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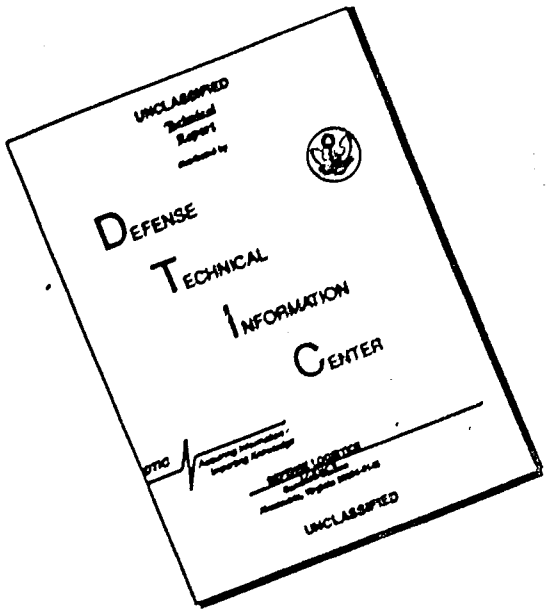

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AGDA (M) (6 Mar 70) FOR OT UT 694118 13 March 1970

SUBJECT: Operational Report - Lessons Learned, Headquarters, 589th Engineer Battalion, Period Ending 31 October 1969

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DEPARTMENT OF THE ARMY
Headquarters, 589th Engineer Battalion (Const)
APO San Francisco 96321

EGACBF-CO 31 October 1969

SUBJECT: Operational Report - Lessons Learned, 589th Engineer Battalion (Construction), Period Ending 31 October 1969, RCS CSFOR-65(R2)

THRU: Commanding Officer
35th Engineer Group (Const)
ATTN: EGA-3
APO 96312

Commanding General
18th Engineer Brigade
ATTN: AVBC-C
APO 96377

Commanding General
United States Army, Vietnam
ATTN: AVHGC-DST
APO 96375

Commander in Chief
United States Army, Pacific
ATTN: GPOP-DT
APO 96558

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Washington, D.C. 20310

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EGACBF-CO 31 October 1969
SUBJECT: Operational Report - Lessons Learned, 589th Engineer Battalion (Construction), Period Ending 31 October 1969, RCS CSFOR-65(R2)

1. SECTION 1, OPERATIONS: Significant Activities

a. Headquarters and Headquarters Company (HHC)

(1) The HHC water point at Song Pha, RVN, produced 556,000 gallons of water for Company C, 589th Engineer Battalion (Construction) and the one at Song Mao, RVN, produced 426,000 gallons of water for the 2/1 Cavalry Squadron during the report period.

(2) The company continued to perform its normal mission of supporting the battalion headquarters throughout the period.

b. Company A

(1) The company continued to provide the battalion with equipment, quarry, maintenance and paving support throughout the report period. Three personnel plus three pieces of equipment from the 51st Engineer Platoon (Asphalt) remained attached to this unit at the close of the period to assist the paving operation. Dynalectron contract mechanics provided maintenance assistance throughout the period for MCA-LOC equipment.

(2) The company paved 10.3 kilometers of roadway utilizing 10,770 tons of asphaltic concrete obtained from the 554th Red Horse Squadron (Air Force) asphalt plant. The battalion provided the aggregate and liquid asphalt.

(3) The asphalt paver, steel wheel rollers, and other paving support equipment were operational and extremely reliable throughout the period. This was primarily due to the emphasis placed on early detection and immediate correction of deficiencies.

(4) The 225TPH rock crushing plant was operationally ready for only 50 percent of the report period due to a myriad of problems. The majority of these problems occurred on the intermediate crusher unit and included engine failure (twice), main drive shaft failure and clutch failure. These repairs were made as quickly as possible and measures were instituted to preclude recurrences. The air intake system was improved to decrease dust entry into the engines. The maintenance program was altered to provide maintenance at night and allow maximum daylight hours for production. This production shift operated at a rate of 13 Euclid truck loads per hour so that the plant was not overworked. The "Crush-O-Matic" welding machine was used weekly during the period to continuously rebuild the secondary (54 Unit) and tertiary (42 Unit) crusher rolls. This build-up has changed the percentages of product to 40% base course, 35% 1"(-) rock and 25% ½"(-) rock.

(5) General electrical problems, support equipmont maintenance problems and lack of repair parts for MCA-BUY equipment (civilian equipment procured to augment TOE materiel) were also responsible for crusher plant nonproductive time.

(6) The direct support maintenance platoon received 357 job orders during the report period. Fifty-five of these are still open, 25 are awaiting parts, 20 are awaiting shop work and 10 were currently in the shop at the writing of this report. A significant portion of the direct support effort was devoted toward crushor maintenance and repair.

(7) The battalion authorized stockage list (ASL) had 5778 authorized line items with 8.3 percent at zero balance and 800 items on requisition. Red Ball (express requisitioning system) requisitions totaled 198 and fringe items totaled 1498.

c. Company B

(1) During the reporting period, the company had several officer personnel changes. On 16 August 1969, CPT Grant Fredricks, former commander, was reassigned to the 35th Group S-3 Section and CPT Daniel Quintard assumed command. LT Steven B. Schilson, 1LT Ralph T. Arnold and 1LT Kennoth P. Koppers were lost by rotation. 1LT David G. Bennett, 1LT James G. Goetz and WO1 Robert A. Brown were officer gains. At close of this reporting period the company was up to authorized officer strength except for the Earthmoving Platoon Leader.

(2) The operational support mission for 2/1 Cavalry Squadron in Song Mao continued intermittently throughout the period. Lack of materials delayed its completion. This construction project includes completing a troop-size base camp consisting of a mess hall, latrines, showers, guard bunkers and towers, living/fighting bunkers, aircraft revetments, a rearm/refuel point and painting the Song Mao air strip with non-skid compound.

(3) New projects undertaken and completed by the company during this reporting period included revetments for army helicopters at the Phan Rang Air Base, major road repair of highway QL-1 in Binh Thuan Province, and the upgrading of a 1.2 mile stretch of haul road.

(a) The Helicoptor Revetments were constructed with the help of seven men from Company C. A total of 14 revetments were constructed with steel pickets, pierced steel planking and discarded 55 gallon drums. The drums were cut, placed and filled with base course to form the revetment walls between which were compacted 1078 cubic yards of base course.

(b) On 24 September 1969, a provisional platoon consisting of personnel from the construction and earthmoving platoons were deployed on highway QL-1(Binh Thuan Province) to repair damages caused by the monsoon rains. There were nine road washouts between coordinates BN 211407 and AN 962304 causing complete closure of the highway. Approximately 210 feet of culvert from 24 inches to 72 inches in diameter was installed and 1235 cubic yards of backfill was placed. The major problem encountered was the lack of adequate backfill and much time and effort was expended locating and hauling suitable material.

(c) A 6400 foot haul road connecting the Phan Rang Air Base with highway QL-11 was upgraded. During a two week period, the company spread and compacted 4430 cubic yards of subbase fill, prepared 3825 yards of base course for priming, replaced 68 feet of 36 inch diameter culvert, and used 18,000 gallons of water in the compaction effort. The road was then paved with asphaltic concrete.

(4) As with last quarter, major emphasis was again placed on QL-11 from Thap Cham to Bridge QL-11-16 (BN 766823 to BN 621956).

