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AUTHORITY

AGO ltr 29 Apr 1980

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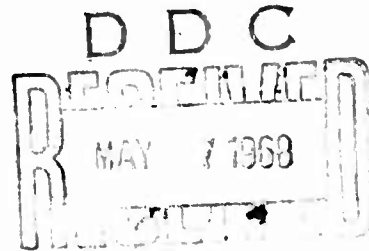
AGAM-P (M) (11 Apr 68) FOR OT RD 681084

16 April 1968

AD831435

SUBJECT: Operational Report - Lessons Learned, Headquarters, 86th
Signal Battalion (Spt), Period Ending 31 January 1968 (U)

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1. Subject report is forwarded for review and evaluation in accordance with paragraph 5b, AR 525-15. Evaluations and corrective actions should be reported to ACSFOR OT RD, Operational Reports Branch, within 90 days of receipt of covering letter.

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

BY ORDER OF THE SECRETARY OF THE ARMY:

Kenneth G. Wickham

KENNETH G. WICKHAM
Major General, USA
The Adjutant General

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Washington, D.C. 20310

DEPARTMENT OF THE ARMY
HEADQUARTERS, 86TH SIGNAL BATTALION (SFT)
APO 96353

SCCV G-SV-CO

14 February 1968

SUBJECT: Operational Report for Quarterly Period Ending 31 January 1968
(RCS-CSFOR-65) UIC: WFTI-AA-A

TO: See Distribution

SECTION I: SIGNIFICANT UNIT ACTIVITIES

1. General: The battalion continued to provide area communications in the western sector of the III Corps Tactical Zone during the reporting period. The 587th Signal Company, 86th Signal Battalion (SFT) relocated from Cu Chi RVN to Tay Ninh West RVN on 18 November 1967 in support of Operation Yellowstone. The headquarters was established at Tay Ninh West with the Red Platoon and elements of the radio platoon providing communications support for the 1st Brigade, 25th Infantry Division and Non-Division Support units while the White Platoon with elements of Blue Platoon provide support to Hqs, 25th Infantry Division, 3rd Brigade, 25th Infantry and Non-Divisional units at Dau Tieng. Responsibility for the operation of the Tan An Communications Site transferred to the Commanding Officer, 39th Signal Battalion effective 20 December 1967. Equipment was transferred in place. In November the responsibility for the operation of Duc Phu Quoc Island VHF-Carrier System was transferred to the 324th Signal Company (SFT), with both personnel and equipment transfers being involved.

2. Personnel: The battalion experienced a reduction in personnel during the reporting period with 719 officers and enlisted men assigned at the end of January. Authorized strength is 778.

3. Operations:

a. Of primary interest to this battalion during the reporting period was providing communications in support of Operation Yellowstone which entailed the reengineering of the present AACS and the establishment and upgrading of VHF system from AN/TRC-24 to AN/GRC-50 PCM (AN/TRC-110/117, and AN/TCC-61 equipment).

b. VHF systems installed and upgraded during the reporting period:

(1) Install: 12 channel . AN/TRC-24 Cu Chi - Bien Hoa AAH42

(2) Install: 12 channel AN/TRC-24 Cu Chi - Dau Tieng AAH21
pending upgrade of AAW80 to 24 channel.

FOR OT RD
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(3) Install: 12 channel AN/TRC-24 Dau Tieng - Lai Khe AAH68

(4) Relocate: 12 channel AN/TRC-24 Bao Trai - Dau Tieng

AAH03.

(5) Install: 12 channel AN/TRC-24 Duc Hoa - New MACV AH22.

(6) Upgrade: 24 channel AN/TRC-110/TCC-61 Cu Chi - Long Binh

AAW75.

(7) Upgrade: 24 channel AN/TRC-110/TCC-61 Cu Chi - Tan Son Nhut

77UH1G.

(8) Upgrade: 24 channel AN/GRC-50 TCC-7 Cu Chi - Dau Tieng

AAW80.

