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<td>Distribution authorized to U.S. Gov't. agencies and their contractors; Administrative/Operational Use; 13 AUG 1969. Other requests shall be referred to Office of the Adjutant General (Army), Washington, DC 20310.</td>
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DEPARTMENT OF THE ARMY
OFFICE OF THE ADJUTANT GENERAL
WASHINGTON, D.C. 20310

AGDA (M) (12 Nov 69) OCT-19-69-19323
31 November 1969

SUBJECT: Lessons learned, Headquarters, 11th Aviation Battalion

Defense of the National Capital

1. Subject report is forwarded for review and evaluation in accordance with paragraph 4b, AR 525-15. Evaluations and corrective actions should be reported to ACSFOR OT UT, Operational Reports Branch, within 90 days of receipt of covering letter.

2. Information contained in this report is provided to insure appropriate benefits in the future from lessons learned during current operations and may be adapted for use in developing training material.

BY ORDER OF THE SECRETARY OF THE ARMY:

ROBERT E. LYNCH
Colonel, AG
Acting The Adjutant General

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  US Army Aviation Test Activity
  US Army Mobility Equipment Research & Development Center
  11th Aviation Battalion
SUBJECT: Operational Report of the 11th Aviation Battalion (Combat) for Quarterly Period Ending 31 July 1969, RCS CSPOR-65 (R) (U)
UNIT COMMANDERS


(g) On 15 July 1969, MAJ William H. Luther, IN, 399-28-0456, replaced MAJ Monte R. Veal, IN, 257-62-4913, as Commanding Officer of 128th Aviation Company (Assault Helicopter).

(h) On 24 July 1969, MAJ Richard J. Burtnett, IN, 218-26-7256, replaced MAJ James W. Griffin, IN, 421-28-0643, as Commanding Officer of the 173d Aviation Company (Assault Helicopter).

(2) The current command and staff structure is reflected at Inclosure 2.

d. (U) Unit Strengths (as of 31 July 1969).

(1) Military:

<table>
<thead>
<tr>
<th>UNIT</th>
<th>OFF AUTH PFD</th>
<th>WO AUTH PFD</th>
<th>EN AUTH PFD</th>
<th>TOTAL AUTH PFD</th>
</tr>
</thead>
<tbody>
<tr>
<td>HHC</td>
<td>19</td>
<td>25</td>
<td>3</td>
<td>5</td>
</tr>
<tr>
<td>391st Q. M. Det</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>432d Med Det</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>128th Avn Co (Aslt Hel)</td>
<td>19</td>
<td>24</td>
<td>51</td>
<td>49</td>
</tr>
<tr>
<td>173d Avn Co (Aslt Hel)</td>
<td>19</td>
<td>24</td>
<td>51</td>
<td>49</td>
</tr>
<tr>
<td>759th Med Det</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>205th Avn Co (Aslt Spt Hel)</td>
<td>15</td>
<td>9</td>
<td>26</td>
<td>20</td>
</tr>
<tr>
<td>213th Avn Co (Aslt Spt Hel)</td>
<td>15</td>
<td>10</td>
<td>26</td>
<td>15</td>
</tr>
<tr>
<td>TOTAL 11th Avn Bn (Otb)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
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AVBACA-AC

13 August 1969

SUBJECT: ORLL for Period Ending 31 July 1969, RCS CSFOR-65 (RI) (U)

(2) Civilian:

<table>
<thead>
<tr>
<th>UNIT</th>
<th>ID.C.</th>
<th>VM</th>
<th>3d N.T'L</th>
<th>TECH R&amp;P</th>
</tr>
</thead>
<tbody>
<tr>
<td>HHC</td>
<td>0 0</td>
<td>9 8</td>
<td>0 0</td>
<td>0 0</td>
</tr>
<tr>
<td>391st Q. M. Det</td>
<td>0 0</td>
<td>0 0</td>
<td>0 0</td>
<td>0 0</td>
</tr>
<tr>
<td>432d Med Det</td>
<td>0 0</td>
<td>1 1</td>
<td>0 0</td>
<td>0 0</td>
</tr>
<tr>
<td>128th Avn Co (Aslt Hel)</td>
<td>0 0</td>
<td>10 9</td>
<td>0 0</td>
<td>0 0</td>
</tr>
<tr>
<td>173d Avn Co (Aslt Hel)</td>
<td>0 0</td>
<td>9 6</td>
<td>0 0</td>
<td>0 0</td>
</tr>
<tr>
<td>759th Med Det</td>
<td>0 0</td>
<td>1 0</td>
<td>0 0</td>
<td>0 0</td>
</tr>
<tr>
<td>205th Avn Co (Aslt Spt Hel)</td>
<td>0 0</td>
<td>8 8</td>
<td>0 0</td>
<td>1 1</td>
</tr>
<tr>
<td>213th Avn Co (Aslt Spt Hel)</td>
<td>0 0</td>
<td>9 9</td>
<td>0 0</td>
<td>1 1</td>
</tr>
</tbody>
</table>

TOTAL 11th Avn Bn (Cbt) 0 0 47 41 0 0 2 2

e. (U) Aircraft Status. See Inclosure 3.
f. (U) Operational Results. See Inclosure 4.
g. (U) Employment. The 11th Aviation Battalion (Combat) was engaged in supporting tactical operations each day during the reporting period. Continuous training of new personnel by subordinate units of the battalion was accomplished concurrently with the conduct of normal combat operations.
h. (U) Personnel, Morale, Discipline and Information.

