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<table>
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<tr>
<th>CLASSIFICATION CHANGES</th>
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<td>TO:</td>
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<tr>
<td>UNCLASSIFIED</td>
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<td>FROM:</td>
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<th>LIMITATION CHANGES</th>
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<td>TO:</td>
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<td>Approved for public release; distribution is unlimited.</td>
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<th>FROM:</th>
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<tr>
<td>Distribution authorized to U.S. Gov't. agencies and their contractors; Administrative/Operational Use; 15 NOV 1969. Other requests shall be referred to Office of the Adjutant General (Army), Washington, DC 20310.</td>
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<thead>
<tr>
<th>AUTHORITY</th>
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<tr>
<td>AGO ltr 29 Apr 1980 ; AGO ltr 29 Apr 1980</td>
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</table>
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SUBJECT: Operational Report - Lessons Learned, Headquarters, 54th Signal Battalion, Period Ending 31 October 1969 (U)

1. Subject report is forwarded for review and evaluation in accordance with paragraph 4b, AR 525-15. Evaluations and corrective actions should be reported to ACSFOR OT UT, 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
Major General, USA
The Adjutant General

1 Incl
as

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54th Signal Battalion
SUBJECT: Operational Report - Lessons Learned, 54th Signal Battalion (Corps),
Period Ending 31 October 1969, RCS CSFOR-65 (RZ)

TO: SEE DISTRIBUTION

   a. General.
      (1) During the past quarter the 54th Signal Battalion (Corps) and its attached
units continued to support combat operations within II Corps Tactical Zone with
twenty-six (26) operating detachments providing command and control communications
between I Field Force Vietnam Headquarters and units under its operational control.
These communications included high frequency radio teletype, single sideband voice
radio, communications center operations, switchboard facilities, very high frequency
multi-channel radio, FM radio wire integration and air and ground messenger
service. Additionally, photographic support was provided. The battalion continues
to serve the Nha Trang area by operating the Military Affiliate Radio Station
(MARS), completing 2152 phone patches to the United States.

   b. Intelligence. None.

   c. Operations and Training Activities.
      (1) Plans. Authority was requested and received from the Commanding General,
I FFORCEN, to relocate the 167th Signal Company (RR) from Pleiku to An Khe. Projected
movement date is during November 1969. Details are set forth in Inclosure #1.

      (2) Operations. Communication detachment locations are shown in Inclosure #2.

         (a) Communications Support for the 173rd Airborne Brigade: The battalion con-
tinued support of the 173rd Abn Bde by providing a communications center, high fre-
quency radio teletype, single sideband voice and five 12-channel VHF systems: V-11
and V-12 (LZ English - An Khe), V-23 (LZ English - LZ North English), V-24 (LZ Eng-
lish - LZ Uplift), V-25 (LZ North English - Tam Quan).

         (b) Communications Support for Task Force South: The battalion continued to
support Task Force South with high frequency radio teletype and single sideband
voice communications linking I FFORCEN Headquarters with Task Force South Head-
quarters. The radio teletype (VSC-2) communications link between Task Force South
Headquarters and the MACV Advisory Team to the 53rd Army of the Republic of Vietnam
Regiment at Di Linh continued, as well as communications center (MCC-17) operations for the MACV Advisory Team to the 14th ARVN Regiment at Song Mao. The 4-channel VHF system that was utilized to provide reliable communications to the 3/503rd Abn Inf Bn, 173rd Abn Bde, at Firebase Skyblast was deactivated during August when the firebase was closed.

(c) Communications Support for the 3rd Battalion, 506th Infantry, 101st Division (Airmobile): Support for the 3/506th Inf Bn in the Phan Thiet area continued. High frequency radio teletype, communications center operations and single sideband voice radio were provided for communications between I FFORCEV Headquarters and the 3/506th Inf Bn. During September and October, when elements of the battalion moved to new firebase locations, one northeast of Song Mao and the other northwest of Phan Thiet, the 5th Signal Battalion responded quickly by providing 4-channel MRC-112 VHF communications systems.