(9) Upgrade: 24 channel AN/GRC-50 TCC-7 Cu Chi - Bien Hoa

AAW66.

c. Upon the availability of AN/GRC-50 PCM equipment, the following AN/TRC-24, 12 channel systems will be upgraded.

(1) Tay Ninh - Dau Tieng AAH36

(2) Dau Tieng - Lai Khe AAH68

(3) Cu Chi - Dau Tieng AAH28

(4) Cu Chi - Duc Hoa AAH01

(5) Duc Hoa - New MACV AAH22

d. Considerable outside cable plant engineering and construction was accomplished during the reporting period. Cable rehabilitation and expansion was accomplished at Cu Chi, Bao Trai and Duc Hoa. The AN/MTC-1 switchboard at Dau Tieng was replaced with an AN/MTC-9 switchboard to meet increased subscriber requirements in support of Operation Yellowstone. Prior to the arrival of Hqs, 25th Infantry Division at Dau Tieng complete rehabilitation of the outside multipair cable was accomplished by battalion personnel due to changes in the initial planning.

e. The Dial Central Office (DCO) and the Communication Center Class IV Signal Projects progressed during the reporting period. Construction and installation of equipment in the Dial Central Office has been completed and is presently undergoing initial testing. Construction on the Communication Center has been 90% completed although no equipment is on hand.

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4. Training:

a. The training program throughout the battalion progressed considerably during the reporting period. This progress is attributed to the frequent, scheduled training inspections and Weekly Command Inspections conducted by this headquarters. Close coordination is being maintained by all staff sections of Functional Training. Requirements are projected for the third and fourth quarters FY 68.

b. Bunker line training continued during the reporting period with increased emphasis being on the operation and function of the M-79 grenade launcher and the M-60 machine gun. The battalion has been levied to furnish two (2) forty (40) men rifle platoons, on call, to function as reaction forces under the operational control of the 25th Infantry Division Support Command.

5. Logistics:

a. During the last quarter the battalion main power distribution system has been improved by installing #00 wire in place of smaller gauge gauge wire previously utilized. An extended run of #8AWG was used to give power to the APO.

b. With the movement of the 587th Signal Company to Dau Tieng and Tay Ninh, new hutments and mess facilities had to be planned and built. Troop labor was used for construction with the bulk of the building materials coming from the 554th Engineer Battalion and 25th Infantry Division DSO. The mess hall was enlarged and 15 hutments completed at Tay Ninh. At Dau Tieng, ten (10) modified tentkits were constructed. All canvas covered tentkits at the White Platoon Cantonment Site at Dau Tieng were subsequently upgraded to tin roofed hutments.

c. The program to turn-in excess on hand TOE equipment is progressing very well. Message, US Army Vietnam, AVHGD-ED 87543 dated 26 November 1967 is being used as authority for turn-in.

d. On the 29th of December, a project to purify all Property Books in the battalion was begun. At the present time, it is 70% complete. The purification is being accomplished by obtaining Equipment Directives for all equipment in excess of TOE and bringing all Property Books and supporting documents into line with current regulations and directives.

SECTION II COMMANDERS OBSERVATIONS AND RECOMMENDATIONS

Part 1: Observation (Lessons Learned)

a. Personnel: None

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b. Operations:

Item: Increased Transmit/Receive Levels on VHF Carrier Systems

Discussion: It has been found that transmit/receive signals have been degraded when excessive lengths of coaxial cable are used to connect transmitters to antennas in accordance with antenna heights prescribed by Letters of Instruction.

Observation: Experimentation has revealed that an antenna placed at a level of thirty (30) feet with a forty (40) foot length of coax between the transmitter and antenna outperforms an identical antenna placed at the ninety (90) foot level with a transmission line of one hundred and twenty (120) feet in length provided radio line of sight exists. Power level measurements show a constant day/night average increase over a six (6) day test period of seven (7) db on the transmitter and four (4) db on the receiver.

c. Training: None

d. Intelligence:

Item: Security Clearances of Alien Personnel

Discussion: It has been found that during preliminary routine processing of personnel individuals of an alien nationality (not US citizen, naturalized) have not had a Background Investigation initiated prior to arriving in a overseas area as specified in AR 609-200.

