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APPROVED FOR PUBLIC RELEASE;
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DEPARTMENT OF THE ARMY
HEADQUARTERS, 14TH AVIATION BATTALION
APO U.S. FORCES 96240

TO:
Commanding Officer
17th Aviation Group
APO U.S. Forces 96240

SECTION I: Significant Organization or Unit Activities

1. Under the provisions of AR 525-24 and USARV Regulation 870-1, the following report for the period ending 30 April 1966 is submitted.

2. The present mission of the 14th Aviation Battalion is to provide general aviation support in the form of reconnaissance, surveillance, airborne communication, and airlift of personnel, material and supplies to expedite combat and counterinsurgency operations in the Republic of Vietnam.

3. Numerous changes occurred in the command structure of the battalion during the period of this report. At the beginning of this period, the battalion consisted of nine aviation companies and one aviation detachment (ASTA), dispersed throughout the entire Republic of Vietnam. To relieve the tremendous problems of support and command and control then existing, a provisional battalion headquarters was formed from assets available within this command. Located at Vung Tau, this battalion became operational on 15 February 1966 and took control of those units located in the III and IV Corps tactical zones. The following units were involved in this reassignment:

<table>
<thead>
<tr>
<th>UNIT</th>
<th>TYPE AIRCRAFT</th>
<th>LOCATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>54th Aviation Co</td>
<td>U-1A</td>
<td>Vung Tau</td>
</tr>
<tr>
<td>57th Aviation Co</td>
<td>CV-2B</td>
<td>Vung Tau</td>
</tr>
<tr>
<td>61st Aviation Co</td>
<td>CV-2B</td>
<td>Vung Tau</td>
</tr>
<tr>
<td>134th Aviation Co</td>
<td>CV-2B</td>
<td>Can Tho</td>
</tr>
</tbody>
</table>

STATEMENT #2 UNCLASSIFIED
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Other changes in the command structure during the reporting period included the reassignment of the 135th Aviation Company (CV-2B) to the 10th Aviation Battalion and the assignment of the 20th Aviation Detachment (ASTA) (OV-1), which was formerly attached to this battalion for administration and logistics. During the month of April, several of the Avionics Maintenance Detachments were reassigned to the 34th General Support Group (Aircraft Maintenance and Supply) and consolidated under a Provisional Electronics Maintenance Company. The personnel and equipment remained in place and continued to perform the same support. Those lost were the 19th, 34th and I Corps (PROV) Signal Detachments.

4. The present command structure is composed of four aviation companies and one aviation detachment (ASTA). This organization includes one UH-1 Provisional Company, one U-1A Company, one CV-2B Company, one O-1 Company and one OV-1 Aerial Surveillance and Target Acquisition Detachment. Due to the wide dispersion of these units, maintenance detachments are attached to each company to provide the necessary back-up support. Pertinent information with regard to this command is as follows:

<table>
<thead>
<tr>
<th>UNIT</th>
<th>AIRCRAFT</th>
<th>LOCATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>I Corps Avn Co (PROV)</td>
<td>10 UH-1E, 1 U-6A</td>
<td>Danang</td>
</tr>
<tr>
<td>18th Avn Co</td>
<td>14 U-1A</td>
<td>Nha Trang</td>
</tr>
<tr>
<td>20th Asta Det</td>
<td>8 OV-1, U-1A</td>
<td>Hue Phu Bai</td>
</tr>
<tr>
<td>22nd Avn Co</td>
<td>16 CV-2B</td>
<td>Qui Nhon</td>
</tr>
<tr>
<td>220th Avn Co</td>
<td>23 O-1</td>
<td>Hue Phu Bai</td>
</tr>
</tbody>
</table>

In addition to the above mentioned unit headquarters locations some of the units have aircraft and crews permanently stationed at other locations to better serve the units they support. These locations are as follows:

<table>
<thead>
<tr>
<th>UNIT</th>
<th>LOCATIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>I Corps Avn Co (PROV)</td>
<td>Hue Citadel</td>
</tr>
<tr>
<td></td>
<td>Quang Ngai</td>
</tr>
<tr>
<td>18th Avn Co</td>
<td>Danang</td>
</tr>
<tr>
<td></td>
<td>Pleiku</td>
</tr>
<tr>
<td></td>
<td>Bangkok</td>
</tr>
</tbody>
</table>
SUBJECT: Operational Report on Lessons Learned, Period Ending 30 April 1966, CSMP-28 (RI)

92nd Avn Co
Danang
Nha Trang

220th Avn Co
Danang
Hue Citadel
Guang Ngai

5. A total of 27,439 hours were flown by battalion aircraft during the period 1 Jan - 30 Apr 66. Cargo flown during this period amounted to 11,671 tons and 111,687 passengers were carried. Based on a comparison of units within the battalion which were fully operational for this and the preceding reporting period there has been a substantial increase in support rendered. During this reporting period the battalion realized a 22% increase in utilization. More detailed information concerning this increase is contained in subsequent portions of this report.

6. The operational control of OV-2B and U-1A aircraft continued to be dictated by USAF directive 95-4. Priority of allocations is determined and controlled on a daily basis by the Army Operations Center of J-3, USMAF, in Saigon. The following organizations are presently being supported by battalion OV-2B and U-1A aircraft:

I Field Force Vietnam
Senior Advisor, I Corps
Senior Advisor, II Corps
5th Special Forces Group
Joint United States Public Affairs Office
Joint United States Military Advisory Group (Thailand)

These commitments were based on the premise of ten flyable aircraft per company each day. The remaining six TOEB aircraft in each company were programmed for scheduled maintenance. Since support allocations continue for lengthy periods without change, daily mission coordination is effected directly between the aviation companies and the supported organizations. As was mentioned earlier, numerous aircraft and crews are physically located near the user units.

7. During the month of April, the 11th Aviation Battalion was directed to move its headquarters from Long Van Air Base in Nha Trang to Lane Army Airfield near Qui Nhon in order to assume command of the light mobile companies stationed there and begin conducting
airmobile operations. As the reporting period ended, construction of office and quarters facilities in the area was underway, using US Army Engineers, battalion personnel and civilian laborers.

8. This headquarters continued to provide administrative and logistical support for the 13 Army Aviation Test Board CT-7 "Buffalo" test program which began here in November 1965. The actual evaluation flights ended on 7 February 1966 and after two days spent preparing for the return trip to CONUS, the two aircraft departed on 12 February. The Test Team Rear Detachment departed on 17 February by H-3F aircraft. Final results of the test program are not known at this headquarters. On one occasion one aircraft transported 140,000 pounds of cargo in one day.

9. Training - In addition to training in required mandatory subjects, continued emphasis has been placed on OJT within the battalion since there is a shortage of personnel in several critical military occupational specialties and fully qualified replacements are not available. This battalion currently has fifty enlisted personnel undergoing OJT in twenty-three critical military occupational specialties. A shortage of qualified mechanics and crew chiefs has placed a burden on the units within this battalion and in some instances has caused a longer down time for maintenance than is desirable. In spite of this handicap units have accomplished their missions with exceptional results as is indicated by the increase in utilization realized during this quarter.

10. This command has experienced a low aircraft availability rate throughout this period due primarily to inadequate aircraft repair parts supply and non-availability of float aircraft for issue to using units. During the period covered by this report, I Corps Aviation Company has experienced an average EDP rate of 19%. Average EDP for the 11th Aviation Battalion has been 8%. Engines, tail boom assemblies, and main rotor head assemblies account for most of the down time for EDP. As of 30 April 1966, the 51st Transportation Detachment reported 61% zero balance on hand for their P6. An average of 31% zero balance on hand was reported by all battalion units. The shortage of float aircraft in Vietnam, preventing immediate replacement of crash damaged aircraft or aircraft removed from operational units for incan, has created hardships on using units. Since January 1965, units of this command have experienced an average daily shortage of three aircraft. Command emphasis should be placed on more expeditious processing and assignment of float aircraft inbound to Vietnam to assist in relieving this situation.