(1) Personnel records. An average of 1180 records was maintained at this headquarters during the reporting period. Processing totals were:

<table>
<thead>
<tr>
<th>In Processed</th>
<th>Out Processed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Officer</td>
<td>30</td>
</tr>
<tr>
<td>Warrant Officer</td>
<td>36</td>
</tr>
<tr>
<td>Enlisted Men</td>
<td>302</td>
</tr>
<tr>
<td>Total</td>
<td>368</td>
</tr>
</tbody>
</table>

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(2) Awards and decorations. The following awards and decorations were processed during the reporting period:

<table>
<thead>
<tr>
<th>Award</th>
<th>Submitted</th>
<th>Received</th>
</tr>
</thead>
<tbody>
<tr>
<td>Silver Star</td>
<td>5</td>
<td>0</td>
</tr>
<tr>
<td>Distinguished Flying Cross</td>
<td>25</td>
<td>12</td>
</tr>
<tr>
<td>Soldier's Medal</td>
<td>4</td>
<td>0</td>
</tr>
<tr>
<td>Bronze Star &quot;V&quot;</td>
<td>0</td>
<td>3</td>
</tr>
<tr>
<td>Air Medal &quot;V&quot;</td>
<td>9</td>
<td>17</td>
</tr>
<tr>
<td>Army Commendation Medal &quot;V&quot;</td>
<td>1</td>
<td>10</td>
</tr>
<tr>
<td>Bronze Star</td>
<td>91</td>
<td>64</td>
</tr>
<tr>
<td>Air Medal</td>
<td>2269</td>
<td>1847</td>
</tr>
<tr>
<td>Army Commendation Medal</td>
<td>130</td>
<td>132</td>
</tr>
<tr>
<td>Purple heart</td>
<td>21</td>
<td>17</td>
</tr>
</tbody>
</table>

1. (C) Intelligence. No significant Intelligence activities transpired during this reporting period.

J. (C) Plans, Operations and Training.

(1) Plans. The 11th Aviation Battalion (Combat) CFLAN 1-69 (Eagle-foot Defense) continued in effect. Incorporated in the defense plan are procedures for defense of the aircraft parking area, the battalion's sector of responsibility within the Hu Loi Base Camp perimeter, gun ship support for the Hu Loi perimeter and procedures for evacuation of battalion aircraft.

(2) Operations.

(a) During this reporting period the 11th Aviation Battalion (Combat) continued to support the following major tactical units: II Field Force, 1st Infantry Division, 1st Cavalry Division (Airborne), 9th Infantry Division, 25th Infantry Division, 5th ARVN Division, Royal Thai Army Volunteer Force (RTAVF), Bien Hoa Tactical Area Command (GTAC), Capital Military Assistance Command (CMAC), Military Assistance Command Civil Operations and Revolutionary Development Support (MACV-ORDS), 11th Armored Cavalry Regiment and 5th Special Forces Group.
SUBJECT: ORLL for Period Ending 31 July 1969, RCS CSFOR-65 (RI) (U)

(b) Operation Toan Thang (Complete Victory) Phase III, initiated on 17 February 1969, continued through this period. During this reporting period, in support of Operation Toan Thang III, the 11th Aviation Battalion (Combat) transported 201,805 passengers and 65,222 tons of cargo while flying 85,702 sorties in 25,034 flying hours (See Inclosure 4). Mission results for this period are listed at Inclosure 4. Ammunition expenditures by type and amount are listed at Inclosure 5.

(c) Throughout this period airmobile combat assaults (CA), tactical extractions and direct combat support missions were conducted daily by the battalion. The trend of employing company and platoon-sized combat assaults continued and was evidenced by the fact that the 11th Aviation Battalion (Combat) did not conduct an infantry battalion insertion during this reporting period. The 11th Aviation Battalion (Combat) continued to support the 1st Infantry Division primarily, although the battalion's two assault support helicopter companies provided general and direct combat support for all other major units in III Corps Tactical Zone. In addition, units of the 11th Aviation Battalion (Combat) were selected to transport the White House Staff during President Nixon's recent visit to RVN.

(d) The 11th Aviation Battalion (Combat) conducted 22 heli-bucket missions (CH-47 Chinooks equipped with two 350-gallon buckets) during the quarter. Nine of these missions, representing 41 per cent of the total, were cancelled prior to the aircraft arriving on station. The remaining 13 missions were completed successfully. A total of 74 sorties were flown to dispense 51,800 gallons of water on fires of various types. With the onset of the monsoon, heli-buckets have not been required to suppress dust in pick-up zones.

(e) The 11th Aviation Battalion (Combat) Pathfinder Detachment continued to provide daily support of CH-47 "Chinook" missions. During this reporting period the Pathfinder detachment established four records by conducting 589 missions consisting of 249 troop sorties transporting 5,029 passengers, and 4,460 equipment sorties involving 19,440 tons of cargo. The pathfinders also set an unusual record during the month of July by conducting 24 artillery fire support base moves during one month.

