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AGO D/A ltr, 29 Apr 1980

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

IN REPLY REFER TO
AGAM-P (M) (3 Oct 67) FOR OT RD-670362

5 October 1967

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SUBJECT: Operational Report - Lessons Learned, Headquarters,
41st Signal Battalion (CA)

TO: SEE DISTRIBUTION

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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

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DEPARTMENT OF THE ARMY
HEADQUARTERS, 41ST SIGNAL BATTALION (CA)
APO 96238

SOOWFO-CA-OP

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SUBJECT: Operational Report for Quarterly Period Ending 30 April 1967,
Reports Control Symbol CSFOR-65.

TO: Commanding Officer
21st Signal Group
APO 96240

References: a. United States Army Regulation 1-19, Subject: Operational Reports Lessons Learned, dated 26 May 1966.

b. 1st Signal Brigade Regulation 870-2, dated 5 October 1966,
Subject: Historical Activities.

SECTION 1

Significant Organization or Unit Activities

1. General:

a. The area of operational responsibility was reduced during the quarter with the reassignment of the Tuy Hoa-Phu Hiep Area to the 459th Signal Battalion (CA). However, the administrative and logistic realm was increased by the assignment of the 586th Signal Company (TOE 11-117E), and D Company, 36th Signal Battalion (TOE 11-87E), from the 509th Signal Battalion. Operational control of these units was retained by the Area Communications Commander, An Khe. This latter organizational change was the by-product of a decision to utilize Headquarters and Headquarters Detachment, 509th Signal Battalion as the command and control element for the provisional Signal Battalion supporting Task Force Oregon.

b. 21st Signal Group General Order Number 8, 13 April 1967, re-assigned the 578th Signal Company (TOE 11-047D) to the 41st Signal Battalion (CA) for administrative purposes. Operational control and logistic support has been with this headquarters since assignment to the Republic of Vietnam. This reassignment is deemed favorable in that it will enhance operational efficiency of that unit.

c. MTOE actions for two of the assigned companies significantly altered the unit organizational structure but aligned them with their present mission. The major change in D Company, 459th Signal Battalion

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(TOE-11-87) was the addition of a twenty-two (22) man fixed central office section. Expansion plans call for a 1,000 line Dial Central Office in Phu Thanh Valley to be the operational responsibility of D Company, 459th Signal Battalion.

d. B Company, 41st Signal Battalion, operating under USARPAC General Order Number 258, 16 August 1965, and 1st Signal Brigade Augmentation, forwarded for approval an MTOE organized under TOE 11-87E. This action asks for DA authorization for the personnel spaces now in the 1st Signal Brigade Augmentation. It also authorizes personnel by grade structure for the Interim Autodin Data Van, a 3,000 line Dial Central Office, and fixed Area Communications Center.

e. B Company, 43d Signal Battalion (SPT) was activated at the close of last quarter with the original mission assigned by Department of the Army, i.e., to establish, operate, and maintain signal communications facilities to support the operations of the USMACV advisory teams at the headquarters of one or more Divisions or Special Tactical Zones, at the headquarters of two or more sectors (Provinces), at one or more military training centers, and at other specified locations within its assigned area of operations. The geographical location of communication facilities, unit density of the area and increasing communication requirements dictated an additional communications mission. The additional assigned mission is:

To establish, operate and maintain other signal communications facilities in support of Free World Military Forces as directed by higher headquarters and to augment the Army Area Communications System.

On 16 March 1967, the company moved to and is building a cantonment area nearer to the Bagi Signal Site and Headquarters, 22nd Division (ARVN).

f. At the close of this reporting period the following units comprise the 41st Signal Battalion (CA).

- (1) Headquarters and Headquarters Company, 41st Signal Battalion (Combat Area).
- (2) B Company, 41st Signal Battalion (Combat Area).
- (3) B Company, 43rd Signal Battalion (Support).
- (4) D Company, 459th Signal Battalion (Combat Area).
- (5) D Company, 36th Signal Battalion (Combat Area).
(Less Operational Control)

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- (6) 578th Signal Company (Cable Construction)
- (7) 586th Signal Company (Support)
(Less operational control)
- (8) 49th Signal Detachment (Cryptologic Support)
(Less operational Control)

2. Attachments and Detachments: No units were attached or detached during this reporting period.

3. Re-organization: Effective 17 April 1967, the following units of the 509th Signal Battalion were reassigned under General Order Number 8, 21st Signal Group, dated 13 April 1967, to the 41st Signal Battalion (CA).

- a. 586th Signal Company (TOE 11-117R).*
- b. D Company, 36th Signal Battalion (TOE 11-87E).*

*Special Instructions: Operational Control is assigned to Area Communications Commander, An Khe.

- c. 578th Signal Company (TOE 11-047D).