Observation: Personnel arriving overseas and subsequently assigned to a unit are unable to perform their assigned duties for three (3) to six (6) months pending the initiation and completion of a Background Investigation.

e. Logistics:

Item: Water Pump for 45KW Hollingsworth Model JHDW45A, FSN

6115-075-9122

Discussion: A 45KW Hollingsworth Generator Model JHDW45A was deadlined for an engine water pump assy, FSN 2930-570-2952, reference TM 5-6115-313-20P. Attempts to get this part through normal supply channels and by other means failed. Finally, it was found that the water pump assembly for the multifuel engine in the M35A2, 2½ ton truck could be used as a replacement. Both pumps are made by Continental Engine Corp., and have the same bolt mounting pattern. The only noticeable difference is the pulley. The M35A2 pump uses a two belt pulley while the 45KW uses a three belt pulley. The three belt pulley for the 45KW pump assembly will fit on the M35A2 water pump's shaft.

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The multifuel water pump assy's FSN is 2930-861-1412, reference TM 9-2320-209-20. No engine overheating has been noticed with the new pump installed. It has proven to be an adequate, temporary replacement and should be replaced when the authorized pump assy, becomes available.

Observation: The water pump assy, for an M35A2 2½ ton truck can be used as a field expedient replacement for the water pump of the 45KW Hollingsworth Generator Model JHDW45A.

Item: Substitution of Electron Tubes

Discussion: Electron tube 836 (FSN 5960-116-9983) used in power supply PP-685/TRC-24 is in short supply and high demand. In an effort to restore AN/TCC-7, AN/TRC-24 multichannel communications systems, it was learned that electron tube 1616 (FSN: 5960-100-7135) is an acceptable substitute for the 836. The 1616 is used in the power supply PP-827/TCC-7 which is only used for cable systems. Since the PP-827 is not required when the AN/TCC-7 is used with the AN/TRC-24 radio set, this is a valuable source of a tube to replace a defective tube 836. In addition to the substitution of the 836 with the 1616 the electron tube 3B28 (FSN: 5960-108-0250) is also an acceptable substitute. This tube is used with the transmitter, T-368 part of AN/GRC-26D Radio Set. There is no restriction on the use of the PP-685 with either tube substituted for the tube 836. In modification to the tube socket in the PP-685 is required to use either of these tubes.

Observation: Electron tubes 836 (FSN: 5960-116-9983) used in power supply PP-685 part of AN/TRC-24 have a high failure rate when the AN/TRC-24 is used in hot climates. Supply of these tubes in RVN is critically short.

Part 2: Recommendations:

- a. Personnel: None
- b. Operations: That emphasis be placed on decreasing antenna heights to acceptable line of sight minimums in order to shorten the length of the transmission line and increase the receive/transmit signal.
- c. Training: None
- d. Intelligence: The initiation of a background investigation for alien personnel should be a part of the POR qualification prior to shipment overseas.
- e. Logistics:

(1) Recommend that the M35A2 multifuel engine water pump assembly be used to replace inoperative water pump assembly on 45KW Hollingsworth JHDW45A Generator, if the authorized assy is not available.

SCCVFC-SV-CO

14 February 1968

SUBJECT: Operational Report for Quarterly Period Ending 31 January 1968
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(2) Units in the field should be advised that tube number 1616 and 3B28 are acceptable substitutes for tube 836 in the AN/TRC-24 power supply PP-685 and an article should be included in a future issue of P.S. magazine.