(d) Communications Support for 5th Battalion, 27th Artillery: A 12-channel VHF system from Phan Thiet to Thieng Giao, and relayed on to Song Mao, was installed to support the 5/27th Arty Bn located at Song Mao. Secure teletype support was provided by a communications center (MCC-17) that was already at Song Mao in support of the MACV Advisory Team.

(e) Communications Support for 2nd Troop, 1st Armored Cavalry, 4th Infantry Division: The battalion continued its support of the 2/1 Arm Cav at Song Mao with a 12-channel VHF system from Phan Thiet, relayed through Thieng Giao. Secure teletype support was provided by a communications center (MCC-17) that was already at Song Mao in support of the MACV Advisory Team.

(f) Communications Support for Company B, 5th Special Forces Group (Airborne): The battalion continued its support of Company B, 5th Special Forces with communications center operations and secure teletype between Nha Trang and Pleiku and communications center operations at Ban Me Thuot.

(g) Communications Support for the 9th Republic of Korea Division U.S. Liaison Officer: The battalion continued to provide secure communications to the I FFORCEV Liaison Officer with the 9th ROK Inf Div at Ninh Hoa through utilization of high frequency radio teletype, supplemented by single sideband voice communications.

(h) Communications Support for the Capital Republic of Korea Division U.S. Liaison Officer: Support continued for the I FFORCEV Liaison Officer with the Capital ROK Inf Div at Qui Nhon, consisting of secure high frequency radio teletype and single sideband voice communications.

(i) Communications Support at An Khe: The 3rd Platoon, 167th Signal Company (RR) continued operations by providing VHF multi-channel radio communications between Pleiku, 4on Geng Mountain (An Khe), L2 English and Vung Chua Mountain (Qui Nhon).
(j) Communications Support of the 4th Infantry Division: The 167th Signal Company (RR), continued to support the 4th Inf Div at Pleiku with VHF multi-channel communications between Pleiku and An Khe.

(k) Communications Support for District Senior Advisor, II Corps: Support of DSA II Corps continued with secure radio teletype service and a single channel secure teletype circuit terminating at the DSA II Corps Tactical Operations Center.

(l) Communications Support for the 70th Engineer Battalion: The battalion continued to operate the 12-channel VHF system between Ban Me Thuot and the 70th Engineer's Kodiak switchboard located outside the city.

(m) Communications Support for Thien Giao District Senior Advisor: Communications for the Thien Giao District Senior Advisor, Binh Thuan Province, were provided via a VHF system (V-06) between Thien Giao and Phan Thiet.

(n) Miscellaneous Support: The battalion continued to operate the 24-channel tropo-scatter system, utilizing AN/TCR-97B equipment, between Hon Tre Island and Hon Cong Mountain (An Khe) and between Hon Tre Island and Dragon Mountain (Pleiku).

(o) Project Quick Comm: During this quarter, the battalion has been tasked with the project of providing technical assistance to upgrade the Province and District radio nets and of providing reliable communications between the Headquarters, I FFORCEV Tactical Operations Center (TOC) and each district TOC within the II Corps Tactical Zone. This project has been given the code name "Quick Comm." In order to accomplish this project, operational radio wire integration (RWI) stations were established at each of the PSA TOC's. As of the end of the reporting quarter, the following had been accomplished:

1. RWI equipment was installed at each of the twelve PSA TOC's.

2. Three technical assistance teams, each composed of two trained radio repairmen, have been established. These teams have visited each of the province and district TOC's and have repaired radio equipment at each location and rendered technical assistance in operating procedures.

3. Forty-four districts in the II Corps Tactical Zone can talk directly to the I Field Force TOC.

(p) Continuing Battalion Projects: The battalion continues toward professional development through emphasis in the following areas:

1. Improvement of site facilities, listed by location as Inclosure #2.

2. Improved communications center operations.

3. Enhancing the reliability of communications to I FFORCEV OPCON units.

4. Quality control of II Corps Tactical Zone telephone service.
(3) **Training.***

(a) Battalion replacement and mandatory training programs have undergone a complete revision during the past quarter with the objective of upgrading the quality of training in order to assure a high level of individual proficiency in mandatory and special training subjects. Areas of revision are as follows:

1. Writing and implementing 54th Signal Battalion Regulation 350-1, titled Training, which initiated needed changes.

2. Where practical, instructor assistance in the form of "professional" personnel in specific areas is being co-ordinated for training subjects.

