

UNCLASSIFIED

AD NUMBER

AD827545

LIMITATION CHANGES

TO:

Approved for public release; distribution is unlimited.

FROM:

Distribution authorized to U.S. Gov't. agencies and their contractors; Critical Technology; 15 AUG 1966. Other requests shall be referred to Assistant Chief of Staff for Force Development (Army), Attn: FOR-OT-RD, Washington, DC 20310. This document contains export-controlled technical data.

AUTHORITY

AGO D/A ltr, 29 Apr 1980

THIS PAGE IS UNCLASSIFIED

DEPARTMENT OF THE ARMY
HEADQUARTERS, 39TH SIGNAL BATTALION
APO San Francisco 96291

SGCVSG-SBC

15 August 1966

SUBJECT: Operational Report on Lessons Learned (RCS CSGPO-28(R1))
for the Period 1 May - 31 July 1966

AD827545

FROM: Commanding Officer
2d Signal Group
ATTN: SGCVSG-C
APO 96307

STATEMENT #2 UNCLASSIFIED

This document is subject to special export controls and each transmittal to foreign governments or their nationals may be made only with prior approval of FOR-OT RD

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

1. Reference USARV Regulation Number 870-2, dated 19 July 1966
2. Subject report is forwarded as Inclosure 1.

FOR THE COMMANDER:

Alvera N. Bone
ALVERA N. BONE
CPT, SigC
Adjutant

1 Incl
as

DDC
RECORDED
FEB 2 1966

FOR OT RD
660218

3

**Best
Available
Copy**

SECTION 1, SIGNIFICANT ORGANIZATIONAL ACTIVITIES

1. During the period covered by this report, the 39th Signal Battalion was commanded by Lieutenant Colonel Donald L. Jenkins. Captain Gerald P. Smith commanded the 581st Signal Company until 17 May 1966 when Captain David J. Richards assumed command. Captain Carlo Montisano assumed command of the 232nd Signal Company on 7 July 1966, vice Captain Dennis J. Clark. Captain Donald E. Keen commanded Company D, 41st Signal Battalion, attached to 39th Signal Battalion, and the 518th Signal Company was commanded by Captain Donald M. Jones. Captain William R. Smith Jr. assumed command of the 267th Signal Company, vice Captain Chester L. Rautenstrauch on 7 July 1966.

2. The Battalion performed its mission of signal support within the III and IV Corps areas in the Republic of Vietnam during this entire period. All elements of the Battalion were fully operational during this period with the exception of the 518th Signal Company which had not yet received all its authorized material since its arrival in Vietnam in December 1965. Principle components of the 518th Signal Company's authorized equipment which were not on-hand were AN/TCC-13 multiplexer sets and five-ton air conditioners.

3. Within this quarter-year, the Battalion engaged in direct combat communications support during Operation Hardihood. Both high frequency and multichannel VHF radio systems were furnished to the 173rd Airborne Brigade. Following Operation Hardihood, the Battalion provided communications links for the 1st Australian Task Force, located north of the town of Baria.

4. Significant communications activities during the period from 1 May 1966 to 31 July 1966 include the following:

a. The 518th Signal Company, on 7 May 1966, completed the installation of a new microwave system between Da Nang and Monkey Mountain. On 19 May 1966, the 232nd Signal Company activated a multichannel VHF system between Duc Hoa and Cu Chi. On the same date the installation of a new manual central office facility for the Vung Tau area was completed by Company D, 41st Signal Battalion. Later in the month, on 26 May 1966, the 1st Australian Task Force located north of Baria was linked with Vung Tau by 12-channel VHF radio. At the III Corps Headquarters compound the installation of a patch panel facility (SB-675) was completed 30 May 1966. Also during the month of May, the 267th Signal Company installed six 26-pair cables on Grande Massif Mountain (VC Hill) at Vung Tau for the VHF radio relay facility; installed three spiral-four cables from the main distribution frame in Vung Tau to U.S. Advisory Team 89 sited in the town of Baria and conducted a cable survey at Can Tho for the 581st Signal Company.

b. On 14 June 1966 the 267th Signal Company completed the installation of a 26-pair cable between the Vung Tau main distribution frame and the Australian Logistical Support Command in Vung Tau. This 26-pair replaced the earlier installed spiral-4 cables. The 518th Signal Company, on 21 June 1966, made radio to radio contact on its newly installed microwave system between Pra Line and Cam Ranh Bay; however, the system was shut down

the following day and the equipment was moved in order to allow the Corps of Engineer to make site improvements. On 21 June 1966 the 518th Signal Company also activated a new microwave system between Cam Ranh Bay and Nha Trang. The same unit turned a newly installed tropospheric scatter system between Saigon and Pra Line to operational status on 28 June 1966. Also in June 1966, the 267th Signal Company installed three spiral-four cables for the 1st Australian Task Force at their site north of Baria; repaired several poles and cables which were damaged at Cu Chi while Corps of Engineer personnel were building a road; and assumed control of all outside plant installations, operations, and repair in the Vung Tau area.

