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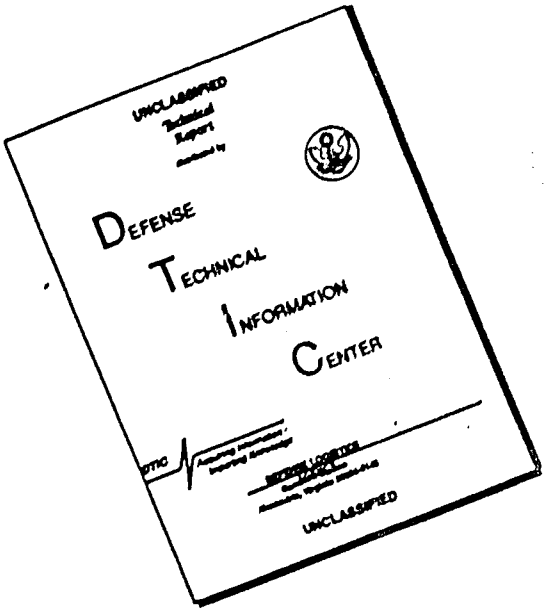

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IN REPLY REFER TO

AD 502 002

AGAM P (M) (7 Mar 69) FOR OT UT 684115 17 March 1969

SUBJECT: Operational Report - Lessons Learned, Headquarters, 212th Combat Support Aviation Battalion, Period Ending 31 October 1968 (U)

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1. Subject report is forwarded for review and evaluation in accordance with paragraph 5b, 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:

Kenneth G. Wickham

KENNETH G. WICKHAM
Major General, USA
The Adjutant General

APR 14 1969

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212th Combat Support Aviation Battalion

DEPARTMENT OF THE ARMY
Headquarters 212th Combat Support Aviation Battalion
"Wings of Freedom"
APO 96337

11 NOV 1968

AVGM-BC

SUBJECT: Operational Report of 212th Combat Support Aviation Battalion for the Period Ending 31 October 1968, RCS CSFOR - 65 (RI)

SEE DISTRIBUTION:

1. (C) Section 1: Operations: Significant Activities.

a. The following mission changes occurred during this period:

(1) The 131st Surveillance Airplane Company began Infrared Missions after discontinuing them in March 1968. New SEAMORE infrared systems are expected to enhance the intelligence gathering capability of the 131st SAC.

(2) The 220th Reconnaissance Airplane Company continued participation in Operation HIGHRISE, with the mission of flying in the DMZ and North Vietnam in support of the 108th Artillery Group.

(3) There were no other changes or additions to the mission of the 212th Combat Support Aviation Battalion.

b. There were no additions or deletions to the organizational chart during the quarter. An organization chart and station list of all units assigned to the battalion is at inclosure 1.

c. Personnel changes of command and principal staff positions within the battalion for the reporting period are at inclosure 2.

d. The 212th CSAB and its subordinate units authorized and present duty strengths as of 31 October 1968 are at inclosure 3.

e. The type aircraft which were authorized and on hand for the battalion and its subordinate units is inclosure 4.

f. The results of the quarters operations by subordinate units in sorties flown, troops lifted, cargo transported, enemy KBA, sampans and structures destroyed, and aircraft lost or damaged are at inclosure 5.

g. During this reporting period the 212th CSAB engaged in operations against the enemy on 92 consecutive days, flying a total of 37,365 sorties.

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h. The following administrative movements occurred during the reporting period:

(1) The third platoon, 220th Reconnaissance Airplane Company was moved from the Marble Mountain Air Facility, Da Nang, to company headquarters in Phu Bai, Vietnam. Operational control of the 220th RAC was assumed by XXIV Corps and the move provided for better coverage of northern I Corps, now the company's area of operation.

(2) The third platoon, 21st Reconnaissance Airplane Company was moved from Quang Ngai to Chu Lai in October. Due to an increase in hostile actions in the Quang Ngai area and the threat of direct action at the airfield, the platoon was moved to the company headquarters at Chu Lai. The platoon is still able to support its mission from Chu Lai.

i. Events of historical significance:

(1) The following attacks on friendly installations took place during the reporting period.

(a) On 2 August 1968 at 0200 hours the Quang Ngai Airfield received four rounds of 82mm mortar fire in the US Army area occupied by elements of this command. The attack lasted approximately five minutes and resulted in no aircraft damage. Casualties were one WHA hospitalized and one WHA treated and returned to duty.

(b) On 31 August 1968 at 0155 hours the Marble Mountain Airfield received approximately twenty-three rounds of 82mm mortar fire. The US Army area received nineteen mortar rounds. The attack lasted approximately five minutes and resulted in the following damage:

(1) UH-1D - minor damage

(1) UH-1D - moderate damage

(1) UH-1H - major damage

(1) OV-1C - moderate damage

There were no casualties as a result of this attack.

(c) On 22 September 1968 at 0200 hours the Marble Mountain Facility received approximately thirty rounds of 82mm mortar fire. US Army area of MMAF received a total of four rounds. The attack lasted approximately ten minutes and resulted in minor damage to (1) UH-1H. No casualties resulted from this attack.

(d) On 23 September 1968 at 0245 hours the Chu Lai Airfield received four rounds of 122mm rockets. The attack lasted for approximately five minutes and caused no damage to aircraft or casualties to personnel.

(e) On 14 October 1968 at 0220 hours the Quang Ngai Compound received 17 rounds of 82mm mortar fire. The attack lasted for approximately seven minutes and resulted in minor damage to (1) UH-1H. No casualties resulted.