(f) The light ship, (Fire-Fly), assigned to the battalion headquarters, was employed on 12 occasions for a total of 34 flying hours. Battalion Fire-Fly operations were normally flown in support of Phu Loi Base defense. On 10 May 1969, the Fire-Fly crew was credited with two (2) NVA/VC KIA. New techniques in Fire-Fly operations are discussed in Section 2.

(3) Training.

(a) During this reporting period the 11th Aviation Battalion (Combat)
sent 159 of 209 eligible personnel to Vietnam in-country training as required by USARV Regulation 350-1. This represented a significant increase over allocations received last quarter. The increase can be attributed primarily to additional allocations received from 1st Infantry Division Training Center located at Di An, RVN. With continued assistance of the 82d Airborne Division Replacement Training Detachment and the 1st Infantry Division Replacement Training Center, the 11th Aviation Battalion (Combat) will accomplish minimum requirements established by USARV Regulation 350-1.

(b) During this reporting period the 11th Aviation Battalion (Combat) Pathfinder Detachment conducted 34 combat equipment parachute jumps to maintain proficiency in the event of a need for airborne operations.

c) The pathfinder detachment continued to assist the Battalion Mobile Training Teams (MTT) in conducting classes for artillery and infantry units on correct procedures for rigging sling loads and proper aircraft utilization. With increased emphasis on ARVN utilization of air assets, many ARVN units were trained by the pathfinders in proper loading and rigging techniques.

(d) In addition to the assistance rendered to supported units on MTT classes, the pathfinders participated in combat assaults with ARVN and Royal Thai Army Units. These operations served to teach command and control techniques in pick-up and landing zones, and control of armed helicopter and medevac ships as the situation required.

(e) The KY-28 training program continued. Since most aviators were not familiar with voice-secure equipment prior to arrival in Vietnam, increased emphasis was placed on training all aviators in the use of the KY-28 voice-secure equipment.

(f) The 11th Aviation Battalion (Combat) received two allocations for Jungle Survival Training School (JEST) during this period. This represented a significant increase in allocations and allowed more emphasis to be placed on survival, escape and evasion classes conducted by school-trained personnel.

(g) An increase in allocations for Army Aviation Refresher Training School (AARTS) courses was received during this reporting quarter. The most significant increase in allocations was for the Technical Inspector Courses. The 11th Aviation Battalion (Combat) requested and received waivers to allow personnel in on-the-job-training (OJT) status to attend the courses. This partially relieved existing critical MOS shortages. Twenty-seven allocations were received for the following courses:
<table>
<thead>
<tr>
<th>Course</th>
<th>No. of Allocations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Technical Inspector Course</td>
<td>2</td>
</tr>
<tr>
<td>Technical Supply Course</td>
<td>2</td>
</tr>
<tr>
<td>Officer Armament Repairman Course</td>
<td>1</td>
</tr>
<tr>
<td>Enlisted Armament Repairman Course</td>
<td>3</td>
</tr>
<tr>
<td>T-53-L-11 Engine Repairman Course</td>
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<tr>
<td>T-53-L-13 Engine Repairman Course</td>
<td>3</td>
</tr>
<tr>
<td>T-55 Engine Repairman Course</td>
<td>6</td>
</tr>
<tr>
<td>AH-1G/UH-1C Airframe Repairman Course</td>
<td>1</td>
</tr>
<tr>
<td>CH-47 Airframe Repairman Course</td>
<td>3</td>
</tr>
<tr>
<td>UH-1D/H Airframe Course</td>
<td>3</td>
</tr>
</tbody>
</table>

(h) During this period increased emphasis was placed on defense against sapper attacks. All members of the command were trained to recognize and defeat sapper techniques. All personnel completed an extensive training program implemented by battalion.

k. (C) Logistics.

(1) The following items continued to be in short supply:

(a) Helmets, APH-5 and APH-6.

(b) Rifles, M-16, 5.56 mm.

(c) Nomex flight suits.

(2) Eleven reports of survey were initiated, three of which were administrative. The remainder were combat losses. Weapons and flight gear represented a large percentage of the equipment lost, damaged or destroyed.

(3) Construction and upgrading of facilities within the battalion continued.

(a) The battalion dispensary was rewired and connected to Phu Loi Post central power. In addition, procurement and installation of a 101,000 B.T.U. central air conditioning unit further improved the standards of this facility.
SUBJECT: ORLL for Period Ending 31 July 1969, RCS CSFOR-65 (RT) (U)

(b) The battalion field ration mess installed a 15-ton air conditioning unit, a stereophonic music system, and installed new tile on the floor.

(4) The lack of school-trained or experienced maintenance supervisors, MOS 63C40, and engineer equipment repairmen, MOS 52B20, continued to be a serious problem. Maximum use of on-the-job-training (OJT) plus daily technical assistance from battalion and direct support units partially alleviated the problem.

(5) A shortage of repair parts for engineer equipment and UH-1B/H helicopters contributed to excessive equipment down time. Further, units were unable to maintenance-exchange because of non-availability of float equipment.

1. (C) Maintenance.

