<table>
<thead>
<tr>
<th>AD NUMBER</th>
</tr>
</thead>
<tbody>
<tr>
<td>AD393516</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>CLASSIFICATION CHANGES</th>
</tr>
</thead>
<tbody>
<tr>
<td>TO: UNCLASSIFIED</td>
</tr>
<tr>
<td>FROM: CONFIDENTIAL</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>LIMITATION CHANGES</th>
</tr>
</thead>
<tbody>
<tr>
<td>TO:</td>
</tr>
<tr>
<td>Approved for public release; distribution is unlimited.</td>
</tr>
</tbody>
</table>

| FROM:                  |
| Distribution authorized to U.S. Gov't. agencies and their contractors; Administrative/Operational Use; 06 NOV 1966. Other requests shall be referred to Assistant Chief of Staff for Force Development (Army), Washington, DC 20310. |

<table>
<thead>
<tr>
<th>AUTHORITY</th>
</tr>
</thead>
<tbody>
<tr>
<td>30 Nov 1978, Group-4, DoDD 5200.10, per document marking; AGO D/A ltr dtd 29 Apr 1980</td>
</tr>
<tr>
<td>UNCLASSIFIED</td>
</tr>
<tr>
<td>---</td>
</tr>
<tr>
<td>AD NUMBER</td>
</tr>
<tr>
<td><strong>AD393516</strong></td>
</tr>
<tr>
<td>CLASSIFICATION CHANGES</td>
</tr>
<tr>
<td>TO:</td>
</tr>
<tr>
<td>CONFIDENTIAL</td>
</tr>
<tr>
<td>FROM:</td>
</tr>
<tr>
<td>SECRET</td>
</tr>
<tr>
<td>AUTHORITY</td>
</tr>
<tr>
<td>30 Nov 1969, Group-4, DoDD 5200.10, per document marking</td>
</tr>
</tbody>
</table>

THIS PAGE IS UNCLASSIFIED
THIS REPORT HAS BEEN DELIMITED AND CLEARED FOR PUBLIC RELEASE UNDER DOD DIRECTIVE 5200.20 AND NO RESTRICTIONS ARE IMPOSED UPON ITS USE AND DISCLOSURE.

DISTRIBUTION STATEMENT A

APPROVED FOR PUBLIC RELEASE;
DISTRIBUTION UNLIMITED.
DISCLAIMER NOTICE

THIS DOCUMENT IS BEST QUALITY AVAILABLE. THE COPY FURNISHED TO DTIC CONTAINED A SIGNIFICANT NUMBER OF PAGES WHICH DO NOT REPRODUCE LEGIBLY.
SECURITY MARKING

The classified or limited status of this report applies to each page, unless otherwise marked.
Separate page printouts MUST be marked accordingly.

THIS DOCUMENT CONTAINS INFORMATION AFFECTING THE NATIONAL DEFENSE OF THE UNITED STATES WITHIN THE MEANING OF THE ESPIONAGE LAWS, TITLE 18, U.S.C., SECTIONS 793 AND 794. THE TRANSMISSION OR THE REVELATION OF ITS CONTENTS IN ANY MANNER TO AN UNAUTHORIZED PERSON IS PROHIBITED BY LAW.

NOTICE: When government or other drawings, specifications or other data are used for any purpose other than in connection with a definitely related government procurement operation, the U. S. Government thereby incurs no responsibility, nor any obligation whatsoever; and the fact that the Government may have formulated, furnished, or in any way supplied the said drawings, specifications, or other data is not to be regarded by implication or otherwise as in any manner licensing the holder or any other person or corporation, or conveying any rights or permission to manufacture, use or sell any patented invention that may in any way be related thereto.
SUBJECT: Lessons Learned, Headquarters, 23d Artillery Group

TO: SEE DISTRIBUTION

1. Forwarded as inclosure is Operational Report - Lessons Learned, Headquarters, 23d Artillery Group for period ending 31 October 1966. Information contained in this report should be reviewed and evaluated by CDBC in accordance with paragraph 6f of AR 1-19 and by CONARC in accordance with paragraph 6c and d of AR 1-19. Evaluations and corrective actions should be reported to ACSFOR OT within 90 days of receipt of covering letter.