3. A replacement training team has been formed to present formalized training in required subjects to all new arrivals.

4. Mandatory training classes have been consolidated at battalion level for ease of presentation.

(b) Non-battalion formal training conducted during past quarter:

<table>
<thead>
<tr>
<th>COURSE</th>
<th>LENGTH</th>
<th># ATTENDED</th>
<th>TOTAL HOURS</th>
</tr>
</thead>
<tbody>
<tr>
<td>AN/TRC-97B Operator</td>
<td>80 hrs</td>
<td>2</td>
<td>160</td>
</tr>
<tr>
<td>PCM Maintenance</td>
<td>160 hrs</td>
<td>1</td>
<td>160</td>
</tr>
<tr>
<td><strong>TOTALS</strong></td>
<td></td>
<td><strong>3</strong></td>
<td><strong>320</strong></td>
</tr>
</tbody>
</table>

(4) Chemical. None.

(5) PSTWAR. None.

d. **Logistics.***

(1) All pulse code modulation equipment authorized under the 54th Signal Battalion (Corps) MTOE 11-150 and the 167th Signal Company (RR) MTOE 11-377G has been requisitioned and is programmed to be available as shown below:

(a) 54th Signal Battalion (Corps):

<table>
<thead>
<tr>
<th>EQUIPMENT</th>
<th>AUTH</th>
<th>O/H</th>
<th>ON REQ</th>
<th>AVAILABILITY DATES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Radio Repeater Set AN/TRC-110</td>
<td>6</td>
<td>0</td>
<td>6</td>
<td>Feb/Mar 1970</td>
</tr>
<tr>
<td>Radio Terminal Set AN/TRC-121</td>
<td>4</td>
<td>0</td>
<td>4</td>
<td>Feb/Mar 1970</td>
</tr>
<tr>
<td>Radio Terminal Set AN/TRC-112</td>
<td>10</td>
<td>0</td>
<td>10</td>
<td>Feb/Mar 1970</td>
</tr>
<tr>
<td>Radio Terminal Set AN/TRC-117</td>
<td>16</td>
<td>0</td>
<td>16</td>
<td>Feb/Mar 1970</td>
</tr>
<tr>
<td>Telephone Terminal AN/TCC-61</td>
<td>4</td>
<td>0</td>
<td>4</td>
<td>Sep 1970</td>
</tr>
<tr>
<td>Telephone Terminal AN/TCC-69</td>
<td>9</td>
<td>0</td>
<td>9</td>
<td>Feb/Mar 1970</td>
</tr>
<tr>
<td>Telegraph Terminal AN/TCC-29</td>
<td>4</td>
<td>0</td>
<td>4</td>
<td>No Availability Date</td>
</tr>
</tbody>
</table>

(b) 167th Signal Company (RR):

<table>
<thead>
<tr>
<th>EQUIPMENT</th>
<th>AUTH</th>
<th>O/H</th>
<th>ON REQ</th>
<th>AVAILABILITY DATES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Radio Repeater Set AN/TRC-110</td>
<td>15</td>
<td>0</td>
<td>15</td>
<td>Feb/Mar 1970</td>
</tr>
<tr>
<td>Radio Terminal Set AN/TRC-117</td>
<td>30</td>
<td>0</td>
<td>30</td>
<td>Feb/Mar 1970</td>
</tr>
<tr>
<td>Telephone Terminal AN/TCC-69</td>
<td>18</td>
<td>0</td>
<td>18</td>
<td>Feb/Mar 1970</td>
</tr>
</tbody>
</table>
(2) Transportation. Operational commitments required extensive use of air transportation during the quarter. The total amounts of cargo transported, in pounds, by the Air Force to and from detachments operated by this unit are as follows:

<table>
<thead>
<tr>
<th>Location</th>
<th>Weight (lbs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHAN THIET</td>
<td>2,000</td>
</tr>
<tr>
<td>PLEIKU</td>
<td>10,940</td>
</tr>
<tr>
<td>SONG MAO</td>
<td>870</td>
</tr>
<tr>
<td><strong>TOTAL:</strong></td>
<td><strong>13,710</strong></td>
</tr>
</tbody>
</table>

(e) Civil Affairs.