4. Personnel:

a. 1st Signal Brigade (USASTRATCOM) approved the MTOE for Headquarters and Headquarters Company authorizing the following personnel strength:

$\frac{OFF}{9}$

$\frac{WO}{6}$

$\frac{EM}{107}$

Included within the above cited spaces is an aviation section organized in consonance with the complete 1st Signal Brigade structure. An influx of enlisted aviation personnel was received during the quarter as fills against requisition spaces for the other Signal Battalions assigned to the 21st Signal Group which have no aircraft assigned. These personnel provided adequate maintenance skill and crew staffing but necessitated reassignment of personnel to align MOS's and authorized grades. Although assigned to other battalions, duty stations remained unchanged at Qui Nhon.

b. Significant MOS shortages continue as in previous quarters. Some relief was provided by the replacement system and an effective cross training program at unit and site level. Significant MOS shortages do remain in some fields; the most critical are listed below:

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<u>MOS</u>		<u>AUTH</u> *	<u>ASG</u>	<u>%SHORT</u>	<u>90 DAY LOSS</u>
94A10	Food Service Apprentice	6	0	100%	0
76C20	Engineer Supply and Parts Specialist	3	0	100%	0
76A10	Supply Clerk	6	0	100%	0
72C40	Senior Switchboard Operator	16	4	75%	1
72B40	Communications Center Supervisor	33	15	55%	4
72B10	Communications Center Specialist	30	0	100%	0
71H40	Personnel Management Sergeant	3	0	100%	0
63A10	Mechanical Maintenance Helper	16	1	96%	0
32D40	Fixed Station Technical Control Supervisor	10	1	90%	0
31Z40	Area Communications Chief	10	7	30%	0
31M40	Senior Radio Relay & Carrier Attendant	81	52	37%	4
31M20	Radio Relay & Carrier Attendant	148	103	33%	8
31K20	General Crypto Repairman	18	12	33%	0
31J40	Senior TTY Repairman	1	0	100%	0
31J20	TTY Repairman	14	9	36%	4

*NOTE: Figures are based on MOTE authorization.

c. Imprest funds for daily hire of indigenous laborers is now being administered at 21st Signal Group Headquarters level. This fund was previously handled locally under the US Army Support Command, Qui

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Nhon. A reduced manpower ceiling recently imposed has an immediate impact on communications operations. Personnel required for operations must be diverted for labor on defensive construction and unit building programs. Both can be accomplished at a sacrifice of time and unity of effort.

d. Implementation of the command directive to release leased facilities and to reduce plaster spending required construction of two 4,000-square-foot two-story buildings to billet the displaced officers and non-commissioned officers of the battalion located in Qui Nhon. The buildings were constructed within three weeks utilizing self-help labor. In conjunction with this move the cost-of-living allowance (COLA) was terminated. This required the unit mess facilities at Qui Nhon be expanded to accommodate the additional officers and non-commissioned officers.

5. Intelligence:

a. Security matters were mostly routine during this quarter. No violations occurred which resulted in compromise or possible compromise of classified material. Renewed emphasis was placed on SAEDA briefings and incountry orientations for all newly assigned personnel.

b. Security clearance actions declined during this period. The following represents the clearance actions during an average month:

	<u>Top Secret</u>	<u>Secret</u>	<u>Confidential</u>
Initiated	3	10	10
Validated	2	12	N/A

Crypto access granted: 16

Clearance Revoked: 1

c. Detailed recordings of individual clearance action histories is a must. Distance between headquarters, processing time and turn-over of processing personnel underscores this requirement. The back of the case file card has proven adequate to record this information.

d. Physical security of communications facilities and living areas is currently being updated to comply with 1st Signal Brigade and local command directives. Sandbags were used initially but it was discovered that salvage fifty-five gallon drums filled with sand provided a more suitable and weather-resistant structure. During part of the period salvaged drums were more readily available than sandbags because of the low issue priority assigned support units.

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e. A locally devised pass system to control the Vietnamese employees on the Qui Nhon compound was instituted. Three types of passes are used. A white pass indicates that the bearer has satisfied the military security service (MSS) investigation and is a permanent employee. A Red colored pass allows the employee access to the compound while the MSS investigation is in process. This interim pass expires after forty-five days. Daily hire are issued a blue pass to indicate that no security investigation has been conducted. Direct coordination with the Vietnamese CIC reduced the processing time for clearances.