11. In the past four months the battalion has continued to experience problems on issue of repair parts, however, expendable supplies are becoming more plentiful.
The 20th Aviation Detachment (A/S) has experienced a problem with 150 gallon drop tanks. A letter was received from AVODM indicating that these tanks are not being manufactured at present and that they would not be available until a new contract could be granted. The 20th initiated action to determine if there were compatible tanks utilized by other services which could be interservice transferred to fill their needs until others become available within the supply system. It was found that the 150 gallon tank utilized by the air force on their AI-E was a compatible tank, and four were obtained on hand receipt until others could be made available. Since that time, US Army Aviation Brigade (PAV) has informed this unit that sufficient tanks have been procured to make a one time issue to all units in RW.

12. The 20th Asta has experienced a serious problem in repair of new avionics and electronics equipment due to the lack of assigned, qualified personnel and inability to obtain factory technical representative assistance. At present all installed AV/AIR-64 Canadian Marconi Doppler Systems are inoperative. This command has attempted to obtain factory representatives for the 20th Asta since 23 March 1966 with negative results. Command emphasis is continuing to be placed on maintenance procedures, supply requisitioning procedures, follow-ups and standards of personnel technical training.

13. The 18th Aviation Company is presently short 2 each ULA aircraft with no expected delivery date. This is a critical shortage as 10 of the 14 assigned aircraft must be made available daily for missions.

14. A problem also exists within the 256th Transportation Detachment (A/C MAINT) in that the authorized shop set, trailer MTP, A-1, has not been issued. This unit has initiated command letters inquiring as to its status on two separate occasions. The last answer received indicated that it was shipped from CONUS in Sept 65 and should have arrived in RW in Oct 65. This is presently being researched at Aviation Brigade O-S level, with an answer as to its disposition after arrival in country expected within a week.

15. A staff study was initiated by this headquarters in February on the relative merits of the AI/JRC-10 survival radio authorized for issue to Army units in RW as opposed to the newer ACR/RT-10 utilized by the US Air Force. The conclusion was reached that the newer type is of a much better design and durability and has a greater range. It was requested that the ACR/RT-10 be issued II0 the AI/JRC-10. At the last Aviation Brigade Supply and Maintenance Conference, USAV indicated that this change has been requested.

16. In preparation for the battalion move, there have been problems in obtaining adequate engineer support for the construction of a cantonement area and in obtaining adequate equipment for operation.
These problems are generally the lack of building materials and engineer assistance required to properly construct the area and the shortage of generators to furnish electrical power for both the administrative and billeting areas plus the perimeter fence lighting. Acquisitions have been submitted for two 10KW generators. This headquarters has been informed by Qui Nhon Support Command that none are available. These generators are desperately needed to provide security for the area plus power for refrigeration in mess halls and lighting within the battalion and company areas.

17. In view of the many and varying missions of the units assigned to this command, the respective operations of the command and subordinate companies are listed below:

a. Headquarters and Headquarters Detachment furnishes command and control, administration, and assistance in communications and supply activities of the battalion. The 11th Security Platoon, which is assigned to the Headquarters and Headquarters Detachment provides security for units of the 11th Aviation Battalion located at Qui Nhon and Nha Trang, RVN. Civil affairs activities for this period include the installation of washing and drying machines, pumps and a water tower at the battalion sponsored orphanage in Nha Trang. At one point in February prior to the loss of four units, the personnel section handled the personal and finance records for two thousand four hundred personnel. This unit provided maximum support and assistance to the 17th Aviation Group Headquarters which was organized in February at Nha Trang, providing physical facilities, equipment, and personnel. In late April initial planning and coordination were effected to develop an area in the Phu Tai valley approximately 12 miles west of Qui Nhon, where the 11th Aviation Battalion Headquarters will be relocated in May. During this reporting period 191 incoming personnel and 150 outgoing personnel were processed by this unit.

b. I Corps Aviation Company (PR07) provides aviation support to the United States Advisory effort in the I Corps tactical zone, RVN. The company flew 2,576 hours while transporting 16,333 passengers and 71.7 tons of cargo. Based on an average of 7.1 passengers hauled per flying hour this unit experienced an increase in utilization over the last reporting period of 10%.