(1) During the past quarter, the Civic Action Program continued. The battalion investigated new possibilities for additional civic action programs.

(2) Headquarters and Headquarters Company began an assistance program to help the Trinh-Vuong Orphanage. Excess food was donated to the children. Presently personnel from HHC are constructing a kitchen for the orphanage.

(3) Company A continued its support of local orphanages and the Nha Trang Miner Seminary by providing it with surplus food. Presently personnel from Company A are constructing a well for the Mau Tam Orphanage.

(4) Company B continued its support of the Ave Maria Orphanage.

(5) The informal mutual assistance relationship between the battalion and the 5th Railway Security Battalion (ARVN) continued during the past quarter. The highlight of the quarter occurred during the Vietnamese Children’s Holiday when personnel from both battalions hosted a party for the Vietnamese children.

(6) Summary of approximate donation statistics:

(a) Man-days: 58.

(b) Voluntary Military Contributions: VN$16,728.

(c) Firewood: 1850 board feet.

(d) Surplus food: 12,775 pounds.

(e) Clothing: 27 pounds.

(f) Health items: 50 pounds.

(f) Personnel.

(1) Religious Activities.
(a) During the past quarter, Protestant, Roman Catholic and Episcopal services were held at the Battalion Chapel each Sunday. Jewish personnel have been informed by the Battalion Chaplain concerning the local Jewish program and their names have been given to the I PPORCEV Jewish Chaplain. Schedules of regular and special denominational services have been posted on company bulletin boards and in barracks in the battalion area. Protestant, Catholic and Jewish religious literature was made available in the Battalion Day Room and at each of the remote sites. Extensive renovation of the Battalion Chapel has been initiated.

(b) Chaplain site visitations were maintained on a regular basis with a goal of one visit to each site each month, the availability of aviation transportation permitting. Religious worship coverage at the sites was provided by resident chaplains in the area. Project Morale packs were sent to the sites on a recurring basis.

(c) Character guidance instruction was given on a regular basis to Headquarters and Headquarters Company, Company A, Company B and the 167th Signal Company (RR). Instruction is also given to the An Khe site when the Chaplain visits there. Character guidance "briefs" are distributed to the other sites.

(d) The Battalion Chaplain has begun a "History of Religion" class for all interested personnel. In addition to this class, Communion Services are now being held on the first Sunday of each month and on special holidays.

(2) Personnel actions.

(a) Rest and Recreation: During the past quarter, the battalion received 207 R&R allocations from I PPORCEV and utilized 176. No additional allocations were borrowed from area units.

(b) Courts & Boards:

1 The Battalion Commander acts as Special Court Martial Convening Authority for the 54th Signal Battalion (Corps), including all attached units and the enlisted men of:

- HHC, I PPORCEV
- HQ Battery, I PPORCEV Arty
- 297th Trans Co (Car)
- 272nd Military Police Co
- 13th Military History Det
- MACV Advisory Teams #25, 26, 28, 30, 31, 32, 36, 37, 38, 41, 42, 45 and 46.

Additionally, the Battalion Commander acts as a Field Grade Commander for Article 15 actions and appeals to Article 15 actions for all of the above units less HQ Battery, I PPORCEV Arty and the 13 MACV Advisory Teams.

2 Non-Judicial Punishment: A total of 58 Article 15's were administered, 19 of these were Field Grade Article 15's. There were 9 appeals to Article 15 actions.
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3 Summary Courts-Martial: Six Summary Courts-Martial were convened during the quarter. None are pending.