(1) For units of the battalion combined, the average aircraft density was 14 UH-1B/C, each operating an average of 81 flying hours per month, 42 UH-1D/H aircraft, obtaining a monthly average time of 108 hours each and 34 CH-47A/C helicopters averaging 71 hours per month (See Enclosure 6). Fifteen UH-1 aircraft were turned in, sixteen replacements were received. The assault support helicopter companies retrograded nine CH-47 helicopters and received eleven replacements.

(2) Based on MTOE authorizations at the close of the reporting period, the 11th Aviation Battalion (Combat) had a shortage of two UH-1B/C and six UH-1D/H aircraft. The 213th Aviation Company (Assault Support Helicopter) operated at an authorized strength of sixteen CH-47C aircraft. Although authorized sixteen A model Chinooks, the 205th Aviation Company (Assault Support Helicopter) had assigned eighteen aircraft, two of which were pending turn-in due to high airframe time.

(3) The 213th Aviation Company (Assault Support Helicopter) continued operations exclusively with CH-47 C model aircraft. Accumulated high-low time aircraft in the unit at the close of the period were 656 and 409 hours, respectively. Shortages of repair parts peculiar to the CH-47C helicopter continued to present a significant problem. Ten aircraft were EDP for 144 days during the quarter as compared with a zero rate for the unit assigned CH-47 A models. The higher EDP rate for the 213th Aviation Company (Assault Support Helicopter) was reported as an excessive Not Operationally Ready-Supply (NORS) status on the Army Aircraft Inventory Status and Flying Time Report (DA Form 1352).

(4) In compliance with MWO's 55-1520-209-50/3 and 55-1520-209-20/27, a Boeing-Vertol special contract team modified 72 forward and aft rotor blades on aircraft assigned to the 205th Aviation Company (Assault Support Helicopter). Performed during June and July, the modifications required 47 days to complete and resulted in eight aircraft non-flyable for 15 days. Down time was minimized by scheduling modifications concurrently with
periodic inspections or unscheduled maintenance. All commitments of the units were met during the period.

m. (U) Aviation Safety. Six major accidents, five incidents, four forced landings and thirteen precautionary landings resulted in a cumulative accident rate of 24.6 accidents per 100,000 flying hours. This is a decrease of 2.0 from the last reporting period. Three of the major accidents, representing fifty percent of the total, were caused by material failure. The remaining three accidents were attributed to pilot error. By comparison all five incidents were the result of pilot error. Material failure was the major contributing factor in all forced and precautionary landings.

n. (U) Medical. As a result of evaluating MFOE 1-256F, 3-500D, recommendations were made for making better use of airmobile medical personnel and equipment. The evaluation included the Battalion Medical Section and 432d Medical Detachment, collocated in the same dispensary building at Phu Loi, and the 759th Medical Detachment located at Lai Khe. The units located at Phu Loi were found to have undesirable and unnecessary duplication of personnel and equipment. It was determined that the Battalion Medical Section should be enlarged to include an additional physician, a variable number of medical aidmen plus additional equipment to provide the medical section a treatment capability, thus eliminating the need for a separate, collocated medical detachment. Further, it was recommended that medical detachments be attached to units only when physically separated from the battalion headquarters. In those instances, the detachment should be staffed, as a minimum, with one flight surgeon, one NCOIC and four medical aidmen.

o. (U) Religious and Personal Services.

(1) The Battalion Chaplain initiated a program of showing selected commercial films followed by group discussions of the moral issues involved. All films were rented using funds from the Phu Loi Consolidated Chaplains' Fund. This project enhanced efforts to improve religious instruction pertaining to real-life situations.

(2) Inclosure 7 contains a summary of religious activities conducted during the period of this report.

p. (U) Civic Actions.

(1) All units of the battalion actively participated in civic action projects during the reporting period. Three units, Headquarters and Headquarters Company, 205th Aviation Company (Assault Support Helicopter), and 128th Aviation Company (Assault Helicopter), sponsored the Lai Thieu School for Deaf Mutes. The 213th Aviation Company (Assault Support Helicopter) sponsored St. Joseph's Leprosarium located near the village of Ben Son. The 173d Aviation Company (Assault Helicopter) sponsored the Elementary School located at Lai Khe.
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SUBJECT: ORLL for Period Ending 31 July 1969, RCS CSFOR-65 (RI) (U)

(2) Efforts were made during the quarter to supply essential subsis- tence items to these various projects. Over 5,000 pounds of food and 100 pounds of medical supplies were distributed to the School for Deaf Mutes and the Loprosarium. In addition, clothing, toys, and candy were also donated. Two reconditioned typewriters, obtained from donors in the United States, were presented to the School for Deaf Mutes.

2. (C) Section 2, Lessons Learned: Commander's Observations, Evaluations and Recommendations.

a. (U) Personnel. None.

b. (C) Operations.

Item: Water Resupply to Tactical Units.

(1) Observation: Supported units frequently employed air movement of water trailers to resupply water to field locations.

(2) Evaluation: The most common method of resupplying water to field locations is to use a water trailer rigged for sling load by a CH-47 helicopter. A water trailer filled to capacity (400 gallons) weighs approximately 5,450 pounds, depending on the type trailer used. An empty trailer weighs approximately 2,280 pounds. Eliminating unnecessary transport of the trailer will permit an increase in allowable cargo load (ACL).

