF AN MC-88. IN THE PRESENT CONFIGURATION, THE TYPEWRITER INTERFERS WITH THE OPERATION OF THE Q RECEIVERS. MODIFICATION WAS

25

JAN

68

LT COL EVANS

3706

KELVIN E. EVANS, Lt Colonel, USAF Operations Officer REQUESTED IN NOVEMBER AND TO DATE NO ACTION HAS BEEN TAKEN BY HIGHER HEADQUARTERS. WE HAVE TAKEN FOLLOW-UP ACTION.

3. IN THE MEANTIME, REQUEST YOU MAN ALL MISSIONS FLIING IN THE ABOVE AREAS WITH Q SYSTEM TRAINED PERSONNEL TO PROVIDE EXPERIENCE AND CONTINUITY ON POTENTIAL COM-JAM TARGETS.

FOR DET 1: COORDINATE WITH THE 361ST TO FLY "Z" CONFIGURED ACFT, NOT OTHERWISE TASKED, INTO AREAS 12 AND 11 WITH FULL Q CREWS ON BOARD WITHIN CAFABILITY. IF ACTIVE JAMMING IS ORDERED, YOU WILL RECEIVE TWO Q BIRDS TO FLY IN THESE AREAS. YOU WILL RECEIVE Z TASKING IN AREA 12 IF YOU FEEL YOUR JERRY-RICGED Z BIRDS CAN HACK IT.

4. OPS PLANS ARE BEING FINALIZED BETWEEN 509 RRG AND THIS HEADQUARTERS AND WILL BE FORWARDED AT EARLIEST POSSIBLE DATE. CONCEPT OF OPERATION WILL FOLLOW MACY COMJAM PLAN EWO PLAN 1-68. YOU WILL RECEIVE A COPY OF THIS PLAN SOONEST.

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APPENDIX A COMBAT COUGAR OPERATIONAL SUMMARY



FOREWORD

This appendix was instituted to provide the reader with a statistical account of Combat Cougar operational activities during the period 1 January 1968 through 30 June 1968.

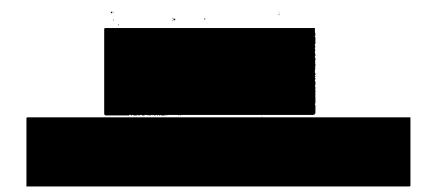


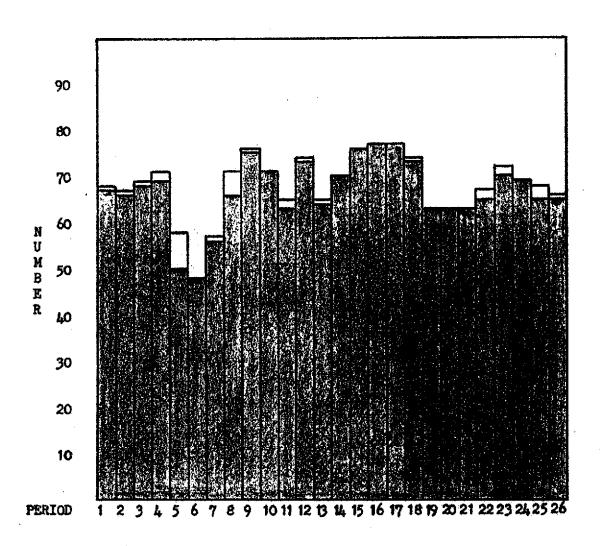


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Combat Cougar Mission Summary



