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DEPARTMENT OF THE ARMY
OFFICE OF THE ADJUTANT GENERAL
WASHINGTON, D.C. 20310

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REPLY TO
ATTENTION OF

DAAG-PAP-A (M) (9 Aug 74) DAMO-000

27 August 1974

Expires 27 August 1975

SUBJECT: Operational Report - Lessons Learned of the 11th Combat Aviation Group for the period ending 31 October 1972, (U)

aviation group

AD531174

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2. The information contained in this report is provided to insure that lessons learned during active operations are used to the benefit of future operations and may be adapted for use in developing training material, as appropriate. This report should not be interpreted as the official view of the Department of the Army, or of any agency of the Department of the Army.

BY ORDER OF THE SECRETARY OF THE ARMY:

J. C. Pennington
C. Pennington

J. C. PENNINGTON
Colonel, AGC
Acting The Adjutant General

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as

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DEPARTMENT OF THE ARMY
HEADQUARTERS, 11th COMBAT AVIATION GROUP
APO San Francisco, 96349

AVIATS-C

17 November 1972

SUBJECT: Operational Report - Lessons Learned (ORLL) of the 11th Combat Aviation Group for the period ending 31 October 1972
RCS CSFOR - 65 (R2) (U)

2. (C) LESSONS LEARNED: Commanders Observations, Evaluation and Recommendations.

a. Personnel: None

b. Intelligence:

(1) OBSERVATION: During the development of "Night Hawk" operations it became apparent that a shortage of intelligence information was causing the lack of tactical success in the rocket belt area of DaNang.

EVALUATION: Upon stand down of the 196th Lt Inf Bde (originators of Night Hawk) the supply of valid intelligence data for crew briefings became almost non-existent. This was due largely to the fact that the S-2 section of the 11th CAG was primarily administrative by its organizational structure. The 11th CAG, S-2 section managed to get on distribution of agent reports from the local MI Detachments and Air Force OSI. Low level reports, through unit evaluations, proved about 90% inaccurate. A combined briefing was initiated by the S-2 section to provide adequate briefings and debriefings to the crews and to establish a meaningful flow of information between the two assigned Air CAV troops who flew the nightly missions. The quality of the intelligence information began to improve when liaison was developed with the Air Force Intelligence office which had access to special intelligence from COMINT & ELINT facilities in the DaNang area. Through a concerted effort on the part of the Group Commander, LTC Cass, the S-2 was able to gain access to this extremely sensitive intelligence source and began not only to ascertain the enemy's location and intentions, but also reasons why our operations were producing such limited success. Our highest error was establishing a pattern for our flights. Once this was revealed flight schedules were altered to reflect random take off times and length of time on station. Our success has since become a matter of record. The enemy has since been forced to alter his movements and techniques for initiating rocket attacks, by concealing launch sites more effectively and limiting his movements to shorter distances each night to prevent detection. Consequently more blade hours are required to adequately cover the area of operation.

RECOMMENDATIONS:

(a) That Group level aviation S-2 sections be given, on a regular basis, access to SI information through the local SSO.

(b) That the S-2 section be responsible for briefing and debriefing of Night Hawk crews.

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(c) That the T.O.E. for group level S-2 section be increased to adequately handle both administrative and intelligence analysis requirements.

(d) That Night Hawk crews be educated as to the adverse effects of unknowingly establishing patterns during their search operations.

(e) That, because of the short time period required to set up and launch rockets, the efforts of Night Hawk be concentrated in areas just outside the rocket belt to restrict the enemy's movement.

(f) That scheduled times for Night Hawk operations be changed on a nightly basis to keep the enemy off guard with respect to when he can move his supplies.

COMMAND ACTION: All recommendations listed above have been instituted in the 11th CAG with the exception of T.O.E. changes.

c. Operations:

(1) OBSERVATION: Due to a shortage of processing kits for the AN/AP-94D SLAR system units were forced to run systems dry in order to meet SLAR mission requirements. Ten missions were flown in this manner.

EVALUATION: The imagery obtained in the ten missions was usable; however, friction of the film traveling over the dry tray caused the film drive motors to burn out. On the ten missions flown, three film drive motor failures were experienced.