(a) During this reporting period all remaining excavation and subbase fill on "DEROS Hill" (BN 692872) was completed. A total excavation of 25,000 yards of material, 80% of which was blue granite rock, required extensive use of track drills, dynamite and bull dozer effort. This area was then subbased with 20,534 cubic yards of decomposed granite.

(b) The last major excavation and subbase fill was the hill mass between bridges 10 (BN 645925) and 11 (BN 636934). Although a minimum of solid rock was encountered, two blasts were required to remove large boulders and approximately 10,000 cubic yards of spoil material was removed. Select fill in the amount of 6226 cubic yards was placed and compacted.

(5) Work began on two permanent bridges on highway QL-11 during the period. Bridge 7 (BN 689883) and Bridge 9 (BN 662923) are both to have pile supported, reinforced concrete abutments with steel stringers and timber decks. They are to be 80 foot in length and will require security force structures to be completed simultaneously with bridge completion. At Bridge 7, all piles were driven, the center pier cap and east footing were placed and the reinforced steel for the west footer was erected. At Bridge 9, all piles were driven, the east abutment was completed, the center pier cap was completed and the west footer was placed.

(6) The monsoon rains caused unscheduled effort to be directed toward emergency maintenance during the period. The bridge QL-11-7 bypass consisted of 60 feet of M4T6 dry span bridge. Bridge approaches required 911 cubic yards of fill for trafficability and 2706 cubic yards of spoil material for a dike which allowed work on the permanent bridge to continue. The bypass at Bridge 9 required 1041 cubic yards of blast rock to make it passable.

d. Company C

(1) Company C, 589th Engineer Battalion (Construction) was ongaged in the upgrading of QL-11 from coordinates BP 540058 to BP 507075, maintaining constant traffic along route QL-11 from coordinates BN 619957 to BN 453084 (34 kilometers of roadway) through maintenance operations. Due to heavy monsoon rains during September and October, more concentratod efforts were applied to the Pass (mountainous region between Song Pha and Don Duong) in koeping QL-11 continuously open to traffic. Recovery of civilian vehicles throughout the AOR increasod nearly three-hundred porcent over the provious reporting period. The company was also ongaged in improvement of its cantonment area, completion of ten guard towers for the 6th Convaloscent Hospital and 22nd Replacement Center in Cam Ranh Bay, complotion of a pioneor road connecting two ARVN companies at Ba Ngoi, and completion of 14 aircraft revetments at the Phan Rang Air Base for the 17th Aviation Group.

(2) The unit was engaged in training and operations for 92 days.

(3) The total amount of select material hauled, graded, and compacted during the reporting period was 117,685 cubic yards. Tho average haul distance fluctuated between 1500 and 2,500 meters. Although select material was readily available borrow pits becamo too saturated to use duo to heavy rain fall causing them to fill overnight. The recordod rain fall at Song Pha during tho period was 58 inches.

(4) The construction platoons completed 5 corrugatod metal pipe (CMP) culverts during the period which required a total of 12 barrols and comprisod 702 feet. Construction of culverts continued through tho town of Song Pha and replacement of two other culverts (blown by tho onemy) has commenced in the Company B area. Culvert construction through Song Pha was accomplishod during the night hours so that traffic could continue uninterrupted during the day. All culverts were backfilled, compacted, hoadwalled, and rip-rapped on the upstream and downstream sides.

(5) A major improvement to the cantonment area was the replacing of canvas roofs on thirty-one billots with corrugated sheet metal. The canvas tents had been used for over a year and had detoriorated greatly.

(6) A continual maintonanco program was steadily emphasized to insure that QL-11 was kept open to traffic. The maintenanco program consisted of repairing pot holes, clearing out culverts and ditches to improve drainage in tho Pass and grading the oxisting road immediately aftor eaoh rain. Rendering assistance to disabled and mired U.S. and local national vehicles in the company area of responsibility occurred continually during the period.

(7) Twenty-six men from the 1st Construction Platoon began construction on 23 August 1969 of the ten guard towers and a perimeter defense system for the 6th Convalescent Hospital and 22nd Replacement Center in Cam Ranh Bay. The towers were standard 10' x 10' timber type with concrete footers, corrugated metal roofs and ledge for sandbag protection. The defense system included erecting 6½ miles of concertina. The project was completed on 14 September 1969.

(8) Thirteen men from the Earthmoving Platoon began construction on 20 September 1969 of a pioneer road connecting two ARVN Company locations. The one kilometer pioneer road was completed from coordinates CP 923240 to CP 929248, located near Ba Ngoi City, south of Dong Ba Thin on highway QL-1. After completion of the pioneer road, upgrading operations began from coordinates CP 972172 to CP 944213 (approximately 5 km). Hauling base course and blast rock, grading and ditching the road was completed 11 October 1969.

(9) Seven men from the 2nd Construction Platoon began construction on 22 September 1969 of 14 helicopter revetments located at Phan Rang Air Base. Support for the project was also provided by Company B, 589th Engineer Battalion located in Phan Rang. Revetments consisted of filled 55 gallon barrels located on berms.

c. Company D

(1) The commander throughout the period was CPT James M. Lewis, however, 1LT Terence C. Holland was moved from Earthmoving Platoon Leader to the post of Construction Officer and XO. 1LT Holland replaced 1LT Albert W. Hunt who departed the unit on 26 October 1969. 2LT Russell Bement III arrived in the unit on 17 October 1969 and was assigned duties as Earthmoving Platoon Leader. CW3 Frank C. Cheatham was assigned on 5 August 1969 and assumed duties as Maintenance Officer.

(2) Major company effort during the report period involved the upgrading of QL-1 between Phan Rang and Ruong Muo (BN 726713 to BN 707606); clearing of 229.9 acres from BN 719688 to BN 706660 for security purposes; maintenance of a 33 kilometer section of QL-1 from BN 800771 to BN 654533; emergency flood control work at the fire base for A Troop, 2/1 Cavalry Squadron; and continued work on the company base camp and civic action projects in the Phu Quy District.

(3) The Earthmoving Platoon, Company C, 93rd Engineer Battalion was detached 27 October 1969. Their assistance in upgrading the road was invaluable, especially in the light of the high deadline rate for engineer equipment in the company for the first 45 days of the report period.

(4) Efforts on QL-1 during the report period resulted in the placement of 121,388 cubic yards of fill, 1345 cubic yards of crushed rock, 520 cubic yards of blast rock, 14 cubic yards of concrete and 15,150 gallons of MC-70 (asphaltic material used for temporary erosion control). Stripping of unsuitable material from roadway and borrow areas required removing 25,375 cubic yards of soil. One drainage structure was completed at coordinates BN 718688.

(5) Work in the base camp resulted in erection of a guard tower and completion of a 20' x 50' TOC which houses the medical, operations, and communications sections. A grease rack was built with 55 gallon drums and 350 feet of chain link fence was erected around the perimeter.

(6) The Tactical Operations Bunker at Cam Ranh Bay was completed on 21 October 1969. It is a 20' x 50' underground reinforced concrete bunker built to house the Cam Ranh Bay Support Command Operations Section. The building was formally accepted by the Pacific Architects and Engineers (PA&E) organization on 27 October 1969 at Cam Ranh Bay.

f. 513th Engineer Company (DT)

(1) The company continued to operate its two truck platoons in separate locations from the beginning of the period until 17 October 1969 when the Second Platoon (formerly attached to A/864th Engr Bn, Const) rejoined the First Platoon at Phan Rang to assist in the upgrade of QL-11.