(2) The following are significant activities which occurred during flying missions:

(a) On 22 August gunships of the 282d AHC supported the 51st ARVN Regiment South of Da Nang. During their mission, three ships encountered intense ground fire with each aircraft receiving minor battle damage. By direction of the ground commander, the gunships worked extremely close to friendly units who were experiencing heavy casualties from the enemy force. As a result of their action, four bunkers were damaged and two bunkers along with two hootches were completely destroyed. Later that night while flying a "Fire Fly" mission, intense fire was taken just south of Da Nang. Returned fire resulted in 11 secondary explosions and a number of mortar and rocket sites were destroyed. Diverting from the "Fire Fly" mission, the gunships escorted two medical evacuation helicopters and accounted for 14 confirmed enemy killed by air while making numerous strafing runs near the LZ during medevac operations.

(b) On 23 August 1968 while working one mile south of Da Nang Air Base, gunships destroyed a 57mm recoiless rifle that was firing on advancing APC's. Thirty-six secondary explosions were counted as a result of machine gun and rocket fire. Later that evening, the gunships were called for support of a friendly outpost at Dien Ban. Results of this action were enemy losses amounting to 28 KBA, 4 structures damaged, 2 destroyed and one machine gun position destroyed.

(c) The loss of 131st SAC OV-1B: At 2305 hours on 24 September 1968 an OV-1B of the 131st Surveillance Airplane Company lost an engine on takeoff and crashed one-half mile from the airfield. The observer ejected low level and was killed. The pilot remained with the aircraft sustaining back injuries. The aircraft was a total loss.

(d) The loss of 21st RAC O-1: On 27 September 1968 at 1035 hours an O1-G aircraft of the 21st Reconnaissance Airplane Company was on a visual reconnaissance mission when the pilot reported being hit by enemy small arms fire. Engine failure followed and the aircraft subsequently crashed with pilot and observer sustaining injuries. The aircraft was a total loss.

(e) The loss of 282d AHC UH-1H: On 17 October 1968 while flying as command and control for the 51st ARVN Regiment, a 282d Assault Helicopter Company UH-1H helicopter was downed by intense small arms fire. The aircraft was severely damaged. Due to intense enemy small arms fire, the aircraft could not be recovered and was destroyed by order of the Battalion Commander. The aircraft crew was rescued with no injuries.

(f) On 26 October 1968, four UH-1H, and four UH-1B gunships from the 282d AHC made a troop lift for the 21st Ranger Battalion. 550 troops were moved into a landing zone which was prepared by artillery. The gunships used rockets and mini-guns on suspected enemy targets. The lift was completed without any significant contact.

(g) The loss of 220th RAC O-1: On 29 October 1968 at 1805 hours an OI-G aircraft of the 220th Reconnaissance Airplane Company was on a counter - battery mission when the aircraft took a burst of anti-aircraft fire under the left wing. Aircraft wreckage was located the following day with no signs of activity observed near the crash site. All attempts to contact survivors have met with negative results.

(3) Significant administrative activities: None.

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

a. Personnel:

(1) Need for trained Survival, Escape, and Evasion (SEE) Specialist.

(a) Observation: As there are no provisions in the MOS structure for personnel whose career is oriented in the vital field of SEE, the units of this command are required to assign SEE related duties as an additional duty.

(b) Evaluation: After mission accomplishment, one of the most important responsibilities of an aviation unit is to have a realistic and effective SEE program. Such a program entails continuous training and re-training of newly assigned aviators and crew-members as well as periodic refresher training of all unit members who participate in aerial flight. There are over 380 flying personnel within the battalion who operate the assigned aircraft of the battalion approximately 8500 hours per month over mountainous jungle terrain which is occupied by hostile forces, or over water. In addition to training in the latest SEE techniques, each unit is responsible for procuring, maintaining, and servicing such equipment as survival vests, special harnesses, survival packs located in the aircraft, survival radios and other signalling devices, flotation gear, and many other items. Due to the importance of the SEE program, most units have a seperate room in which all survival gear is stored, issued, and maintained. The duties related to the SEE program are so numerous so as to require the full time attention of an NCO. Thus, the units are required to utilize an individual who is holding some other authorized position within the unit to meet the SEE requirement.

(c) Recommendation: That a study be initiated to evaluate the feasibility of creating a new enlisted career field in survival, escape and evasion and that an appropriate MOS code group be established. Specialists trained in this vital area would be of great value not only to all aviation units, but to ground combat units as well.

(2) Lack of prior notice of inbound officers.

(a) Observation: Of the twenty officers assigned the battalion in the month of October, this headquarters had advance notice of the arrival of only one officer.

(b) Evaluation: Advance notice of the arrival of officers is highly desirable in that it allows the battalion commander time to more effectively place the officer in the job best suited for him and where his particular skills will do the unit as a whole the most good. When an officer arrives with certain qualifications, he is assigned to fill a specific requirement based on immediate needs. Often, a few days later, another officer will arrive who has much higher qualifications in the same field but who must be assigned elsewhere in the battalion thereby not utilizing him to the best advantage of the battalion. A minimum of two weeks prior notice would eliminate this situation to a large degree. It is recognized that often no prior notice is possible, but this should be the exception rather than the rule.

(c) Recommendations: That aviation units down to battalion level be given advance notice of the arrival of new officers to include a resume of the officer's qualifications, if available.

(3) Late receipt of CONUS reassignment instructions.

(a) Observation: Quite often CONUS reassignment instructions for EM and Officers are not received by this headquarters until a few days prior to DEROS. In some cases it has been necessary to issue port calls with no assignment instructions.