RECOMMENDATION: That the AN/AP-94D SLAR system not be run dry.

COMMAND ACTION: This unit has adopted the recommendation.

(2) OBSERVATION: There is a propensity for headquarters to task aviation units to dedicate aircraft to certain missions or staff sections rather than scheduling aircraft daily on an as required basis. This often times causes inefficient use of aircraft and limits flexibility.

EVALUATION: With the abundance of aviation assets available during the Vietnam build-up certain aircraft were assigned to specific missions or staff sections on a regular basis to allow both the supported and supporting unit better coordination and continuity on missions. As aviation assets have dwindled little attempt was made to effect a consolidation of requirements. This practice has often times resulted in the misutilization of available aircraft and limited the capabilities of aviation companies to provide support to other missions.

RECOMMENDATION: That headquarters tasking aviation units evaluate mission requirements in order to establish priorities and schedule aircraft on a task rather than a dedicated aircraft basis.

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COMMAND ACTION: 11th CAG provides aircraft on a combination priority/dedicated basis and continues to recommend improvements that foster improved flexibility and aircraft utilization.

(3) **OBSERVATION:** Low level flight operations reduce the sophisticated anti-aircraft (AA) threat common to near mid-intensity conflict.

EVALUATION: Because of the large number and variety of AA weapons being employed in MR-1, flight at altitudes above 200 feet above ground level (AGL) by rotary wing aircraft has become extremely hazardous. Flight at or below 1500 feet AGL places the aircraft within effective small arms range. Low level flight and nap-of-the-earth flight significantly reduce the effectiveness of large caliber AA weapons. However, these low level techniques do not lessen the aircraft vulnerability to small arms fire except in that exposure time to aimed fire is reduced.

If flight is conducted over a concentration of enemy troops, or if it is conducted in mountainous terrain where larger caliber AA weapons can be sighted down the valleys, the chance of taking hits is increased considerably.

RECOMMENDATION: Aircraft should be flown low level or nap-of-the-earth while operating in known AA high threat areas.

COMMAND ACTION: Units of the 11th CAG use either low level or nap-of-the-earth flight when operating in Northern MR-1, or in any area known to contain active enemy AA.

(4) **OBSERVATION:** Navigation is extremely difficult at low level.

EVALUATION: The navigational problems inherent in low level flight are many. The lack of easily recognizable terrain features in parts of MR-1, the age and inaccuracy of area maps, the speed at which the aircraft is flying, and the necessity for dividing one's attention between piloting the aircraft, and performing the mission, are but a few. In order to alleviate these problems, a thorough map reconnaissance including a terrain analysis, and plotting of routes, checkpoints and boundaries should be accomplished. The "time, distance, heading" method may also be used; however, this method requires close monitoring of the compass & clock further contributing to the problem of division of attention. It cannot be effectively used during nap-of-the-earth flight.

RECOMMENDATION: Pilots should conduct a thorough map reconnaissance before each flight and use the information gained from this reconnaissance together with their prior knowledge of the area to accomplish the mission. In addition, the "time, distance, heading" method should be used when possible.

(5) **OBSERVATION:** Maintaining adequate command and control of reconnaissance operations and combat assaults at low level is extremely difficult.

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EVALUATION: Before the sophisticated AA threat in northern MR-1 forced US Army helicopters to adopt low level tactics, reconnaissance operations and combat assaults were controlled by aircraft circling overhead at sufficient altitude to effectively control all elements, and keep them correctly orientated on the objective area. This luxury no longer exists in areas of MR-1 protected by effective AA weapons. The Command and Control (C & C) aircraft must also resort to low level in order to survive.

RECOMMENDATION: Several methods of employment and crew configurations for C & C aircraft have evolved since the onset of the present NVA offensive. Two methods have proven successful in operations in MR-1 are as follows:

(a) By having the C & C aircraft orbit behind the gunship (staying over ground already cleared by the scout aircraft). The mission commander rides in the passenger compartment with the ARVN or US ground commander's representatives. From this position he directs the operation, navigates, copies spot reports, and performs the normal C & C functions. This method enables the pilot to devote full attention to flying the aircraft, and the mission commander free to direct the mission.