2. Information contained in this report is provided to the Commandants of the Service Schools 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

DISTRIBUTION:
- Commanding General
- US Army Combat Development Command
- US Continental Army Command
- Commandants
- US Army Command and General Staff College
- US Army War College
- US Army Air Defense School
- US Army Artillery and Missile School
- US Army Armor School
- US Army Chemical Corps School
- US Army Engineer School
- US Army Military Police School
- US Army Infantry School
- US Army Intelligence School
- US Army Medical Field Service School

(Continued on page 2)

FOR OT RD
6603Z22

SECRET
003 650
SECRET

Distribution: (Cont'd)

Commandant
US Army Ordnance School
US Army Quartermaster School
US Army Security Agency School
US Army Transportation School
US Army Signal School
US Army Special Warfare School
US Army Civil Affairs School

Copies furnished:
Assistant Chief of Staff for Force Development
Research Analysis Corporation (Library)
Security Officer, Los Alamos Scientific Laboratory
Office of the Director of Defense Research & Engineering ODD(SEAM), ODR&E
Commanding Officer, 23d Artillery Group

2616606
AVGE-C

6 November 1966

SUBJECT: Operational Report on Lessons Learned (U)

THRU: Commanding General
II Field Force Vietnam Artillery
ATTN: AVFB-FA-C
APO 96277

Commanding General
United States Army Vietnam
ATTN: AVC-DH
APO 96307

Commander-in-Chief
United States Army Pacific
ATTN: GPOP-NH
APO 96558

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

SECTION I

SIGNIFICANT HEADQUARTERS OR UNIT ACTIVITIES

1. (C) Administration and Personnel

   a. This headquarters remains assigned to United States Army Vietnam (USARV) and operates as a major subordinate command of USARV. Commanding General, II Field Force Vietnam Artillery retains operational control of 23rd Artillery Group.

   b. Normal SI activities have been conducted during the period 1 August 1966 through 31 October 1966.
CONFIDENTIAL

SUBJECT: Operational Report on Lessons Learned (U)

6 November 1966

a. Personnel strength of the command on 31 October 1966 was:

<table>
<thead>
<tr>
<th>UNIT</th>
<th>TOT AUTH</th>
<th>EN</th>
<th>TOE AUTH</th>
<th>OFF</th>
<th>WD</th>
<th>EM</th>
</tr>
</thead>
<tbody>
<tr>
<td>3d Bn, 23d Arty Op</td>
<td>17</td>
<td>2</td>
<td>95</td>
<td>15</td>
<td>19</td>
<td></td>
</tr>
<tr>
<td>2d Bn, 13th Arty</td>
<td>27</td>
<td>3</td>
<td>46</td>
<td>24</td>
<td>100</td>
<td></td>
</tr>
<tr>
<td>6th Bn, 27th Arty</td>
<td>35</td>
<td>4</td>
<td>56</td>
<td>26</td>
<td>7</td>
<td>78</td>
</tr>
<tr>
<td>2d Bn, 32d Arty</td>
<td>26</td>
<td>3</td>
<td>42</td>
<td>11</td>
<td>1</td>
<td>47</td>
</tr>
<tr>
<td>2d Bn, 35th Arty</td>
<td>33</td>
<td>4</td>
<td>57</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

All information pertinent to the 2d Bn, 35th Arty is from 1 August 1966 to 20 October 1966 inclusive. On 20 October 1966 the 2d Bn, 35th Arty, was reassigned to the 5th Artillery Group.