(3) Recommendation: That unless the situation requires a readily mobile water supply, ground commanders use collapsible bladders or two A-22 bags filled with five-gallon water containers. Adoption of either method will reduce the number of required sorties, permit an increase in useful ACL and permit rapid rigging of equipment for back haul.

(4) Command Action: A vigorous program of liaison with all supported units was established to improve overall resupply techniques and utilization of aircraft.

Item: Use of Make-shift Cargo Containers for Slingloads.

(1) Observation: Several units that require repeated CH-47 support have fabricated wooden boxes, commonly called "pig pens", to facilitate air movement of mess hall equipment, supplies and other small items of equipment. These devices varied in construction and design to the point that only the slings were common. (Since February 1969, four "pig pens" dis- integrated in flight, resulting in dropped loads. Although only one device failed this quarter, experience indicates the trend will continue.)
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13 August 1969

SUBJECT: ORL1 for Period Ending 31 July 1969, RCS CSFOR-65 (RI) (U)

(2) Evaluation: Although the "pig pen" facilitates air movement of small items, quality of design and construction are generally below acceptable standards. In light of past experiences, continued use of these devices without construction standards is questionable.

(3) Recommendation: That standard specifications be prescribed by appropriate authority and included in SOP's pertaining to airmobile operations.

(4) Command Action: Aircraft commanders were instructed to inspect all field expedient devices prior to movement. If in the opinion of the aircraft commander the device cannot be carried safely, a release from responsibility must be obtained from the supported unit.

Item: Flight Planning in the Cockpit.

(1) Observation: Changing tactical situations frequently required aviators to deviate from original flight plans. Faced with the prospects of limited reaction time and no flight planning facility, the aircraft commander was required to conduct mission planning in flight. To reach the point of decision to continue or abort the mission based on fuel, pilots needed a simple, reliable method of estimating required flight time.

(2) Evaluation: Pilots need a rule-of-thumb for computing flight time utilizing 10 kilometer (10,000 meter) grid squares on tactical maps. One method, based on predetermined ground speed in knots, is to convert distance in kilometers to flight time required. The chart below explains the principal

<table>
<thead>
<tr>
<th>GROUND SPEED</th>
<th>DISTANCE</th>
<th>APPROXIMATE TIME IN MINUTES</th>
</tr>
</thead>
<tbody>
<tr>
<td>80K</td>
<td>In KM</td>
<td>40% of the distance</td>
</tr>
<tr>
<td>100K</td>
<td>In KM</td>
<td>1/3 or 33 1/3% of the distance</td>
</tr>
<tr>
<td>130K</td>
<td>In KM</td>
<td>1/4 or 25% of the distance</td>
</tr>
</tbody>
</table>

An example of the rule is shown below:
100 kilometers at 80 knots = 40 minutes flight time.
(When computing this with an E6B computer, 100 kilometers is equal to 54 nautical miles. At 80 knots the flight time required is 40 minutes.)

(3) Recommendation: That all aviators be made aware of this rule-of-thumb for in-flight mission planning.

(4) Command Action: Members of this command were briefed on the use of this formula for in-flight planning.

Item: Assault Helicopter Company Employed as a "Split Flight".
AVBACA-AC

13 August 1969

SUBJECT: ORLL for Period Ending 31 July 1969, RCS CSFOR-65 (RI) (U)

(1) Observation: During this reporting period Assault Helicopter Companies of the 11th Aviation Battalion (Combat) frequently were required to employ in two elements, commonly called "split flights". Employment in this manner required an assault helicopter company to commit simultaneously two units consisting of a command and control aircraft, one light fire team of two helicopters each, and four lift aircraft.

(2) Evaluation: The technique of "split flight" employment allows maximum coverage of the area of operations with a minimum of aviation assets, and has been proven effective in combat operations especially during lull periods, when small units or reconnaissance patrols are normally employed. The technique has several disadvantages however:

(a) The practice of "split flights" often results in less than optimum aircraft utilization. This can primarily be attributed to the fact that supported units fail to tailor their forces to the available aviation assets. Frequently, ground tactical plans call for employment of company-sized units usually requiring 18 sorties. With the aviation company operating in multiples of four, an 18 sortie lift will require two empty aircraft to orbit at some time during the mission. This procedure also complicates security problems in the LZ/PZ since flights of four aircraft do not normally allow units to maintain integrity unless the unit has been specially tailored.

(b) Two light fire teams are required on station simultaneously. Normally, when employing an assault helicopter company as an integral unit, only one light fire team is required to be airborne during a mission, with the remaining light fire team in ready reserve. This employment affords the air mission commander maximum flexibility.

(c) The reduction in communications limits both ground and air mission commanders. Only one command and control aircraft per assault company is equipped with a communications console. In "split flight" operations, a second command and control party is forced to rely solely on one FM radio organic to the aircraft, supplemented by AN/PRC-25 radios furnished by the supported unit. Under these circumstances the command party can monitor one net only utilizing the aircraft radios and the air mission commander is without an alternate means of communications. To obtain primary UHF communications for both elements of the "split flight", the second air mission commander must borrow a UHF frequency.

(3) Recommendation: That supported units tailor their forces proportionally to their aviation assets or that in planning the mission they request the specific number of aircraft required to accomplish their prescribed mission in the most advantageous and efficient manner.