6. Operations:

a. The Battalion departed from its semi-fixed communications task and supported tactical operations during the quarter. Two VHF systems, one employing a relay, were established in support of the ROK Capitol Infantry Division. Four AN/MRC-73's and one AN/MRC-54 with fifteen personnel are employed to satisfy this requirement, which is in addition to the normal support provided the Capitol Division.

b. Two light tropospheric scatter systems terminals utilizing AN/TRC-66 equipment and operating teams provided by the US Air Force were installed on Vung Chua Mountain Signal Site under the operational control of the Battalion. One of the systems, to Nha Trang, is relayed through Hon Tre Island before reaching Vung Chua. The second system is relayed at Cu Lao Re, an island in the South China Sea, thence to Chu Lai and Da Nang. These new systems will provide additional channels between II, III, IV Corps, and the I Corps tactical zone of operations. Four through groups or 48 channels are planned to be installed on these systems. Preliminary tests have indicated a high degree of reliability which will enable more long distance trunks to be available.

c. Prior to the establishment of the AN/TRC-66 systems to the island, a requirement existed to provide communications in support of Operation Oregon. The Group tropo contingency teams were deployed to Vung Chua and the operational area. The system was subsequently established and turned over to DCA for channelization. Installation of the AN/TRC-129 and the two AN/TRC-66 systems on Vung Chua brought the total number of light tropo systems to seven, an increase of one hundred and forty-four channels.

d. AN/TRC-24 radio equipment continues to be used extensively for reliable, short-haul communications, but space to install new systems is becoming critical. Microwave is being planned to replace the terminals where two or more systems are used. Land agreement has been received to establish a microwave site at Phu Cat Air Base. This system would be terminated at Vung Chua Mountain Signal Site and would increase the present twenty-four channels to forty-eight.

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e. With all sites within driving distance frequent inspections were made with the effect of improving efficiency of operations and maintenance. Intensive heat and high humidity affect the operation of the K-1 relay in the receivers of the AN/TRC-24. This is particularly true when a large number of systems are operated in one confined area. Air Conditioners were installed to increase or prolong the functional life of the equipment.

f. Primary wire construction efforts were aimed at the upgrading of existing facilities. The cable used to provide communications of the POL pipeline system between Qui Nhon and An Khe, a distance of some 60 miles was maintained during the period. The first 18 miles of spiral four between the terminal tank farm, pumping station #1 and pumping station #2 is installed on poles and is considered extremely reliable. The remaining 42 miles are on the ground along the route of the pipeline and is maintained only with the greatest difficulty. Vandalism and theft on the part of the Vietnamese civilians along the route accounted for the loss of cable and communications. Beyond pumping station #2, wire is not dependable and radio continues to provide the primary means of communications.

g. A pole line was installed between the Bagi Signal Site at the Advisor Compound, 22d Infantry Division (ARVN) and the south end of the Phu Thanh Valley, a distance of 4 miles below the Phu Thanh Switchboard. Total length of the pole line is 12 miles and was primarily installed to extend AN/TCC-7 cable carrier systems from Phu Thanh Valley and Qui Nhon to Bagi. Since then, a pipeline communications cable has been added and both the ROK Capital Infantry Division and 22d Infantry Division (ARVN) are using the poles to suspend cables for internal communications.

h. Multi-pair cable was installed within the Phu Thanh Valley to replace the maze of field wire and cable formerly serving subscribers. The Phu Thanh Valley runs on a North-South axis which provided a density pattern close to both sides of the Main Supply Route and could be served by cable runs north and south from the switchboard. The result has been a greatly improved wire network and increased quality of telephone service within the valley.

i. During this quarter the AN/MTC-1 serving Phu Thanh Valley was filled to capacity. To alleviate the congestion and provide for continued growth, a six position switchboard was installed in a ground mounted configuration. This provided an upgrade to 600 lines if needed and room for additional operators to have access to the board. The board was installed on a concrete pad and an all-weather building constructed to house it. Additional space around the board provided a cooling effect and permitted ease of maintenance on all components of the board. The Main Distribution Frame was constructed and if expansion is again required, no foreseeable problem exists to hinder the expansion.

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j. Cable carrier installations increased during this period. Systems installed include two 12-channel systems from Qui Nhon Local to Qui Nhon Technical Control, a distance of 5 miles; one additional 12-channel system from Qui Nhon Switchboard to Phu Thanh Valley, 10 miles; and one system from Phu Thanh to Bagi, 9 miles. Channels over these systems are extremely quiet and of superior quality.

k. Class IV Projects for a 2,000 Line Dial Central Office, a Fixed Station Communication Center, and an Outside Plant Cable Distribution System were continued during this period. The buildings are complete and equipment is being installed in the BCO and is in transit for the Communications Center. The Outside Cable Plant is estimated to be within three weeks of completion and certain portions are already being used in conjunction with the MTC-9's used as Qui Nhon Local and ID. Switchboards. Equipment installation at the new Dial Central Office Building proceeded at a slow rate because a great deal of equipment earmarked for the project has been lost or damaged in shipment. This delay in activation of the Dial Central System assumes urgency since the existing MTC-9 used as Qui Nhon Local is taxed to capacity during this period of burgeoning growth of telephone service requirements.

l. With the activation of an AN/MOC-23, Teletype Relay Van, the Qui Nhon Army Area Communications Center added relay station capability to its prior status as a teletype terminal and distribution station. Concurrent with the new van were the activation of two new 100-word-per-minute circuits to provide increased traffic capability to Nha Trang and Da Nang. The Communications Center now processes approximately 40,000 messages per month. In addition to its function as a communications center, the Qui Nhon Army Area Communications Center has been forced into the role of an AQ Distribution Center, serving 179 units in the city and contiguous areas with over-the-counter message reproduction and delivery service. Activation of the new communications center building scheduled for the early part of next quarter should greatly enhance efficiency of this operation.

m. Training:

(1) One hundred and eleven (111) hours of mandatory classroom training was conducted during the winter quarter. Special emphasis was placed on CBR indoctrination and training. Formal class room training continues to be extremely difficult because of unavailability of facilities and the constant operational commitments.