d. Critical MOS shortages in NCO grades. During the period 12 September 1966 to 20 October 1966 certain key MOS shortages were experienced. These shortages included NCO grades in Supply (76W0), Mess (9L20), Motor Maintenance (63W0) and Communications Specialist (3I110). The reason for these shortages is that the Group experienced an extremely high number of rotations during the quarter and replacements in these key MOS's lagged by 15-45 days. Personnel shortages have begun to be filled, beginning on 20 October 1966 and are expected to reach the required level on or about 15 November 1966.

e. MOS for units of the 23rd Artillery Group were submitted on the following dates:

(1) 2d Battalion, 13th Artillery: 22 September 1966
(2) 6th Battalion, 27th Artillery: 1 October 1966
(3) 2d Battalion, 32d Arty: 8 October 1966

f. Personnel changes during this quarter include:

<table>
<thead>
<tr>
<th>GAINS: OFF</th>
<th>WD</th>
<th>EN</th>
</tr>
</thead>
<tbody>
<tr>
<td>35</td>
<td>7</td>
<td>351</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>LOSSES: OFF</th>
<th>WD</th>
<th>EN</th>
</tr>
</thead>
<tbody>
<tr>
<td>37</td>
<td>7</td>
<td>338</td>
</tr>
</tbody>
</table>

g. Casualties Included:

<table>
<thead>
<tr>
<th>TYPE</th>
<th>NUMBER</th>
</tr>
</thead>
<tbody>
<tr>
<td>Killed in Action</td>
<td>2</td>
</tr>
<tr>
<td>Wounded in Action</td>
<td>11</td>
</tr>
</tbody>
</table>
CONFIDENTIAL

SUBJECT: Operational Report on Lessons Learned (U)

MISSING

- Operational Report on Lessons Learned (U)

November 1966

1. The in-country R&R consisting of 3 day passes to Vung Tau included 6 permanent quotas which decreased to 2 on 18 September 1966.

2. The out of country R&R included the following 5 day quotas:

<table>
<thead>
<tr>
<th>LOCATION</th>
<th>AUG</th>
<th>SEP</th>
<th>OCT</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bangkok</td>
<td>38</td>
<td>21</td>
<td>22</td>
<td>81</td>
</tr>
<tr>
<td>Tokyo</td>
<td>44</td>
<td>40</td>
<td>36</td>
<td>120</td>
</tr>
<tr>
<td>Manila</td>
<td>10</td>
<td>10</td>
<td>9</td>
<td>29</td>
</tr>
<tr>
<td>Hong Kong</td>
<td>22</td>
<td>25</td>
<td>25</td>
<td>72</td>
</tr>
<tr>
<td>Taipei</td>
<td>29</td>
<td>20</td>
<td>27</td>
<td>76</td>
</tr>
</tbody>
</table>

NOTES: In addition to these awards, 14 recommendations for awards have been submitted and are pending approval by USARV.
CONFIDENTIAL

AVNCO:
SUBJECT: Operational Report on Lessons Learned (U) 6 November 1966

<table>
<thead>
<tr>
<th>LOCATION</th>
<th>APR</th>
<th>SEP</th>
<th>OCT</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Singapore</td>
<td>12</td>
<td>4</td>
<td>4</td>
<td>20</td>
</tr>
<tr>
<td>Seattle</td>
<td>12</td>
<td>7</td>
<td>6</td>
<td>25</td>
</tr>
<tr>
<td>Penang</td>
<td>11</td>
<td>12</td>
<td>12</td>
<td>35</td>
</tr>
<tr>
<td>Hawaii</td>
<td>0</td>
<td>12</td>
<td>11</td>
<td>23</td>
</tr>
</tbody>
</table>

j. Unit mail clerks pick up and deliver mail from the nearest APO. APO numbers for the units are as follows:

<table>
<thead>
<tr>
<th>UNIT</th>
<th>APO</th>
</tr>
</thead>
<tbody>
<tr>
<td>17F, 23d Arty Op</td>
<td>96289</td>
</tr>
<tr>
<td>2d Bn, 13th Arty</td>
<td>96289</td>
</tr>
<tr>
<td>6th Bn, 27th Arty, 1H, A Btry</td>
<td>96289</td>
</tr>
<tr>
<td>A Btry</td>
<td>96370</td>
</tr>
<tr>
<td>B Btry</td>
<td>96362</td>
</tr>
<tr>
<td>C Btry</td>
<td>96491</td>
</tr>
<tr>
<td>2d Bn, 32d Arty</td>
<td>96353</td>
</tr>
<tr>
<td>A Btry</td>
<td>96257</td>
</tr>
<tr>
<td>B Btry</td>
<td>96289</td>
</tr>
<tr>
<td>C Btry</td>
<td>96256</td>
</tr>
<tr>
<td>2d Bn, 35th Arty</td>
<td>96257</td>
</tr>
</tbody>
</table>

k. Judicial and Non-Judicial actions by units included:

<table>
<thead>
<tr>
<th>UNIT</th>
<th>ARTICLE 15</th>
<th>SUMMARY COURT</th>
<th>SPECIAL COURT</th>
<th>GENERAL COURT</th>
</tr>
</thead>
<tbody>
<tr>
<td>1H, 23d Arty Op</td>
<td>7</td>
<td></td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>2d Bn, 13th Arty</td>
<td>2</td>
<td>2</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>6th Bn, 27th Arty</td>
<td>24</td>
<td>3</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>2d Bn, 32d Arty</td>
<td>39</td>
<td>1/6</td>
<td>2/9</td>
<td>1</td>
</tr>
</tbody>
</table>

TOTAL

Page 4 of 22 Pages

CONFIDENTIAL
CONFIDENTIAL

6 November 1966

SUBJECT: Operational Report on Lessons Learned (0)

1. Each Battalion and Headquarters Battery, 23rd Artillery Group, operates a medical section. Pertinent statistics include:

- Total patient visits (unit personnel) 2,522
- Admitted to hospital 48
- Evacuated within the country 5
- Evacuated out of country 2
- Malaria cases 4

2. Reportable accidents included:

<table>
<thead>
<tr>
<th>UNIT</th>
<th>VEHICLE</th>
<th>AIRCRAFT</th>
<th>PERSONNEL</th>
</tr>
</thead>
<tbody>
<tr>
<td>7th Bn, 3d Arty Gp</td>
<td>7</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>2d Bn, 13th Arty</td>
<td>15</td>
<td>0</td>
<td>4</td>
</tr>
<tr>
<td>6th Bn, 27th Arty</td>
<td>7</td>
<td>0</td>
<td>22</td>
</tr>
<tr>
<td>2d Bn, 32d Arty</td>
<td>11</td>
<td>0</td>
<td>14</td>
</tr>
<tr>
<td>2d Bn, 35th Arty</td>
<td>6</td>
<td>0</td>
<td>3</td>
</tr>
</tbody>
</table>

3. Personnel management within the group has operated smoothly. The personnel sections of the three presently assigned battalions are consolidated into a Group Personnel Section. It is co-located within the area of one of the battalions’ service battery. The consolidated Personnel Section consists of Pay, Management and Records Sub-Sections with a Personnel Warrant Officer supervising each sub-section under the control of the Group SI. This consolidated Group Personnel Section, is similar to the personnel service division organic to an Infantry Division. It has proven particularly effective in processing replacements and returnees.