(4) Command Action:

(c) An active liaison program was established with supported units to
insure an understanding of the advantages and disadvantages of "split flight" operations.

(b) Additional UHF frequencies were requested to allow air mission commanders flexibility in primary control communications.

c. (C) Training.

Item: 2.75 inch Folding-Fin Aerial Rockets (FFAR).

(1) Observation: During recent months the 11th Aviation Battalion (Combat) was severely limited in allocations of 10-pound point-detonating rockets.

(2) Evaluation: A recent study indicated that the majority of rockets expended were 10-pound point-detonating. Generally, aviators favor use of this rocket over other types because of their familiarity with its employment, capability and limitations. The investigation revealed that most aviators had never employed VT or flechette ordnance during combat operations.

(3) Recommendation:

(a) That gun ship pilots be familiar with the employment of all types of 2.75 inch folding-fin aerial rockets (FFAR).

(b) That air mission commanders make selective use of various types of rockets to insure employment of ordnance best suited for the tactical situation.

(4) Command Action: The 11th Aviation Battalion (Combat) established a recurring two day training program for pilots on the use of variable time (VT) and flechette rockets. Unit commanders were instructed to emphasize to air mission commanders and pilots the need for economical and selective use of ordnance.

Item: Fire-Fly Techniques:

(1) Observation: The 11th Aviation Battalion (Combat) light ship (Fire-Fly) experienced difficulty in locating targets detected by AN/PPS-5 Radar.

(2) Evaluation: Past techniques of intercepting targets detected by radar proved ineffective. Although Fire-Fly responds rapidly, targets vanish prior to the light ship arriving on station. Intelligence indicates that VC/NVA personnel hide in tunnels, walls and ravines when forewarned by an approaching light ship, scanning with search light enroute to the target.
(3) Recommendation: That Fire-Fly remain blacked out until guided by radar to a point directly over the target area.

(4) Command Action:

(a) Light ship crews were instructed to cruise blacked out until vectored over the target area.

(b) A vigorous training program was established to fully coordinate vector and intercept procedures.

(c) Active liaison with Phu Loi Base Defense and the Phu Loi Counter-Mortar Radar Detachment developed excellent vectoring techniques which were used successfully on four separate occasions. Through utilization of the AN/MPC&A Counter-Mortar Radar equipment, the vectoring technique was refined to an accuracy of ten meters.

d. (U) Intelligence. None.

e. (U) Logistics. None.

f. (U) Organization. None.

g. (U) Aircraft Maintenance. None.

ALTON B. REID
LTC, INF
Commanding
AVBACA-SG (13 Aug 69) 1st Ind

SUBJECT: Operational Report of the 11th Aviation Battalion (Combat) for Period Ending 31 July 1969, (RCS CSFQR-65) (R1) (U)

DA, HEADQUARTERS, 12TH AVIATION GROUP (COMBAT) APO 96266 29 August 1969

TO: Commanding General, II Field Force Vietnam, APO 96266

In accordance with USARV Reg 525-15, the Operational Report - Lessons Learned of the 11th Aviation Battalion (Combat), for the period ending 31 July 1969, is forwarded.

FOR THE COMMANDER:

[Signature]

RONALD C. VINES
Major, Infantry
Adjutant
AVFBC-RE-N (4 Sep 69) 2nd Ind

SUBJECT: Operational Report of the 11th Aviation Battalion (Combat) for Period Ending 31 July 1969, RCS CPFOR-65 (Bl) (U)

DA, HQ II FFORCEN, APO San Francisco 96266 6 SEP 1969

THRU: Commanding General, 1st Aviation Brigade, ATTN: AVHA-C, APO 96307
   Commanding General, US Army Vietnam, ATTN: AVHIC(OST), APO 96375
   Commander-In-Chief, US Army Pacific, ATTN: CPJP-PT, APO 96558

TO: Assistant Chief of Staff for Force Development, Department of the Army, Washington, D.C. 20310

This headquarters has reviewed and concurs with the Operational Report - Lessons Learned of the 11th Combat Aviation Battalion for the period ending 31 July 1969.

FOR THE COMMANDER:

B. C. MARDONALD
LT, AGC
Asst AG
CONFIDENTIAL

AVBAGC-O (13 Aug 69) 3d Ind
SUBJECT: Operational Report of the 11th Aviation Battalion (Combat) for Period Ending 31 July 1969, RSS CSFOR-65 (I/I) (U)

DA, HEADQUARTERS, 1ST AVIATION BRIGADE, APO 96384 19 SEP 1969

THRU: Commanding General, United States Army Vietnam, ATTN: AVHC-DCS, APO 96375
Commander-in-Chief, United States Army Pacific, ATTN: GFC-OT, APO 96558

TO: Assistant Chief of Staff for Force Development, Department of the Army, Washington, D.C. 20310

1. (U) This headquarters has reviewed subject report and concurs with the contents as indorsed.