(2) An aggressive program of OJT and cross training was continued to alleviate deficiencies of personnel in key MOS's to include.

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(a) OJT of communications center personnel in data transceiver operation, thus minimizing operations difficulties encountered from the recall of TDY personnel to the Phu Lam Data Center.

(b) The cross training of cable installers as cable splicers, to acquire personnel with skills needed for the rejuvenation of the Qui Nhon cable network.

(c) Cross training of generator mechanics as wheeled vehicle mechanics to alleviate difficulties caused by shortage of personnel in that MOS.

(3) The 578th Signal Company has no problems in the area of cross training as ninety-three percent (93%) of the personnel assigned carry a wireman's MOS, 36C20. Replacement personnel are integrated into existing teams and the training program is continuous.

(4) Eighteen (18) hours of familiarization firing were conducted for four-hundred and eleven (411) newly arrived personnel. Weapons fired were the M-14 rifle, M-60 machine gun, 50 caliber machine gun, 3.5 rocket launcher, and M-79 grenade launcher.

(5) Formal schools under the auspices of the 1st Signal Brigade increased over previous quarters. Quotas were received and filled for the following schools:

(a) Interim Autodin Data Course, (operator and maintenance), at Phu Lam Data Center, 21 days, 4 EM attended.

(b) Dial Central Office Course (TTC-28) at Nha Trang, 7 days, 5 EM attended.

(c) Cable Splicers School, at Saigon, 21 days, 4 EM attended.

(d) AN/GRC-50 Radio Set (instructor course) at Cam Rahn Bay, 4 days, 1 NCO.

(e) 26C-Modem School at Clark Air Force Base, PI, 21 days, and 5 EM.

(f) Communications Section Maintenance Course, at Saigon, 45 days, 6 NCO's.

(g) Test Controllers Course, AN/MSQ-73 at Saigon, 21 days, 1 Officer and 5 EM.

(h) IBM 1013 Maintenance Course at Saigon, 24 days, 1EM.

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(6) A military justice class for all unit commanders and company grade officers was presented by the Judge Advocate Section of Qui Nhon Sub-Area Command. The presentations provided the battalion officers a better understanding in the administration and processing of judicial papers. Results of the class have been favorable.

(7) The completion of instructor pilot training in a UH-1D helicopter gives aviation section two rated rotary wing instructor pilots. This terminates the requirement of soliciting assistance from other units and airfields to accomplish required check rides and transition training for assigned aviators. Fixed wing instructor pilot training is still in progress.

7. Logistics:

a. Generators

(1) Again this quarter, the generator problem continued to remain a critical item of command concern. The procurement of large size generators, 60 KW and above, has been relieved by the issue of assets presently in depot stocks to the area engineer for installation. However, materials required to complete the distribution systems are not on hand at this depot, i.e., high amperage wire, insulators, switches and miscellaneous hardware for connections. Meanwhile, large capacity generators located in the compound area and Vung Chuz Signal Site remain inoperative.

(2) The power requirements must be requested on a work order DA Form 2701, submitted through R & U channels operated by PA&E and are classed as R & U projects. Presently the large electrical switches required for these systems are not available to R & U as the capacity of the system required is classed beyond the normal R & U capability. Further, the large electrical components are not authorized on thirty-day stockage levels.

b. Repair Parts

(1) Repair parts are for the most part readily available in supply channels and the depot ASL's have been updated to include items experiencing recurring demands. Items such as starters, magnetoes, spark plugs, and oil filters for SF-10MD generators continue to be a major shortage item. Shortages of generator starters and magnetoes cause 75% of the generator deadlines.

(2) The infrequently used part still presents some excessive deadline, however, the Red Ball system, if applied properly, does furnish relief in this area. The main difficulty remains with inadequate follow up on requisitions placed on the depot or direct support unit. It has been

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discovered through liaison with supply control personnel that a requisition, inadvertently lost, can be re-initiated by the submission of an AF-1 and follow-up. If it is determined there is no record of the requisition, the AF-1 Card is considered in the place of the original requisition and is either filled from stock or passed to CONUS and a status card furnished the unit.

(3) The presence of sixteen (16) each M-211 trucks in the 578th Signal Company continues to be a problem area as replacement parts for the obsolete vehicles are difficult to obtain. Requisitions for replacement vehicles (M-35) have been submitted, resubmitted and followed for four-hundred and twenty-six (426) days. The company which owns these trucks has been issued eight (8) each M-35's, but is unable to obtain the remaining sixteen (16).