4. The morale of the command is outstanding.

5. Educational opportunities for personnel are provided by US:FI extension courses.

6. Religious Services, both Protestant and Catholics, are held on a regular weekly basis. The Protestant and Catholic chaplains assigned to this headquarters and the chaplains of the 1st and 25th Infantry Divisions or the 196th Light Infantry Brigade are utilized on an area coverage basis under the supervision of the II Field Forces Chaplain. The Group Chaplains visit each battery within the group at least once a week for the purpose of conducting counseling sessions.
r. Medical Section activities included the following:

(1) A new dispensary has been constructed for Headquarters, 23rd Artillery Group and is now operational. The new facility will handle most emergencies in a more sanitary atmosphere. It has been sited within fifty yards of "Dust Off" facilities, thereby permitting the Medical Section to attend incoming patients with minimum delay.

(2) Throughout the group, personal hygiene, prophylactic usage and frequent lectures on venereal disease have helped in lowering the VD rate. The Battery Commander, Surgeon and Chaplain complement each other's efforts in their approach to this problem. Only one case of re-occurrence has been treated within the entire group.

(3) With the support of the sponsor city, Gadsden, Alabama, and the assistance of U.S.D.I., money, material and medical supplies have been procured for the Gadsden Village, Vietnam, dispensary. At this time the dispensary is nearing completion. The medical section of Headquarters, 23rd Artillery Group will hold sick call three times weekly. Plans are to increase this to daily sick call as soon as circumstances permit. Also, arrangements have been made for a Vietnamese mid-wife to live at the dispensary. (For further on this civic action project, see para 7.)

s. During this quarter, command emphasis was placed on proper administration in accordance with applicable RRs and USAV regulation in the areas of funds, messes, files, security of classified and crypto material, fire prevention and safety, to name only some of the areas stressed. This emphasis served to prepare the Group for its annual Inspector General Inspection and to improve areas which may have been neglected as the Group placed primary emphasis on becoming operational in a combat environment.

t. During this quarter, emphasis was placed on a Command Information program; with the Battery Commander personally conducting the orientation on the major subjects. A program to brief the troops on the general tactical picture in the Vietnam area on a weekly basis was initiated.

2. (C) Intelligence.

a. On 12 October 1966, this headquarters successfully completed a counter-intelligence inspection by Headquarters United States Army, Vietnam.

b. The 23rd Artillery Group and each battalion within the group conducted a one hundred percent semi-annual inventory of classified documents during the month of October. There were no short-comings.
c. Group and Battalion aerial observers are now assigned a designated zone of observation. The zones average forty kilometers by ten kilometers and are covered during a two hour flight. Each assigned area is covered at least once every other day. The observer sightings have improved as each observer becomes thoroughly familiar with this particular zone and detects minor changes in tree lines, trail usage, etc. It has been found that an observer with one assigned sector will develop more targets than an observer searching a larger area for targets of opportunity.

d. Observers conduct surveillance of 4 and 1 targets whenever possible. The surveillance provides a check on the accuracy of fire and insures the availability of an observer to exploit the situation if firing develops a new target by flushing personnel into the area, causing secondary explosions, etc.

3. (S) Training.

a. On the job training and individual cross training continues in all sections and units of the 23rd Artillery Group. During the reporting period a great majority of the personnel, who originally deployed to RVN with 23rd Artillery Group or with subordinate units during October 1965, rotated to CONUS for reassignment. Operational problems were minimized due to replacement orientation and training of incoming personnel prior to the rotation of outgoing personnel. In the areas of cooks, mechanics, supply and maintenance sergeants, replacements generally arrived 15-45 days after rotation of the principle, causing some training problems. It should be noted that a number of key noncommissioned officers within the 23rd Artillery Group have extended their tours in RVN, thereby providing an overlap of knowledge and experience.

b. The following directives have been published to implement uniform training programs within the Group:

(1) On 30 August 1966 the 23rd Artillery Group published a letter, subject: Education and Training, prescribing actions to be taken by subordinate units to implement an effective unit training program. This oriented the battalions toward training in the areas that pertain specifically to operations in RVN.