2. (C) The following additional comments are considered pertinent:

a. Paragraph lk(l)(a), page 7, addresses shortages of APH-5 and APH-6 flight helmets. The APH-5 and APH-6 helmets are no longer being issued. The SPH-4 helmet is the replacement. Ist Aviation Brigade command policy establishes the issue priority of the new helmet as combat elements receiving Ist priority, support elements 2d priority, and staff elements 3d priority. The new SPH-4 is presently being received by Ist Aviation Brigade at a rate of 200 per week. The 12th Aviation Group (Combat) has received 588 helmets to date.

b. Paragraph lk(l)(b), page 7, addresses shortage of H-16A1 rifles. Present priority of issue for the M-16A1 rifle does not allow additional combat support units to draw the weapon at this time. The M-14 rifle is being issued as a suitable substitute. As the stock level of M-16's increases, combat support units will be issued the weapons on a one for one exchange. This item has USAV command interest and monthly reporting as to unit status is required. Additional Ist Aviation Brigade units can expect to receive M-16 rifles beginning in the 2d and 3d quarter FY 70. The 11th Avn Bn (Cbt) has been informed as to the priority of issue of the M-16.

c. Paragraph lk(l)(c), page 7, addresses a shortage of Nomex flight suits. The reported shortage of Nomex flight suits was subsequently solved by the units hand carrying requisitions through the direct support unit to the United States Army Inventory Control Center Vietnam (USAICCV), as previously instructed by this headquarters in the Commander's Notes Number 5, dated 9 June 1969 and in the 1st Aviation Brigade Supply and Maintenance Newsletter Number 6, dated 9 June 1969. The S-4, 11th Aviation Battalion (Combat) informed this headquarters on 3 September 1969 that sufficient Nomex shirts and trousers were physically on hand to provide all personnel with two (2) sets of Nomex flight clothing.
d. Paragraph 1k(4), page 6, addresses the shortage of MOS 63C40 and 52B20. The shortage of 63C40, General Vehicle Repair Supervisor, is common to the entire 1st Aviation Brigade. However, the 1st Aviation Group (Combat) has eleven repairmen excess in MOS 63C20/30, which balances the shortage of 7 NCO's in that MOS. It is recognized that MOS 63C20/30 repairmen lack the experience and training normally expected of NCO's; however, through on the job training, these excess personnel may effectively be trained for NCO positions. The shortage of enlisted men in MOS 52B20 within the 11th Aviation Battalion (Combat) is proportionate to the Brigade and USAV shortage. Headquarters USAV is attempting to fill these positions by assigning enlisted men qualified as 52B20, Power Generator Equipment Repairman, to the 1st Aviation Brigade. The qualifications of MOS 52D20 parallel those of MOS 52B20 and have been satisfactorily utilized as 52B20's in recent months. No projection of the inputs in MOS 52B and 52D can be made at this time due to reductions in USAV manning levels.

e. Paragraph 2c, page 13, discusses Fire-Fly Techniques. This headquarters recognizes a need for establishing criteria, techniques and methods of employment for Fire-Fly missions. Data is being collected to determine the most effective techniques employed by subordinate units in operations and training for inclusion in the 1st Aviation Brigade Operational Procedures Guide.

FOR THE COMMANDER:

ARTHUR W. LITTLE
CPT, AG
Asst AG
TO: Commander in Chief, United States Army, Pacific, ATTN: GPOP-DT, APO 96558

1. (U) This headquarters has reviewed the Operational Report-Lessons Learned for the quarterly period ending 31 July 1969 from Headquarters, 11th Aviation Battalion (Combat).

2. (C) Comments follow:

a. (C) Reference item concerning "Use of Make-shift Cargo Containers for Slingloads", section II, page 10, paragraph 2b; nonconcur. It is impractical to prescribe a single configuration for packaging which will meet the operational needs of every unit. It is the responsibility of the ground rigging crew to ascertain and verify the airworthiness of each item to be airlifted. Items considered unsafe should be rejected.

b. (C) Reference item concerning "Flight Planning in the Cockpit", section II, page 10, paragraph 2b; concur. Various methods have been devised by individual aviators to assist in making rapid estimates of flying time required. These methods normally vary due to individual preferences and type of aircraft, and do not merit publication as a standardized "rule of thumb".

c. (C) Reference item concerning "Assault Helicopter Company Employment as a 'Split Flight' ", section II, page 11, paragraph 2b; concur. Supported units should tailor their forces to the maximum extent permitted by the tactical situation and mission, considering the aviation assets available. Nonconcur with the portion of the recommendation that the supported unit request the specific number of aircraft required to accomplish the prescribed mission in the most advantageous and efficient manner. The request for aviation support should include sufficiently detailed information to permit an analysis of the lift requirement and the allocation of aviation assets to provide proper support of the ground unit.

FOR THE COMMANDER:

C. D. WILSON
1LT, AGC
Assistant Adjutant General

Cy furn: 11th Avn Bn (Cbt)
1st Avn Bde
GPOF-NT (13 Aug 69) 5th Ind
SUBJECT: Operational Report of HQ, 11th Aviation Battalion (Combat) for Period Ending 31 July 1969, BCS CHEC-65 (R1)

HQ, US Army, Pacific, APO San Francisco 96558 21 OCT 69

TO: Assistant Chief of Staff for Force Development, Department of the Army, Washington, D. C. 20310

This headquarters concurs in subject report as endorsed.