(2) CPT Forrest P. Hanson relinquished command of the 513th Engr Co (DT) on 14 August 1969 and was replaced by CPT Alan J. Arikian. 1LT Richard A. Peace continued as First Platoon leader; the Second Platoon received a new platoon leader, 1LT David R. Johnson, who joined his platoon at Ninh Hoa on 4 August 1969.

(3) The First Platoon supported battalion operations on QL-11, both east and west of Phan Rang AFB, near Phu Quy, and as far south as Bridge #51 (55 km from Phan Rang). Plagued by brief but frequent torrential rains during September, the company assisted in the replacement of the bypass at bridge 9 on highway QL-11 (QL 11-9) and assisted in the replacement of the bypass at bridge QL 11-7 over the weekend of 19-20 September. Prior to the onset of the monsoon season, and with the resumption of normal activities after the construction of a dry span at bridge QL 11-7, the company continued to haul base course and blast rock to work sites at bridges QL 11-20, 21, 22, and 26. The hauling of base course for the upgrading of the shoulders of highway QL-11 continued throughout the report period. A total of 20,932 cubic yards of base course and 10,773 tons of asphaltic concrete were hauled by the First Platoon during the period.

(4) The Second Platoon, operating out of the Co A, 864th Engr Bn cantonment at Ninh Hoa until 30 September 1969 and operating out of Khanh Duang thereafter, continued to support the 864th Engr Bn operations on highway QL-21 east of Khanh Duang. It hauled 10,980 cubic yards of base course, 3600 tons of asphalt, and 160 loads of blast rock. Much of the base course was hauled over a round trip distance of some 90 miles and the asphalt, blast rock and the rest of the base course was hauled approximately 15 miles. The haul distance averaged 30 miles (one way) for the period and was primarily responsible for the Second Platoon's most recurring problem of flat tires. The platoon also assisted in delivering blast rock from the Khanh Duang quarry to the 610th Engr Co crusher when muddy haul roads restricted the effectiveness of the latter's Euclid dump trucks.

(5) The Second Platoon also contributed significantly to Civic Action Projects throughout the reporting period. It hauled sand and gravel to a site at Duc My where ARVN Engineers were constructing a new high school. It also assisted in the construction of the district dispensary at Ninh Hoa and supported the construction of a revetment at the 48th Avn Bn dispensary.

(6) The company was assigned operational control of 8 MCA-LCC 10 cubic yard dump trucks. These trucks which were deprocessed and placed into operation on 13 October 1969 contributed significantly to the ease with which construction operations were performed. "DEROS HILL" (rock hill mass between bridges QL-11-6 and 7) continued to absorb a substantial share of base course haul.

(7) On 16 October 1969, the platoon moved to Phan Rang to join the rest of the company in support of the 589th Engr Bn (Const)'s operations on QL-11.

g. 687th Engineer Company (LC)

(1) The First and Second Platoons engaged in clearing operations in Binh Thuan Province during the period 11 August 1969 through 7 October 1969. The Third Platoon operated in the 45th Engineer Group AOR working with elements of the 7th Engineer Battalion (Rein) (U.S. Marines) on the extension of Operation Pipestone Canyon during the period 3 August 1969 through 30 August 1969. This platoon then moved to Phan Thiet where they engaged in a maintenance standdown and accomplished tasks in Binh Thuan Province until 7 October 1969.

(2) The First and Second platoons also engaged in clearing operations along highway QL-1. Two hundred meters were cleared on both sides of the roadway, where possible, between Phan Thiet and Luong Son. Most of the clearing was quite light and this fact allowed the unit to move along rapidly. Minor problems developed due to marshy areas and densely inhabited

areas. The unit moved from highway QL-1 into the Lee Hong Phong Forest and cut 132 kilometers of access trail there. The forest had long been a sanctuary for Viet Cong/NVA forces and there was no way that friendly forces could gain easy and rapid access to its center. Vegetation consisted primarily of small trees and dense undergrowth which allowed the cutting to proceed at a fairly steady rate. By the time the unit had completed its clearing operation, there was no area within the forest which was more than 5 km away from helicopter landing zones or tracked vehicle access roads.

(3) The Third Platoon joined the operation in the Lee Hong Phong Forest on 23 September 1969. Because of heavy rains in the early part of the month in the Phan Thiet area, much of highway QL-1 was impassable. The dozers were taken as far north on QL-1 as possible by tractor and trailer. From this point, an access road was cut into the forest along high ground so that they could join the main body of the company. The arrival of the platoon in the forest marked the point when the most efficient and productive cutting was done and the rapid mission accomplishment expedited unit return to Phan Thiet.

(4) The entire unit moved from Phan Thiet to Phan Rang by Landing Ship Tank (LST) for their maintenance standdown. The unit made 3 LST loads, the first of which arrived in Phan Rang on 13 October 1969 and the last on 15 October 1969. The standdown was completed on 27 October 1969. One element was sent south along QL-1 to complete clearing in Binh Thuan Province and the other north to begin clearing in the Cam Ranh Bay and Dong Ba Thin area.

(5) Much progress was made during the report period to improve company maintenance organization and capability. The new maintenance officer assigned to the organization immediately began the re-organization and training of unit maintenance personnel. A heavy load was placed on the maintenance section when the Third Platoon returned from Da Nang, however the load was lessened when a contact team was sent from the 136th Light Maintenance Company, 69th Maintenance Battalion, to assist with third echelon maintenance. Repair parts continued to be a problem, as the Phan Thiet Logistical Support Activity (LSA) was not set up to support engineer equipment, and consequently, had no supporting Authorized Stockage List (ASL). The unit move to Phan Rang greatly improved the support maintenance service due to the availability of engineer repair parts from the 589th Engineer Battalion (Const).

(6) Security was provided for the unit while it was working along highway QL-1 by one platoon of the 2/1 Armored Cavalry Squadron and by a company of Vietnamese infantry. Security within the Lee Hong Phong Forest was always provided by one company of American infantry from either the 3/506 Infantry Battalion or the 1/50 Mechanized Infantry Battalion, one platoon

from the 2/1 Armored Cavalry Squadron, two tubes of self propelled 105mm artillery and one platoon of Vietnamese infantry.

(7) All resupply was accomplished through the LSA at Phan Thiet until the unit moved to Phan Rang where resupply was accomplished through the 589th Engr Bn. While the unit was in the field, resupply was accomplished by air. Utilization of an aerial resupply program placed a great deal of extra work on the rear element, but its operation proved highly successful.

(8) All training was integrated with daily clearing operation except for one hour of Command Information each week. The few new operators who were assigned during this period were given extensive on-the-job training by the experienced operators before they were allowed to operate on their own.

h. Communications

(1) The communications section placed primary emphasis during the period on improving the communications of the outlying companies. Company D, in particular, was in need of small tactical manpack radios to maintain constant communication between the platoons working as scattered work parties along QL-1 South between Phan Rang and Xom Moi (30km). The security element provided by personnel from Company D also required communications with the work parties they were guarding. A request for a temporary loan of six AN/PRC-25's was submitted through supply channels but was returned disapproved. The only solution was to borrow the necessary number of radios to meet the requirements of the situation. A similar problem is anticipated when Company B moves to its new location on highway QL-1.

(2) During this report period a security fence 10 feet high with a remotely controlled gate lock was constructed around the 589th Engr Bn Commo building. This fence provides the maximum security required for communications equipment in the crypto facility.