c. The 18th Aviation Company (AIR MBL FW) provides air transport to expedite tactical operations and logistical support. One aircraft is located in Bangkok, Thailand supporting JSMAO. Three in Danang support the I Corps Senior Advisor and the CS IIIrd MEF. Two in Pleiku support the II Corps Senior Advisor. The remainder are located at Nha Trang with two in support of 5th Special Forces, one in support of 1st Field Forces Vietnam and one in support of JUSPAC.
The company flew 3778 hours while transporting 17,121 passengers and 516 tons of cargo. They hauled 0.475 tons per flying hour, an increase in utilization of 27% over the last reporting period. At present this unit is operating with 14 aircraft, although they are authorized 16 by T.O.22.

d. The 92nd Aviation Company (AI-44632M) provides aerial resupply, medical evacuation and limited troop movement in support of units in the I and II Corps tactical zones. Five aircraft are stationed at Danang. Four are in direct support of the IIIrd MAW I Corp and one is in direct support of Detachment C-1, 5th Special Forces. One aircraft based at Qui Nhon is in direct support of Detachment C-2, 5th Special Forces located at Pleiku. Four aircraft located at Nha Trang are in direct support of the 5th Special Forces. On 28 January the company flew a reactionary force into the special forces camp at Tr. Bong which was under attack, thus insuring the successful defense of the camp. On 9-10 March 15,000 lbs. of ammunition and medical supplies were air dropped into the special forces camp at Ashau, enabling friendly forces to hold out until evacuation could be effected. Both these missions were accomplished in extremely marginal weather. During the reporting period several new special forces camps were opened in I and II Corps tactical zones. The company supported each operation placing maximum effort on the movement of troops, ammunition, food and building materials. On one operation the company moved 350 troops and 140,000 lbs. of supplies and equipment in one day using four CV-22 aircraft.

In this quarter the company received forty-eight hits from enemy ground fire in thirty separate incidents. Twenty-four of these incidents occurred in the I Corps tactical zone. The unit flew a total of 4,303 hours during this quarter transporting 27,465 passengers and 6197.38 tons of cargo. They realized an average of 1.93 tons per flying hour, an increase of 23% in utilization over the last reporting period.

3. The 220th Aviation Company continued to provide visual aerial reconnaissance, coastal surveillance, adjustment of artillery fire, control of air strikes and limited photo reconnaissance within the I Corps tactical zone. A marked increase in requirements was placed on this unit for both visual reconnaissance and support of combat operations. Operations from company size through multi-battalion size have been conducted continuously within the corps area supported by 220th. The largest operations supported were the US Marine Corps portions of operations Double Eagle and Utah. Others have included Georgia, Virginia, Wyoming and Texas. The unit's average aircraft flying time has increased nearly twenty percent over the last quarter. During the month of April the average flight time on each O-1 was 137.4 hours. This was an increase in utilization of 12% over the month of March. The current USAF doctrine, whereby only USAF forward air controllers may control USAF strike aircraft, is being modified.
The 20th Tactical Air Support Squadron at Da Nang has been tasked by Headquarters, 7th Air Force to conduct ground and airborne training to qualify 220th personnel as FACs. This program should be completed by the end of May. During the battle in which Ashau Special Forces Camp was overrun, the 220th flew 91 sorties in support of the forces involved. Their O-1 aircraft were often the only ones able to get into the area because of weather. The first casualty was evacuated in a 220th aircraft when no other aircraft were able to get into the area. The pilot received a minor wound from a grenade fragment while the aircraft was on the ground. An air force AC-47 was shot down several miles from Ashau and subsequently found by a 220th pilot. His efforts with 2.75 rockets and his M-16 rifle kept the VC at one time within ten meters away from the AC-47 crew until strike aircraft and rescue helicopters arrived. The O-1 visual reconnaissance program in the I Corps tactical zone continues to produce good results in the form of timely and accurate intelligence data. This program is sound and has proven workable throughout the last nine months. The type warfare in which we are engaged in RVN is unique in that targets are fleeting and can quickly disperse after being sighted. Instant response is required. The present debate in this area is whether the Air Force should control or perform all visual reconnaissance. US Army aviators involved in the VR program are mostly combat arms officers, well schooled in ground tactics as well as aviation. They recognize the ground commander's problems, understand his deployment patterns, recognize those enemy activities which are important indicators to the ground commander and in short, can function as an airborne extension of the ground commander. Statistics maintained in I Corps headquarters show that US Army VR aircraft have produced 85% of the intelligence information gleaned from visual aerial sources. A single case in point lends particular emphasis. The I Corps reconnaissance area B-4 is a USAF recon area into which Army aircraft go only on specific request, usually from Special Forces units. The Ashau Camp is in B-4 area. The USAF flew twenty VR sorties in B-4 between 16 February and 3 March and reported negligible activity. On 4 March two US Army sorties were flown at the request of the Special Forces at Ashau. The pilot's report noted extensive VC activity to include defensive positions, buildings, and anti-aircraft positions. He recommended reinforcing Ashau to include insertion of artillery pieces. Six days later Ashau fell to the VC.