(2) On 3 September 1966 a letter, subject: Driver Training, was issued by this headquarters initiating a driver training program and requiring training classes to be conducted on the M51 5/2 ton truck, utility, and classes on defensive driving. These classes have aided greatly in orienting incoming personnel to the problems inherent in driving in this country as well as serving as a refresher for the personnel already in country.
(3) On 15 September 1966, the 23rd Artillery Group published a letter, subject: Gunnery Procedures, to provide guidance and establish policies concerning gunnery procedures to be followed by artillery battalions assigned to this headquarters. It further established procedures to insure every effort is made to deliver artillery fire with maximum speed and accuracy, using the latest and best firing data available, while including necessary safety checks to preclude errors which might jeopardize the safety of the supported troops and/or other friendly elements.

(4) A summary checklist was issued by this headquarters on 27 September 1966 to all subordinate battalions, with sufficient copies for all firing batteries. The checklist was not designed as a substitute for sound judgement, alertness and comprehensive knowledge of gunnery techniques, but rather, as a guide in evaluating and measuring the competency of battalion and battery fire direction centers and firing battery operations in general.

c. The DOD Film 153, "The Unique War," was scheduled during the period 10-30 October and has been viewed by all personnel in Headquarters, 23rd Artillery Group, and each of its subordinate battalions.

(d) On 22 October 1966, selected personnel of the 6th Battalion, 27th Artillery, and 2nd Battalion, 32nd Artillery, departed the Republic of Vietnam and attended out-of-country (Weapons Assembly) Training conducted in the Republic of Korea. Personnel returned on 31 October 1966. The training was excellent and extremely beneficial.

e. During the period of 17-28 October 1966 a team from USAAMS, sponsored by USAAV, conducted instruction for the heavy artillery battalions of the 23rd Artillery Group on the M107/M110. This course consisted of a 20 hour block, composed of 8 hours of armament instruction, 8 hours of chassis instruction and 4 hours of maintenance management. The course was successful in providing the artillery battery with improved and up to date techniques for maintenance of its primary weapons.

(h) Operations.

a. Normal operations, consistent with the Group mission, were conducted during the reporting period.

b. The operational capabilities of the Group Artillery Battalions are varied and are reflected in their physical participation in operations this quarter as well as their special equipping for new assignments.

(1) The 2nd (How) Bn, 13th Artillery was the most active participant in operations during this quarter. During the reporting period all batteries of the 2nd Battalion (105mm, towed), 13th Artillery participated in a total of 13 operations in support of divisional maneuver elements. Each operation followed generally the same pattern, in which a
battery was alerted on short notice and prepared to move to a selected location either by escorted road convoy or air movement (by C-130, C-123, or CH-47). Upon attachment or assignment of a tactical mission, the battery commander and limited reconnaissance party moved by organic aircraft to make a hasty reconnaissance of either the firing position or a staging area where the battery joined the maneuver element or artillery unit with which they would work. Since the firing batteries of 2nd Battalion, 13th Artillery have worked with both the US divisions and all of the separate U.S. brigades in III RVN Corps Tactical Zone, personnel of the battalion are familiar with the standing operating procedures of each unit. This reduces the amount of pre-operation briefing. Coordination of radio frequencies and special communications instruction is accomplished during this period. During the conduct of the operations, batteries have performed all of the standard artillery tactical missions, ranging from direct support to general support. The battery commander must be prepared to assume a new mission with new requirements on very short notice. During the course of an operation the battery must be prepared to move to a new firing position on short notice by either road or air lift. This requirement has presented no problem due to the state of training of the unit in air mobile operations. During the reporting period this headquarters sent a letter to the Assistant Commandant, U.S.A.M.C., Fort Sill, Oklahoma, enclosing a copy of the after action report prepared by 2nd Battalion, 13th Artillery at the completion of Operation Toledo (11 Aug - 6 Sep 66). This letter points out the fact that this conflict in RVN is "a battery commanders war" as far as the artillery is concerned. The commander of an artillery battery must be prepared to assume all types of tactical missions and carry them out with little assistance or supervision from the parent battalion staff due to distance involved and lack of communications. He must be prepared to operate independently for sustained periods.