(3) AM radio communications were established between the battalion headquarters at Phan Rang and an outlying unit 80km away. Reception was good using the AM 3349/GRC-106 radio.

(4) A considerable improvement in the availability of batteries for battalion signal equipment came about when "Project Orange Ball" went into full operation during this report period. Fresh, cold storage batteries were available on 24 hours notice or less.

i. Engineer Equipment Maintenance Office

(1) The battalion continued to experience maintenance problems due to inadequate driver maintenance and, consequently, corrective action concentrated in this area. Other problems were significant but not insurmountable. Brake shoes were subjected to increased hazards due to water and mud seeping into linings and wheel cylinders when equipment was operated in extremely wet areas. The quantity of various brake shoes authorized for storage in PLL and ASL was not sufficient to get this organization through the wet season without having "down time" for critical items such as road graders. Brake shoes of all types have been added to the battalion list of seasonal high mortality repair parts.

(2) An extremely serious problem arose within the battalion when the number of engines requiring replacement increased sharply. In analyzing the problem it was found that 55 gallon and 5 gallon containers of OE-30 oil did not meet military specifications for that type oil. Two types of OE-30 were found to be defective: (1) A Shell product marked as Mu-L2104B and (2) one marked as Mu-L2104BMB 1023. An AmCo chemical product marked LZ104B & AMZ did meet required specifications. Once this defect was noted, all organic and attached units were notified to make a visual inspection of all OE-30 oil and replace where necessary. The 35th Engr Group Headquarters was made aware of this problem and this resulted in a country-wide notification to check all oil marked as OE-30.

(3) Lack of maintenance personnel has been an increasing problem. The Company A support maintenance activity supported, in addition to its normal workload, the 687th Engr Co (LC), the 513th Engr Co (DT) and an extra TOE Earthmoving Platoon. Since the 225TPH crushing plant was inoperative for 50% of the reporting period, a significant amount of direct support effort was diverted toward emergency crusher maintenance. This situation is expected to improve when authorized maintenance personnel replacements are received.

(4) The MCA-LOC equipment greatly increased battalion productive capability. However, when an item of this equipment was deadlined it affected the battalion to greater extent than if a similar TOE item were deadlined. The equipment exhibited a high availability factor and the most common reasons for long term deadline status were the nonavailability of adequate MCA repair parts and the inability to obtain these parts readily.

j. Medical Activities

(1) The Medical Section of the battalion provided primary medical support for elements of HHC, A, B, C, and D companies, the 513th DT and the EM Platoon, Company C, 93rd Engr Bn. The 687th Engr Co (LC) received medical supply support from this section but received primary medical support

from the 101st ABN Div dispensary in Phan Thiet. The Battalion Medical Section provided treatment for other elements including D/36th Sig Bn and HHT 2/1 Cav Sqdn. The total number of out-patients seen in the Aid Station for the reporting period was 2610; of these, 107 were admitted to our over-night ward. The number of immunizations given was 1725 and the number of Vietnamese patients seen was 874.

(2) Patients who required more intense and specific diagnostic work and treatment than could be provided by the battalion aid station were usually sent to the 8th Field Hospital in Nha Trang. When necessary, patients were evacuated straight from the field by "Dustoff" helicopters called from Nha Trang or Phan Thiet. Other loss seriously ill patients were transported by fixed-winged aircraft. Considering the number of military units in the Phan Rang area and the number of available landing zones and aircraft maintenance units, the Battalion requested that a Medevac unit be stationed in this area to cover the distance between Nha Trang and Phan Thiet.

(3) The venereal disease rate has been stable at a fairly low number during the reporting period, however it is expected to rise as various local areas are put back "on limits".

(4) A weekly medical civic action program (MEDCAP) was initiated for the town of Song Pha. A second weekly program was started in the Phu Quy area near Company D. These programs are popular with the Vietnamese and promote good will among villagers and US soldiers, however the quality of medical care is somewhat limited due to the substantial number of patients seen. The more seriously ill patients who need intense continual medical care can not be treated effectively at the MEDCAP level and are referred to the Vietnamese hospital in Phan Rang.

k. Religious Activities

(1) Attendance at religious services for battalion personnel slightly declined over the previous reporting period due to lack of a Battalion Chaplain for part of the period.

(2) A weekly Catholic Mass is scheduled in the battalion chapel by a Catholic Chaplain at the Phan Rang Air Base, however, Catholic coverage for outlying companies C and D has been spasmodic. Arrangements have been made for improvement. Jewish Services are conducted weekly at the Phan Rang Air Base by a lay leader of the Jewish faith. Other denominational services are held at the Air Force chapel and personnel of the 589th are encouraged to attend.

(3) The character guidance program received continued emphasis by the command. The health, welfare, and morale of the men of the command was of constant concern. Character guidance classes were held and the required subjects presented.

(4) The Battalion Chaplain attended monthly training conferences and participated in retreats which were helpful and encouraging in the performance of the ministry.

(5) The Protestant Chaplain's Fund was utilized to aid missionary work in the area, to secure sufficient literature for the men, and to provide refreshments for followship after each worship service.

1. Personnel

(1) The battalion staff and command changes are as follows: CPT Alan J. Arikian, Engineer Equipment Maintenance Officer (EEMO), on 1 August 1969, replaced CPT Gerald N. Braloy who rotated to CONUS. MAJ Vincent Parmesano arrived on 4 August 1969 and filled the vacant Executive Officer position. CPT Arikian vacated the EEMO position on 14 August 1969 to assume command of the 513th Engineer Company (DT) replacing CPT Forest P. Hanson who returned to CONUS. CPT Daniel Quintard took the reins of Company B on 16 August 1969 replacing CPT Grant B. Frodricks who was reassigned to HHC, 35th Engineer Group (Construction) as an Assistant S-3. CW4 Allen Keeney, Unit Supply Technician, rotated to CONUS on 1 September 1969. CPT Robert Kyle assumed command of Company A on 7 September 1969 replacing CPT Richard W. Chapman who rotated to CONUS. WO1 Percy C. Green arrived on 12 September 1969 and filled the vacant Unit Supply Technician position. Chaplain (CPT) James Rogers departed the battalion on the same date. MAJ Romayne E. Schroder assumed the duty of S3 on 13 September 1969 and CPT Joseph Feast Jr became the Assistant S3. CPT Michael Burkowsky was assigned as the Pipeline Engineer on 16 September 1969 replacing 1LT David G. Bennett who was reassigned to Company B as a Platoon Leader. Also, on 16 September 1969, WO1 Thomas D. Macon filled the Unit Personnel Technician position left vacant by CW2 Harold Mangum who returned to CONUS on 24 July 1969. Chaplain (MAJ) Arnold T. Ellsworth was assigned as the Battalion Chaplain on 1 October 1969. 1LT Byron Smith was designated as the Pipoline Engineer on 13 October 1969 to replace CPT Burkowsky who assumed command of HHC to allow 1LT Perry L. Price, the former commander, to return to CONUS. Doctor (CPT) Richard E. Lavagne became the Battalion Surgeon on 15 October 1969 replacing CPT Lannie R. Hughes who rotated. CPT Ferdinand Scafuro was assigned to the S3 section on 20 October 1969 to replace CPT Feast, Assistant S3, who will be reassigned. 1LT Timothy W. Collins, Construction Engineer, S3 section, rotated on 26 October 1969.

