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**AGO ltr 29 Apr 1980**

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DEPARTMENT OF THE ARMY  
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IN REPLY REFER TO

AGAM-P (M) (19 Sep 67) FOR OT RD-670369

25 September 1967

AD82754

SUBJECT: Operational Report - Lessons Learned, Headquarters,  
73rd Signal Battalion (SPT)

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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39

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DEPARTMENT OF THE ARMY  
HEADQUARTERS, 73RD SIGNAL BATTALION (SPT)  
APO San Francisco, California 96312

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14 May 1967

SUBJECT: Operational Report for the Quarterly Period Ending 30 April 1967, Reports Control Symbol CS-FOR-65

TO: **Commanding General  
United States Army Vietnam  
ATTN: AVHSC-JE  
APO 96307**

References: a. Department of the Army Regulation 1-19, dated 26 May 1966, Subject: Administration, Operational Reports-Lessons Learned, RCS CSFOR-65.

b. United States Army Vietnam Regulation 870-2, dated 19 July 1966, Subject: Historical Activities, Operational Reports-Lessons Learned (RCS CSFOR-65).

c. Headquarters, 1st Signal Brigade (USA STR-TCOM) Regulation 1-19, dated 20 March 1967, Subject: Administration, Operational Reports-Lessons Learned (RCS CSFOR 65).

d. Headquarters, 21st Signal Group Regulation 1-19, dated 8 April 1967, Subject: Administration, Operational Reports-Lessons Learned (RCS CSFOR-65).

SECTION I

SIGNIFICANT ORGANIZATION AND UNIT ACTIVITIES

1. GENERAL:

Lieutenant Colonel Kirby Lamar became the new Battalion Commander, assuming command on 7 March 1967. Reassigned from the 40th Signal Battalion (Construction), Long Bien, Republic of Vietnam, LTC Lamar replaced Lieutenant Colonel Louis F. Dixon who departed to join the staff of the 21st Signal Group.

Organizational changes continued throughout this period although the Battalion's mission remained unchanged. The third platoon of the 278th Signal Company, which has been supporting the Third Brigade of the 25th Infantry Division near Pleiku, returned to the control of its parent unit and assumed the area communications responsibilities at Dong Ba Thin. With its personnel and equipment resources, this platoon was able to greatly improve communications services to the 18th Engineer Brigade, 10th Aviation Battalion, and other units in the area. The First Platoon of the 278th Signal Company joined the 43rd Signal Battalion in support of the 4th Infantry Division Headquarters. The majority of the personnel and equipment of the 278th Signal Company will be transferred or attached in the near future to D Company, 43rd Signal Battalion in an organizational reassignment. D Company, which is TO&E-tailored to meet the present requirements of the 278th Signal Company, will assume that function under the 73rd Sig Bn. The reduced-strength 278th Sig Co will then take on a

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1

SCCVNG-SS

13 May 1967

SUBJECT: Operational Report for the Quarterly Period Ending 30 April 1967, Reports Control Symbol CS-FOR-65

new mission in the 43rd Sig Bn area of communications responsibility.

In connection with this alignment, C Company of the 41st Signal Battalion, has lost two of its sites, Phan Thiet, and Song Mao, thereby reducing its mission to the large task of providing communications for the increasing numbers of units in the environs of Cam Ranh Bay.

The 362nd Signal Company (TROPO) was relieved of its area communication responsibilities which enabled it to concentrate its efforts on maintaining communications through its many Tropospheric Scatter Forward Propagation systems dispersed throughout the Republic of Vietnam. Recently formed E Company of the 43rd Signal Battalion, beefed up with newly arrived personnel and equipment, assumed those area responsibilities at La'Bian Mountain, Pr'Line, Dalat, Traimat, Gia Nghia, and Bao Loc sites.

The arrival of the 544th and 545th Signal Detachments (TROPO) in addition to a Tropo detachment of the 327th Signal Company (TROPO) helped ease some of the 362nd Signal Company's communications burdens. However, the 544th and 545th Detachments do not fall under the operational control of the 362nd but provide mission support to tactical units as required. Personnel from the 327th Signal Company detachment have been assigned to 362nd Signal Company units in order to supplement personnel already on site and reduce the growing operator shortage, which was created by normal attrition and the return of TDY units under the 11th Signal Group to CONUS.

Command emphasis during this period was placed upon improved control and utilization of circuitry, equipment and personnel along with increased physical security protection of both personnel and the equipment. Particular attention was given towards increasing communications efficiency through the utilization of new or additional equipment, additional control facilities, installation and/or replacement with multi-pair cable and field wire, and the elimination of circuits and systems which were not receiving sufficient usage to justify their existence.

Staff activities continued to be highlighted by a large amount of planning for future requirements and also by increased inspections and visits to all sites. The Battalion was operational for the entire 89 day period with 26 days of integrated unit training.

## 2. ACTIVITIES:

Several months work on the installation and testing of the outside cable plant consisting of several hundred thousand feet of multi-pair cable and the inside plant was culminated in the activation of the 24 0 line Dial Central Office complex at Cam Ranh Bay on 15 April 1967. The entire cut-over took less than 5 minutes to accomplish, with no troubles incurred, which attests to the careful planning and preparation. The combined efforts of B Company, 40th Signal Battalion (Construction), the Third Platoon, 578th Signal Company (Construction), C Company, 41st Signal Battalion (Ca), and the installation team from STRATCOM-PACFO, headed

SC 7NG-SS

13 May 1967

SUBJECT: Operational Report for the Quarterly Period Ending 30 April 1967, Report Control Symbol CS-FOR-65

by Mr Edwin Bromley were utilized to achieve this activation. B Company installed all of the outside plant multi-pair cable while the third platoon, 578th Signal Company, provided all of the drop wire connections and installed all the new dial phones. C Company personnel provided assistance on the inside plant installation and assumed the operational and maintenance responsibilities upon activation of the DCO, training Dial Central Office switchboard operators in advance of the actual cut-off. Mr. Bromley's team completed the inside plant installation and testing. Other units contributing to the planning of this installation were 1st Signal Brigade (STRATCOM), 21st Signal Group, and the 73rd Signal Battalion (SPB). The quality and clarity of all Long Distance circuitry has improved three-fold. Hum, noise, and weak voice frequency strengths have practically disappeared. The two manual switchboards, AN/MTC-9s, have been released and after rehabilitation can be redeployed by 1st Signal Brigade to upgrade telephone plants within the Republic of Vietnam.

Other notable activities engaged in by personnel of this Battalion during the past quarter were wire installations projects at Dong Ba Thin, Phan Rang, and Dalat, besides Cam Ranh Bay. Four VHF Radio systems (two terminals each) and four VHF radio systems were installed in order to improve communications efficiency and obtain better utilization of personnel and equipment. The arrival of the new AN/GRC-50 radio relay equipment resulted in an increase in training for operator and maintenance personnel in this field and subsequently in the installation and operation of the equipment itself. Training, in general, increased during this period due to the influx of new equipment, shortage of personnel in key MOSs and the establishment of refresher type schools within Vietnam.

Affecting every site in this Battalion were the requirements to protect all communications facilities with revetments and other physical security measures. Even the smallest detachments were busily engaged in filling sandbags to protect their equipment and themselves from mortar or ground attack. This requirement led to such other items as the development of improved Physical Security Plans, the practicing of alert procedures and increased training and emphasis on security in general.