(2) Demonstrating the abilities of self-propelled artillery, the 2nd Battalion (155mm, SP), 35th Artillery also participated in many operations requiring independent battery operations. This unit was restricted to road movement due to size and weight of the weapons. Like the light battalion, this unit performed in all of the standard tactical missions and remained in the operational areas for extended periods. By virtue of the ground mobility of the M109 self-propelled howitzer this unit was caused to make frequent displacements to render the required support, sometimes moving three times in one 24 hour period. The weapon has proven to be quite effective in the terrain of this portion of RVN. The lack of organic aircraft as directed by Department of the Army in the deployment of this battalion limits its effectiveness in the acquisition of targets and in the effective span of command and control. The battalion commander does not have the capability of continuous command supervision of his batteries on separate missions when light aircraft are not immediately available to him. The 2nd Battalion, 13th Artillery, on the other hand, with their two organic O-1's and one H-13, has the
The subject of supporting individual batteries in remote locations. This support does not normally include operational control, but consists of target acquisition, personnel movement, mail delivery, command supervision of fire direction and gunnery techniques, extension of communications, and movement of critical supply parts. The 2nd Battalion, 35th Artillery was only able to operate by "spreading thin" the organic aircraft of the other units of the group, and of the group headquarters.

The very heavy artillery made limited moves on special operations called "Turkey Shoots". Two "Turkey Shoots" have been conducted during the reporting period. A "Turkey Shoot" is the planned displacement of either an 8 inch or 175mm platoon to a forward firing position for approximately 6 hours during daylight to attack targets that are beyond range capabilities from normal secured locations. Normally 200 rounds of ammunition is adequate for this type of operation. Security about the forward position area is provided by the supported ARVN or U.S. Command. Organic observation aircraft are used to locate targets and observe fires on pre-planned targets. The two "Turkey Shoots" during this reporting period were conducted by Battery C, 2nd Battalion, 22nd Artillery employing two 175mm guns at B.A.O THAI (vic 6T256005) on 2 September 1966 hitting targets on well used supply line from Cambodia to Saigon. The second "Turkey Shoot" was conducted by the 8 inch howitzer platoon of Battery C, 2nd Battalion, 32nd Artillery in TAT NEW. The shoot was conducted at THAI BAI (vic XT1155705) and reached targets in Zone C otherwise inaccessible from the normal position in TAY NEW.

The tube composition (175mm versus 8 inch) of both heavy battalions was rearranged within the batteries to permit greater flexibility and for special missions. Presently both heavy artillery battalions are equipped with both the M10 8 inch self-propelled howitzers and the M107 175mm gun. Of the six firing batteries of these battalions, only two are organized as complete 175mm gun batteries. Battery B, 6th Battalion, 27th Artillery is equipped with four 175mm guns for the specific purpose of providing long range artillery fires in support of the III Marine Amphibious Force from the vicinity of DONG HA (TS063559). Battery C, 2nd Battalion, 32nd Artillery is equipped with four 175mm guns, however the battery is deployed as battery (-) and a separate platoon in two distant locations. A platoon of M10 8 inch howitzers of Battery D, 3rd Battalion, 13th Artillery, 25th Infantry Division is presently attached to Battery C (-), 2nd Battalion, 32nd Artillery at TAY NEW, making it a composite battery. Future plans call for conversion of the remaining platoon of Battery C to 8 inch howitzers and for the battery to be re-united at TAY NEW. This discussion is included to emphasize the flexibility inherent in the M10/M107 carriages.

c. The following deployments were effected during the reporting period:
(1) On 19 September 1966 Battery C (-), 2nd Battalion, 32nd Artillery was moved from CU CHI (XT6444146) to TAY NINH (XT155515). The mission of the battery is general support, reinforcing the 3rd Battalion, 32nd Artillery, the direct support artillery battalion of the 196th Light Infantry Brigade. It also provides fire support for the Special Forces camps in the area.