(2) The battalion has been involved in two separate programs designed to reduce the size of American forces in Vietnam and to increase the participation of local nationals in the LOC program by augmenting U.S. units with civilian employees. Both of the goals are commendable and, if timed properly, the separate programs could have been executed without great adverse effect upon unit capability. In the case of the 589th

Engineer Battalion, however, the programs were implemented separately and in a piecemeal fashion. The net result is a rather serious reduction in overall unit manpower which, apparently will become even more serious as we move into the next report period.

(3) On 25 June 1969 the battalions U.S. military personnel space authorization was reduced by 204. The action was part of "Program VI" which intended to replace American personnel with local national civilians on the basis of 3 civilians for 2 U.S. military. Reductions in personnel strength were to be accomplished by normal attrition. By comparison to the 399 U.S. personnel authorized prior to this action, the battalion assigned strength dropped to 793 on 31 July, to 760 on 31 August, to 732 on 30 September and to 690 on 31 October 1969. The authority to hire the local national replacements was not concurrent, however. During most of the report period the battalion had no authority to increase the number of permanent hire civilians, even to fill previously authorized vacancies, due to a hiring freeze.

(4) The number of authorized U.S. spaces continued to be reduced with an additional 21 spaces taken away on 14 July 1969 when the unit was designated a type B unit. An additional 54 spaces were removed on 19 September 1969 in another reduction in forces. These reductions had no immediate effect, since they were also to be achieved through attrition, However, they will effectively lengthen the attrition period, making an even longer period of time before the replacement flow begins.

(5) The hiring freeze began to thaw toward the end of the period when, in two separate actions, (a) permission was granted to hire permanent civilian employees as an exception to the hiring freeze and (b) an increase in permanent civilian allocations was authorized. This increase was achieved not by any additional authorizations, but by redistribution of civilian spaces already authorized within the 35th Engineer Group.

(6) Authorized permanent civilian spaces increased from 144 on 1 August 1969 to 235 on 31 October 1969 with an actual increase in civilians hired on a permanent basis going from 77 on 1 August 1969 to 180 on 31 October 1969. This increase in hired personnel was actually accomplished during the last 16 days of the period because the special authority lifting the hiring freeze was not granted until 15 October 1969. The great disparity between the number authorized and the number employed on 1 August 1969 was due to the hiring freeze that had been in effect for some time. The rapid increase in the actual number of employees in a short time was handled so that the personnel could be utilized effectively. This was done through plans made during August and September by our Civilian Personnel Officer to establish TDs for the various units of the battalion. New employees are being hired as fast as their papers can be processed. The

unit was quite fortunate in that the lifting of the freeze coincided with a reduction in force of the Phan Rang area operation of RMK-BRJ, a civilian contract construction organization which employed many Vietnamese with various skills. It should also be noted that the presently authorized 235 civilian spaces includes 55 spaces involving kitchen police, latrine burners, laborers and other non-TOE authorized functions which are not significantly affected by strength cuts.

(7) The reduction in authorized U.S. spaces essentially stripped the battalion of its vertical construction capability. In order to restore that capability and utilize Vietnamese skills and leadership ability to the maximum extent possible, platoon-type Vietnamese civilian organizations are being formed with American counterparts at the squad leader, platoon sergeant and special equipment operator levels. The Americans will be phased out as the platoon attains the requisite level of proficiency. Additional problems remain to be solved. For example, the reductions in U.S. military personnel spaces deleted nearly all truck drivers, but no truck drivers were included in the local national hire authority. Additionally, receipt of MCA-LOC construction equipment for which no additional operators were authorized, either U.S. or local national, requires further reduction of the vertical construction capability.

m. Intelligence and Security

(1) Enemy activity directed against friendly forces in the battalion area of responsibility was concentrated primarily at Company D located at Phu Quy. They were the object of enemy attack on ten different occasions throughout the report period which caused them to devote both vertical platoons to job site security. The enemy virtually destroyed three completed drainage structures on QL-11 consisting of a total of 360 feet of corrugated metal pipe. The enemy failed to affect overall battalion production significantly over the past three months and his activity subsided toward the end of the report period.

(a) Company D received six 82 mm mortar rounds inside the base camp perimeter (BN 740742) at 0215 hours, 5 August 1969. A colocated MACV team retaliated with 81 mm mortar fire.

(b) Personnel from Company B received six rounds of small arms fire at 1400 hours on 6 August 1969 near BN 629945. No casualties resulted.

(c) The Company D earthmoving task force came under enemy fire at 1330 hours, 8 August 1969, while upgrading highway QL-1 (BN 707618). They received rocket-propelled grenades and small arms fire for 15-20 minutes. Fire was returned by unit personnel and elements of 2/1 Cavalry Squadron. Artillery fire and air strikes were also coordinated. Casualties and equipment damage were sustained.

(d) The Company D base camp at Phu Quy (BN 740742) received

seven 82 mm mortar rounds on 12 August 1969. No personnel injuries were sustained, however several items of equipment received minor damage.

(e) The 687th Engineer Company (LC) was convoying on highway QL-1 toward their new base camp location, 14 August 1969, when they were hit with enemy small arms and mortar fire at BN 025360. Fire was returned by unit personnel and the Vietnamese armed force escort. Casualties were light.

(f) A work party from Company B at Song Mao received approximately 40 rounds of 82 mm mortar and 4 rounds of B-40 rockets at 0435 hours, 21 August 1969. 2/1 Cavalry and MACV elements fired 105 mm artillery and 81 mm mortars at suspected launch site which resulted in 1 VC KIA. No friendly casualties resulted.

(g) The railroad bridge and the corresponding road culvert in the bypass at Bridge #9 on highway QL-11 (BN 661923) were packed with demolitions and blown on 2 September 1969. The railroad was repaired by Vietnamese Railway System (VRS) personnel and the culvert was repaired by Company B, 589th Engineer Battalion.

(h) A booby-trapped 82mm mortar round was discovered and blown in place by Company D personnel at 0830 hours on 2 September 1969 (BN 787772).

(i) The 687th Engineer Company (LC) found and destroyed during the period 17 August 1969 thru 7 September 1969 the following items while clearing a Viet Cong stronghold in the Loc Hong Phong Forest (BN 100300): 186 bunkers, 10 spider-type foxholes, 1 M1 Carbine, 1 each 55 gallon drum of tear gas agent, and assorted small arms ammunition and medical supplies.

(j) HHC, Company A, Company B, and 513th Engr Co (DT) are based at the Phan Rang Air Base. The base received 17 rounds of 82 mm mortar fire and 1 round of 107 rocket fire on 5 September 1969 at 2350 hours. No equipment damage or personnel injuries were sustained.

(k) Also, on 5 September 1969, at 0230 hours, the Company D base camp at Phu Quy (BN 740742) received 5 rounds of 82mm mortar fire. No personnel injuries were sustained.

(l) Culvert #12 on highway QL-11 (BN 634936) was blown at 1045 hours, 8 September 1969. The road was immediately made trafficable by Company B.

(m) Company D work party received small arms fire from three directions simultaneously on 9 September 1969 while working on QL-1 (vic BN 718683). The firing followed the detonation of a mine on the work site.

Fire was returned and no injuries were sustained.

(n) Eight rounds of 82mm mortar fire landed outside of the Company D base camp (BN 740742) at 2355 hours, 14 September 1969. The colocated MACV element returned mortar fire on the suspected launch site.

(o) The Phan Rang Air Base received 3 rounds of 107 mm rocket fire at 1840 hours, 20 September 1969. No injuries or damages sustained.