Dean B. Dickinson

DEAN B. DICKINSON
LTC SIGC
Commanding

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SCCVSG-CO (14 Feb 68) 1st Ind
SUBJECT: Operational Report for the Quarterly Period Ending 31 January
1968 (RCS CSFOR-65) (WFT1-AA-A)

DA, HEADQUARTERS, 2D SIGNAL GROUP, APO 96491 23 FEB 1968

THRU: Commanding General
1st Signal Brigade (USASTRATCOM)
APO 96384

Commanding General
United States Army Vietnam
APO 96374

Commander-in-Chief
United States Army Pacific
APO 96558

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

1. Operational Report for Quarterly Period Ending 31 January 1968 submitted by the 86th Signal Battalion has been reviewed and found to be adequate, with the following comments noted:

a. The 86th Signal Battalion Headquarters and Headquarters Detachment are located at CU CHI. The 86th Signal Battalion commands subordinate units as follows: 587th Signal Company, TAY NINH; Company B, 36th Signal Battalion, CU CHI; and, Company D, 44th Signal Battalion, DUC HOA.

b. Section I, Paragraph 3b(2). AAH21 was deactivated on 9 January 1968. AAW80 was upgraded to 24-channels on 9 January 1968.

c. Section I, Paragraph 3b(3). System AAH03 (BAO TRAI - DAU TIENG) was relocated back to CU CHI on 8 February 1968.

d. Section II, Part 1, b and Section II, Part II, b. It is true that excessive lengths of coaxial cable cause signal attenuation. There is definitely a trade-off point. By increasing antenna heights a height gain factor is realized. At some point the gain or signal improvement realized by height is offset by coaxial cable loss. Further increase in antenna height results in a loss. This trade-off point is reached sooner if sections of coaxial cable are used rather than continuous lengths; it is estimated that each junction results in a 3 db loss. Heights specified in LOIs are based on the assumption that continuous lengths of coaxial cable will be used. In the case of AN/GRC-50 systems

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SCCVSG-00 (14 Feb 68)

1st Ind

SUBJECT: Operational Report for the Quarterly Period Ending 31 January
1968 (RCS CSFOR-65) (WFT1-AA-A)

antenna height is determined by the requirement for 1st freznl zone clearance. It is true that the system will perform without this clearance, but fading paths will be deeper and longer; consequently, AN/GRC-50 systems that do not have 100% freznl zone clearance will achieve something less than 99% reliability. Transmitter output power is independent of the length of coaxial cable to the antenna. The improvement of 4 db (how measured is unknown) is realized by eliminating the junction between 80 and 40 foot pieces of coaxial cable and not by the reduction in length. If the 120 feet of coaxial cable was continuous, it is predicted that the higher antenna would provide the best signal over the long term. Recommend that that equipment characteristics and radio path be taken into consideration before decreasing any antenna heights.

e. Section II, Part 1, d and Section II, Part 2, d. Recommend that personnel records be screened during POR to ascertain if the immigrant alien MOS will require a security clearance. Upon determination of the requirement of a clearance a BI should be initiated to preclude unnecessary delay after movement to an overseas area.

2. I concur in the commander's Observations and Recommendations portions of the report, except as noted above.

Daniel C Bird

DANIEL C. BIRD
Colonel, SigC
Commanding

SCCVOP (14 Feb 68)

2d Ind

SUBJECT: Operational Report for Quarterly Period Ending 31 January 1968,
from Headquarters, 86th Signal Battalion, (RCS CSFOR-65)
(WFT1-AA-A)

DA, HQ, 1st Sig Bde (USASTRATCOM), APO SF 96384 3 MAR 1968

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

Commanding General, United States Army Strategic Communications
Command, ATTN: SCCOP, Fort Huachuca, Arizona 85613

1. Subject report is forwarded for your information.
2. Concur in the Commander's observations as stated in the basic correspondence and 1st indorsement.
3. Concur in the Commander's recommendations. The following information is provided with respect to Section II, Part 2; Recommendation e, (2) page 7. The 86th Signal Battalion has been instructed to submit an Equipment Improvement Report (EIR) on the 836 tube.
4. Nonconcur in the Commander's recommendation stated in Section II, Part 2, as follows:

Recommendation: d, page 6. AR 600-200, paragraph 3-6b, states that a favorable background investigation (BI) is to be completed on all aliens sometime after entry on active duty (EAD). Without a BI, an alien is restricted from overseas assignment. Further, if a security clearance is necessary for an alien to work in his MOS, a request for clearance must be submitted IAW AR 604-5 and all investigations must be completed prior to granting a clearance. In addition, this headquarters recommends the following:

- a. All aliens have a BI initiated upon entry on active duty.
- b. An alien not be assigned overseas without a completed BI.
- c. An alien not be assigned in an MOS requiring access to classified information without a favorably completed background investigation.

FOR THE COMMANDER:

John B. Kinney, Col Sig C
for THOMAS D. BLEDSOE, JR.
Colonel, GS
Chief of Staff

AVHGC-DST (14 Feb 68)

3d Ind

SUBJECT: Operational Report for Quarterly Period Ending 31 January 1968
(RCS-CSFOR-65) UIC: WFT1-AA-A

HEADQUARTERS, US ARMY VIETNAM, APO San Francisco 96375

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

1. This headquarters has reviewed the Operational Report-Lessons Learned for the quarterly period ending 31 January 1968 from Headquarters, 86th Signal Battalion (SPT) (FT1A) as indorsed.

2. Concur with report as indorsed. Report is considered adequate.

3. A copy of this indorsement will be furnished to the reporting unit through channels.

FOR THE COMMANDER:


CHARLES A. BIRD
Major, AGC
Assistant Adjutant General

Copy furnished:

HQ 86th Sig Bn (SPT)

HQ 1st Sig Bde (USASTRATCOM)

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GPOP-DT (14 Feb 68) 4th Ind
SUBJECT: Operational Report for the Quarterly Period Ending 31 January
1968 from HQ, 86th Sig Bn (Spt) (UIC: WFTLAA) (RCS CSFOR-65)

HQ, US Army, Pacific, APO San Francisco 96558 21 MAR 1968

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

This headquarters has evaluated subject report and forwarding indorse-
ments and concurs in the report as indorsed.

FOR THE COMMANDER IN CHIEF:



K. F. OSBOURN
MAJ, AGC
Asst AG

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DOCUMENT CONTROL DATA - R & D

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DEPARTMENT OF THE ARMY
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WASHINGTON, D.C. 20310

IN REPLY REFER TO

AGAM-P (M) (6 May 68) FOR OT RD-681084

8 May 1968

SUBJECT: Operational Report - Lessons Learned, Hqs, 86th Signal
Battalion (Spt), Period Ending 31 January 1968, dated
16 April 1968

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Attached pages 5 and 6 of subject report, omitted from some copies
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C. A. STANFIEL
Colonel, AGC
Acting The Adjutant General

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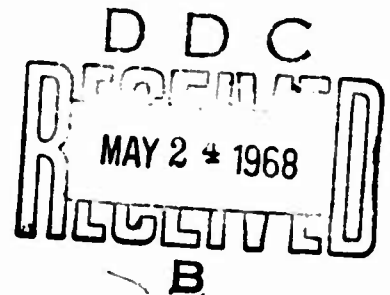
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CO, 86th Signal Battalion (Spt)

SCCVSG-SV-CO

14 February 1968

SUBJECT: Operational Report for Quarterly Period Ending 31 January 1968
(RCS-CSFOR-65) UIC: WFT1-AA-A

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Part 2: Recommendations:

- a. Personnel: None
- b. Operations: That emphasis be placed on decreasing antenna heights to acceptable line of sight minimums in order to shorten the length of the transmission line and increase the receive/transmit signal.
- c. Training: None
- d. Intelligence: The initiation of a background investigation for alien personnel should be a part of the POR qualification prior to shipment overseas.
- e. Logistics:

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SCCVSG-SV-CO

14 February 1968

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Dean B. Dickinson

DEAN B. DICKINSON
LTC SIGC
Commanding

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