4 Special Courts-Martial: Eight Special Courts-Martial were convened during the quarter. Four are pending.

5 General Courts-Martial: Six General Courts-Martial were referred to the CO, I FFORCEV.

(c) Emergency Leaves: Seventeen emergency leaves were granted during the quarter.

(d) Promotions and Vacancies:

<table>
<thead>
<tr>
<th></th>
<th>Aug</th>
<th>Sep</th>
<th>Oct</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vacancies</td>
<td>85</td>
<td>114</td>
<td>84</td>
</tr>
<tr>
<td>Promotions</td>
<td>56</td>
<td>42</td>
<td>36</td>
</tr>
</tbody>
</table>

September

<table>
<thead>
<tr>
<th></th>
<th>Aug</th>
<th>Sep</th>
<th>Oct</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vacancies</td>
<td>80</td>
<td>111</td>
<td>5</td>
</tr>
<tr>
<td>Promotions</td>
<td>105</td>
<td>20</td>
<td>4</td>
</tr>
</tbody>
</table>

October

<table>
<thead>
<tr>
<th></th>
<th>Aug</th>
<th>Sep</th>
<th>Oct</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vacancies</td>
<td>14</td>
<td>79</td>
<td>3</td>
</tr>
<tr>
<td>Promotions</td>
<td>15</td>
<td>43</td>
<td>3</td>
</tr>
</tbody>
</table>

(e) A list of key personnel is attached as Inclosure #3.

h. Artillery. None.

h. Other.

(1) Communications Statistics.

(a) Total average daily transmissions (sent and received):

<table>
<thead>
<tr>
<th></th>
<th>Aug</th>
<th>Sep</th>
<th>Oct</th>
</tr>
</thead>
<tbody>
<tr>
<td>Landline</td>
<td>586</td>
<td>612</td>
<td>614</td>
</tr>
<tr>
<td>Radio Teletype</td>
<td>35</td>
<td>38</td>
<td>37</td>
</tr>
</tbody>
</table>

(b) Average handling time (in minutes) for all originating and terminating messages by precedence:

<table>
<thead>
<tr>
<th></th>
<th>Aug</th>
<th>Sep</th>
<th>Oct</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flash</td>
<td>17.36</td>
<td>15.05</td>
<td>17.57</td>
</tr>
<tr>
<td>Immediate</td>
<td>74.72</td>
<td>87.02</td>
<td>84.44</td>
</tr>
<tr>
<td>Priority</td>
<td>63.93</td>
<td>92.99</td>
<td>89.90</td>
</tr>
<tr>
<td>Routine</td>
<td>112.18</td>
<td>161.43</td>
<td>162.91</td>
</tr>
</tbody>
</table>

CONFIDENTIAL
(c) Precedence of total transmissions in percentages:

<table>
<thead>
<tr>
<th></th>
<th>AUGUST</th>
<th>SEPTEMBER</th>
<th>OCTOBER</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flash</td>
<td>20.68%</td>
<td>14.63%</td>
<td>16.19%</td>
</tr>
<tr>
<td>Immediate</td>
<td>37.07%</td>
<td>37.19%</td>
<td>36.84%</td>
</tr>
<tr>
<td>Priority</td>
<td>29.93%</td>
<td>32.20%</td>
<td>31.42%</td>
</tr>
<tr>
<td>Routine</td>
<td>12.32%</td>
<td>15.98%</td>
<td>15.56%</td>
</tr>
</tbody>
</table>

(d) Switchboard Operations (TIPHOON, TIPHOON TOC):

<table>
<thead>
<tr>
<th></th>
<th>AUGUST</th>
<th>SEPTEMBER</th>
<th>OCTOBER</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total TIPHOON Subscribers</td>
<td>245</td>
<td>246</td>
<td>307</td>
</tr>
<tr>
<td>Total TIPHOON Trunks</td>
<td>74</td>
<td>74</td>
<td>74</td>
</tr>
<tr>
<td>Total TIPHOON TOC Subscribers</td>
<td>36</td>
<td>36</td>
<td>35</td>
</tr>
<tr>
<td>Total TIPHOON TOC Trunks</td>
<td>29</td>
<td>29</td>
<td>29</td>
</tr>
<tr>
<td>Average Daily Peg Count</td>
<td>317.1</td>
<td>316.7</td>
<td>316.1</td>
</tr>
<tr>
<td>Average Pick-up Time (seconds)</td>
<td>2.8</td>
<td>2.7</td>
<td>3.5</td>
</tr>
</tbody>
</table>