(4) Bill of materials in support of assigned letters of instruction (LOI) are still not received prior to completion of the assigned missions. Projects are accomplished with materials obtained by means other than normal requisition channels. The commencement of projects without the required materials causes prolonged installations, field expedient construction and difficulty of maintenance.

(5) Authorized float level has been accomplished for three companies. The remaining companies are being issued excess assets on hand to adjust float levels. Upon completion of this adjustment items on requisition will be cancelled and requisitioned as necessary.

(6) Establishment of a mobile ELM facility on Vung Chus Signal Site in support of the twenty-four stacks of VHF and carrier equipment has proven successful. The facility processes approximately fifty pieces of equipment a week either for repair or replacement. Decreased maintenance problems and increased system reliability resulted from having an on site maintenance capability.

8. Aviation:

a. A bi-weekly courier flight was inaugurated to provide aviation support for signal units at Qui Nhon, Nha Trang, Dalat, Ban Me Thout, Pleiku and An Khe. Service on a scheduled basis was terminated at the end of the quarter because of limited utilization. Aviation support will continue for these units on a mission basis.

b. With the receipt of two new UH-1D helicopters, replacements for two UH-1B's, the aviation section increased both its carry capability and speed with which the mission can be accomplished. Likewise, availability of aircraft has increased considerably resulting in an unprecedented movement of cargo and passengers by this battalion. Assigned aircraft are two UH-1D, and one U-1A.

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e. Six-hundred accident-free flight hours were logged during the quarter. Airlift was provided for 1,339 passengers and 189,580 pounds of cargo.

SECTION 2

Commander's Observations and Recommendations

Part I. Observations (Lessons Learned)

a. Personnel

In-Country Activated Units

Item: Staffing of In-Country Activated Units

Discussion: There is appreciably more to be accomplished in organizing and activating a unit in-country and establishing it on par with other active units than there is in preparing a unit in CONUS for operations in Vietnam. Organizational requirements must be considered in personnel assignment and not only the communications mission to be performed.

Observation: Although not considered communications mission essential personnel must be assigned in sufficient numbers to provide a substantial base and work force for overall unit establishment.

b. Operations

Shortage of 31M's

Item: Overall shortage of 31M, Radio Relay and Carrier Operators.

Discussion: Upon arrival in the command new units have 100% of authorized personnel. They are immediately assigned to take over already operating sites or are given additional commitments and equipment without receiving additional personnel. In particular, additional radio relay and carrier equipment is available for commitment in quantity. At some sites using vanized equipment, the critical personnel shortages can be partly alleviated by assembling dismantled vans so that one operator can work two or three vans and also by working shifts of 12 hours on and 12 hours off.

Observation: Due to the rapid growth of the communications means, adequate numbers of properly trained personnel are not always available. Methods used to improve the personnel posture include cross-training, particularly VHF and switchboard operators and generator mechanics at isolated sites; collocating shelters; and by long working hours.

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Pipeline Communications

Item: Low Reliability of Pipeline Communications

Discussion: This unit installed and maintains a 65 mile Spiral-four line to provide metallic voice communications at pumping stations along a POL pipeline from Qui Nhon to An Khe. During one month this quarter 102 reels of cable were replaced and 13 splices made. Neither sabotage nor deliberate hostile action is considered responsible for the breaks. Rather it is attributed to outright theft and acts of vandalism.

Observation: The repeated outages and loss of cable have resulted in a high percentage of outage and a high material and manpower cost of repair and replacement. Where such conditions prevail ground laid communications wire is highly impractical to maintain.

AN/TRC-24

Item: Higher Frequency Usage for TRC-24.

Discussion: The Radio Set, AN/TRC-24 is capable of operating in the frequency range of 50 MC to 1875 MC with the proper tuning heads and antennas. The overwhelming majority of VHF systems in use in Vietnam today are assigned frequencies in the B- and C-band (100-400 MC) range, with a small handful of systems assigned in the D-band (400-600MC). This saturation leads to frequency interference and unreliable system. The A- and B-bands have the advantage of non-critical line-of-sight path versus D-band and above, which are line-of-sight critical. On those systems where radio line-of-sight exists and D-band equipment is available, superior quality systems are possible. This is due to a relatively uncrowded radio spectrum and almost no local man-made background noise.

Observation: Higher frequency equipment is manufactured for operation of radio relay systems in an uncrowded noise-free portion of the radio spectrum.

Vietnamese Switchboard Operators

Item: Vietnamese Switchboard Operators at Qui Nhon Local

Discussion: Three Vietnamese switchboard operators and one supervisor have been working in the Qui Nhon Local Switchboard for approximately one year. Experience has shown them to be capable and industrious and a distinct asset to operation of the board during frequent shortage of school trained operators.

Observation: Indigenous personnel can provide valuable assistance as switchboard operators after suitable training, and under adequate supervision.