Building construction was another notable and continuing activity. Some of the construction was on a "self-help" type as in C Company where the unit built five two-storied barracks, five large multi-person underground bunkers, remodeled the day room and converted the former NCO quarters into a television room. The 278th replaced its medium GP tents with pine tent frames and doubled the seating capacity of the mess hall. The Third Platoon, 278th Sig Co, is in the process of constructing frame buildings 100 feet by 20 feet for living quarters. E Company, 43rd Signal Battalion continued its site development with the erection of two 48 feet by 20 feet and one 96-foot by 20 foot quonsets to be utilized for communications and operations. In addition, site personnel along with the support of Pacific Architects and Engineers constructed latrines, a

SCCVNG-SS

13 May 1967

SUBJECT: Operational Report for the Quarterly Period Ending 30 April 1967, Report Control Symbol CS-FOR-65

4

new billets, a wooden frame building 20 feet by 30 feet to house new generators, a sentry dog kennel pad, carved a motor pool area out of the mountain side, tapped a spring on the lower side of the mountain to obtain a water reservoir, improved kitchen facilities in the mess hall and built two new showers. Many improvements were made possible to the compound operated by the 362nd Signal Company in Dalat by the fact that Pacific Architects and Engineers' Repair and Utilities Facility in that area became fully operational and obtained the necessary materials. A site Development plan has been submitted to the local Engineer Command in the Cam Ranh Bay area for the development of Beaver Signal Site, which houses the Headquarters, 73rd Signal Battalion as well as operational elements of the C Company, 41st Signal Battalion and motor pool facilities for these two units and the Third Platoon, 578th Signal Company.

Construction at Integrated Wideband Communications Systems (IWCS) sites continued or were nearly completed at Cam Ranh Bay, Phan Rang, and Pr'Line.

A visit by the Red Cross Field Director at Cam Ranh Bay prompted periodic visits of Red Cross girls to the Lang Bian Mountain and Pr'Line sites. These were the first American girls to have ever set foot on this isolated mountain site. During their half-day visits, they organized games and talked with the men. Representatives of the United States Army Vietnam Public Information Office visited the Dalat area and conducted tape recording sessions with signal personnel for rebroadcast on hometown radio stations. The front cover of February's issue of SIGNAL Magazine featured a photograph of the Lang Bian Mountain VHF Radio installation.

A Command Material Maintenance Inspection was conducted throughout the Battalion area and, during the latter part of this period, preparations were being made for a visit by the Inspector General.

### 3. PERSONNEL AND ADMINISTRATION

Modified Tables of Organization and Equipment were submitted on all Battalion units to 1st Signal Brigade (USASTRATCOM) which approved and forwarded them to USASTRATCOM by 3 March 1967. USASTRATCOM forwarded the MTO&Es with minor revisions to the Army Chief of Staff for Force Development on 3 April 1967. These MTO&Es recommended a significant 34 percent increase in TO&E strength. Among the recommended organizational additions were a fourteen-man, three-helicopter Aviation section, Battalion Electronics Maintenance Section, Administration and Logistics, and Security & Intelligence Section at the Battalion Headquarters level and Facilities Control Sections, Single Sideband Radio Sections and Refrigerator Maintenance Section in various companies. The plan also provided for the integration of the presently separate Tropo detachments into Tropo operating platoons of the 362nd Signal Company to improve personnel administration and operations.

5  
SCCVNG-SS

13 May 1967

SUBJECT: Operational Report for the Quarterly Period Ending 30 April 1967, Reports Control Symbol CS-FOR-65

Personnel administration during this period has involved the following actions and/or problems.

a. The 278th Signal Company will experience a personnel rotation problem during the month of August, 1967, when approximately 70 per cent of its personnel are scheduled to rotate to CONUS upon completion of their overseas tour. The steps listed below have been initiated in order to reduce the impact on operations caused by these departures:

(1) Encouragement of personnel to extend their overseas tours. Thus far, approximately 20 per cent have extended or have requested extension of their tours.

(2) Replacement of personnel by newly arrived personnel on a one for one basis.

(3) Transfer of personnel within the Battalion resources.

(4) As a final step, this headquarters will request 21st Signal Group to effect a transfer of personnel within the Group resources.

The steps outlined above were initiated in March, 1967, and are being gradually taken in order.

b. The personnel buildup of E Company, 43rd Signal Battalion, continues as the unit is assigned additional missions.

c. The arrival of the tropo detachment from the 327th Signal Company greatly reduced the shortage of MOS 26L (Microwave/Tropo) operator personnel. However, it is significant that these personnel were all of lower enlisted grade. A critical shortage of senior enlisted personnel in this MOS continues and probably will hinder unit operations until it is relieved.

d. The receipt of reassignment instructions for Officers has improved but there is a marked decrease in the receipt of reassignment instructions for departing enlisted personnel.

e. Preparation is being made to transfer responsibility for military pay administration together with the maintenance of financial data records folders from the unit personnel office to the servicing finance office in accordance with Department of the Army Circular 37-22 and USARV Circular 37-9 which outlines the "Modified Military Pay Voucher System". Current plans call for the transfer of personnel, equipment, and TO&E spaces in addition to the pay records. It is anticipated that this transfer will be accomplished by 31 May 1967.

SCCVNG-SS

13 May 1967

SUBJECT: Operational Report for the Quarterly Period Ending 30 April 1967, Reports Control Symbol CS-FOR-65

f. This Battalion presently has the responsibility of holding and routing 21st Signal Group's and 1st Signal Brigade's personnel replacements arriving in Cam Ranh Bay through the 22nd Replacement Battalion. This responsibility involves issuing diversionary orders as required, billeting and messing of all such replacement personnel, and securing transportation for these personnel to their final destination. This headquarters is not equipped nor does it have the personnel resources to handle large numbers of replacement personnel on an indefinite basis. No authorization has been granted to request additional equipment and rations and further, transportation, at best, is uncertain, thereby causing transit personnel to be held in this area for three or four days before transportation can be secured. At the present time, plans are being made to establish a three-man liason team from 1st Signal Brigade at the 22nd Replacement Battalion for this purpose.

g. The following is a list of current critical shortage MOS for this Battalion:

| <u>MOS</u> | <u>AUTHORIZED</u> | <u>ASSIGNED</u> | <u>ON HAND<br/>PERCENTAGE</u> | <u>90 DAY<br/>LOSSES</u> |
|------------|-------------------|-----------------|-------------------------------|--------------------------|
| 05B        | 46                | 14              | 37                            | 0                        |
| 05C        | 92                | 74              | 80                            | 7                        |
| 31J        | 12                | 8               | 67                            | 1                        |
| 31N        | 13                | 9               | 69                            | 3                        |
| 32E        | 100               | 86              | 86                            | 11                       |
| 63A        | 11                | 0               | 0                             | 0                        |
| 63B        | 32                | 25              | 75                            | 6                        |
| 72C        | 130               | 109             | 83                            | 14                       |
| 94A        | 4                 | 0               | 0                             | 0                        |
| 94B        | 46                | 39              | 86                            | 3                        |

SCCVNG-SS

13 May 1967

SUBJECT: Operational Report for the Quarterly Period Ending 30 April 1967  
Reports Control Symbol CS-FOR-65

h. The 73rd Signal Battalion authorized strength (Letter Headquarters 21st Signal Group, Subject: Personnel Authorized, December 1966) is as follows:

| UNIT              | TO&E     | OFFICERS<br>AUTH/ASG |    | WO<br>AUTH/ASG |   | EM<br>AUTH/ASG |     | LOSSES |
|-------------------|----------|----------------------|----|----------------|---|----------------|-----|--------|
| H&T, 73d Sig Bn   | 11-116D  | 10                   | 16 | 2              | 2 | 34             | 76  | 24     |
| Co C, 41st Sig Bn | 11-87E   | 5                    | 6  | 1              | 2 | 203            | 313 | 63     |
| 278th Sig Co      | 11-117D  | 9                    | 10 | 4              | 3 | 337            | 334 | 36     |
| 362d Sig Co       | GO 258   | 20                   | 14 | 0              | 1 | 345            | 303 | 64     |
| D Co 43d Sig Bn   | *11-500D | 5                    | 0  | 0              | 0 | 125            | 13  | 0      |
| E Co 43d Sig Bn   | *11-500D | 6                    | 4  | 2              | 2 | 239            | 164 | 15     |
| 206th Sig Det     | 11-500D  | 1                    | 0  | 0              | 0 | 8              | 12  | 1      |
| 220th Sig Det     | 11-500D  | 1                    | 0  | 0              | 0 | 8              | 8   | 3      |
| 221st Sig Det     | 11-500D  | 1                    | 1  | 0              | 0 | 8              | 9   | 6      |
| 224th Sig Det     | 11-500D  | 1                    | 0  | 0              | 0 | 8              | 5   | 1      |
| 235th Sig Det     | 11-500D  | 1                    | 0  | 0              | 0 | 8              | 8   | 4      |
| 506th Sig Det     | 11-500D  | 1                    | 0  | 0              | 0 | 8              | 5   | 0      |
| 508th Sig Det     | 11-500D  | 1                    | 1  | 0              | 0 | 6              | 6   | 0      |
| 608th Sig Det     | *11-500D | 0                    | 0  | 0              | 0 | 6              | 7   | 0      |
| 708th Sig Det     | 11-500D  | 1                    | 1  | 0              | 0 | 6              | 6   | 0      |
| 803th Sig Det     | *11-500D | 0                    | 0  | 0              | 0 | 6              | 6   | 0      |
| 809th Sig Det     | 11-500D  | 1                    | 1  | 0              | 0 | 6              | 4   | 0      |
| 810th Sig Det     | *11-500D | 0                    | 0  | 0              | 0 | 6              | 4   | 0      |