f. The 20th Detachment (ASTA) was temporarily located in Nha Trang at the beginning of this reporting period. Due to extremely limited land area and a shortage of personnel and supplies, they were unable to operate at their full capability, however, they did support several operations. On operation Lookout, utilizing the OV-1B with Side Looking Airborne Radar (SLAR), they worked in conjunction with the US Navy. Movement of boats along the coast of Vietnam was detected by the SLAR and relayed to a Navy patrol ship, who then investigated unidentified vessels.
This has been credited with seriously hampering the VC coastal resupply effort. Both SLR and INFRA-RED (IR) surveillance and visual and photo reconnaissance were used extensively in support of Free World Military Assistance Forces in ground operations near Tuy Hoa and Phan Rang during January. In operation Fire Dragon, an OV-1C (IR) would search a predetermined area at night. Upon discovery of a suitable target, the pilot would mark it with a flare. USAF fighter aircraft would then attack the area, followed by loudspeaker and leaflet propaganda aircraft. Intelligence credits this operation with being extremely successful in harassing and interdicting the enemy, thereby reducing his resistance and will to fight. On 15 January 1966 all operations were discontinued to prepare for movement from Nha Trang to Hue Phu Bai. A change of mission, issued by Commanding General MiCV, placed the 20th Detachment (ASWA) under operational control of the United States Air Force to support a classified mission. Movement from Nha Trang to Hue Phu Bai commenced on 15 January. Due to delays in transportation and changes in priority, the unit did not complete the move until 15 February. In spite of being "In Transit" during this period, support was rendered on a limited basis during the move. As more equipment arrived in the new location operations were accelerated and on 21 February 1966, the unit was fully operational. Results to date have been very regardin.

Visual, photo, SLIR and INFRA-RED surveillance have been utilized to the fullest extent possible in developing and exploiting the area of operations. Maximum latitude has been granted to this unit in developing new techniques of electronic surveillance and, as a result, the contribution made by the 20th Detachment (ASWA) has been acknowledged by all echelon of command in the theater. Since January, the 20th Detachment (ASWA) has lost six OV-1 aircraft. On 9 January, one OV-1C failed to return from a night INFRA-RED mission. No trace has yet been found of the aircraft, pilot, or observer. On 15 January one OV-1 was lost by ground fire. Although the aircraft was severely damaged by fire, the pilot was able to make a wheels-up landing at Da Nang RVC. Only minor injuries were received by the pilot, but the aircraft was evacuated as a combat loss. On 21 February one OV-1A was hit by ground fire. Due to the damage to the aircraft, both the pilot and observer were forced to eject. Both crew members were rescued and later evacuated from Vietnam due to back injuries. On 15 March one OV-1A failed to return from a mission. A forward air controller in the area at the time stated that the aircraft was hit by anti-aircraft fire and crashed immediately. No trace has been found of the aircraft, pilot, or co-pilot. On 6 April two OV-1A's were shot down simultaneously while on a photo mission. One crew was rescued and evacuated; the other crew is missing in action. During this period the 20th Detachment (ASWA) flew 523 hours of visual reconnaissance, 523 hours of photo reconnaissance, 276 hours of INFRA-RED surveillance and 552 hours of SLIR surveillance. The following problem areas have been noted during this period:

(1) The present TO&E does not authorize enough aircraft or personnel to adequately cover the mission area on a twenty-four hour
AVOP-BC
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A day, seven day a week mission basis. The unit is scheduled to be expanded to company size during FY 67.