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c. Training

Cross-Training

Item: Using Temporary Personnel Shortages

Discussion: A spirited program of OJT and cross-training has been the best method available to ease temporary personnel shortages. One example is the cross-training of wheeled vehicle mechanics and power generator mechanics thereby providing a buffer for temporary shortages in either skill. Similarly, switchboard operators and VHF carrier attendants can be sufficiently trained to interchange duty shifts when required at small sites.

Observation: Command attention to cross-training and OJT can prevent or alleviate numerous personnel crises before they adversely effect the unit mission.

d. Intelligence

Substitute for Sandbags

Item: Use of filled barrels in lieu of sandbags for protection of equipment, buildings, and personnel.

Discussion: Sandbags filled with sand were first employed in the protection of communication equipment, POL, generators, and buildings to afford shielding from indirect hostile fire. However sandbags were found to have the following disadvantages:

- a. Usual burlap type bags rotted quickly and had an average life span of four months before they had to be replaced.
- b. Newer polypropylene bags were highly flammable.
- c. Sandbags were tedious and slow to fill and were in short supply.

When sand or dirt filled drums (55 gal) were used in lieu of sandbags the following advantages were realized:

- a. Metal drums were more durable.
- b. Metal drums were easier and quicker to fill.
- c. Metal drums were more stable since their contents didn't shift or leak.

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d. Metal drums could be filled with any composite material (sand, laterite, etc.)

Observations: 55 Gallon drums are more practical than sand filled sand-bags for the construction of protective walling against indirect hostile fire.

e. Logistics

Consolidation of Equipment

Item: Placing of equipment back to back.

Discussion: At several Signal Sites, a saving of manpower results by placing communications shelters back to back with a narrow passageway between. Then one operator can watch two or three shelters at one time. If construction materials are available, a permanent wooden or Quanset type shelter can be used to house equipment and operators. This is the most desirable form of consolidating equipment because it permits much greater air flow around equipment for cooling in addition to reducing personnel requirement. Another advantage that consolidating equipment accrues is the easier means of physical security, i.e. sandbugging. Those sites in secure areas with high equipment density are well rewarded for the effort required to consolidate equipment.

Observation: Semi-fixed sites should have equipment consolidated by placing shelters back to back or by dismounting equipment in permanent buildings. Advantages gained are reduced personnel requirements, greater cooling air flow with dismounted equipment and ease of providing adequate physical security.

Wear of Brakes

Item: Effect of weather on brakes.

Discussion: During the rainy season, water, sand, and mud work their way into vehicle brake drums and wear out brake shoes, linings, and even brake drums at an accelerated rate.

Observation: During the last quarter, almost three-quarters of the vehicles deadlined were due to brake failure and non-availability of repair parts. Support activities have found it necessary to stock abnormally high levels of brake repair parts. In addition, pulling the wheels and thoroughly cleaning all parts monthly helps to reduce wear to an acceptable level.

SCGVNO-CA-OP

30 April 1967

SUBJECT: Operational Report for Quarterly Period ending 30 April 1967,
Reports Control Symbol CSFOR-65

V-18 Earth Auger

Item: Excessive repair of old equipment.

Discussion: Signal construction units in Vietnam are equipped with the V-18 Earth Auger manufactured in 1952. Units that have been in country ~~eighteen months~~ have found that replacements for these items are not available in the supply system. Excessive maintenance is required to keep the remaining few diggers operational. This may take the form of conventional repairs exceeding those which would be spent on other types of vehicles of this advanced age or unconventional repairs.

Observation: New earth boring machinery is required to increase the pole setting capability of cable construction units.

Part II: Recommendations (Lessons Learned)

a. Newly activated units should receive immediate assignment of fifty percent of authorized personnel. This would provide a sufficient work force to establish a base camp and assume a communications mission.

b. Unit training must stress the need for cross-training of allied MCS's, particularly at the team level. Methods that provide maximum personnel efficiency must be investigated and incorporated in unit procedures and site configuration. These measures will alleviate somewhat the shortage of critical skills at the team level.

c. Cross-Training and on-the-job training programs should be initiated at the site and installation level as the most appropriate solution to transient skill shortage.

d. Pipeline and similar communications systems should be supported by coincident installation of serial wire or by radio relay systems.

e. Use of D-, F-, and J-band high frequency equipment is needed to take advantage of these relatively uncrowded frequency bands. Basis of issue should be one of each per AN/TRC-24 on hand.

f. Indigenous personnel can be effectively used to support military personnel with the proper training and supervision.

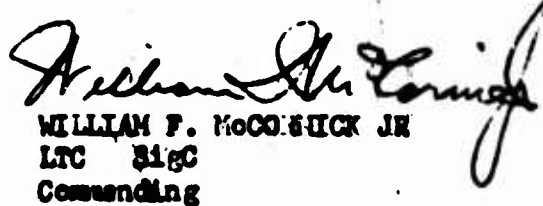
g. Commercial diggers are available "off the shelf" that are suitable for military use. New signal construction equipment should be procured and issued to field units.