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SCCVNG-SS

13 May 1967

SUBJECT: Operational Report for the Quarterly Period Ending 30 April 1967  
Report Control Symbol CS-FOR-65

#### 4. SECURITY

As it has been mentioned in the preceding section, the most notable security accomplishment during this period has been the revetment of all billets, operational equipment, petroleum and oil storage points, generators and other facilities. A quick and effective method of providing protection around buildings or large equipment vans was discovered by filling 55-gallon drums with sand and interlacing the drums with sandbags. It is necessary to fill the drums with sand rather than dirt so that the revetment would not be weakened from dirt washing out of the drums during the rainy season. A solid base for such protective walls was also a necessity since each filled drum weighed over 400 pounds and could cause considerable damage if it toppled against a building or van. Constant attention is being paid to physical security measures and procedures. Practice alerts are utilized periodically to perfect each unit's defense plans. Additional security equipment such as concertina wire is being emplaced and such items as stationary and mobile xenon/infrared search lights, perimeter lights and guard towers are on requisition for the various sites. Two isolated signal sites, Pr'Line and Lang-Bian Mountain, are in the process of installing minefields.

There have been no enemy attacks directed against signal sites under this Battalion during the past quarter. At Da Nang, however, Detachment #6, 362nd Signal Company suffered no casualties or equipment damage during an enemy rocket attack on the cantonment area because the signal site's revetments withstood the attack and its alert procedures were followed as they had been planned. Security violations decreased during this period due, mainly, to this overall increased emphasis on security in general. Another factor in this decrease were the several administrative security inspections conducted throughout the Battalion, by this Headquarters, 21st Signal Group, and 1st Signal Brigade and the preparations which were being made for the Inspector General's visit in May. The Central Registry Unit at Cam Ranh Bay conducted a counter-sabotage inspection of all signal units in the Cam Ranh Bay area and are in the process of extending it to all signal units in the II Corps Area, Republic of Vietnam. One "Lesson Learned" occurred as a result of a possible security compromise. Personnel from the local Military Intelligence unit in the Dalat area requested permission to utilize the signal unit's teletype equipment to run off extra copies of teletype master tapes which they had in their possession. The military intelligence personnel did not inform the teletype operators that the messages were classified since they felt the operators did not have the "Need to Know". Consequently, when the intelligence personnel were temporarily left alone with the equipment the classified messages were erroneously transmitted over a non-secure circuit due to the selector switch, which determines the mode of operation, being placed in the wrong position. Measures adapted subsequent to this incident included the prohibiting of all personnel other than trained teletype

9  
SCOVNG-SS

15 May 1967

SUBJECT: Operational Report for the Quarterly Period Ending 30 April 1967  
Report Control Symbol CS-FOR-65

operators assigned to that unit duty from utilizing the equipment, the posting of security labels on all of the equipment, the placement of large signs in the area reminding all personnel that the circuits are non-secure, and increased physical security controls on access to the teletype operations area.

SCCVNG-SS

13 May 1967

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

5. SAFETY:

Accidents occurred at an alarming rate during the reporting period. There were 23 vehicular accidents within the Battalion resulting in three fatalities and 14 injuries to military and civilian personnel and an estimated \$12,475 in damages to property. Personal carelessness, inattention on the part of the driver or passenger, excessive speeds and failure to inspect or secure vehicles were the main causes of these accidents. In the majority of the above accidents, lack of proper defensive driving procedures or incorrect judgements in reacting to the situation were contributing factors. There were 18 military injuries incurred during this period: 10 were connected with vehicle accidents, three were the result of accidental weapons discharges, two occurred when a carburetor in a 2½ ton truck exploded, two resulted from personnel stepping on sharp objects and one resulted from an individual falling through a rotted pier.

One unit, the 362nd Signal Company, which had been involved in the majority of the accidents, implemented the following Vehicle safety measures.

a. Completion of a Driver Training course consisting of classes on local speed limits, rights of way, passing techniques, backing techniques, familiarization with Vietnamese traffic laws and international road signs, general defensive driving techniques, general safety practices and causes of accidents for all personnel assigned to the unit and retesting of all drivers on the written and practical licensing examination.

b. Dispatching vehicles daily, utilizing DA Form 2400, by the Commanding Officer of the unit.

c. Assigning of vehicles only as required and placing more stringent requirements on the dispatch of vehicles.

d. Utilization of vehicles after duty hours requires the presence of a non-commissioned officer, E-6 or above, or special authorization in writing by the unit duty officer or the site commander.

e. Speed limits of 20 mph in towns and 30 mph in rural areas were stenciled on the vehicles and local military police personnel were advised of this unit speed limit policy.

f. Personnel observed practicing unsafe driving habits lose their licenses, are reprimanded and undergo mandatory remedial driver training.

SCCVNG-SS

13 May 1967

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

In addition, this Headquarters has distributed several command letters concerning safety observances, published a quarterly review of accidents and injuries and required that DA Label 76, a Good Driver decal, be placed on the instrument panel of all vehicles. A safety cartoon program was initiated by the Battalion Safety NCO to obtain a wider interest in the program.

#### 6. TRAINING:

There has been a large upsurge of activity in connection with the integrated training program, which includes mandatory unit training subjects, on-the-job training, MOS cross-training and formal schooling. The unit training program has become more formalized and now unit and individual training schedules, increased proficiency of instructors and the obvious requirements for additional cross-training have added impetus to the program.

→ This Battalion has been responsible for the formulation of AN/GRC 50 Radio Relay Equipment School and a TROPO Academy. The AN/GRC-50 school consisted of three-day classes with classroom instruction and practical application of the equipment. This school trained 11 instructor personnel and 54 operators and maintenance type personnel from all units within 21st Signal Group. Initial assistance in setting up the school and preliminary guidance and instructions for the school's instructors was provided by Electronics Command Technical Representatives. The TROPO Academy was established near its Field Maintenance Shop in Nha Trang and is set up to conduct two week courses on the operations and maintenance of tropo equipment for approximately 15 personnel per each course. Operations of the Academy have been hampered by the loss of operating equipment which is currently employed in support of a tactical mission.

Other formal schooling attended by personnel of this Battalion during the past quarter are a Direct Support/General Support Maintenance Course on the AN/GRC-50, a 19-day course at 1st Signal Brigade, Saigon; International Business Machine's 1013 equipment maintenance course, a three-week course at the Phu Lam Data Relay facility; AUTODIN (Automatic Digital Network) operator and maintenance training on the job, also at the Phu Lam Facility; a three-week course on the Lenkhurt 26C Modem equipment at Clark Air Force Base, Phillipines; a 21-day course on the Toll Test Facility AN/MSQ-73 at the 1st Signal Brigade School; a three week Cable Splicer's course at the 40th Signal Battalion (CONST) school; a training course on the AN/TCC-28, a 600-line mobile Dial Central Office equipment van at the 459th Signal Battalion (CA); a 13-day refresher type training course on the AN/TRC-24 VHF Radio equipment at the 43rd Signal Battalion (CA); a two day introductory training course on the Western Electric Company (WECO) Frequency Converter at 2nd Signal

SCCVNG-SS

13 May 1967

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

Group, Tan Son Nhut; a 10 day familiarization course on Microwave equipment at the 39th Signal Battalion, Vung Tau; and a formal class on Prescribed Load List conducted by 21st Signal Group.