(b) In the second successful method the C & C aircraft orbits over the last secure area short of the air cav box (approximately four kilometers square). Actual operational control is invested in the lead gunship; the C & C aircraft is relegated to the task of recording reconnaissance information and other coordination with the secondary task of rescue of downed aircrews. Thus the pilot of the C & C aircraft acts as the mission coordinator during the execution phase and mission commander during the planning phase.

(6) OBSERVATION:

The CH-47 (Chinook) is especially vulnerable to virtually any type of AA weapons because of its size and infrared signature. The resupply of large amounts of bulk supplies (i.e. artillery ammunition, construction material and bulk POL) can be done very expeditiously by this aircraft; in fact it is the preferred method of resupply for armor and artillery units. This has necessitated using the CH-47 in the front line resupply role.

EVALUATION: The primary means of reducing the CH-47's vulnerability factor is to keep it in the high threat area for the shortest possible time. In order to shorten ground time in the LZ the external (slung load) method should be used whenever possible.

RECOMMENDATION: Ground units requiring CH-47 resupply must be instructed to rig as much of their cargo as possible for external load. In addition, gunship cover should be provided whenever possible.

COMMAND ACTION: The above recommendation has been adopted by units operating in MR-1.

(7) **OBSERVATION:** A Forward Air Controller (FAC) working in conjunction with the air cavalry team is an extremely effective method of operation.

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EVALUATION: Having a FAC in contact with the air cavalry element offers several advantages. Many times the FAC can put immediate TAC AIR on the targets acquired by the scouts. In addition the FAC can assist the team in target acquisition and navigation.

RECOMMENDATION: That close coordination be affected between US Army and US Air Force elements to provide a FAC to air Cavalry elements whenever possible.

(8) **OBSERVATION:** There have been several instances of US aircraft being mobbed in the LZ by civilian refugees attempting to escape enemy threatened areas.

EVALUATION: Because of the obvious lack of control in the LZ when an incident of this nature occurs, a serious threat exists to the lives of the helicopter crews and to the aircraft involved.

RECOMMENDATION: That pilots on resupply missions who feel that the risk of being mobbed exists should come to a high hover and discharge their supplies. If through necessity the aircraft must land to discharge passengers, the pilot should abort the mission until he receives a guarantee that the LZ will be controlled and then continue using extreme caution.

d. Organization: None

e. Training: None

f. Logistics:

(1) **OBSERVATION:** During the move from Marble Mountain Army Airfield to Da Nang Air Base, 15 Aug 72 thru 9 Sep 72, Philco Ford Inc, part of this unit's direct support, changed contracts. Due to this change this unit experienced a lack of support in the following areas:

(a) Lack of electrical power and lack of proper maintenance on existing electrical equipment.

(b) Sewage problems.

(c) Lack of water on many occasions.

(d) Slow work on all outstanding work orders.

EVALUATION: This unit needed proper support during the move periods, which was mandatory for health and welfare of troops.

COMMAND ACTION: Proper records have been annotated to assure that all coordination with US Army contract personnel will be completed prior to any future move.

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(2) **OBSERVATION:** Planning conferences for movement from Marble Mountain Army Air Field to Da Nang Air Base included personnel from Army Support Element, Philco Ford, ARVN, VNAF, and advisors but failed to include members of this unit. Due to this oversight this unit experienced many problems, delays and bottlenecks during the move period. Many of these problems could have been worked out on the planning table eliminating many of the problems encountered.

EVALUATION: Being excluded from the planning conferences caused many delays, excess man hours, and much money unnecessarily spent during this unit's move.

RECOMMENDATION: Higher headquarters and supporting units should plan together with the subject unit prior to including this unit in any active plans.

COMMAND ACTION: Supporting units and the Army Support Element have been advised by S-4 11th CAG of the problems which arose during the move period because this unit had been excluded from planning conferences. This unit will take all necessary action in further moves to assure that it is included in the planning phase of any proposed move.

k. Communications:

(1) **OBSERVATION:** The commercial telephone service provided in the Da Nang area is marginal, and cannot be relied upon for tactical purposes.