(b) Evaluation: These circumstances have a detrimental affect on morale in that they cause emotional turbulence and even actual hardship on those with dependents in CONUS.

(c) Recommendation: That a more determined effort be made to insure the timely issue of reassignment instructions.

(4) Assignment of personnel whose MOS are not authorized within the battalion.

(a) Observation: This battalion presently has 50 personnel assigned and is continuing to receive replacements whose MOS is not authorized within the organization.

(b) Evaluation: This headquarters is required to list as excess many EM who have an MOS for which there is no authorization within the battalion. Occasionally a man can be assigned based on his PMOS, or after an OJT period, can be awarded a new PMOS. However, this is unusual due to the technical nature of many of the specialized MOS's in this aviation battalion. Usually the results are poor manpower utilization, no opportunity for promotion, and the denial of the individual's services to some other organization.

(c) Recommendation: That EM not be assigned this battalion unless their MOS is authorized.

b. Operations.

(1) Artillery Clearance.

(a) Observation: The present method of obtaining artillery clearances in the Quang Nam Sector is inadequate.

(b) Evaluation: In the Quang Nam Sector there are approximately eight separate centers for artillery clearance. Five fire bases in this area are operated by ARVN, ROK, AND USMC units. To insure complete artillery clearance, all centers must be contacted prior to initiation of a flight. Each center issues clearance for fire originating within it's area of responsibility. To contact each center for a clearance is a very time consuming task. This is compounded by the fact that the primary duty of the centers is [illegible]: this is done only as a courtesy function. Freque[illegible] congested and radio discipline is lacking causing [illegible] to obtaining a clearance to be far greater than the actua[illegible]. Back up radio communication is nonexistent.

(c) Recommendation: One central agency which issues clearances for atillery, naval gunfire, and air strikes, such as that utilized in the area from the Hoi An River to Quang Ngai should be established.

(2) (C) Test Set Cryogenic Refrigerator AN/AAM 29.

(a) Observation: Due to the aging AN/AAS-14A infrared detecting sets and because of the atmospheric environment in which the equipment operates, the need for cooler system evacuation is ever increasing.

(b) Evaluation: The required systematic evacuation of an entire cooling system to include pre-amps, coolers and lines can take as long as 24 hours. The average work load in this unit includes 2 pre-amps per day and at least 2 coolers and sets of lines per week. This schedule presents a backlog which could be eliminated by the authorization for one additional Evacuation and Pressurization Unit, Cryogenic Refrigerator MX [illegible]OC/AAM 29, FSN 5850-057-7352.

(3) (U) Cooling System, ES-38 Photographic Laboratory.

(a) Observation: On numerous occasions, condensation was noticed in the ES-38 Photographic Laboratory. All metal parts, lenses, [illegible] filters were affected by this condensation. The high degree of condensation was especially noticeable when both air conditioner switches [illegible] on the "cool" position and the photo lab had not been in operation [illegible] a period of time. This combination necessitated wiping the condensation from the metal parts and lenses; however, this would not be done on the wedge or the filters as it would erase the gradual density coating on the wedge and leave marks on the filters. Condesation forming on all metal parts and optical lenses and filters have noticeably affected the quality of imagery processes by the laboratory.

(b) Evaluation: It has been determined that by setting the air conditioner switch to "fan" position during hours of non-operation the problem of condesation has been eliminated. Though this

seems like a minor problem, the solution for the control of condensation has lengthened the life of equipment by preventing rust. Time has also been saved by not having to wipe off the equipment to dry it prior to operation.

(c) Recommendations: That all units possessing the ES-38 laboratory be notified of this procedure.

(4) (U) Color Film Processing.

(a) Observation: In the past, the photo lab section had experimented with the idea of splicing two or more rolls of color film for processing so as to cut down on the processing time from approximately 8 hours to 3½ hours. When two rolls were processed separately the processing would take approximately 8 hours since a new batch of chemicals had to be mixed after the first roll was processed. The developer for each roll also had to be cooled down to 75 degrees plus or minus ½ degree F. To reduce the length of time to 3½ hours, two rolls of the same type of color film were spliced together and thus processed simultaneously. It was determined that at the two ends and where the splicing overlapped each other, a certain amount of chemicals would remain during the rinse and wash steps, thereby resulting in the staining of the color transparency. The brownish stains appeared periodically in vertical streaks across the film.

(b) Evaluation: It has been decided that each roll will have to be processed separately and a new batch of color chemicals be mixed for each additional roll of exposed film. The quality of imagery between the two procedures is of no great importance if it will mean the difference in the imagery being properly processed or being ruined during processing in an attempt to economize on time, effort and chemicals. The quality of color imagery when processed according to directions, a roll at a time, justifies the developing time involved by reducing the possibility of ruining the film in processing.

(c) Recommendation: That all units processing color film by hand be notified of this procedure.

(5) Fire Fly Mission

(a) Observation: The use of flares in conjunction with gunship tactics poses a hazard for safe flight.

(b) Evaluation: On several occasions when the Mark 24 aircraft flares were employed as a means of battlefield illumination, they became a hazard to flight. As the flares descended they became obstacles and restricted the maneuverability of the gunships.

(c) Recommendation: While holding away from the target area, coordinate with the flare ship the azimuth to be used over the target area, number of flares to be dropped, and time interval between flares. Flares should be ignited at 1200 feet so that gunships can make passes above the flares.

(6) Use of UH-1 in Defoliation.

(a) Observation: Extensive damage is caused to aircraft by the defoliation solutions.

(b) Evaluation: The UH-1 has been used as a spray platform in defoliation missions. This utilization has caused extensive damage to the aircraft's painted surface and rubber composition areas. Gear box seals and rubber items are indicating definite damage from the spray solution.