The following unit sections have instituted an aggressive on-the-job training program in order to maintain operations: AUTODIN, Switchboard Facilities, Com Center Sections, operating tropo units, AN/GRC-50 equipment and AN/MSQ-73 control facilities. These programs were necessitated because of the shortage of personnel or the lack of qualified personnel. Teletypewriter operators were cross-trained as AUTODIN operators and the data maintenance personnel assigned to this Battalion were found to have no experience on the particular pieces of equipment received in this area and had to receive rapid familiarization training on the equipment from the Phu Lam Facility.

Weapons familiarization firing programs were carried out in all units. On 17-19 April 1967, 475 officers and enlisted men from signal units located at Cam Ranh Bay participated in this program by firing their assigned weapons. Since regulation type qualification ranges are not available anywhere within the Battalion area, units utilize available real estate. The 362nd Signal Company fires with Vietnamese Military Academy personnel in Dalat while isolated sites such as Lang-Bian Mountain and Pr'Line fire from their actual defensive positions. Other units improvise similarly.

Units were given the responsibility of writing specific lesson plans on mandatory subjects and, upon completion of these plans, a combined Lessons guide was published by this Headquarters in order to reduce the work load on all the units. Training films are being requisitioned by all units since all subordinate company headquarters and HHD, 73rd Signal Battalion, now have 16mm movie projectors. This has greatly assisted unit training as well as providing troop entertainment facilities. Driver Training Classes, the implementation of the General Educational Development Program and periodic visits by the Battalion Chaplain for Character Guidance classes and problem consultations have been integrated into the unit training sections. From 12 to 17 April 1967, the first-Battalion Training inspections were conducted at the company headquarters level. Expansion of existing training classrooms or construction of new facilities are being carried on in all of the units.

The problem areas were the shortage of equipment such as radio sets, teletypewriters, etc. for formal training purposes since they were committed to operations and the non-availability of personnel due to operational requirements or their utilization on physical security constructions. Increased on-the-job training is planned to reduce the former problem and the completion of physical security defenses will solve the latter.

13  
SCCVNG-SS

13 May 1967

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

#### 7. OPERATIONS:

The most significant operational event was the activation of the Dial Central Office, as previously mentioned in this report. Brigadier General Robert D. Terry, Commanding General, 1st Signal Brigade (USASTRATCOM) and Brigadier General Mahlon E. Gates, Commanding General, USA Support Command, Cam Ranh Bay, were present at the ribbon-cutting ceremony inaugurating the dial exchange. This 2400 line Dial Central Office is the largest operational Dial Facility in Vietnam and is currently carrying 524 local lines, 110 long distance trunks, and 11 local trunks. With the retirement of the Manual switchboards, AN/MTC-9s, C Company is now operating and maintaining only one manual switchboard, an AN/MTC-1, for the 22nd Replacement Battalion complex, Cam Ranh Bay. All of the other units operate manual switchboards.

The Third Platoon, 578th Signal Company, which did such an outstanding job installing drop wire and dial telephones to meet the Dial Central Office cutover deadline is currently installing over 3000 feet of 100 pair cable and telephone poles to the 22nd Replacement Battalion complex in order to provide direly needed increased communications services in that area, preparing to install a new 50 pair cable and pole line at Phan Thiet and a buried 25-pair cable line in the Pacific Engineers and Architects area at Cam Ranh Bay. Since the cut over to the new DCO the Third Platoon has recovered more than six miles of telephone poles and its associated aerial cable and wire. Other projects accomplished by the Third Platoon during this period of time include the replacing of all deteriorated telephone poles at Cam Ranh Bay, the relocation of a 50-pair cable at Phan Rang from the US Army Control Facility to the US Air Force's new Dial Central Office due to heavy construction in the area, and the installation of 25 miles of Spiral-four cable and 50 miles of WD-1 in the Dalat area to replace deteriorated wire facilities. Company B, 40th Signal Battalion (CONST), which completed the outside cable plant for the DCO at Cam Ranh Bay, installed an additional 8000 feet of 100 pair cable to tie the 500th Transportation Group into the outside plant. Other major wire projects completed last quarter were the installation of over 400 feet of 200-pair cable for the telephone distribution system in support of Headquarters, 1st Bde, 101st Airborne Division, at Phan Rang; two cable projects at Dong Ba Thin consisting of 8000 feet of 100 pair cable to the 18th Eng Brigade Headquarters and 5300 feet of 100-pair cable (2300 feet buried and 3000 feet on poles) with 26 new telephone poles installed for area subscribers as part of a wire renovation plan there; eight miles of 100-pair cable installed to the US Naval Facility at Cam Ranh Bay in preparation for the installation of a 200-line Dial Central office at the Naval Facility, and preparation for the installation of a new outside plant at Dong Ba Thin prior to the arrival of critically needed Dial Central Office equipment.

SCCVNG-SS

14.  
13 May 1967

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

On 9 March 1967, the AN/MSQ-73 Technical Control Facility at Lang Bian Mountain was cutover for operations and became the first facility in Vietnam to be wired and installed without any outage time required. The cutover was accomplished on an individual circuit basis. Systems to be cutover were first paralleled into the AN/MSQ-73 and the circuits contained in the systems were cutover on a patch type basis and later hand-wired into the facility equipment. Cutover of the 96 voice circuits required a total of 12 working hours and was accomplished over a four-day period, from 2200 to 0100 each day. Every circuit passing through this facility may be monitored, tested, interfaced with different transmission equipments, or rerouted, thus being completely controlled. However, lack of a modification for the facility has prevented Direct Current (teletype) circuits from passing through this equipment. A second Technical Control Facility is being activated at Pr'Line signal site in order to control and improve communications efficiency.

To further improve communications services, systems and circuits were continually reviewed throughout the period for proper utilization. As a result of this continual study a realignment throughout the VHF Radio systems was effected which included the deactivation of three systems, the activation of three new systems, the relocation of one, the temporary installation of another and the conversion of three other systems to the newer AN/GRC-50 equipment which provides improved circuit quality on short, line of sight shots. Eventually the newly-arrived AN/GRC-50 equipments will replace all of the older AN/TRC-24 radio terminals in the Dalat area and the majority in the Cam Ranh Bay area, leaving the AN/TRC-24 equipment to provide increased backup capabilities.

An AN/TRC-129 Tropo system has been successfully installed between Ban Me Thuot and Pleiku by the 362nd Signal Company and a rehabilitation program is currently underway for the older AN/TRC 90 models. A Quality Assurance Team has assisted the 362nd Signal Company in improving circuit quality on systems between Pleiku-Lang Bian Mountain-Saigon and Pr'Line-Tan Son Nhut. The assumption of responsibility for the operation and maintenance of switchboard, center, wire and electronic maintenance facilities in the Dalat area by E Company, 43rd Signal Battalion, has enabled the 362nd Signal Company to concentrate its efforts on improving tropo systems throughout the Republic of Vietnam.

High Frequency (HF) Radio commitments have decreased in this Battalion during the past quarters. The USARV Administrative net was deactivated at Cam Ranh Bay, two AN/GRC-26 Radio teams from the 278th Signal Company were dispatched to Nha Trang under the 459th Signal

SCJWNG-SS

13 May 1967

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

Battalion and two AN/GRC-46 teams from the same unit came under the control of the 37th Signal Battalion at Chu Lai in mid-April. This reduced the operational HF facilities to a station in the Ground Liaison Officer's Net for the Cam Ranh Bay Air Force Base, a MARS Station which operates approximately 95 phone patches per week to CONUS from Cam Ranh Bay, and a single-sideband station in the 21st Signal Group Command and Control Net, and a station in I Field Force V Command net. The Third Platoon, 278th Signal Company, is presently providing mobile VHF support to the Headquarters, 30th Republic of Korea Regiment, in tactical missions at Ninh Hoa and Ba Ngoi. E Company, 43rd Signal Battalion has erected an .B-216 antenna tower at Lang Bian Mountain to improve VHF type communications and is in the process of constructing a new quonset to house the AN/GRC-50 and AN/TRC-24 radio equipment. At this mountain site, E Company has also constructed a 96-foot operations building. The AN/MSQ-73 Test Control Facility and the AN/MTC-7, Dalat area long distance switchboard, are mounted on concrete pads and have been integrated into the building structure thus eliminating dust and other extraneous matters from entering these vans and also providing close co-ordination with the Operations section of the unit.