(p) Sometime during the night of 2 October 1969, culvert #11 on highway QL-11 (BN 637934) was packed with demolitions and blown. Company B made emergency repairs and kept the traffic flowing.

(q) Four and six rounds of 82 mm enemy mortar rounds landed outside of the Company D camp perimeter (BN 740742) on 6 and 9 October 1969, respectively, with negative effect.

n. Operations and Training

(1) Overall battalion production dipped below its norm during the report period due to the monsoon rains and the fact that critical compaction equipment was deadlined 40% of the period.

(2) The total amount of rainfall which fell during the period was 20.5 inches in the Phan Rang area, location of HHC, Company A, Company B, 513th Engineer Company (DT); 22.2 inches in the Phu Quy area, location of Company D; and 58.0 inches in the Song Pha area, location of Company C. The rain caused the emphasis to shift from upgrade to maintenance and training. Operational support to U.S. and allied units increased sharply as the rains washed out bridges, portions of critical roads and outlying base camp locations. Hasty fords and expedient bypasses were used extensively to quickly reopen vital traffic arteries. Bailey bridge parts were in short supply. Dry span bridging was used occasionally in wet gaps which proved to be marginally satisfactory due to constant adjustments made necessary by erosion beneath the support pedestals in the river. Lack of suitable soil (along highway QL-1 in Binh Thuan Province) for temporary road repair increased the probability of frequent subsequent repairs. The feasibility of sand-cement stabilization is being studied.

(3) Nonoperational compaction equipment was the other factor which significantly inhibited maximum earthwork production during the report period. The MC4 self-propelled vibratory and segmented compactors are so vital to efficient base course and fill operations, respectively, that their absence reduced production to a token level and induced delays in the other scheduled phases of construction. Maximum use was made of all other compaction equipment available to the battalion.

(4) The battalion received 12 each 12 cubic yard MCA dump trucks and 3 MCA transit mix trucks during the period. The beneficial effect of this equipment has been to increase production immediately and to foster greater efficiency. The better operators in the battalion are assigned to this equipment and procurement actions are underway to hire Vietnamese operators for the idle TOE equipment.

(5) Much time and effort was expended training personnel on the job. While this is a desirable and reasonably effective method of training, it limits maximum production and restricts quality work. It would be highly conducive to timely professional construction if more school-trained personnel were received. OJT is not nearly as effective in qualifying operators in maintenance as it is in operating techniques.

c. Logistics

(1) Construction materials continued to be in short supply during the report period. Shortage of command controlled items such as lumber in 1, 2 and 4 inch widths and plywood caused many substitutions and minor delays in culvert construction. Lack of adequate 60 and 72 inch corrugated metal pipe (CMP) has prompted investigation of small prefabricated slabs and beams for drainage structures. This will require cement and reinforcing steel which may be more readily available in the required quantities than CMP. Two-inch lumber and plywood will still be required, but to a lesser degree.

(2) Inadequate timber resupply on certain repair parts was the major contributing factor to equipment nonavailability during the period. Items such as air filters for 10 ton tractors, tires, tubes and bearings for the 35-50 ton roller, drill bits and extensions for track drills, and cutting edge plow bolts for the 290 M wheeled tractor are especially noteworthy since their absence frequently deadlined these high production pieces of equipment. Special efforts are being taken to increase the resupply rate on those parts.

2. SECTION 2, LESSONS LEARNED: Commander's Observations, Evaluations and Recommendations

a. Personnel

(1) Executive Officer, Land Clearing Company

(a) OBSERVATION: The 687th Engineer Company (Land Clearing) is not authorized an Executive Officer.

(b) EVALUATION: A land clearing company is authorized 4 commissioned officers: 1 Company Commander and 3 Platoon Leaders. This limited officer strength does not provide adequate capability to the unit to reconnoiter areas to be cleared, coordinate logistical support and perform the numerous administrative duties normally associated with an engineer company without detracting from the command responsibilities of the presently authorized officers. An additional officer to handle these responsibilities would place the land clearing company officer strength more in alignment with standard combat and construction engineer companies, which have an executive and construction officer, respectively.

(c) RECOMMENDATION: That an Executive Officer be added to the land clearing company TOE.

(2) Vietnamization Program

(a) OBSERVATION: The battalion has been involved in two separate programs designed to reduce the size of American forces in Vietnam and to increase the participation of local nationals in the LOC program by augmenting U.S. units with civilian employees.

(b) EVALUATION: The two programs were implemented separately and in piecemeal fashion with no coordination between them to integrate the loss of U.S. personnel with the concurrent addition of local nationals. The timely phase-in of qualified Vietnamese replacements who possessed the required skills did not occur because of the total absence of any apparent coordination between military and civilian personnel organizations. In fact the only factor that precluded a complete loss of vertical construction capability within the battalion was a redistribution of command assets within the 35th Engineer Group, which, together with previously authorized spaces, which were entirely unrelated to a reduction of U.S. strength, constituted the only avenue through which immediate relief from the U.S. personnel drawdown could be obtained.

(c) RECOMMENDATION: That some coordination be established between the agencies which delete U.S. spaces and those which authorize the Vietnamese civilian replacements so that there will be some awareness of the effects of actions taken by either of the agencies on the other.

(3) Civilian Personnel Officer

(a) OBSERVATION: Handling the administrative details of a local national work force required under a Type B TOE organization requires an officer on a full-time basis.

(b) EVALUATION: The acquisition of local hire personnel is an involved and painstaking task. It involves initiating local security actions. It requires the application of a knowledge of construction operations and the exercise of sound, considered judgment during the interview in order to ferret out potential high quality workers. Fair and equitable wages, within specified ranges, must be made commensurate with training and experience. Accurate record keeping and the proper administration of associated funds require close and constant surveillance. The resolution of pay problems and other conflicts necessitates the presence of an informed arbitrator. These assets can best be found in an officer and his total attention must be devoted to the job to insure proper administration of the program.

(c) RECOMMENDATION: That the TOE and MTOE be amended to provide an officer space for Civilian Personnel Officer when a unit is organized as a Type B unit.

b. Intelligence: None

c. Operations

(1) Land Clearing Company Security

(a) OBSERVATION: The use of an Armored Cavalry platoon for securing the land clearing company is excellent.

(b) EVALUATION: The Armored cavalry platoon provides outstanding security for the land clearing company due to its high mobility, great fire power, and the compatibility of its tracked tactical vehicles with tracked engineer vehicles. It moves rapidly over any terrain where land clearing operations are being conducted. It provides an indirect fire capability within the company base camp with its mortar track. It keeps pace with the cutting operations where ground troops cannot. With an Armored Cavalry platoon, the unit could operate independently in most areas without additional job site or base camp security.

(c) RECOMMENDATION: Whenever possible, it is recommended that an Armored Cavalry platoon be provided to the land clearing company as its security element. By using them, highly effective job site and base camp security can be provided with a minimum American security troop requirement.

(2) Land Clearing Company Development

(a) OBSERVATION: The land clearing company functions most efficiently when operating as a company.

(b) EVALUATION: When the land clearing company is split into two or three separate elements, each attached to a different headquarters, much efficiency is lost. The company no longer functions as a unit and the condition of the equipment declines. The maintenance standdown cycle is disrupted and the various platoons get out of phase with each other on the various stages within the cycle.