---- Missions scheduled

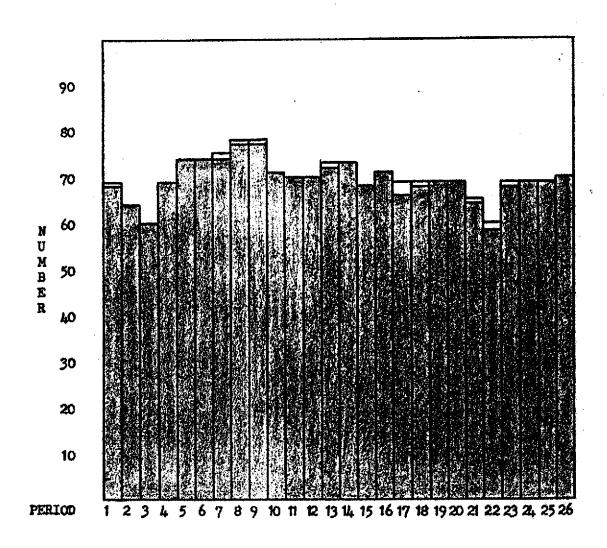


Missions accomplished





Detachment 1, 6994th Security Squadron
Combat Cougar Mission Summary

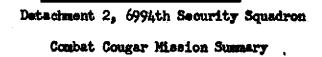


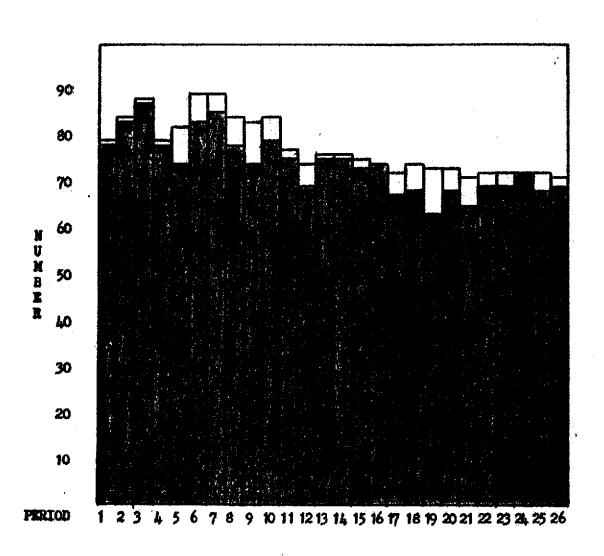
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Missions accomplished





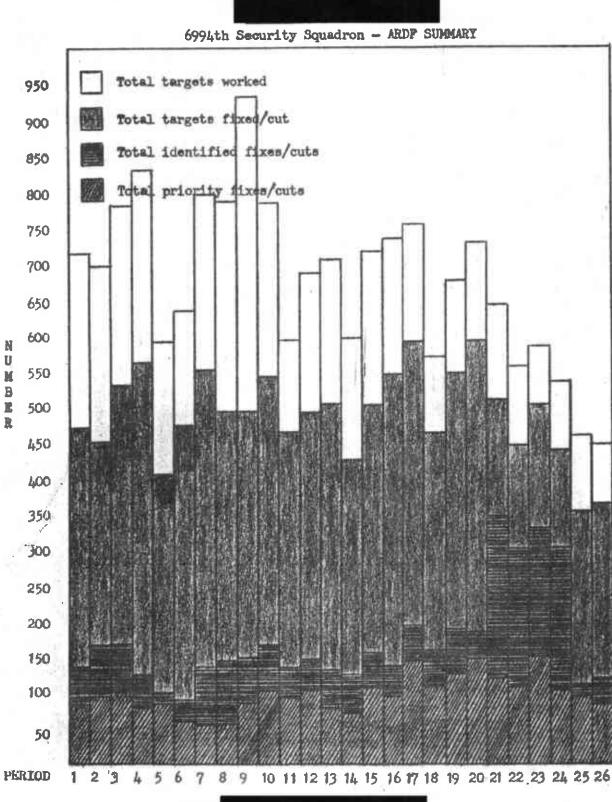


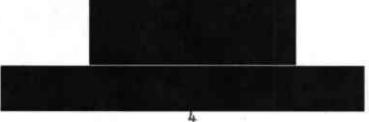
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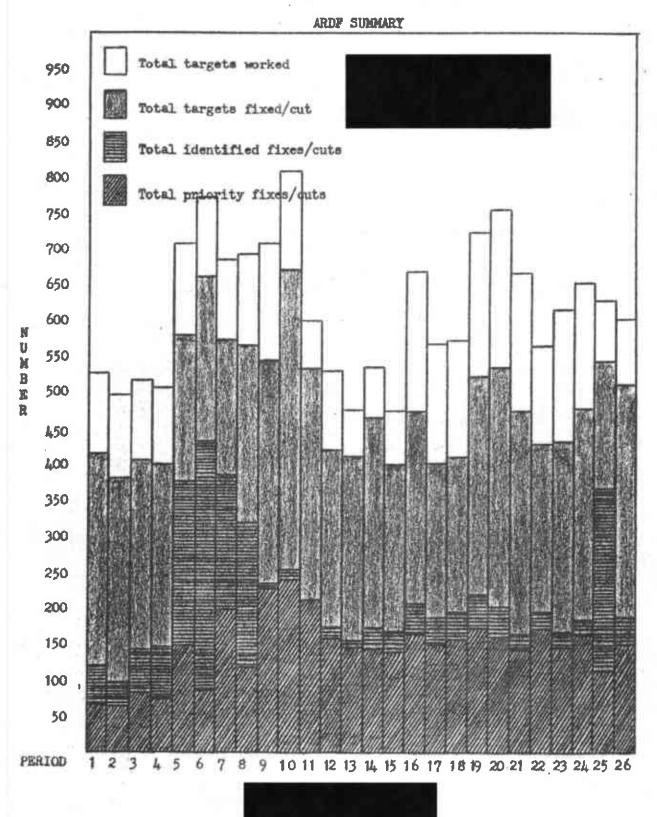
Missions accomplished







Detachment 1, 6994th Security Squadron



Detachment 2, 6994th Security Squadron