(2) Lack of terrain avoidance radar in the IR aircraft, which is essential if the IR is to be used effectively at night. IR flights are too dangerous during daylight hours since the aircraft must be flown at a low altitude over a straight course line.

(3) Unscheduled maintenance, mostly due to battle damage, has resulted in many hours of down time. Relatively simple items such as tubing and cables are not available and have to be manufactured by either Air Vietnam or the other services.

SECTION II: Commanders Recommendations

1. Lessons Learned:

a. Intelligence.

(1) Item: Twenty-four hour a day surveillance is essential.

Discussion: An effective surveillance program must provide for a twenty-four hour a day surveillance plan utilizing all sensory equipment and visual reconnaissance. The enemy is a master at deception especially in the field of camouflage. To detect and ultimately destroy him a continuous surveillance effort is essential.

Observation: The 20th Detachment proposes to furnish continuous surveillance within their area of responsibility.

(2) Item: Low altitude required for effective O-1 visual reconnaissance program.

Discussion: Effective performance of the visual reconnaissance mission by O-1 aircraft against the type enemy represented by the Viet Cong requires low level operation. Before deployment in RVN of the 220th Aviation Company there was little information available on visual reconnaissance under conditions prevalent in RVN. Experience in the past indicated that an altitude of 1500 feet was a desirable altitude from which to observe. This supposedly kept the aircraft safe from ground fire and should have provided an optimum height for observation. This proved to be unfounded. The aircraft remained safe from ground fire but the VC also remained safe from detection. It was found early that 1500 feet is much too high to effectively detect the activities of an adversary as clever at camouflage and at utilizing cover and concealment as is the VC.
The working altitude was lowered until the routine operating altitude became 900-1000 feet. This has proven the optimum altitude for detection. In most instances a low pass at the lowest possible altitude must be made to complete identification of the personnel who are involved. The VC are clever. After a few months of operation we noticed that everyone waved as our O-1's passed overhead. It turned out that they were mixing with the local civilians in an attempt to continue without detection, hence the necessity for the low pass. By getting face to face at low levels it can be determined whether the suspected personnel are carrying weapons or other tell-tale equipment, what type clothing they are wearing, even what type sandals, if any. Current USAF doctrine requires operation of O-1's at 1500 feet or above. It is believed this was one of the primary reasons for the poor showing made by USAF aircraft participating in the VR program. The Ashau incident serves to verify this point.

Observation: Aircraft of the 220th Aviation Company have taken numerous ground fire hits, however, losses have been surprisingly light. Aircraft of this unit have averaged one hit per 274 hours of operation. Only one aircraft has been shot down. The O-1 aircraft can take a great deal of ground fire punishment and continue to fly.

b. Operations.

(1) Item: Tactics and techniques need continuous monitoring.

Discussion: For OV-1 aircraft, tactics and techniques as taught today such as "Nap of the Earth" flying has not proven as effective a battlefield survival method as speculated. Methods of battlefield survival such as "Nap of the Earth" flying require constant monitoring to determine validity and seek improvements or new concepts.

Observation: At present data is being collected to develop new concepts of battlefield survival as pertains to this theater of operations.

c. Maintenance.

(1) Item: Engine Mount wear on U-1A aircraft.

Discussion: Finite tolerances and inadequate care are causing excessive engine mount changes on U-1A aircraft. Published limits of .005 wear on the engine mount allow almost no wear before repair is required. Engine inner cowlings restraining clamps loosen rapidly due to vibration and allow the cowlings to slide down to the ring mount and score it beyond limits in a very short period of time.
Observation: Cowlings have been modified by removing a small portion so the cowling won't touch the mounts. On some aircraft the cowling continues to chaff on the mount, however, the condition is not serious. Mounts are being inspected every twenty-five hours.