EVALUATION: Shortly after the 11th CAG relocated from Marble Mountain to Da Nang Air Base the shortcomings of the commercial telephone system became obvious. Following an incident in which the 1200 pair underground cable serving the Gunfighter West area was cut, the 11th CAG was virtually without telephone communications for three weeks. For much of this time the only communications between 11th CAG and 1st Avn Bde was a single link by RWI with FRAC TOC, and even this line was dependent on the commercial telephone system either for primary or back-up use in MK-1.

RECOMMENDATION: 11th CAG should provide itself not only with the capability of communications with 1st Avn Bde in Saigon in the event of a tactical emergency, but with the additional capability of maintaining internal communications with subordinate units by means of a system independent of the commercial telephone network and entirely controlled and repaired by 11th CAG personnel.

COMMAND ACTION: This office has taken action to expand service provided by Skyrocket switchboard, to include trunk lines to each of the unit switchboards, and a line to Long Binh switchboard. Arrangements have been made to install an IIF radio with telephone patching capabilities at the Skyrocket switchboard, thus enabling any subscriber to skyrocket to make an RWI type call to anywhere in Vietnam.

(2) **OBSERVATION:** The attrition rate of secure equipment in the 11th CAG TOC was unusually high.

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EVALUATION: The TOC was required to monitor both FRAC secure FM radio nets on a 24 hour basis. The KYH-6 T/SEC equipment used with the radios in the TOC malfunctioned faster than it could be replaced. Under normal operating conditions, a KYH-6 should be changed every six hours. This would require four separate pieces of equipment to meet the requirements of the TOC. KY38s can be used indefinitely without changing equipment pieces. The one disadvantage to the use of the KY-28 was that each one uses batteries at the rate of two each per 24 hour period.

COMMAND ACTION: This office secured permission from FRAC G-6 for TOC to reduce its monitoring to a single secure net since the nets are overlapping in the Da Nang Area. This reduced battery usage by 50%.

(3) **OBSERVATION:** There is difficulty in maintaining communications between 11th CAG TOC and F/4 Cav at Tan My because of equipment limitations and the distance and terrain involved.

EVALUATION: The commercial land line system of communications with F/4 Cav at Tan My Island is unreliable at best. This dictates the necessity of maintaining permanent radio contact with that location. In turn, the planning range of the radio equipment authorized this unit by TO&E (RT 524) is only 30 KM, while Tan My is some 75 KM distance. This problem had, in the past, been partially solved by employing an unattended transmission unit at Monkey Mountain. While this provided the capability of FM radio communications with F/4 it also created the problem of making the TOC dependent on unattended equipment. Furthermore, the types of traffic which could be passed over non-secure radio were limited. The prospect of a secure retransmission unit at Monkey Mountain presented the problem of even more equipment of a more complicated operative nature, and introduced the additional problem of the security measures required for secure equipment.

RECOMMENDATION: 11th CAG should provide the personnel to attend and monitor the retransmission site.

COMMAND ACTION: Permission was secured from FRAC G-6 to include F/4 Cav in one of the FRAC FM secure radio nets. The TAC-1 net had been operating successfully with a station at Hue and could net with Tan My even when direct contact from the TOC was not possible. The 11th CAG retransmission facility was relocated to the 321st AD (D) flight following station at Monkey Mountain, manned by personnel from 11th CAG.

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h. Material

(1) **OBSERVATION:** Current model Army helicopters are too vulnerable to ground fire.

EVALUATION: During this reporting period there have been many injuries to aircrew members due to hostile small arms fire. There exists a need to increase crew protection and also increase protection of vital aircraft parts. Current armor protection and system redundancy is not adequate.

RECOMMENDATION:

(a) The UH-1H needs armor protection behind the pilot's and copilot's heads. There is also a need for armor protection behind and beneath the door gunners.

(b) The CH-47 needs more armor around the cargo hook well (for protection of the crew chief as he observes the load). Armor is also required along the walls and floor vicinity the door gunners stations.

(c) The AH-1G needs armor along the sides and floor of the pilot and gunner compartment to protect the pilot's legs, and is particularly needed on the pilot's left side (to protect the pilot's arm as he holds the collective). Armor should also be used to protect the back of the pilot's head.

COMMAND ACTION: None other than pilots are instructed to wear body armor at all times while flying in unsecure areas.