(e) MARS Operations:

<table>
<thead>
<tr>
<th></th>
<th>AUGUST</th>
<th>SEPTEMBER</th>
<th>OCTOBER</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phone Patches Attempted</td>
<td>1031</td>
<td>939</td>
<td>1157</td>
</tr>
<tr>
<td>Phone Patches Completed</td>
<td>716</td>
<td>656</td>
<td>780</td>
</tr>
<tr>
<td>MARS-Grams</td>
<td>23</td>
<td>19</td>
<td>6</td>
</tr>
</tbody>
</table>

(2) Photographic Operations: The following figures represent the photographic production of the combined Battalion Pictorial Section and 209th Signal Detachment (Photo) during the quarter:

<table>
<thead>
<tr>
<th></th>
<th>AUGUST</th>
<th>SEPTEMBER</th>
<th>OCTOBER</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of negatives exposed</td>
<td>4069</td>
<td>7168</td>
<td>9103</td>
<td>20,340</td>
</tr>
<tr>
<td>Number of prints made</td>
<td>6029</td>
<td>10165</td>
<td>8002</td>
<td>24,496</td>
</tr>
<tr>
<td>Number of color slides made</td>
<td>812</td>
<td>2120</td>
<td>1020</td>
<td>3,952</td>
</tr>
<tr>
<td>Feet of Motion Picture film exposed</td>
<td>2600</td>
<td>3500</td>
<td>3200</td>
<td>9,300</td>
</tr>
</tbody>
</table>

(3) Aviation Activities:

(a) The period covered in this report was characterized by the rendering of air messenger support to I FFORCEV Headquarters and administrative, logistical and operational air support to the 54th Signal Battalion (Corps). During the period, a total of six aircraft were assigned: 1 UH-1D, 4 UH-1H's and 1 OH-6A. The section flew a total of 2071 sorties.

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(b) The following information reflects aircraft status and flying hours for the past quarter:

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<tr>
<th>AIRCRAFT STATUS AND FLYING HOURS</th>
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<td>TYPE A/C</td>
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(c) During the period covered by this report, 149 tons of cargo and 3,731 passengers were transported by the unit's aviation section.

(l) Inclosure #5 sets forth a detailed chronology of battalion activities and operations for the period of this report.

2. Lessons Learned: Commander's Observations, Evaluations and Recommendations.

a. Personnel. None.

b. Intelligence. None.

c. Operations. None.

d. Organization. None.

e. Training.

(1) School-trained Tactical Microwave Systems Repairmen (MOS 26L).

(a) OBSERVATION: School-trained 26L personnel are authorized and have been assigned to this unit. Although they have a good understanding of microwave radio operations, they are totally unfamiliar with AN/TRC-97B tropospheric scatter equipment.

(b) EVALUATION: The school-trained 26L personnel assigned to this unit received broad training in microwave characteristics and operation but were not trained to operate tactical tropospheric scatter equipment, specifically the AN/TRC-97B. Consequently, system and circuit misalignments are frequent and damage to equipment has occurred.

(c) RECOMMENDATION: That all 26L personnel in Vietnam scheduled to operate the AN/TRC-97B equipment attend the 80 hour operator's course conducted by the 362nd Signal Company at Cam Ranh Bay, RVN, prior to being assigned AN/TRC-97B duties.
(2) Inexperienced 31M Personnel.

(a) OBSERVATION: Radio relay operators located at remote locations are not employing many of the proper operational techniques that are taught in the 31M course at Fort Gordon. Many of these techniques, if practiced, would greatly improve communications.

(b) EVALUATION: The majority of VHF site NCO's are junior NCO's who frequently lack the leadership and technical skills to teach 31M personnel, and demand from them, proper operational procedures and techniques in the area of tactical communications.