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SECYNO-CA-OP

30 April 1967

SUBJECT: Operational Report for Quarterly Period Ending 30 April 1967
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h. Site power requirements should be classed as MCA projects after completion of adequate design specifications and bill of materials. The project would operate in the same manner as class IV projects.


WILLIAM F. MCCOSICK JR
LTC SigC
Commanding

17
SCCVNG-SY (30 Apr 67) 1st Ind
SUBJECT: Operational Report for the Quarterly Period Ending 30 April
1967 (RCS-CSFOR-65)

Headquarters, 21st Signal Group, APO 96240 28 May 1967

THRU: Commanding General, 1st Signal Brigade (USASTRATCOM) APO 96307

THRU: Deputy Commanding General, USARV, ATTN: AVC-DH, APO 96307

THRU: Commander in Chief, USARPAC, ATTN: CPOC-NH, APO 96558

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

1. Transmitted herewith is one copy of Headquarters, 41st Signal
Battalion report, Subject as above.

2. Concur with observations made by CO, 41st Signal Battalion.

3. The commander's observation on pipeline communications shows a
pilferage problem exists over the 65 mile spiral four line that provides
voice communications along the POL pipeline from Qui Nhon to An Khe. It
appears that using spiral four cable along this route is highly imprac-
tical. A study will be conducted to determine the feasibility of using
a radio system over those portions of the pipeline route that are con-
sidered insecure.

4. Reference Section I para 6 (1), the capacity of the six position
switchboard installed at Phu Thinh Valley is 400 lines not 600.

5. The 41st Signal Battalion has conducted an excellent training
program to meet required operational commitments. Their on-the-job
training and cross training programs have provided "stop-gap" measures
for critical MOS areas, i.e., switchboard operators, communications cen-
ter specialist, and generator mechanics at isolated sites. The use of
Vietnamese personnel as switchboard operators is noteworthy of comment.
These personnel, if properly trained, could relieve our shortages within
major switchboards and could possibly be retained for years.

6. The revised MTOE of the 41st Signal Battalion reduced its avia-
tion personnel structure to: 1 Off, 1 WO, 2 EM. Its capability to per-
form its aviation support mission would have been seriously impaired had
not enlisted personnel assigned to the 37th and 43rd Signal Battalions
become available. A recommended MTOE change has been submitted which
will adequately serve the needs of the 41st Signal Battalion, if approved.

SCCVNG-SY

28 May 1967

SUBJECT: Operational Report for the Quarterly Period Ending 30 April 1967 (RCS-CSFOR-65)

7. Reference item, substitute for sandbags. 21st Signal Group has disseminated information to all subordinate units, that 55 gallon drums or other permanent material be used for revetment requirements.

8. Reference section 2, part I. In-country activated units have been gradually brought up to strength as the communications mission increased. This initially meant that the personnel had to work additional hours to build contourment areas, etc. However, the morale has been high in these units due to their great sense of accomplishment and additional personnel have been provided as expeditiously as possible.

Charles H. Burr, Jr.
 CHARLES H. BURR, JR.
 COL, SigC
 Commanding

21
SCCVOP (30 Apr 67)

2d Ind

SUBJECT: Operational Report for the Quarterly Period Ending 30 April 1967
(RCS CSFOR-65)

DA, HQ, 1st Sig Bde (USASTRATCOM), APO SF 96307 7 JUN 1967

TO: ✓ Commanding General, United States Army Vietnam, ATTN: AVHOC-DST,
APO 96307
Commanding General, United States Army Strategic Communications
Command, Fort Huachuca, Arizona 85613

1. IAW AR 1-19, subject report from the 41st Signal Battalion is forwarded.
2. Reference para 5d, Section 1 page 5. It should be noted that the priority for issue of sandbags to signal units has been raised. The supply of this item is no longer a serious problem.
3. Concur with the Commander's Observations as modified by 1st Indorsement with the following comments:
 - a. Reference Item: Cross Training, page 14. Concur in part. Cross training of switchboard operators MOS 72C as carrier operators MOS 31M is not considered practical as personnel in the 31M MOS require a much higher degree of technical knowledge and skill than do personnel in the 72C MOS. While this training may prove practical in isolated instances, a general practice of cross training personnel with 72C MOS into the 31M MOS is not recommended.
 - b. Reference Item, Substitute for Sandbags, page 14. Concur in part. The 55 gallon sand or dirt filled drums should be used in conjunction with sandbags, not as a complete substitute for sandbags. While drums are valuable for protection of large structures, sandbags are still required for overhead protection, bunkers etc. New and old type sandbags will burn when subjected to fire, but neither type is highly flammable. Further, the contents of the bags will smother any fire, therefore, fire is not considered a hazard when using sandbags. Drums are as effective as sandbags only when filled with sand, dirt, or a fine grained material. The use of laterite is not recommended unless other fill materials are not available. The proper use of drums has reduced the time and effort required torevet operational buildings, provided a more stable means of protection, and significantly reduced the maintenance effort formerly required to keep revetments in a serviceable condition. This use is encouraged by this headquarters.
 - c. Reference Item, V-18 Earth Auger. The problems with this equipment have been covered in the Operational Report for the Quarterly