(c) Recommendation: Recommend a restriction be imposed on all UH-1 aircraft for this type of mission. Until a workable spray system is devised, extensive damage will continue. Possibly the solution could be modified, eliminating the damaging effects to the aircraft.

(7) TACAN, AN/ARN 52

(a) Observation: The average operational time before failure of the TACAN was approximately 40 hours. The primary cause of failure was due to overheating. The system was designed to be cooled by air flow but the high temperatures associated with ground operations in Vietnam damaged the circuitry.

(b) Evaluation: After analyzing the characteristics of the equipment, this unit changed its operating procedures. The TACAN set remains in the off position until the aircraft is airborne and the equipment is turned off prior to landing. The life of the set is thereby greatly increased.

(c) Recommendation: That other OV-1 units be advised of this procedure.

(8) (C) APS-94 SLAR

(a) Observation: Daily changes in atmospheric pressure, temperature and humidity causes the BIAS setting to change. At present, the method of adjusting the BIAS is by trial and error by turning a screw in the nose of the aircraft. Two persons are needed to accomplish this task.

(b) Evaluation: There is currently being produced a SLAR system which has BIAS controls in the cockpit. The older model APS-94 systems should be modified with a similar control which would facilitate BIAS adjustments and would allow inflight corrections as needed.

(c) Recommendation: That a modification kit be provided for installation in all older model APS-94 systems.

(9) (C) AN/AAS-14 IR Detecting Set

(a) Observation: IR operations in RVN are almost entirely at night to include system mission preparation. Installation and changing of the film magazine is hampered by the lack of adequate lighting in the electronics bay of the OV1. Unnecessary damage occurs to the sensitive pin connectors between the recorder and the magazine during operations in the dark.

(b) Evaluation: The installation of a light connected to the 28 volt power supply and operated by an override switch on the electronics bay door would aid the repairman in servicing the IR system. The presence of a light in the bay would assist him in removing or replacing film magazines in the aircraft.

(c) Recommendation: That a MWO be authorized to provide a light in the electronics bay of all OV-1 aircraft.

(10) 250 Foot Film Cassettes for the KA-30 Camera, KS-61 Camera system.

(a) Observation: Film jamming was experienced when these cassettes were first used.

(b) Evaluation: It was found that a minor adjustment of torque on the camera body drive clutch was needed to prevent slipping of the take-up spool.

(c) Recommendations: That other OV-1 units be advised of this procedure.

(11) (U) Material Defects of New Engines and Replacement Assemblies.

(a) Observation: New engines and replacement assemblies have reached this unit with material defects.

(b) Evaluation: This unit recently received from the factory a new engine with major defects. On inspection, the engine was found to have broken piston rings. It is not likely that this defect could have occurred in transit.

(c) Recommendation: All new and rebuilt engines and replacement assemblies be inspected upon receipt for material defects. Also better inspection procedures during manufacture or rebuilding.

c. (C) Training.

(1) Technical Operator OV-1, MOS 17L.

(a) Observation: Airborne Sensor Operators have been arriving in country with the following deficiencies in training:

1. No training in Escape and Evasion or Survival Techniques.

2. First echelon and operator maintenance training on the SLAR and IR Data Terminal generators is inadequate.

3. Operators are weak in RO-166 target plotting skills.

(b) Evaluation:

1. Because many flight hours are spent over enemy territory and very rough terrain, training in the use of standard survival, escape and evasion equipment and procedures is a must for each crewmember.

2. Data terminal teams ordinarily operate their ground stations in areas remote from the parent unit and usually with very little guidance or supervision. Operator maintenance of the Data Terminal generators is an essential skill for 17L personnel.

3. The primary duty of the SLAR operator during the conduct of a mission is to continuously plot targets and correlate the imagery to a map. Plotting from SLAR imagery in flight is an essential skill.

(c) Recommendations: That these requirements be forwarded to the Airborne Sensor's Department, US Army Combat Surveillance School, Fort Huachuca, Arizona 85613.

(2) OV-1 Aviators.

(a) Observation: Newly assigned OV-1 aviators [illegible] the following areas of training:

1. No training on the use of the APR-[illegible] Electronic Countermeasures Equipment.

2. No training on TACAN.

3. Excessive training on low level flying and navigation.

4. Inadequate night training.

5. No training on Survival, Escape and Evasion procedures.

(b) Evaluation:

1. The operation and tactical use of the standard OV-1 [illegible] is essential to the accomplishment of certain missions in RVN. Valuable time is spent training pilots in country when this training could and should be taught in a classroom environment with the use of appropriate training aids.

2. TACAN is the primary means of navigation for SLAR in Northern RVN and the pilot therefore is required to have a thorough knowledge of its use.

3. It has been noted that new OV-1 pilots have had excessive emphasis placed on low level navigation and flying techniques which are not an acceptable tactic in RVN.

4. Approximately 75% of the OV-1 flying in the area is accomplished during the hours of darkness and often in marginal weather. Additional emphasis should be placed on night operations with particular emphasis on night instrument conditions.

(c) Recommendations: That the USAAVNS, Fort Rucker and the USACSS/TC at Fort Huachuca be notified of these training deficiencies as appropriate.

(3) Additional training requirements for newly assigned aviators.

(a) Observations: One of our two O-1 units instituted a training program for newly assigned aviators which includes a minimum of 10 hours dual flight with a qualified IP. Approximately one half of this time, depending on the IP's evaluation of the new pilot, is spent on landing and take-off techniques. During this phase of the training techniques required for cross wind and gusty wind conditions are stressed. The remainder of the dual time is spent primarily on emergency procedures, flying techniques required for mountain flying, surviving in the combat environment while accomplishing the mission, and combined with this, a general area orientation.