(c) RECOMMENDATION: That the land clearing company be deployed as a unit. Where small jobs need to be done, it is suggested that the company be centrally located so that it can control two job sites at once, thus accomplishing the smaller jobs without losing unit integrity.

d. Organization

(1) Land Clearing Company TOE 5-87T

(a) OBSERVATION: The 687th Engineer Company (Land Clearing) is presently organized under MTOE 5-500C, USARPAC 14/68.

(b) EVALUATION: The tentative TOE 5-87T raises the strength from 119 to 178, gives the CO an APC and adds a much desired machine shop capability.

(c) RECOMMENDATION: That TOE 5-87T be adopted.

(2) Maintenance Support for TDY Units

(a) OBSERVATION: Platoon size operational support elements that have no organic maintenance capability are frequently sent TDY away from their parent organizations without a proportionate share of the parent unit's maintenance support.

(b) EVALUATION: A unit's TOE maintenance capability is determined based on equipment type and density. The addition of a sizeable quantity and variety of additional equipment places an unprogrammed strain on a unit's maintenance organization.

(c) RECOMMENDATION: That units attached to other units be deployed with maintenance support personnel in the same mechanic/equipment ratio as is available at the parent organization location.

(3) Non-standardized MTOE

(a) OBSERVATION: Modified Tables of Organization and Equipment (MTOE) are standardized for construction engineer battalions.

(b) EVALUATION: Weather conditions, tactical situation, geographical location and the nature of the mission combine to present unique problems in an area of operations which require unique solutions that vary from location to location even within a country as small as Viet Nam. The MTOE should be flexible enough to allow liberal manipulations of manpower organization and equipment to adapt the work force to requirements peculiar to certain areas. The document could accomplish this purpose by authorizing temporary increases in certain personnel skills and selected equipment density as requested by the battalion commander. Equipment turn-in and personnel redistribution would be effected immediately upon termination of requirements.

(c) RECOMMENDATION: That MTOE not be standardized, but be written to allow the battalion commander to tailor his organization to meet the requirements of the mission and the area of responsibility; that a determination be made as to which resources should be increased so as to allow such a program to succeed.

e. Training

(1) The Noncommissioned Officer (NCO)

(a) OBSERVATION: Many NCO's who hold primary MOSs in the 51H and 62N series are not qualified.

(b) EVALUATION: NCOs are being assigned to positions requiring their assumed experience and training. An alarming number of these NCOs have had little experience in these fields and their working knowledge is limited. They are unaware of their "total" responsibility of artfully applying both technical know-how and leadership principles to train, to educate and to instill the desire to excel. Also, in schools, greater emphasis should be placed on the use of field expedients and decrease the fanatic dependency on machines. Part of the problem in the 62 series MOS is the lack of training in soils, methods of road construction and basic survey techniques necessary to perform the field job which awaits the construction machine supervisor. The bulk of his training has been in equipment operation and maintenance, which is certainly beneficial, but does little in preparing him to perform his primary mission of road building.

(c) RECOMMENDATION: That greater emphasis be placed upon screening NCOs for qualification prior to their graduation from MOS-producing schools; that 62N series MOS supervisors receive training in road building

techniques, soils and basic survey techniques; that a portion of each technical school's POI contain a significant block of instruction on leadership.

(2) Preventative Maintenance Training for Officers

(a) OBSERVATION: Most officers will become involved with vehicle maintenance at some point during their tour in the Republic of Vietnam.

(b) EVALUATION: Officers will be more effective in the maintenance program if their memories are refreshed with some type of preventative maintenance course prior to coming overseas.

(c) RECOMMENDATION: That a certain percentage of all overseas-bound officers receive an appropriate preventative maintenance course prior to leaving.

f. Logistics

Use of Salvaged and Damaged CMP

(a) OBSERVATION: Due to rough transportation and handling, many pieces of normally good culvert are being bent and sprung so that they cannot be used for normal culvert assembly.

(b) EVALUATION: This culvert is normally used for miscellaneous projects or simply discarded as useless.

(c) RECOMMENDATION: That this culvert be used for emergency field expedient tubes by nailing the culvert flanges to a common 4x4 wood flange.

g. Communications: None

h. Material

(1) MCA-BUY Equipment Standardization

(a) OBSERVATION: The MCA-BUY equipment provided a tremendous thrust to the construction engineer effort of this battalion during the report period.

(b) EVALUATION: The MCA-BUY equipment provided the highest production per equipment-hour than similar TOE equipment. The only areas

which require close attention and streamlining is the MCA repair parts supply system and insurance of the arrival of manuals and overpacks with the equipment.

(c) RECOMMENDATION: That the MCA-BUY equipment become standard issue items to construction battalions and that the repair parts supply system be made more dependable (to include manuals and overpacks with the equipment).

(2) Aircraft Augmentation

(a) OBSERVATION: The scope and magnitude of battalion operations have grown to the point where the full-time assignment of a helicopter would greatly facilitate mission accomplishment.

(b) EVALUATION: Battalion road maintenance responsibilities presently comprise 170km of highway. In order to effectively monitor this length of road, to determine where trouble spots are located and to dispatch emergency repair crews to keep the roads open, flexible, rapid transportation is required. In addition to BOC construction and maintenance, operational support tasks are frequently required at points as much as 165km apart. Efficient and effective management of such wide-spread activities requires close coordination and quick reaction to potential problem areas. An aircraft would insure tight command control. It would also cut medical evacuation reaction time in half for remote units, virtually eliminate resupply problems to deployed elements and would immeasurably enhance the perpetual reconnaissance activities.

(c) RECOMMENDATION: That a UH-1 series helicopter be permanently assigned to the battalion.

i. Other

(1) Adjutant General (AG) Services to Outlying Units

(a) OBSERVATION: There are no facilities at outlying locations for troops to obtain money orders and other periodic, short term, commonly used AG services.

(b) EVALUATION: Money order purchase procedure requires the purchaser to present his MACV Form 5, I.D. card and addressed envelope at the banking or postal facility at the time of purchase. Because of the isolation of engineer construction companies special arrangements must be made by the unit to obtain AG services normally furnished. For example one man from each unit collects funds from everyone who wishes to purchase money orders and then proceeds to conduct the transactions at a banking facility.

EGACBF-CO 31 October 1969
SUBJECT: Operational Report - Lessons Learned, 589th Engineer Battalion (Construction) Period Ending 31 October 1969 RCS CSFOR-65 (R2)

If an itinerant Army Postal Unit were tasked to provide this monthly service in the field, it would not only facilitate the money order purchase operation, but also, with the addition of other AG personnel, administer GED tests, make I.D. cards, and provide other miscellaneous AG services not readily available to the field troops.

(c) RECOMMENDATION: That an itinerant AG special team be made available to provide money order purchase, GED testing, and other AG-type services to non-divisional units in outlying areas on a periodic basis.

Donald A. Ramsay

DONALD A. RAMSAY
LTC, CE
Commanding

EGA-CO (31 October 1969) 1st Ind
SUBJECT: Operational Report - Lessons Learned, 589th Engineer Battalion (Construction), Period Ending 31 October 1969, RCS CSFOR-65(R2)

DA, Headquarters, 35th Engineer Group (Const), APO 96312, 22 November 1969

TO: Commanding General, 18th Engineer Brigade, APO 96377

1. The Operational Report - Lessons Learned for the 589th Engineer Battalion (Construction) has been reviewed by this headquarters and is considered an excellent account of the battalion's activities during the reporting period ending 31 October 1969.