FOR THE COMMANDER IN CHIEF:

[Signature]
C. L. Sherrill
CM, AGC
As AD
11TH AVIATION BATTALION (COPTAT)
ORGANIZATION & CURRENT UNIT STATION LIST
AS OF 31 JULY 1969

11th Avn Sq (Cht)
APO 96280
Phu Loi, RVN

173d ASHC
APO 96289
Lei Abe, RVN

213th ASHC
APO 96289
Phu Loi, RVN

129th AVS
APO 96289
Phu Loi, RVN

759th Med Det
APO 96289
Lai Che, RVN

39th QM Det
APO 96345
Song Be, RVN

Pathfinder Det
APO 96289
Phu Loi, RVN

432d Med Det
APO 96289
Phu Loi, RVN

Security Platoon
Phu Loi, RVN

Inclosure 1

* MOL: Reflects functional organization as opposed to MOCO.
<table>
<thead>
<tr>
<th>UNIT</th>
<th>OF-6A</th>
<th>UF-1</th>
<th>OF-6A</th>
<th>UF-1</th>
<th>CF-47</th>
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<tr>
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<td>AUTH</td>
<td>OF FND</td>
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<td></td>
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<td>128th ARC</td>
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<td>7</td>
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11TH AVIATION BATTALION (COMBAT)
OPERATIONAL RESULTS
FOR THE PERIOD 1 May 1969 THROUGH 31 July 1969

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<tr>
<th>UNIT</th>
<th>SORTIES FLOWN</th>
<th>TROOPS LIFTED</th>
<th>CARGO TONS LIFTED</th>
<th>HOURS FLOWN</th>
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<td>48,577</td>
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<td>58,730</td>
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<td>201,805</td>
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<tr>
<th>UNIT</th>
<th>AIRCRAFT CBT DAM</th>
<th>CBT LOSS</th>
<th>ENEMY KIA</th>
<th>STRUCTURES DAM DEST</th>
<th>SARPAWS DAM DEST</th>
<th>RECOVERIES</th>
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<tr>
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<td>6</td>
<td>43</td>
<td>2</td>
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Inclosure 4
### 11th Aviation Battalion (Combat)

**Ammunition Expended**

For the period 1 May 1969 through 31 July 1969

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<th>Unit</th>
<th>7.62 mm</th>
<th>40 mm</th>
<th>2.75 FFAR</th>
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<tbody>
<tr>
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<td>278,551</td>
<td>19,190</td>
<td>4,395</td>
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<td>173rd AHC</td>
<td>707,050</td>
<td>5,540</td>
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<tr>
<td>205th ASHC</td>
<td>4,850</td>
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<td>213th ASHC</td>
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<td>11th AB (C)</td>
<td>998,951</td>
<td>24,730</td>
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**Inclosure 5**
# Aircraft Maintenance Statistical Summary

For the period 1 May 1969 through 31 July 1969

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<th>May</th>
<th>June</th>
<th>July</th>
<th>Total</th>
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<tr>
<td></td>
<td>Hours flown</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>UH-1B/C</td>
<td>1005</td>
<td>1210</td>
<td>1180</td>
<td>3395</td>
</tr>
<tr>
<td>UH-1D</td>
<td>2923</td>
<td>2967</td>
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<tr>
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<td>1238</td>
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</tr>
<tr>
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<td>1230</td>
<td>1219</td>
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<table>
<thead>
<tr>
<th>Hours flown</th>
<th>Available (%)</th>
<th>EDF (%)</th>
<th>EDF (%)</th>
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<tbody>
<tr>
<td>UH-1B/C</td>
<td>33.5</td>
<td>85.5</td>
<td>89.8</td>
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<tr>
<td>UH-1D</td>
<td>90.6</td>
<td>91.1</td>
<td>90.2</td>
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<tr>
<td>UH-1H</td>
<td>75.6</td>
<td>84.5</td>
<td>92.2</td>
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<tr>
<td>CH-47A</td>
<td>86.3</td>
<td>85.8</td>
<td>85.2</td>
</tr>
<tr>
<td>CH-47C</td>
<td>78.2</td>
<td>74.3</td>
<td>80.4</td>
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</table>

| UH-1B/C | 16.3 | 14.5 | 9.3 | 13.4 |
| UH-1D   | 9.4  | 8.9  | 8.9 | 9.2  |
| UH-1H   | 24.4 | 15.5 | 7.1 | 15.6 |
| CH-47A  | 13.7 | 14.2 | 14.8| 14.2 |
| CH-47C  | 12.1 | 12.0 | 4.5 | 9.5  |

| UH-1B/C | 0.2 | 0.0 | 0.9 | 0.3 |
| UH-1D   | 0.0 | 0.0 | 0.3 | 0.1 |
| UH-1H   | 0.0 | 0.0 | 0.7 | 0.2 |
| CH-47A  | 0.0 | 0.0 | 0.0 | 0.0 |
| CH-47C  | 9.7 | 13.7| 15.1| 12.8|

*NOTE: The sum of percentages does not equal 100% in some instances due to rounding off in computation.*

Inclosure 6
Operational Report - Lessons Learned, HQ, 11th Aviation Battalion

Experiences of unit engaged in counterinsurgency operations, 1 May 69 to 31 July 69.

CO, 11th Aviation Battalion

13 August 1969

Page 1

TOTAL NO. OF PAGES
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693135

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Security Classification