(b) Evaluation: The training program, although consuming time and resources, appears to be worthwhile and necessary. That unit has had a considerable influx of new aviators since the program was initiated, but there have been no more accidents. The training program will have to be continued in its present form as a minimum until the USAAVNS produces pilots who are more proficient in the O-1.

(c) Recommendations: The USAAVNS should increase the training in the O-1, with particular emphasis on landings under adverse conditions, to relieve the gaining units of the additional training requirements.

d. (C) Intelligence:

(1) Comparative Coverage of IR Imagery.

(a) Observation: Because of the necessity for disseminating the information gathered from Infrared Imagery as soon as possible after the aircraft touches down, the comparing of previous imagery taken in the same target area with the present imagery is impractical. Different pilots will fly the same infrared mission in a different manner and as a result the interpreter would have to scan the imagery as they sit side by side on the light table, until the two rolls of imagery correspond to each other. Ideally, this would be the best situation for comparing imagery; however, reporting time would increase.

(b) Evaluation: The reporting time can remain as rapid as in the past and still in a sense employ comparative coverage. This is done by using a piece of acetate keyed to the target area. Using color codes for each night's imagery, emissions are plotted on the acetate and the acetate (usually the acetate is no larger than 8"X10") is placed in the mission folder. The Imagery Interpretation Officer can analyze changes in concentration of emissions. Using this method, the Imagery Interpretation Officer can determine where the emphasis of Infrared coverage should take place. It assists in eliminating flying over areas that would normally not provide much intelligence. By its very nature, information received from infrared imagery is perishable.

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The interests of the supported unit is best served when infrared mission results are transmitted to all addressees as quickly as possible. Means were developed by which the interpreter could benefit from comparative cover without spending the time necessary, when comparing an infrared mission with a previous mission.

(c) Recommendations: That all units responsible for the interpreting of IR imagery be notified of this procedure.

(2) (U) Field expedient for determining TACAN readings.

(a) Observation: In the past the imagery interpretation section would draw a line from the TACAN channel to the target area to determine the direction and distance. These three steps were time consuming and it became necessary to establish procedures to cut down on this small, but important operation.

(b) Evaluation: The briefing of air crews include TACAN coordinates from the target to the nearest TACAN channel. Previously the section would draw a line from the TACAN channel to the target area. Then a scale in nautical miles was placed on this line to determine the distance from the target area to the TACAN channel. A protractor would then be laid over the TACAN channel and the interpreter would read the degree heading to the target area. To expedite time spent on this lengthy procedure, a field expedient was devised. This requires the drawing of both a 360 degree protractor and nautical mile scale on a clear sheet of acetate. The photo lab exposes the drawings on SLR film and the resultant is a transparency. The next step is to put together a 1:250,000 map of the area of interest. Cover the map with acetate and put a small nail at the center of each TACAN channel. Pass the nail through the center of the protractor and orient the protractor to the map. Tape the protractor to the acetate to keep it from rotating. Then pass the nail through the zero reading on the nautical miles scale. Allow the scale to swing free so that when finding TACAN readings, rotate the nautical miles scale to the target area and read both heading and range in one easy and fool proof step. Time saved in determining TACAN readings, plus the accuracy of the reading have made the TACAN Reading Board a valuable asset to the section.

(c) Recommendations: That all Imagery Interpretation Sections in OV-1 units be informed of this field expedient.

c. (U) Logistics:

(1) Direct Support Repair of OV-1 Electronic Components.

(a) Observation: Much of the OV-1 electronic equipment, received in the direct support unit for repair was found to contain hydraulic fluids. These hydraulic fluids have caused direct shorts, or partially desolved the circuit boards thus causing components to burn.

(b) Evaluation: Hydraulic leaks in the avionics compartments of the aircraft had allowed the fluid to seep into the avionics

equipment or to be drawn in through the equipments cooling system. The leaks were repaired however, the fluid entered the navigation equipment undetected. Anytime a hydraulic fluid leak is discovered in the avionics compartment of an aircraft, the avionics equipment should be pulled and checked thoroughly for hydraulic fluid. This will prevent unnecessary down time.

(c) Recommendations: That OV-1 units be informed of the procedure used by this unit to reduce the amount of DS maintenance.

f. Organization: None.

g. Other: Mosquito Control.

(1) Observation: Mosquito larvae has been observed breeding in rainfilled revetment barrels and bunkers after the heavy monsoon rains began.

(2) Evaluation: Mosquitoes, even the disease carrying variety, require water for breeding. Any collection of water which stands for 10 days or longer becomes a potential breeding spot for the larvae. The construction of revetments on flight lines by the use of barrels filled with sandbags provides a ready-made site for rainwater to collect and provides a suitable environment for an increase in the mosquitoes population.

(3) Recommendations:

(a) Revetments be constructed of barrels completely filled with loose sand, rather than sandbags and several ½" holes be drilled around the barrel at random to permit drainage. At least 3 holes should be 4" from the top edge of the barrel and 3 more 4" from the bottom.

(b) Barrels not being used should be stored on their sides or in a sheltered area to avoid collecting water.

(c) Any collection of water that is noted in revetment barrels should be emptied or drained immediately.

3. (C) Section 3, Department of the Army Survey Information: Escape and Evasion.

a. There were no actual escape and survival situations in the 212th Combat Support Aviation Battalion during the report period. Rescue of pilots was accomplished in the field at or near the ejection or crash site. However, escape and evasion techniques are continuously emphasized, and the following lessons learned are submitted for your consideration.

b. Survival Training.