(c) RECOMMENDATION: The establishment of a 2 or 3 man team of senior NCO's very experienced in VHF operations, utilized as a Technical Assistance Team, is most beneficial. The team not only provides refresher training to VHF operators, but should evaluate and correct as necessary all VHF systems, from the antenna to the ground. The team should remain at each VHF site from 3 to 7 days, as necessary.

f. Logistics. None.

g. Communications.

(1) Quality Improvement of Trunk Circuits.

(a) OBSERVATION: Over any 24-hour period, the quality of all trunk lines emanating from a tactical switchboard that are routed over microwave or VHF radio systems changes many times.

(b) EVALUATION: In order to consistently maintain high quality trunk lines each circuit must be tested from switchboard to subscriber on a frequent basis for noise level and signal strength. Any circuit not meeting acceptable standards must receive corrective action immediately.

(c) RECOMMENDATION:

1. Tactical switchboards should make hourly checks on all their circuits that are routed over microwave or VHF radio systems.

2. Each check must consist of the following:
   a. Ring down the circuit from both directions.
   b. Determine whether the signal strength is acceptable.
   c. Listen to whether noise is above acceptable limits.

3. Switchboard circuit logs must be maintained by the switchboard operators reflecting the results of each check.

4. Irregularities noted during checks should immediately be brought to the attention of the circuit control section for corrective action.
(2) **Excess Co-axial Cable at Antenna Connectors.**

(a) **OBSERVATION:** Operators leave excessive slack in the co-axial cable behind the antenna AT-411/TRC when installing the electrical clamp (RF cable) to ease the strain on the CQ-10h2/U ("TM" cable).

(b) **EVALUATION:** Excessive slack increases reflected power.

(c) **RECOMMENDATION:** When installing the antenna, operators should insure that the slack of the co-axial cable between the electrical clamp and the CQ-10h2/U is kept to a minimum.

(3) **Integrating AN/MRC-112 and AN/TRC-24 Equipment.**

(a) **OBSERVATION:** A shortage of repair parts for components of AN/MRC-112 equipment exists throughout Vietnam making it very difficult to support the equipment.

(b) **EVALUATION:** By employing A-band equipment with AN/TRC-24 equipment, both AN/TRC-24 and AN/MRC-112 equipment can be interfaced. This method of operation allows one AN/MRC-112 to be utilized in a tactical situation where a larger piece of signal equipment would not be practical. In an effort to reduce the number of AN/MRC-112's requiring repair parts and at the same time utilizing the equipment to its maximum, this piece of equipment has been used in the aforementioned configuration whenever possible.

(c) **RECOMMENDATION:** Until repair parts become sufficiently available through supply channels to adequately support existing AN/MRC-112's, they should be employed in conjunction with AN/TRC-24 equipment whenever possible.

h. **Material.** None.

i. **Other.** None.

5 Incl
- 1 - Lt., HQS, 54th Sig En-(Corps), dtd 12 Oct 69, Subj: Relocation of the 167th Signal Company (RR), w/1st Ind HQ, IFFV, dtd 27 Oct 69, Subj: same.
- 2 - Communication Detachment Locations
- 3 - Key Personnel
- 4 - Composition of 54th Signal Battalion-(Corps)
- 5 - Chronology

Incls 1 - 5 wd HQ, DA

CONFIDENTIAL
SUBJECT: Operational Report - Lessons Learned, 54th Signal Battalion (Corps),
Period Ending 31 October 1969, RCS CSFOR-65 (R2)

DA, Headquarters, I Field Force Vietnam, APO 96350

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

(U) This headquarters has evaluated subject ORLL and concurs.

FOR THE COMMANDER:

[Signature]

PAUL HELMELAERE
ILT, A2
ASST MG

CF:
2 - ACSFOR, DA
1 - CO, 54th Sig Bn
AVHGC-DST (15 Nov 69) 2d Ind
SUBJ: Operational Report-Lessons Learned, 54th Signal Battalion (Corps),
    Period Ending 31 October 1969, RCS CSFOR-65 (R2)

HEADQUARTERS, UNITED STATES 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 October 1969 from Headquarters, 54th
   Signal Battalion (Corps).