2. Commanders' Recommendations:

a. Personnel.

(1) Problem: The demands placed on the 220th Aviation Company are taxing its present capabilities. The increase in U.S.M. strength and scope of operations are causing a continuous maximum effort by this unit. It will be very difficult for the unit to continue at its present pace. For the month of April they averaged over 137.4 hours per aircraft.

Recommendation: That the 220th Aviation Company be returned to the original TO&E strength which included four platoons (32 aircraft). The unit is presently operating with three platoons (23 aircraft).

b. Intelligence.

(1) Problem: The USAF is attempting to assume control of the visual reconnaissance mission performed by the Army.

Recommendation: That visual reconnaissance from Army aircraft continue to be controlled by the Army. The Army aviator's dual function as both an aerial observer and a ground combat arms officer make him the best qualified individual for seeking and recognizing intelligence information which is useful and meaningful to the ground commander. Long-term statistics and comparisons of USAF and US Army VR reports from the same combat area verify the value of this system.

(2) Problem: The OV-1C aircraft organic to the 20th Detachment (ASA) are not equipped with terrain avoidance radar. This radar is a must if IR (LPR-40) is to be effectively used at night. The IR flights are too dangerous during daylight hours since low altitude and a straight line course are required.

Recommendation: That terrain avoidance radar be installed in all OV-1C aircraft.

c. Maintenance.

(1) Problem: The syringe method of greasing UH-1B tail rotor drive shaft hanger bearings has not proved effective.
I Corps Aviation Company (PROV) encountered no significant wear on hanger bearings prior to the institution of the syringe method on 14 February 1966. Following the implementation of the syringe method, in which bearings are lubricated at each intermediate inspection, several high frequency vibrations have been traced to bearing malfunction. Elimination of these vibrations required replacement of eight hanger bearings on three UH-1B's in less than seventy days.

Recommendation: That the syringe method of greasing UH-1B tail rotor drive shaft hanger bearings be discontinued and the handpack method be reinstated.

(2) Problem: Lack of Technical Assistance (Manufacturer's Representatives) has seriously curtailed the surveillance effort of the 20th Detachment (ASTA). An example is the AM/SM-97 Canadian Marconi Doppler System, none of which are operational. Technical assistance is required to keep new equipment installed in OV-1 type aircraft operational.

Recommendation: That Technical Assistance (Manufacturer's Representatives) be made available to the 20th Detachment (ASTA) on a full time basis.

(3) Problem: Many hours of down time have been experienced by the 20th Detachment (ASTA) since relatively simple items such as tubing and cables cannot be reproduced at unit level.

Recommendation: That the 20th Detachment (ASTA) be authorized and issued tools and material so they can manufacture tubing and cables at unit level to replace battle damaged items.

d. Communications

(1) Problem: Pilots in O-1 aircraft are only able to transmit on one of the two FM radios in the aircraft. Missions have been aborted in the past because the pilot lost the only FM transmitter available to him.

Recommendation: That a wiring modification be made within the FM radio wiring system of the O-1 aircraft which would allow the pilot to transmit over either FM radio.

(2) Problem: At present a make-shift system of wiring is being utilized to allow pilots of O-1 aircraft to
fire the 2.75 inch rockets. This is undesirable and increases the possibility of malfunction.

Recommendation: That a standard wiring modification be made to allow firing of 2.75 inch rockets when the tubes are installed on the O-1 aircraft bomb shackles.

ROHLD J. ROGERS
Major, Infantry
Commanding

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SUBJECT: Operational Report on Lessons Learned, CSGPO-28(RI)

HEADQUARTERS 17TH AVIATION GROUP, APO San Francisco 96240 23 May 1966

TO: ACoFS for Force Development, Department of The Army, Washington, D.C. 20310.

The problem concerning the lack of technical assistance (Manufacturer's representatives) as discussed in Section II, paragraph 2c(2) has now been alleviated.

FOR THE COMMANDER:

[Signature]

DOUGLAS SCHNEEWEB
Major, Infantry
Adjutant