2. This headquarters concurs with the observations and recommendations of the commander and in particular the observations and recommendations for the 687th Engineer Company (Land Clearing). This unit has completed difficult projects due primarily to superior leadership at all levels within the company. However, the mobility, platoon separations, maintenance support, and lack of executive officer have been problems that have been noted at all levels due to the priority missions given the 687th Engineer Company (Land Clearing).

Harry A. Griffith

HARRY A. GRIFFITH
COL, CE
Commanding

AVBC-CG (31 Oct 69) 2nd Ind
SUBJECT: Operational Report of the 589th Engineer Battalion (Const) for the Period Ending 31 October 1969, RCS CSFOR-65 (R2)

DA, HEADQUARTERS, 18TH ENGINEER BRIGADE, APO 96377 22 DEC 1969

TO: Commanding General, U.S. Army Vietnam, ATTN: AVHGC-DST, APO 96375

1. This Headquarters has reviewed the Operational Report - Lessons Learned for the 589th Engineer Battalion (Const), as indorsed by the 35th Engineer Group (Const). The report is considered to be an excellent account of the Battalion's activities during the reporting period.

2. This Headquarters concurs with the observations and recommendations of the Battalion and Group Commanders, with the following comments added:

a. Reference: Section 2, item d(3). Non-concur. The day of unlimited authorizations of personnel and equipment is over. The Army Authorization Documents System (TAADS) has established a standard procedure for relating unit operational requirements to authorizations and for documenting organizational structure. Department of the Army policy in this regard is set forth in DA Circular 310-44, wherein it is required that all like TOE units at the same personnel authorization be organized identically. In accordance with this policy, all engineer units in Vietnam are presently standardized. The requirement for standardization stems from a need to keep the administration of force structure and the programming of personnel and equipment requirements within manageable bounds. In the face of future reductions in USARV troop strength and attendant organizational turbulence, it is particularly important to minimize the administrative problems of materiel and personnel management. For this reason, a moratorium on the processing of TDA, MTDA, and MTOE actions was effected by USARV on 12 October 1969. Exceptions to this present restriction will be allowed only as critical circumstances require.

b. Reference: Section 2, item h(1). Increased attention to management of the Dynalectron MCA parts contract has produced a supply system which is more responsive to user requirements than the earlier system. The purpose of the MCA buy was to employ high capacity commercial equipment in augmentation and acceleration of the ICC effort. Department of the Army is presently formulating policy which will facilitate adoption of selected off-the-shelf items of equipment as standard Army issue. A comprehensive field appraisal of MCA equipment will be made. The evaluation will address the following considerations:

AVBC-CG (31 Oct 69) 2nd Ind 22 DEC 1969
SUBJECT: Operational Report of the 589th Engineer Battalion (Const) for the Period Ending 31 October 1969, RCS CSFOR-65 (R2)

(1) Comparative effectiveness of MOA and TOE equipment.

(2) Problems related to operator maintenance or training.

(3) Effectiveness of repair parts supply.

(4) Changes in organization which might increase utilization effectiveness.

(5) Recommended modifications.

(6) Unit recommendations for incorporation of specific items of equipment in engineer TCEs.

(7) Adequacy of commercial manuals, test equipment, and special tools.

c. Reference: Section 2, item i(1). Procedures exist for furnishing units stationed in isolated areas with postal money order service. Other services, such as issuance of identification cards, can be administered by the organic personnel section. The commander has been provided with appropriate information in this matter.

J. H. MORRIS
Brigadier General, USA
Commanding

CF:
1 - CO, 35th Engr Gp
1 - CO, 589th Engr Bn

AVHGC-DST (31 Oct 69) 3d Ind
SUBJECT: Operational Report-Leesons Learned, 589th Engineer Battalion (Conetruction), Period Ending 31 October 1969, RCS CSFOR-65(R2)

HEADQUARTERS, UNITED STATES ARMY, VIETNAM, APO San Francisco 96375 22 JAN 1970

TO: Commander in Chief, United States Army, Pacific, ATTN: GPOP-DT, APO 96558

1. This headquarters has reviewed the Operational Report-Lessons Learned for the quarterly period ending 31 October 1969 from Headquarters, 589th Engineer Battalion (Const) and comments of indorsing headquarters.

2. Comments follow:

a. Reference item concerning "Executive Officer, Land Clearing Company", page 19, paragraph 2a(1), and 1st Indorsement, paragraph 2; concur; Recommendation concerning changes to TOE documentation should be submitted through command channels to CG USACDC (paragraph 11f, AR 310-44 and paragraph 8e AR 310-31). Recommendation should reference TOE 5-87T as a MTOE change was submitted to USARPAC on 29 October 1969 to reorganize the Engineer Land Clearing Companies under MTOE 5-87T.

b. Reference item concerning "Vietnamization Program", page 19, paragraph 2a(2); concur. The problems concerning program 6 civilization have been documented and made a matter of record. In case of future similiar programs lessons learned from program 6 will be applied.

c. Reference item concerning "Civilian Personnel Officer", page 20, paragraph 2a(3); nonconcur. Duties outlined are properly that of the battalion S-1 staff in conjunction with the assistance and expertise of the area civilian personnel office.

d. Reference item concerning "Land Clearing Company TOE 5-87T", page 21, paragraph 2d(1); concur. A MTOE was submitted to USARPAC on 29 October 1969 to etandardize all in-country land clearing companies under MTOE 5-87T.

e. Reference item concerning "The Noncommissioned Officer (NCO)", page 22, paragraph 2e(1); concur. The skills described are definitely desirable for noncommissioned officers in the MOS'e indicated. Unfortunately, the Skill Development Base program does not provide adequate time for the development of a background of experience. Although classroom instruction provides the required knowledge, application of this information is accomplished only with the confidence gained through experience.

f. Reference item concerning "Preventive Maintenance Training for Officere", page 23, paragraph 2e(2); nonconcur. Preventive maintenance is

AVHGC-DST (31 Oct 69) 3d Ind 22 JAN 1970
SUBJECT: Operational Report-Lessons Learned, 589th Engineer Battalion (Construction), Period Ending 31 October 1969, RCS CSFOR-65(R2)

a topic of instruction at all branch basic and career officer's courses. All officers arriving in RVN have had some limited training in preventive maintenance policies. A CONUS preventive maintenance course, especially for all officers assigned to USARV, is not considered to be practical. A preventive maintenance course will serve its purpose only if it relates to particular equipment, climatic conditions, and local regulations and procedures. A very satisfactory solution is for major subordinate commands to develop short courses, of one to three days in duration, for newly assigned unit and organization officers.

g. Reference item concerning "MCA Buy Equipment Standardization", page 23, paragraph 2h(1); 2d Indorsement, paragraph 2b; concur with 2d Indorsement. No action by higher headquarters is required.

FOR THE COMMANDER:

C. E. MICHELS
MAJ, AGC
Assistant Adjutant General

Cy furn:
589th Engr Bn
18th Engr Bde

GPOP-DT (31 Oct 69) 4th Ind
SUBJECT: Operational Report of HQ, 589th Engineer Battalion (Construction) for Period Ending 31 October 1969, RCS CSFOR-65 (R2)

HQ, US Army, Pacific, APO San Francisco 96558 3 FEB 70

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

1. Thia headquarters concurs in subject report as indorsed.

2. Reference paragraph 2a, basic and paragraph 2d, 3d Indorsement. Subject MTOE was forwarded to DA 15 December 1969.

FOR THE COMMANDER IN CHIEF:

for JOHN F. DUNN
Colonel, AGC
Deputy Adjutant General

CF: CG, USARV

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