7 JUN 1967 92

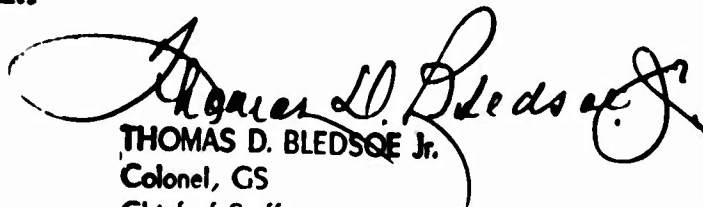
SCCVOP

SUBJECT: Operational Report for the Quarterly Period Ending 30 April 1967
(RCS CSFOR-65)

Period Ending 31 January 1967 from the 40th Signal Battalion (Constr) and letter, Headquarters 40th Signal Battalion (Constr) subject: Operational Report for the Quarterly Period Ending 31 January 1967 dated 16 May and forwarded to Headquarters USARV by 1st Indorsement this headquarters on 27 May 1967.

4. Concur in Commander's Recommendations with exception of recommendation h, page 18. Generators are normally installed by Repair and Utilities Projects. On some signal sites, where no power systems existed, MCA projects have been initiated for power installation. Whether R&U or MCA projects are used for power installation should depend upon an evaluation at each site.

FOR THE COMMANDER:



THOMAS D. BLEDSOE Jr.
Colonel, GS
Chief of Staff

AVHGC-DST (30 Apr 67)

3d Ind

SUBJECT: Operational Report-Lessons Learned for the Period Ending
30 April 1967 (RCS CSFOR-65) (U)

HEADQUARTERS, UNITED STATES ARMY VIETNAM, APO San Francisco 96307 11 JUN 67

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

1. This headquarters has reviewed the Operational Report-Lessons Learned for the period ending 30 April 1967 from Headquarters, 41st Signal Battalion (CA) as indorsed.

2. Pertinent comments follow:

a. Reference item concerning generator problems, paragraph 7a, page 10: Concur. Electrical switchgear and wire for electrical distribution systems have been in short supply. An eleven million dollar buy of high voltage material and a two million dollar buy of low voltage material is being processed. The material is being procured in CONUS. Estimated delivery date to RVN is August-September 1967.

b. Reference item concerning shortage of repair parts, paragraph 7b, page 10: Stockage of repair parts continues to improve, and the maintenance program is noteworthy. Red Ball Express and Red Ball Expanded systems are available to remove equipment from deadline and for anticipated deadlines. The APi card is a means the requestor/requisitioner has to periodically follow up on requisitions to determine validity.

c. Reference item concerning substitute for sandbags, paragraph d, page 14: Concur with 2d Indorsement. The utilization of 55 gallon drums filled with sand provides protection against fire, except at the point of contact between drums. This area must be filled with sandbags or other material. There have been two reports of spontaneous combustion of the polypropylene sandbag. This is not considered indicative of their being highly flammable.

d. Reference item concerning V-18 earth auger, page 16: Concur with observations; non-concur with recommendations. ATAC informed this headquarters on 17 June 1967 that 20 each V-18's are available in CONUS and can be shipped to Vietnam. This headquarters will request that vehicles in CONUS be shipped to USAFV. ATAC has further indicated that no suitable commercial model was available for procurement and that it would take 16 to 18 months before a model would be available.

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AVHDC-DST (30 Apr 67)

3d Ind

SUBJECT: Operational Report-Lessons Learned for the Period Ending
30 April 1967 (RCS CSFOR-65) (U)

e. Reference item concerning use of D-, J- and F- band high frequency, page 16: Concur, AN/GRC-50 equipment being distributed in the theater will provide some relief for the frequency congestion as mentioned in the observations.

FOR THE COMMANDER:

J. H. ...
Major General

23
GPOP-DT (30 Apr 67)

4th Ind

SUBJECT: Operational Report for the Quarterly Period Ending 30 April 1967
from HQ, 41st Sig Bn (CA) (RCS CSFOR-65)

HQ, US ARMY, PACIFIC, APO San Francisco 96558 21 SEP 1967

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

1. This headquarters has evaluated subject report and forwarding
indorsements and concurs in the report as indorsed.

2. Reference Section I, paragraph 7b(3), page 10: "The M-211 is
classified as a standard "B" vehicle and is not obsolete as stated.
Repair parts are available through normal supply channels using procedures
outlined in paragraph 2b, 3d Indorsement."

FOR THE COMMANDER IN CHIEF:

G. L. McMullin
G. L. McMULLIN
MAJ, AGC
Asst AG