c. During the course of normal activities, it was noted that an expansion of trunk systems between Can Tho and Soc Trang were needed. A VHF 12-channel test system was installed between the two areas and was activated on 4 July 1966 with favorable results. In Vung Tau, near the air field, a new drainage ditch was being dug by constructional contractors. At a critical moment on 13 July 1966; two supervisors, who knew the exact location of a buried 50 pair cable, were not with the workmen and the 50 pair cable was cut. At the time, water was standing in the ditch and the severance of the cable covering caused water to get into the cable, saturating the pairs for several feet on either side of the cut. Four days later, on 17 July 1966, the engine on a "Beaver" aircraft failed shortly after takeoff from the Vung Tau air field. The subsequent crash injured the pilot, broke four poles and seven spiral-four cables which furnished communications to the Baria area. That same afternoon, an AN/MRC-69 was dispatched to the Baria area to continue communications support to the U.S. Advisory Team 89. On 18 July 1966, a microwave link was activated between Hills 182 and 184 at Cam Ranh Bay. Two days later, on 20 July 1966, a microwave test system was established between Grande Massif (VC Hill) at Vung Tau and Saigon; and on 25 July 1966, a microwave system was brought on the air between Pra Line and Cam Ranh Bay. On Grande Massif (VC Hill), with the introduction of new equipment, antennas, power units, etc. for a programmed tropospheric scatter system between Pleiku and Vung Tau; it was quite evident that the VHF radio and carrier equipments would have to be relocated on the hill. A site was chosen on the western portion of the hill top, and concrete pads for the VHF radio and carrier shelters and an antenna tower were poured. By 28 July 1966, the tower had been raised, antennas affixed, and all shelters relocated at their new positions. On 29 July 1966, the 232nd Signal Company reported that 3000 ft of 25 pair cable had been destroyed during a mortar attack on the 25th Infantry Division compound at Cu Chi.

SECTION 2, PART I, OBSERVATIONS (LESSONS LEARNED)

Relay Site Installation

Item: Some proposed VHF and microwave relay sites require ground preparations before facilities can be properly installed.

Discussion: On four occasions, portions of this unit were deployed to sites on which there was no room to install VHF or microwave equipments. In the case of microwave, the equipment of the 518th Signal Company is not shelter mounted and thus requires room for some type of building to house carrier, radio, and atmospheric control equipment. Requirements called for the communications to be operational before Corps of Engineer work could be done to level the area, clear building and/or tower space, and in some cases to drill holes in rocky ground for tower guy anchors. The result was that either the systems were first operational, then shut down until Corps of Engineer tasks were completed, and finally reinstalled; or the required communications systems were delayed in becoming operational.

Observation: Planning of new site locations should include close coordination with Corps of Engineers to allow for a phased site building process which would result in microwave equipment and VHF being installed correctly on-site the first time. Dates when systems are to become operational should take into account the time required for site preparations.

Operational Equipment Performance

Item: Poor operating procedures can result in poor performance of equipment.

Discussion: Poor performance of some communications systems was found to have resulted from such reasons as: Generator units overheating because of low radiator water and dirty air filters; granules in carbon microphones for telephones and switchboard operator headsets becoming packed thus reducing transmission level; specific gravity of battery electrolyte ranging over relatively wide ranges because of too infrequent testing with hydrometers; strain on generating equipment caused by shutting generators off immediately after taking them off the power line rather than letting them run awhile to cool; oxidation built up on 26-pair cable hocks because of too infrequent inspection of cable systems; and using too many short cuts when aligning AN/TRC-24 radios and AN/TCC-7 carrier equipments and not following prescribed line-up procedures.

Observation: Commanders and subordinates must become fully familiar with proper operating procedures to insure availability of the designed output from all equipment.

Damage to Buried Communication Cables

Item: Competent supervisory personnel should be present when workers are digging near buried communication cables.

Discussion: Prior to the digging of a new drainage ditch, construction supervisory personnel were thoroughly briefed on the exact location of a 50-pair buried cable crossing the path of the proposed ditch. The supervisors planned to use ditch digging machinery until within vicinity of the cable and then to have the workmen cautiously dig by hand to insure no damage to the cable. However, when the critical moment approached, the supervisors were not on-site and the workmen continued using the ditch digging machinery. At the time, water was standing in the ditch, and when the digger cut the cable, the inside of the cable was flooded for several feet on either side of the cut. 11

Observation: All persons involved in digging near buried cable should be thoroughly cautioned as to its exact location and depth. Instructions should be very specific, describing in detail how the digging operations should approach the cable to avoid damage to it.

Generator Repair Parts

Item: Lack of generator repair parts hamper electric generating capability and creates shortage in unit's PLL.

Discussion: Critical shortages in PLL and repair parts for 45KW and 15KW generators has developed. The supply system has not been able to respond sufficiently to the shortages, thus crippling electric power generating capabilities.

Observation: Demand of parts should be fully recognized at all levels of command, and command emphasis concerning resupply should be increased in an attempt speed up the delivery of repair parts.

Authorized Equipment

Item: When a unit arrives in-country minus a portion of its authorized equipment, the unit cannot be expected to fully satisfy its capabilities.

Discussion: One microwave company was deployed to Vietnam in December 1965 minus 32 AN/TCC-13 multiplexer units which still have not been received. Some of the multiplexer units are needed now and the remainder are required for proposed requirements. Follow-up requisitions have been made.

Observation: Units to depart CONUS should be fully outfitted with all its authorized equipment before movement to ensure operational capability when the unit arrives in Vietnam.

SECTION 2, PART II, RECOMMENDATIONS

The following recommendations are submitted:

a. That planning for new radio relay sites include a site survey before letters of instruction calling for establishing of new systems are issued, and that proposed times for systems to become operational include any necessary ground improvement time.

b. That any unit destined for Vietnam be fully outfitted with all its authorized equipment prior to the unit's departure from CONUS.

SCCVSG-C (15 Aug 66)

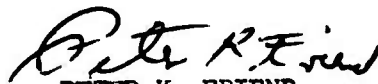
1st Ind

SUBJECT: Operational Report on Lessons Learned (CS FOR-65) for the
Period 1 May - 31 July 1966

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

Concur in observations.

FOR THE COMMANDER:



PETER K. FRIEND

Cpt, SigC
Adjutant