Plans for a new Fixed Station Communications Center at Cam Ranh Bay has been finalized and start of the construction is imminent. The present comcenter has improved its operation with the addition of the AN/MSQ-23 Tape Relay Van and by deactivating five little-used circuits and adding two new, required circuits. It now operates one full duplex 100 word-per-minute circuit, three full duplex 60 WPM circuits and two half-duplex 60 WPM circuits, handling an average of 612 messages sent or received per day. Plans have also been proposed to add comcenters to Bao Loc and Gia Nghia sites under E Company, 43rd Signal Battalion. E Company has already installed an AN/MTC-17 comcenter van in Dalat to serve as the area Comcenter there as soon as a circuit approval is received.

A final significant operations note during the period was the assumption of responsibility by C Company, 41st Signal Battalion, for an Interim AUTODIN (Automatic Digital Network) operation at the US Army Depot, Cam Ranh Bay. The AUTODIN Terminal van consists of an IBM 1013 Card Transmission Terminal, IBM 557 Alphabetic Interpreter; IBM 026 Printing Card Punch, IBM 082 Card Sorting Machine and a Lenkhurt 26C Motor unit. Personnel to operate this equipment were taken from the comcenter and cross-trained into the operation in approximately 30 days. A check of the records and conversations with the Data Maintenance personnel assigned to C Company revealed that they had not received formal schooling on this type of equipment.

SCCVNG-SS

13 May 1967

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

To remedy this situation, these personnel were sent to Phu Lam Data Facility (NARC-Nonautomatic Relay Center) and to the schools or course noted in the training section of this report for basic instruction on the maintenance of this equipment. This operation which provides data transmission facilities for the US Army Depot, the US Air Force Base, and the 22nd Replacement Battalion, all in the Cam Ranh Bay area is currently processing approximately 10,000 cards per day. Approval for the emergency requisition of Data operator personnel has been received and a solution to lack of qualified personnel is still being pursued.

17  
SCCVNG-SS SCCVNG-

13 May 1967

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

#### 8. LOGISTICS:

The Battalion S-4 and his staff, in continuing periodic unannounced Logistics and Maintenance Inspections, has noted numerous improvements in the posture of the Battalion. Significant decreases in per cent deadlined rates for generators vehicles, and many classes of signal equipment have been especially encouraging. This may be attributed to several factors, the most prevelant bñing effective cross-training programs, more emphasis on supervisory responsibilities, and the improved responsiveness of direct support units in providing repair parts and expediting evacuation of unservicable equipment.

The effectiveness of the current Red Ball Express requisitioning program has improved greatly in the past two months. Confusion existed at first among support units as well as supporting units concerning the mechanics of the program, which led to unsatisfactory results. This has been clarified and all units are participating as required by the provisions of applicable regulations. The arrival of the 552nd Light Maintenance Company in Phan Rang greatly reduced the problem of transporting engineer and ordnance by the 278th Signal Company to a support maintenance facility and provided a faster response on Red Ball Requisitions.

The arrival of, and ensuing inspections by DA PLL Purification Teams (Project Counter) has caused some consternation to all Signal Units in this area. Units of this command were advised of maintaining grossly improper PLL's and were instructed to turn-in, in some cases, as high as ninety-five (95) per cent of the repair parts held in stock. This instruction was based on the disregard of provisions established for a thirty (30) day stockage level as prescribed by 1st Signal Brigade Regulation 750-3, and retention of initial stockage level through twelve (12) review periods in accordance with AR 735-35. Units "Combat Essential" will be considered "as required" items and retained solely on the basis of demand experience. In response to a request for clarification of this policy, 21st Signal Group advised all units under that command to adhere to 1st Signal Brigade Reg 750-3.

Due to distance involved and transportation difficulties, the 362nd Signal Company and E Company, 43rd Signal Battalion, both in the Dalat area, were advised of possible benefits in placing liaison personnel near the units support facility. Such was implemented, and both units have had much more success in procuring equipment, parts, and supplies, as well as more adequately controlling shipment to required locations. Liaison personnel are effective in taking follow-up action, making timely pick-up of items, and coordinating expedient shipment of same.

The support responsibilities for these units was transferred to the 63rd Maintenance Battalion in Nha Trang in late February 1967. From the USA

SCCVNG-88

13 May 1967

SUBJECT: Operational Report for the Quarterly Period Ending 30 April 1967  
Report Control Symbol CS-FOR-65

18.

Depot, Cam Ranh Bay, requisitions were cancelled and rerequisitioned through the new support unit; a smooth transition was effected by liaison visits from the maintenance support battalion personnel.

In effecting conversion of the Dalat area mess halls to Field Ration Messes, several problems were incurred concerning procurement of additional mess hall equipment, proper forms, and coordination of ration shipment from the Cam Ranh area. Had the units concerned made more timely requests for their requirements, the change-over would have been smoother. The Battalion S-4 made numerous visits to CRB Depot, Cam Ranh Support Command, and Ration Breakdown to expedite preparation and to establish policies. The change-over was made on schedule, major problems having been resolved, and a working system is eliminating the minor faults.

More than 300,000 sandbags and 30 miles of concertina wire were requisitioned, obtained and distributed to the units as part of the physical security construction program.

The transfer of the signal maintenance shop in Dalat to E Company and its subsequent buildup has reduced systems outages due to the more rapid replacement of defective equipment. However, the actual repair of the defective equipment has not been so rapid due, partly, to the following:

- (a) parts nonavailability in country.
- (b) the necessity of forwarding requisitions through the mail and receiving parts similarly.
- (c) The direction by supply channels that O2 type requisitions be challenged and requisitions resubmitted with an O5 priority when a doubt or error in priority exists.

In an attempt to remedy this situation, shop personnel are tasked with handcarrying requisitions to the depot on a weekly basis to insure faster processing.

The capacity of POL storage in the Dalat area by the 237th POL Det has increased from three, 10,000-gallon bladders to eight because of the increased quantity consumed by the Lang-Bian Mountain and Pr'Line signal sites.

The present power sources for the Lang-Bian Mountain consists of seven 45KW generators. Four are operational at all times. At the beginning of the quarter, many problems were experienced involving these

19  
SCCVNG-SS

13 May 1967

SUBJECT: Operational Report for the Quarterly Period Ending 30 April 1967  
Report Control Symbol CS-FOR-65

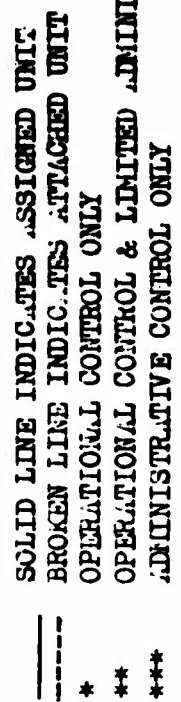
generators. Numerous outages were the direct result of power failures. With the establishment of an increased OJT operator and maintenance program, power failures were reduced to a minimum. The program included the leveling of the generators, thoroughly cleaning the insides and constant maintenance observations. Pacific Architects and Engineers are presently installing and will maintain three 200KW generators to replace the 45KW, although four will be retained as backup for emergencies.

The 278th Sig Co has been experiencing difficulties with the AN/GRC-26 Radio Sets. While components of the AN/GRC-26 are interchangeable, components of the T-368 transmitter are not. The unit dead-lined two T-368s because components had been swapped between AN/GRC-26 vans.

#### 9. AVIATION:

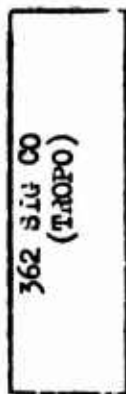
At the present time, there are no aviator elements assigned or attached to this Battalion.