(2) **OBSERVATION:** Obtaining a high degree of accuracy with the M129, 40mm grenade launcher mounted in the AH-1G is extremely difficult.

EVALUATION: Fire adjustment of the 40mm grenade launcher from a moving aircraft is extremely difficult. Due to the relatively slow muzzle velocity of the round the "burst in target" method of adjustment from a fast moving aircraft is relatively impossible.

RECOMMENDATION: That 40mm ammunition for use in the M129 be equipped with a tracer element every fourth round. This would facilitate rapid fire adjustment without waiting for the initial rounds to impact.

(3) **OBSERVATION:** Covers issued for the infra-red suppression kit on UH-1H and AH-1G helicopters will melt and fall into the engine exhaust diffusers section if they are replaced too quickly after flight.

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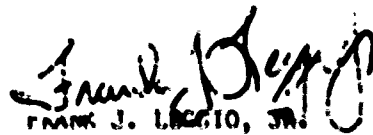
EVALUATION: The covers issued with the IR kits are made of a material which melts (particularly the thread) if placed on the exhaust stack immediately after flight. If these covers are not replaced after flight and it rains, the engine will fill with water.

RECOMMENDATION: The present solution is to wait until the engine has cooled sufficiently so as not to cause damage to the covers; however, in the future covers should be fabricated from more heat resistant material.

COMMAND ACTION: Aircrews have been instructed to delay a sufficient amount of time for the engine to cool before replacing engine covers. Several unit maintenance officers have already submitted EIR's on these covers.

1. Other: None.

FOR THE COMMANDER:


FRANK J. LICATO, JR.
CPT, TC
Adjutant

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AVBAGC (17 Nov 72) 1st Ind CPT Pfeiffer/bb/3761
SUBJECT: Operational Report-Lessons Learned (OR-LL) of the 11th Combat
Aviation Group for the Period Ending 31 October 1972, RCS
CSFOR-65 (R2) (U)

DA, Hqs 1st Aviation Brigade, ATTN: AVBAGC, APO San Francisco 96309 4 Dec 72

TO: Cdr, USARV ATTN: AVHDO-DO, APO San Francisco 96375

1. (U) This headquarters concurs with the Operational Report-Lessons Learned for the 11th Combat Aviation Group, dated 17 November 1972 for the period ending 31 October 1972.

2. (C) Comments pertaining to Paragraph 2, Lessons Learned: Commanders Observations, Evaluations, and Recommendations are as follows:

a. Paragraph 2c(7).

Coordination between Air Cavalry troops and an Air Force Forward Air Controller (FAC) is a responsibility that remains with the Regional Assistance Commanders in each Military Region. Joint FAC-Air Cavalry utilization has been used quite often in the past. This headquarters highly encourages continuous cooperation and utilization of this joint services concept.

b. Paragraph 2c(8).

All units within the 1st Aviation Brigade have been instructed to instruct their pilots not to enter landing zones where they may be mobbed. Close coordination between pilots, ground commanders, and advisors is necessary to alleviate this problem and appropriate guidance has been provided to subordinate commands.

c. Paragraph 2h(1).

Vulnerability of personnel and vital systems in Army helicopters is realistically presented in this section. The comments are valid and are substantiated by reference to anti-aircraft capabilities and experience in the area of operations. Immediate actions to reduce aircraft/aircrew vulnerability at this level are limited, other than avoidance of high threat areas and modification of flight tactics. This requirement is currently SOP within units of the 1st Aviation Brigade.

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AVBAGC


4 December 1972

**SUBJECT: Operational Report-Lessons Learned (OR-LL) of the 11th Combat
Aviation Group for the Period Ending 31 October 1972, RCS
CSFOR-65 (R2) (U)**

d. Paragraph 2h(3).

The United States Army Aviation Systems Command in St. Louis has been made aware of the problem of the melting exhaust cover and are in the process of procuring new covers with a higher heat resistant capability. No estimated date of availability has been provided to this headquarters. All United States units in Vietnam have been advised to delay covering the exhaust following flight until the exhaust area has cooled sufficiently.

FOR THE COMMANDER:


JAMES T. McQUEEN
LTC, GS
Chief of Staff

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