(1) Observation: Aviators assigned to surveillance aircraft units should be school trained in survival techniques before coming to Vietnam.

(2) Evaluation: The present policy is the training of a limited number of aviators in suvival techniques to form the nucleus of a unit Escape and Evasion Program. This policy is inadequate in several respects.

(a) It limits the training to text book and "Word of Mouth" situations with no practical experience gained by the aviator. The training is limited by the printed material available and the ability of the school trained aviators to impart his knowledge on the subject. Once in the tactical situation, the primary duties take precedence and there is little opportunity for practical experience training.

(b) Any training is helpful but it is the practical experience that becomes ingrained and overcomes the psychological panic that is present to some degree in any survival situation. Added to the phsychological damage, pain, or discomfort, it is possible the non-school trained aviator could not overcome the psychological implications of his situation much less apply survival techniques.

(3) Recommendation: Aviators destined for a tactical unit, especially surveillance/reconnaissance units, should be school trained prior to arriving in Vietnam, since it is inherent in their mission to fly far from supporting ground troops and air support.

c. Escape and Evasion Material.

(1) Observation: There is a shortage of escape and evasion material.

(2) Evaluation: It is difficult to obtain escape and evasion material thru normal supply channels. Occassionally, these items can be obtained from the Air Force, but not on any regular basis. The items most in demand are point-talk papers, water proof maps of the tactical area (I Corps), and instructions on what to do if forced to stay overnight in an escape and evasion situation.

(3) Recommendation: A system should be initiated to make the above items readily available to each aviator.

d. Security for downed aircraft and crews.

(1) Observation: This battalion had an incident whereby an aircraft crash landed in a hostile area as a result of enemy ground fire. The pilot was pinned in the aircraft and the observer was badly injured. A UH-1 helicopter from a nearby unit was on the ground with the downed aircraft within a few minutes. The aircraft commander of the helicopter evacuated the observer and informed the pilot's unit of the situation. Search and Rescue aircraft were in the area. Ground elements of two US Divisions operating in the area were contacted to provide a security force for the crash site. None was furnished since the aircraft was outside their area of operation. When it became evident that no security force would be made available, a small volunteer force of CIDG troops was lifted into the area to provide the security force.

(2) Evaluation: The trapped and defenseless pilot of the downed aircraft was left in a hostile area with no security force for an unduly long period of time. The better trained and equipped US troops, who were within a few minutes flying time of the crash site, would undoubtedly have been more effective against an enemy ground attack had one materialized than the CIDG Force that finally secured the site. Air cover of all types was immediately made available but air cover cannot provide adequate security of an area without troops on the ground.

(3) Recommendation: That ground units from the nearest unit be made available to secure a crash site, whether or not it falls within their area of operation, and that this security force be moved into the crash site by the most expeditious manner possible. Since aviation units do not have the capability of providing a security force, and possible not the means to transport the troops immediately available, a more clearly defined system of providing ground security should be established and ground unit commanders made cognizant of the need for mutual support especially in these circumstances. It is a demoralizing factor to consider that an aviator only minutes flying time from Da Nang should have to wait over an hour for ground security.

5 Incl -Inclosures 2 thru 5 w/d, Hq, DA
1. Organizational Chart
~~2. Personnel Changes~~
~~3. Present for Duty Strength~~
~~4. Aircraft Status~~
~~5. Quarterly Statistics~~

BERNARD W BRUNS
LTC, EN
Commanding

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AVGM-SC (11 Nov 68) 1st Ind
SUBJECT: Transmittal of Operational Report Lessons Learned (ORLL)

DA, Headquarters, 16th Combat Aviation Group, APO 96337

TO: Commanding General, 1st Aviation Brigade, ATTN: AVBA-C, APO 96384

1. (U) Transmitted herewith is one (1) copy of 212th Combat Support Aviation Battalion letter, Subject: Operational Report of the 212th Combat Support Aviation Battalion for Quarterly Period Ending 31 Oct 68 (Report Control Symbol CSFOR - 65).

2. (U) This headquarters has reviewed and concurs with the basic report.

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

a. Page 4, para 2(a). The USARV practice of assigning officers on arrival in country based on current officer position requirements precludes advanced notice to the unit of inbound officers. I do not consider this a serious problem. We are experiencing no shortage in officers or critical officer MOS.

b. Page 14, para 3(d). The Air Force Rescue Coordination Center failed to obtain security forces for the downed aircraft because of confusion as to responsibility for the area of operation where the aircraft was downed. On his own initiative and Army Aviator from the 14th Combat Aviation Battalion, 16th Combat Aviation Group, contacted Special Forces and transported a volunteer group to the scene.

William C. Tyrrell

WILLIAM C. TYRRELL
COLONEL, CE
Commanding

AVBA-C (11 Nov 68) 2d Ind
SUBJECT: Operational Report of 212th Combat Support Aviation Battalion for the Period Ending 31 October 1968, RCS CSFOR - 65 (R1) (U)

DA, HEADQUARTERS, 1ST AVIATION BRIGADE, APO 96384 [illegible] 68

THRU: Commanding General, United States Army Vietnam, ATTN: AVHGC-DST, APO 96375
Commander-in-Chief, United States Army Pacific, ATTN: GPOP-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 this report, considers it to be adequate, and concurs with the contents as indorsed.