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23

ORGANIZATIONAL STRUCTURE 362ND SIG CO (TROPO)



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SCCVNG-SS

13 May 1967

SUBJECT: Operational Report for the Quarterly Period Ending 30 April 1967  
Report Control Symbol SCFOR-65

## SECTION 2

### COMMANDER'S OBSERVATIONS AND RECOMMENDATIONS

#### PART I: Observations (Lessons Learned)

##### a. Personnel

#### PERSONNEL ROTATIONS

ITEM: Problem of large number of personnel departures during a short period of time.

DISCUSSION: The 278th Signal Company will experience a personnel rotation problem during the month of August, 1967, when approximately 70 per cent of its personnel are scheduled to rotate to CONUS upon completion of their overseas tour.

OBSERVATION: The steps listed below have been initiated in order to reduce the impact upon unit operations caused by these departures.

- (1) Encouragement of personnel to extend their overseas tours.
- (2) Replace departing personnel with newly arrived personnel on a one-for-one basis to insure job continuity.
- (3) Transfer personnel with Battalion resources.
- (4) As a final step request higher headquarters to effect a transfer of personnel within their resources.

#### NUMBERED DETACHMENTS

ITEM: The administrative burden of the fourteen numbered signal detachments (Tropo) continues to be a problem.

DISCUSSION: Direct Department of the Army assignment for these units does not always meet the operational requirements at the various tropo sites therefore causing an unnecessary shifting of personnel in order to do so. However, the shifting of these personnel complicate reporting procedures, such as morning reports.

OBSERVATION: The assignment of tropo personnel to the 362nd Signal Company would facilitate reporting procedures, allow for the parent unit to meet its operational needs, and render its TO&E structure realistic. A modified TO&E has been submitted on this by the 73rd Signal Battalion.

SCCVNG-SS

13 May 1967

SUBJECT: Operational Report for the Quarterly Period Ending 30 April 1967  
Reports Control Symbol SCFOR-65

b. Operations:

ANTENNA TOWERS

ITEM: Utilizing AB/216-U Antenna towers to support AN/TRC-90 antennas.

DISCUSSION: Initial requirement for the successful activation of the tropo scatter system between Ban Me Thout and Pleiku depended on the installation of a 120 foot tower. Profile of this shot justified this installation. Antenna towers utilized with the AN/TRC-90 series tropo scatter equipment are of fixed lengths and was thereby restrictive to this requirement. To satisfy all requirements for this shot, AB/216-U Towers were installed. However, an added problem arose whereby the AN/TRC-90A antenna being utilized could not be properly secured to the tower. To remedy this situation the "A" frame of AN/TRC-29 (Microwave) was affixed and with a slight modification of the "A" frames, the mast section of the AN/TRC-90A was fitted and the antenna properly positioned and secured.

OBSERVATION: AB/216-U Tower antenna fixtures can be utilized to mount and support the TRC-90A antenna.

VHF EQUIPMENT

ITEM: VHF voltage protection.

DISCUSSION: In the past, either operators in VHF sometimes failed to shut off power supplies and circuit, or the generator came back up too soon for operation to accomplish the above, after a power failure. Consequently, when the power was re-supplied, the surge damages the PP-685 supply.

OBSERVATION: In case of power failure, PP 685 Power Supplies must be turned off prior to the re-application of power and, furthermore, the generator man notifies VHF as to when the power is coming back up.

DIAL CENTRAL OFFICE

ITEM: Half Tap of Cable at M.D.P. to Operational AN/MTC-9's

DISCUSSION: The half tap of the class IV project Cable was objected to quite strongly by civilian supervisors. Their objection was based primarily on the fact that it placed the DCO in the position of a circuit control point.

27  
SCCVNG-SS

13 May 1967

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

The half tap, however, did permit the testing of the cable by actually passing traffic over the new cable prior to cutover.

OBSERVATION: Although the half tap did take up considerable time by placing a control burden on the installers, it was a small price to pay for the amount of testing which the cable received. The training that the DCO personnel got in trouble shooting prior to the cutover was also invaluable. It is suggested that cutovers in the future use the half tap systems.

#### CUTOVER PROCEDURES

ITEM: The cutover of long distance circuits from one switchboard to another.

DISCUSSION: The procedure followed in the preparation of the LD Cutover, was as follows. The plan called for the removal from service 50% of the LD circuits from service starting at 1500 hours and running through until 2000 hours. This permitted a gradual limitation of service as the demand decreased through the day. The circuits taken out of service were talked out and this guaranteed a 50% proven LD capacity at cut-over which was at 2200 hours.

OBSERVATION: There was some problem with distant switchboard operators sending calls over the deactivated circuits. This permitted the maintenance personnel to be certain that the circuits were operative but it inconvenienced the calling parties. Care should be taken to coordinate with the distant end to prevent this subscriber inconvenience prior to the actual cutover. However, overall, the above method of cut over proved extremely effective.

#### AN/MSQ-73 TECH CONTROL FACILITY

ITEM: Trouble shooting 26 pair cable problems and emergency replacement.

DISCUSSION: A great deal of time was used to trouble shoot 26 pair cable or when necessary, replacement of the entire cable.

OBSERVATION: By running spare 26 pair cable from the AN/MSQ-73 van to each of the radio terminals and tagging the hocks provided a quick means of substitution while trouble shooting cable problems or for emergency replacement.

#### CONTROL TERMINAL COMMUNICATION FACILITY

ITEM: Interference of CTCF.

SCCVNG-SS

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

13 May 1967

DISCUSSION: During preliminary checkout of the AN/MSQ-73 a great deal of hum, induction and interference to the CTCF was caused by the transformer.

OBSERVATION: Moving the right hand D.C. power supply switch to the upper position in its rack greatly reduced hum, induction and interference to the CTCF.

#### ALARM INDICATORS

ITEM: Marking alarm panel indicators.

DISCUSSION: Service alarm panel indicators are not marked, therefore control operators were often confused as to which circuit had failed when an alarm condition occurred.

OBSERVATION: Tagging the alarm indicators has eliminated this problem.

c. Training and Organization.  
(See Next Page)

SCCVNG-SS

SUBJECT: Operational Report for the Quarterly Period Ending 30 April 1967  
Reports Control Symbol SCFOR-65

13 May 1967

LESSON PLANS

ITEM: Preparation of Lesson Plans.

DISCUSSION: The Battalion training section assigned approximately ten lesson plans to each company to be prepared and sent to Battalion where they were all reproduced and record copies sent back to the unit. This system prevents duplication in preparing classes and allows each unit to produce good lesson plans.

OBSERVATION: The present system reduces the administrative work load of an efficient training program and allows maximum effort to be spent on actual training and operation.

d. Intelligence.

PROTECTION OF COMMUNICATIONS FACILITIES

ITEMS: The problem of signal units constructing revetments for large structures.

DISCUSSION: No provisions have been made in the initial plans for revetment of IWCS sites, Communications Centers, or Dial Exchanges; all large structures. However, command policy requires their revetment. Signal units are not equipped to undertake such large engineering construction and faulty construction by unqualified personnel could cause considerable damage.

OBSERVATION: Revetment of these structures could be included in the contracts or plans and would be more reliable and permanent than sandbag walls. This recommendation has been made to higher headquarters.

DEFENSE CONSTRUCTION

ITEM: The problem of sandbagging equipment vans and personnel bunkers.

DISCUSSION: When erecting passive defense construction around vans and for personnel bunkers, it is less time consuming and just as effective to use 55-gallon drums rather than sandbags. Van, size S-141/G type or smaller, should not have sandbags piled on top of them as their roofs tend to buckle under the load. Also, a 12-inch air space should be left between the top of the van and the sandbag covering to reduce the heat in the van and subsequent malfunctioning of the equipment. The drums should be filled with sand rather than dirt. A rainy season will cause the dirt to wash out of the drums and weaken the wall. A filled drum weighs over 400 pounds and could cause considerable damage if it toppled.