2. Comments follow:
   a. Reference item concerning "School-Trained Tactical Microwave Systems
      Repairman (NOS 26L)" , page 9, paragraph 2e(l); concur. The AN/TRC-97B is an
      Air Force item and is not taught in the CONUS Signal Schools. It is essential
      that 26L's receive the necessary training for this equipment before reporting
      to their assignments or soon thereafter. Training is available at a school
      operated by the 362d Sig Co/73d Sig Bn in Cam Ranh Bay, RVN. Quotas are
      requested from the 1st Signal Brigade. The 54th Signal Battalion requested
      and received three allocations for this course during the 2d Quarter FY-70.
   b. Reference item concerning "Quality Improvement of Trunk Circuits,"
      page 10, paragraph 2g(1); concur. Hourly checks in the absence of live traffic
      over all trunks are required to ensure that quality service is provided.
      These checks should be a matter of standard practice. Emphasis should be
      placed on supervisory personnel to insure compliance. Spot checking by
      supervisors is required.
   c. Reference item concerning "Excess Coaxial Cable at Antenna Connectors,"
      page 11, paragraph 2g(2); concur. The slack or "drip loop" as it is commonly
      called, serves two purposes when connecting coaxial cables to antennas; one,
      it insures that rain drips off the cable rather than follow it down to the next
      connection and possibly penetrate into the cable. Two, it allows no strain
      to be placed on the connector at the antenna. If too much slack is installed,
      it is possible that reflected power would increase because of the induction
      property of the cable itself. Coaxial cable should never be looped back over
      itself in a roll when used as a transmission line. Also, all coaxial cable
      connections must be taped securely with a waterproof tape.
d. Reference item concerning "Integrating AN/MRC-112 and AN/TRC-24 Equipment", page 11, paragraph 2g(3); concur. AN/MRC-112's can be interfaced with AN/TRC-24 equipment on a very selective basis. However, the shortcomings inherent in such an operation must be recognized. Due to the difference in RF channels spacing of the two equipments, only 33 compatible channels are available. In addition, the entire overlap band (54-70.9 MCS) falls within the AN/VRC-12 frequency range. Thus the AN/MRC-112 receiver is subject to "capture effect" of tactical FM radios. Furthermore, the AN/TRC-24 (A BAND) equipment is degraded by denying use of that portion of the frequency spectrum (70.9-100 MCS) when less interference is experienced.

FOR THE COMMANDER:

[Signature]

Cy furn:
54th Sig Bn
I FFV
CPOP-DT (15 Nov 69) 3d Ind (U)
SUBJECT: Operational Report of HQ, 54th Signal Battalion (Corps) for Period Ending 31 October 1969, RCS CSFOR-65 (R2)

HQ, US Army, Pacific, APO San Francisco 96558 26 JAN 1970

THRU: Commanding General, US Army Strategic Communications Command, Fort Huachuca, Arizona 85613

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

This headquarters concurs in subject report as indorsed.

FOR THE COMMANDER IN CHIEF:

C. L. SHORTT
CPT, AGC
Amo AG

CF:
DA, ACSFOR
CG, USASTRATCOM-PAC
SUBJECT: Operational Report of HQ, 54th Signal Battalion (Corps) for Period Ending 31 October 1969, RCS CSFOR-65 (R2)

Headquarters, United States Army Strategic Communications Command, Fort Huachuca, Arizona 85613

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

This headquarters concurs in subject report as indorsed.

FOR THE COMMANDER:

[Signature]

W. O. Polston
Major, ASC
Adjutant Gen
Operational Report - Lessons Learned, HQ, 54th Signal Battalion

Experiences of unit engaged in counterinsurgency operations, 1 Aug 69 to 31 Oct 69.

CO, 54th Signal Battalion

15 November 1969

N/A

N/A

N/A

OACSFOR, DA, Washington, D.C. 20310