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

a. Paragraph 2a(4), page 5. This headquarters is attempting to alleviate this problem by accepting replacements in only those MOS's which are authorized in the Brigade. Proper surplus reporting will result in transfer of unauthorized personnel if a need for the MOS exists elsewhere in Vietnam and he is otherwise qualified for reassignment.

b. Paragraph 2b(6), page 7. The 212th CSAB performed one defoliation mission using UH-1 aircraft in support of Special Forces to defoliate the barrier around their camps. The mission could not be flown by USAF aircraft due to the confined areas. No policies or procedures have been established for use of UH-1 aircraft for defoliation missions, however aircraft used for these missions should be thoroughly washed with mild detergent and rinsed with plenty of water.

c. Paragraph 2b(7), page 8. The suggestion that the TACAN system be turned on only after airborne and turned off prior to landing will be brought to the attention of 34th Group (GS) as an operational solution the problem of high failure rate of power supply and RF amplifier modules.

d. Paragraph 2b(8), page 8. Further recommend that not only the BIAS control, which adjusts for imagery density or contrast, but the Residue Adjust control be remoted to the cockpit. Some time ago Motorola did a prototype of this configuration and ECOM at Fort Huachuca, Arizona, was supposed to evaluate it. No results are available as yet.

e. Paragraph 2b(9), page 8. Concur with recommendation that an MWO be initiated to provide a light in the electronics bay of all OV-1 aircraft. The 212th CSAB has been advised by this headquarters to submit an EIR recommending installation of the light.

AVBA-C 9 DEC 1968

SUBJECT: Operational Report of 212th Combat Support Aviation Battalion for the Period Ending 31 October 1968, RCS CSFOR - 65 (R1) (U)

f. Paragraph 2b(10), page 9. Other OV-1 units were queried on film jamming of the film cassettes and no malfunctions were noted. This headquarters has notified all OV-1 units of the 1st Aviation Brigade of the recommended corrective action to be taken should these malfunctions occur.

g. Paragraph 2b(11), page 9. This headquarters is aware of the problems encountered on rebuilt O-470 engines. A letter recommending better quality control on O-470 engines was forwarded to USARV on 10 November 1968.

h. Paragraph 3b, page 13. Letter, AVBA-B, this headquarters, dated 5 September 1968, SUBJECT: Survival Training, was forwarded to Headquarters USARV requesting that action be taken to program all fixed wing rated aviators into survival schools prior to their arrival in the Republic of Vietnam.

i. Paragraph 3c, page 14. USAF Escape and Evasion charts are available. These charts are made of pliable plastic material. Procurement procedures are outlined in MACV Map Catalog, dated July 1968.

3. (U) 1 Inclosure as stated on the 1st Indorsement is incorrect and should be 5 Inclosures.

FOR THE COMMANDER:

[signature]

[illegible] MIXSELL

[illegible] Major General

AVHGC-DST (11 Nov 68) 3d Ind (C)
SUBJECT: Operational Report of 212th Combat Support Aviation Battalion for the Period Ending 31 October 1968, RCS CSFOR - 65 (R1)(U)

HEADQUARTERS, UNITED STATES ARMY, VIETNAM, APO San Francisco 96375 15 JAN 1969

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 October 1968 from Headquarters, 212th Combat Support Aviation Battalion.

2. (C) Comments follow:

a. (C) Reference item concerning need for trained survival, escape, and evasion specialists, page 4, paragraph 2a(1). Concur. Recommend that the study also consider the feasibility of establishing an MOS prefix code for special training in SEE. This is a matter of concern for higher headquarters.

b. (U) Reference item concerning late receipt of CONUS reassignment instructions, page 5, paragraph 2a(3). The USARV Adjutant General is making a concerted effort to improve reporting procedures here in Vietnam and also maintains continuous telephone and teletype contact with DA. In addition, a liaison visit to Department of the Army was made the second week of December, 1968. DA indicated that a concentrated effort is being made to expedite the forwarding of assignment instructions.

c. (C) Reference item concerning artillery clearance, page 5, paragraph 2b(1). Concur. This problem has been recognized for some time, and is presently under study by a joint Army/Air Force working group. Initial recommendations by this group have been forwarded to COMUSMACV.

d. (U) Reference item concerning cooling system, ES-38 photographic laboratory, page 6, paragraph 2b(3). Concur. This item will be published in a future issue of the USARV pamphlet, Command Communications.

e. (C) Reference item concerning TACAN, AN/ARN 52, page 8, paragraph 2b(7) and 2d Indorsement, paragraph 2c. Concur in the adoption of operational technique of operating TACAN sets only while airborne. This information was disseminated during the USARV OV-1 meeting in August, 1968.

f. (U) Reference item concerning APS-94 SLAR, page 8, paragraph 2b(8) and 2d Indorsement, paragraph 2d. Concur in the recommendation. A team is scheduled to arrive in Vietnam to complete modification of the bias control on the remaining APS-94 systems by the end of 3d quarter FY 69. Further modifications will be made when the aircraft are returned to CONUS beginning June, 1969.