SCCVNG-SS

13 May 1967

SUBJECT: Operational Report for the Quarterly Period Ending 30 April 1967  
Reports Control Symbol SCFOR-65

OBSERVATION: Care should be taken to allow for heat dissipation and the weight of the earth or sandbags on equipment van roofing when constructing passive defense measures. Sand instead of dirt should be used to fill drums and sandbags and care should be taken that sandbagging is not located under or near any water drainage or possible water drains.

e. Logistics:

#### SUPPLY LIAISON

ITEMS: Co-ordination with direct support maintenance.

DISCUSSION: In remote areas where transportation facilities are limited and direct support activity is located in another area, many problems arise in the co-ordination of requisitioning and turning in of equipment.

OBSERVATION: Establish a permanent liaison man at the direct support activity to co-ordinate with responsible individuals.

#### T-368 TRANSMITTER

ITEM: Interchange of T-368 Components.

DISCUSSION: In the present AN/GRC-26D, there may be anyone of six models A thru F of the T-368 transmitter. Components from different models can not be interchanged because of different circuits contained therein. The least damaging thing that can happen if this is done is that the set won't work. If, for example, A and C model components are switched many capacitors, resistors, and interconnectors may be burned out.

OBSERVATION: Unless schematics of T-368's can be checked for identical circuitry, no components should be swapped.

#### MULTIPAIR CABLE

ITEM: Damage of Multipair Cable

DISCUSSION: This unit received two reels of multipair cable which were damaged beyond use. The damage was apparently caused by use of a forklift to handle the cable. Normally this method is suitable unless careless operation of the forklift punctures or otherwise damages the cable.

OBSERVATION: Care should be exercised when moving cable with forklifts.

31  
SCCVNG-SS

13 May 1967

SUBJECT: Operational Report for the Quarterly Period Ending 30 April 1967  
Reports Control Symbol SCFOR-65

AIR CONDITIONING MAINTENANCE SUPPORT

ITEM: Tropo Scatter Equipment Air Conditioners.

DISCUSSION: AN/TRC-90 Series tropo scatter equipment are plagued with air conditioner problems resulting in extended systems outages. In spite of applied operator maintenance and the constant efforts by maintenance personnel, the air conditioners are continually in need of support type maintenance. Site personnel have had to beg, borrow, and even purchase with their funds oscillating fans and portable air conditioners so that the equipment may be kept at a temperature safe for operation and hoping to prevent extended systems outages. This command is not equipped to provide timely services in repairing or replacing defective air conditioners common to the AN/TRC-90 series tropo scatter equipment. Availability of 15 to 19 thousand BTU portable conditioners is limited. The mission of the tactical long lines communication system is paramount to the over-all mission of the allied forces and, as such, more emphasis should be placed on making available portable air conditioners to support maintenance facilities or to the organizational maintenance section of the 362nd Signal Company (TROPO).

Systems outage, RFO-----Air Conditioner out. After approximately twelve (12) days of "NO COOL AIR" condition the power transformer of the AN/TRC 90 series Power Amplifier became too hot for safe and continued operations. Result was that system was taken down and logged OUT. Operator and organizational maintenance personnel were not able to correct the deficiency due to lack of parts. Oscillating fans were then obtained, installed, and the tropo equipment was back in operation. Equipment temperatures coupled with natural sun light temperatures were much more than the power amplifier could stand; result: system outage again. A portable air conditioner was obtained, installed and with the help of the oscillating fans the system was back in operation. Positioning of the portable air conditioner was somewhat of a problem but if mounted on a platform on the outside and at the rear of the van, utilizing air ducts fastened to the two (2) existing air vents, and by properly positioning oscillating fans, cool air circulation is adequate for continuous operation.

OBSERVATION: Emphasis must be placed on air conditioner maintenance support to insure that the support is adequate to units whose operations are critical and dependent on this type of auxiliary equipments. A recommendation for the establishment of a refrigeration maintenance section in this unit was made in the modified TO&E submitted by this Battalion.

SCCVNG-SS

13 May 1967

SUBJECT: Operational Report for the Quarterly Period Ending 30 June 1967  
Reports Control Symbol SCFOR-65

### DIESEL GENERATORS

ITEM: Operating Temperature of Diesel Generators

DISCUSSION: Lower than specified operating temperature of Diesel Generators allows fuel oil to slip past piston rings and down the cylinder walls where it dilutes the lube oil in the crankcase. 2% fuel oil in lube oil reduces the body strength of the lube oil below 50% which means the "HD-30" becomes "HD-10", a condition which can not be tolerated.

OBSERVATION: Adjusting the radiator shutters and keeping access panels closed as per TM instructions will increase the operating life of Diesel Generators.

### 45KW DIESEL GENERATORS

ITEMS: Effect of vibrations and shock on 45KW Generators.

DISCUSSION: Excessive vibrations and shock. Over-voltage relays are sensitive to excessive vibrations and shock resulting in numerous and unaccountable power failures. This same situation causes bolts to become loose, registering of invalid lube oil level readings, and improper functioning of the set-tank float switch and transfer jumps. After careful inspection, it was discovered that the improper levelling and blocking of the generator was the major cause of these deficiencies.

OBSERVATION: Extreme care should be taken in the blocking and levelling of the generators. A few extra minutes taken in performing these actions will result in prolonged and satisfactory operations.

### ALTITUDE EFFECTS ON GENERATORS

ITEM: Decreased efficiency of generators at high altitudes.

DISCUSSION: At high altitudes generators (45KW) do not perform at maximum efficiency due to a decrease in air density.

OBSERVATION: Besides lowering the load requirements, fuel barrels, if used should be elevated and generators should be leveled. Maintenance must be performed constantly.

### GENERATOR RADIATORS

ITEM: Improve fuel consumption.

DISCUSSION: Fuel consumption is a problem at high altitude.

SCCNG-SS

13 May 1967

SUJECT: Operational Report for the Quarterly Period Ending 30 April 1967  
Reports Control Symbol SCFOR-65

OBSERVATION: Keep radiator shutter on 45KW generator closed. This keeps the engine cool and improves fuel consumption.

f. Safety

PRE-OPERATIONAL CHECKS

ITEM: A generator carburetor leaking fuel caused a fire when personnel tried to start the generator.

DISCUSSION: Make sure all fuel lines and connections are tight before trying to start the generator.

OBSERVATION: Always check equipment over before starting.

g. Aviation: None

PART II: Recommendations (Lessons Learned)

1. PERSONNEL

a. Continued attention must be given toward reducing rotational bumps.

b. Increased efforts should be made at all echelons to expedite reassignment instructions for enlisted personnel rotating from RVN.

c. The emergency requisition for qualified operator personnel for the Interim Autodin Facility be filled as soon as possible.

2. OPERATIONS:

a. When required, utilize the AB/216-U tower antenna for supporting the AN/TRC-90A antennas.

b. When changing generators or interrupting power, turn off PP-685 Power Supplies.

c. Plans for cutting over large switchboards, particularly from a manual board to a dial facility, should utilize half-taps. Also a portion of the long distance trunks should be cut-over early and tested prior to the main cut-over.

d. Spare 26 pair cables should be installed from the AN/MSQ-73 vans to each radio terminal and tagged for quick substitution in case of cable problems.

34  
SCCVNG-SS

13 May 1967

SUBJECT: Operational Report for the Quarterly Period Ending 30 April 1967  
Reports Control Symbol SCFOR-65

e. The right hand D.C. power supply switch of the AN/MSQ-73 should be in the upper position in order to reduce hum and induction in the control terminal communication facility.

f. Alarm indicators in the AN/MSQ-73 should be tagged.

3. TRAINING AND ORGANIZATION: The battalion S-3 section should co-ordinate the preparation of lesson plans within companies to reduce administrative requirements and enhance the quality of training.

4. INTELLIGENCE:

a. Contractor constructed facilities should have the necessary revetment construction included in the original facility contract.

b. When constructing revetments, care must be exercised to allow proper air flow and not to overload vans or other supporting articles. Also, sand instead of dirt should be used to fill sand-bags and drums.

5. LOGISTICS:

a. Close liaison should be established between battalions and direct support maintenance activities.

b. Care must be practiced when exchanging or replacing components of AN/GRC-26 Radio Sets; otherwise the components assembled may not be compatible.

c. Multipair cable reels should be handled with care, particularly when forklifts are being used.

d. An air conditioner/refrigeration maintenance section should be included in the battalion organization. Such a section was included in the MTOE submitted to higher headquarters.

e. Diesel generator radiator shutters and access panels should be carefully adjusted according to TM specifications.

f. Extreme care should be taken in levelling and blocking 45 KW diesel generators.

g. At high altitudes the following precautions should be used when operating 45 KW generators:

- (1) Load requirements should be lowered.
- (2) Maintenance must be performed more frequently.
- (3) The radiator shutter should be closed.

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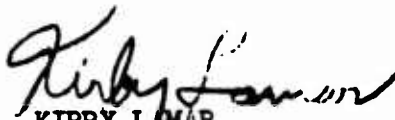
13 May 1967

SUBJECT: Operational Report for Quarterly Period Ending 30 April 1967  
Reports Control Symbol SC:OR-65

6. OTHER:

All fuel lines and connections should be checked for tightness before trying to start generators.

- 1 Inc  
(Picture of DCO Cut Over)

  
KIRBY LAMAR  
LTC SigC  
Commanding

37  
SCCVNG-SY (14 May 67) 1st Ind  
SUBJECT: Operational Report for the Quarterly Period Ending 30 April  
1967

Headquarters, 21st Signal Group, APO San Francisco, 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: CPOP-NH, APO 96658

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, 73rd Signal Battalion Report, Subject: Same as above.
2. Concur with observations made by CO, 73rd Signal Battalion.
3. Reference Section I, para 3a a transfer of personnel within Battalion resources should be sufficient to resolve rotational hump within the 278th Sig Co, without the necessity of transferring personnel to other battalions. This is preferable since the rotation of personnel between battalions creates problems in the system of requisitioning replacement personnel.
4. Reference Section I para 3f, the three man liaison team has been provided to coordinate the assignment and movement of incoming Group and Brigade personnel replacements arriving in Cam Ranh Bay.
5. Reference Section I par 6.
  - a. The formal schooling conducted by 1st Signal Brigade has helped the OJT program in the 73rd Signal Battalion. The program has provided qualified personnel to instruct new arrivals coming in-country on the different types of communications equipment in use by the unit.
  - b. Weapons familiarization firing programs were carried out in the 73rd Signal Battalion during the last quarter enabling almost half of the battalion to fire their assigned weapons. Throughout the I and II Corps Tactical Zone no firing range is available for qualification firing of weapons.
6. Reference Section I para 8 Logistics.
  - a. Continual command emphasis must be placed on maintenance of equipment to insure maximum serviceability of TO&E equipment. Reliability of systems and quality of circuits depends of trained operators and a sound preventive maintenance program.

SCCVNG-SY

28 May 1967

SUBJECT: Operational Report for the Quarterly Period Ending 30 April 1967

b. Upgrading PLL's is a continuous task. It is only through the practice of recording demand experience that a realistic level of repair parts will be available to repair personnel.

c. There is no substitute for timely follow-up and personal contact with supporting units to insure outstanding requisitions are still valid. All units that have been activated in country are experiencing a delay in receiving their TO&E equipment.

7. Reference Section II part I.

a. Item: Half tap of cable at MDF

The half tap procedure that the 73rd Sig Bn used in the process of cutting over their DCO seems to have worked well. The cut-over progressed very smoothly.

b. Item: Troubleshooting 26 pair Cable Problems on the MSQ-73.

This method of trouble shooting cable, that is, substitution, is probably the most reliable and efficient. As long as cable and hocks are available, all sites would do well to follow this method.

*John M. Sakat, Jr. SigC*  
CHARLES H. BURR JR  
COL, SigC  
Commanding

39  
300VOP

2nd Ind

SUBJECT: Operational Report for the Quarterly Period Ending 30 April 1967

DA, HQ, 1st Sig Bde (USASTRATCOM), APO SF 96307 11 JUN 1967

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

1. IAW AR 1-19, subject report from the 73rd Signal Battalion (Support) is forwarded.

2. Concur in the Commander's Observations as indorsed by 21st Signal Group with following comments:

a. Reference Item Personnel Rotations page 22, concur with paragraph 3, 1st Indorsement.

b. Reference Item: Numbered Detachments page 22. An MTOE for the 362d Signal Company was prepared and forwarded to USASTRATCOM on 25 February 1967, incorporating 12 separate detachments into the 362d Signal Company. This MTOE was approved by USASTRATCOM and forwarded to ACSI FOR, DA on 13 April 1967 with a recommendation for concurrent deactivation of the detachments upon approval of the MTOE 362d Signal Company. After the above action, 2 RI detachments, the 544th and 545th Signal Detachments, were assigned to the 362d Signal Company and it will require MTOE action to incorporate these 2 detachments into the 362d Company. This action will be delayed until the MTOE presently being staffed is approved. This problem will be resolved upon completion of pending and future MTOE action.

c. Reference Item: Protection of Communications Facilities page 26. The revetment of structures described in this item must and has been accomplished by troop labor using available materials. This revetment has been accomplished at numerous signal sites. Action has been initiated by this headquarters and Headquarters, USARV to have revetments for the IWCS and Class IV project buildings included in future contracts. A request has been submitted through channels to Department of the Army to obtain AMICO steel revetment kits used by the Air Force for revetment of present IWCS structures. If approved these revetments will be erected by troop labor to replace the present sandbag and sand-filled drum revetments.

d. Reference Item: Defense Construction, page 26. The methods described are those recommended by this headquarters and 21st Signal Group. Guidance has been provided regarding overhead cover. Overhead cover will be provided when structural strength is sufficient to bear the load; however, where structural strength is inadequate, load spreaders or roof construction will be used.

40

11 JUN 1967

SCCVOP

SUBJECT: Operational Report for the Quarterly Period Ending 30 April 1967

3. Concur in the Commander's Recommendations as indorsed by 21st Signal Group with the following comment: Reference recommendation lc page 30. Emergency requisitions and follow up actions have been taken by this headquarters.

FOR THE COMMANDER:



THOMAS D. BLEDSOE Jr.

Colonel, GS

Chief of Staff

41  
AVHGC-DST (14 May 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 18 JUL 1967

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, 73d Signal Battalion (Spt) as indorsed.

2. Pertinent comments follow:

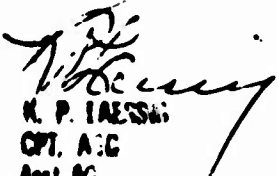
a. Reference item concerning a critical shortage of senior enlisted personnel in MOS 26L (MICROWAVE/TROPO), paragraph 3c page 5: Noted. Replacements for the 1st Signal Brigade are programmed by USASTRATCOM. Both headquarters are aware of these shortages and are attempting to alleviate the situation.

b. Reference item concerning a marked decrease in the receipt of reassignment instructions for departing enlisted personnel, paragraph 3d page 5 and paragraph 16, page 30: Noted. The 1st Signal Brigade is aware of this situation and attempting to resolve the matter thru USASTRATCOM channels.

c. Reference item concerning large numbers of personnel departing during a short period of time, page 22: Concur in the actions being taken by the commanding officer of the 73d Signal Battalion to reduce the rotational hump of his unit.

d. Reference items concerning close liaison between battalions and DS maintenance activities, operating precautions for 45 KW generators, and check of fuel lines and connections before starting generators, paragraph 5g page 31: Concur in unit recommendations.

FOR THE COMMANDER:

  
K. P. LAESSE  
CPT, AIC  
Asst AG

42

GPOP-DT(14 May 67)

4th Ind

SUBJECT: Operational Report for the Quarterly Period Ending 30 April 1967  
from HQ, 73d Sig Bn (Spt) (RCS CSFOR-65)

HQ, US ARMY, PACIFIC, APO San Francisco 96558

19 SEP 1967

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

This headquarters has reviewed subject report and concurs in the  
report as indorsed.

FOR THE COMMANDER IN CHIEF:



H. SEYLER  
OPT, AGO  
Asst AG