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g. (C) Reference item concerning materiel defects of new engines and replacement assemblies, page 9, paragraph 2b(11) and 2d Indorsement, paragraph 2g. Concur. The unsatisfactory report pertaining to O-470 engines was forwarded to CINCUSARPAC on 15 November 1968. A recommendation was made that AVSCOM be advised of this problem.

h. (C) Reference item concerning OV-1 aviators, page 10, paragraph 2c(2). Concur in the recommendation as stated.

i. (C) Reference item concerning technical operator OV-1 MOS 17L, page 9, paragraph 2c(1). Concur in the recommendation as stated.

j. (C) Reference item concerning additional training requirements for newly assigned aviators, page 11, paragraph 2c(3). Nonconcur. Gaining units cannot be relieved of additional training requirements. Every aviator must receive an orientation flight upon arrival in country. Some aviators require more flying time to become proficient than others. The training now given in the O-1 at USAAVNS is only 25 hours. Fixed wing students are given crosswind operations but are not given duplicate situations which may occur in RVN. This 25 hour transition course is given approximately three months prior to the students arrival in RVN.

k. (C) Reference item concerning comparative coverage of infrared imagery, page 11, paragraph 2d(1). The technique of constructing a comparative image overlay appears to have merit and applicability to the operations of other aerial surveillance companies in RVN. An article describing this technique will be included in the next issue of the USARV publication, Combat Intelligence Lessons.

l. (C) Reference item concerning field expedient for determining TACAN readings, page 12, paragraph 2d(2). A TACAN reading board appears to be an excellent means of determining heading and distance with minimum error. An article describing the procedures for constructing a TACAN reading board will be included in the next issue of the USARV publication, Combat Intelligence Lessons.

m. (C) Reference item concerning direct support repair of OV-1 electronic components, page 12, paragraph 2e(1). Concur. This recommendation will be included in the next 34th General Support Group Monthly Newsletter.

n. (C) Reference item concerning survival training, page 13, paragraph 3b and 2d Indorsement, paragraph 2h. Concur. DA has quotas to the USAF Jungle Survival School in the Philippine Islands. These quotas will be allocated to F/W aviators TDY enroute to RVN. Priorities for quotas are

AVHGC-DST (11 Nov 68) 3d Ind (C)
SUBJECT: Operational Report of 212th Combat Support Aviation Battalion for the Period Ending 31 October 1968, RCS CSFOR-65 (R1)(U)

OV-1 pilots, and O-1 pilots in that order. The currently allocated quotas are not sufficient to train every aviator or observer enroute to RVN.

o. (C) Reference item concerning escape and evasion material, page 14, paragraph 3c and 2d Indorsement, paragraph 2i. Concur with 2d Indorsement, paragraph 2i. Additional information and assistance can be obtained from the US Army Flight Information Detachment (PACIFIC), APO San Francisco 96557. The unit will be so advised.

FOR THE COMMANDER:

W. C. ARNTZ
CPT, AGC
Assistant Adjutant General

GPOP-DT (11 Nov 68) 4th Ind (C)
SUBJECT: Operational Report of HQ, 212th Cbt Spt Avn Bn for Period Ending 31 October 1968, RCS CSFOR-65 (R1) (U)

HQ, US Army, Pacific, APO San Francisco 96558 14 FEB 1969

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

1. (U) This headquarters has evaluated subject report and forwarding indorsements and concurs in the report, as indorsed, except as indicated below.

2. (C) Reference item concerning defects in new engines and replacement assemblies, page 9, paragraph 2b(11); 2d Indorsement, paragraph 2g; and 3d Indorsement, paragraph 2g. The equipment improvement recommendation on O-470 engines was forwarded to Aviation Command on 22 November 1968, with a recommendation that appropriate action be taken. Aviation Command replied on 27 January 1969, that steps are being taken to insure manufacture and rebuild quality control standards.

3. (C) Reference item concerning escape and evasion material, page 14, paragraph 3c; 2d Indorsement, paragraph 2i; and 3d Indorsement, paragraph 2o. Procedures for obtaining subject material are outlined in MACV Map Catalog, USARV Regulation 95-7 and 1st Aviation Brigade Regulation 95-2. Additionally, the U. S. Army Flight Information Detachment (Pacific) reviews requisitioning procedures in their periodic newsletters to customers. There is no indication that escape and evasion materials are in short supply.

FOR THE COMMANDER IN CHIEF:

C. L. SHORTT
CPT, AGC
Asst AG

212th Combat Support Aviation Battalion
APO 96337 (Marble Mountain Air Facility, Da Nang)

21st Reconnaissance Airplane Company
APO 96374 (Chu Lai)
(OPCON) Deputy Senior Advisor I Corps

1st Platoon
APO 96337 (Da Nang)
(OPCON) I Corp G-2 Advisor

2nd Platoon
APO 96374 (Chu Lai)
(OPCON) Americal Aviation Officer

3rd Platoon
APO 96374 (Chu Lai)
(OPCON) 2nd ARVN Division Advisory Group

131st Surveillance Airplane Company
APO 96308 (Phu Bai)
(OPCON) MACV J-2

220th Reconnaissance Airplane Company
APO 96308 (Phu Bai)
(OPCON) XXIV Corps Headquarters

1st, 2nd, 3rd and 4th Platoon
APO 96308 (Phu Bai)

231st Signal Detachment
APO 96308 (Phu Bai)

134th Medical Detachment
APO 96308 (Phu Bai)

245th Surveillance Airplane Company
APO 96337 (Marble Mountain Air Facility, Da Nang)
(OPCON) III Marine Amphibious Force

538th Signal Detachment
APO 96337 (Da Nang)

647th Transportation Detachment
APO 96337 (Da Nang)

ORGANIZATIONAL STRUCTURE (cont)

282nd Assault Helicopter Company
APO 96337 (Marble Mountain Air Facility, Da Nang)
(OPCON) Deputy Senior Advisor I Corps

519th Medical Detachment
APO 96337 (Da Nang)

484th Transportation Detachment
APO 96337 (Da Nang)

504th Signal Detachment
APO 96337 (Da Nang)

Corps Aviation Company (Provisional)
APO 96308 (Phu Bai)
(OPCON) XXIV Corps Headquarters

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