(2) On 21 September 1966 the Advance Party of the 54th Artillery Group was briefed by the staff of the 23rd Artillery Group. The 54th Artillery Group personnel spent two (2) days with this headquarters observing the operations of their counterparts.

(3) On 23 September 1966 Task Force Haymaker (6th Battalion, 27th Artillery) moved from PHOUC VINH (XT969495) enroute to I Corps area (vicinity YD623559) where they were placed under the operational control of III Marine Amphibious Force (III MAF). On 15 October 1966 the Task Force was attached to the 2nd Battalion, 94th Artillery. This interim period saw a battalion deployed on a 450 mile front. The Task Force is comprised of the equipment and personnel of a TOE 175mm gun battery augmented with a survey team, liaison team and maintenance personnel from the battalion. The mission of the Task Force is to provide long range artillery support for US and Free World Military Assistance Forces in the I Corps Zone.

(4) The Advance Party of the 1st Battalion, 40th Artillery, arrived in-country on 3 October 1966. The party was briefed at this headquarters on 3 October. On 4 October the Advance party departed by convoy for their staging area at CU CHI (XT650150). The mission of the 1st Battalion, 40th Artillery, was changed while they were staging. On 7 October 1966 they departed III Corps Zone for I Corps Zone and were placed under operational control of III MAF.

(5) The Advance Party for the 7th Battalion, 9th Artillery, arrived in-country on 12 October 1966. The party was briefed at this headquarters on 12 October. On 14 October 1966 the Advance Party moved into the staging area prepared by Headquarters, 2nd Battalion, 13th Artillery, at PHU LOI to await the arrival of their equipment and personnel. The Battalion will be assigned to 54th Artillery Group and located in a base camp at BEAR CAT (YT165003).

d. The following studies were conducted by this Group:

(1) A study of meteorological conditions in the XUAN LOC (YT4644083) and NUI DAT (YS427665) areas was conducted by the meteorological sections of the 2nd Battalion, 32nd Artillery, and the 2nd Battalion, 35th Artillery. The purpose was to determine the similarity of weather conditions between the two areas to see if one meteorological station would be adequate to service both areas. The study indicated the apparent need for a meteorological station at both locations. II Field Force
SECRET

6 November 1966

SUBJECT: Operational Report on Lessons Learned (U)

Vietnam Artillery has tentative plans to place one of the meteorological sections of Headquarters Battery, 8th Battalion (Target Acquisition), 25th Artillery, at NUI DAT to fill this requirement.

(2) On 19 August 1966 this headquarters completed a study for United States Army Artillery and Missile School on the effectiveness of the Field Artillery Officer Basic Course. Recommendations for changes to the program of instruction were forwarded to Fort Sill.

(3) From 15-25 October 1966, the 23rd Artillery Group conducted a series of taped interviews with various personnel of Headquarters 23rd Artillery Group and assigned battalions. This tape will be used in classroom instruction at the United States Army Artillery and Missile School to increase student interest as well as to inform the school of the various problems facing artillery units in Vietnam.

... continuation...

Local Pacification in the HU LOI area continued with Operation LAM SON II. This operation is controlled by the 1st Infantry Division and is conducted by a task force composed of an infantry battalion, Division Artillery personnel, and personnel from tenant units at HU LOI.

... continuation...

During the month of August, all artillery tubes in the 23rd Artillery Group were calibrated and inspected by pull-over groups. Spot calibrations are performed when a unit receives a new tube. Recalibration started in October 1966 and should be finished by late November 1966.

... continuation...
**SECRET**

SUBJECT: Operational Report on Lessons Learned (U)

<table>
<thead>
<tr>
<th>UNIT</th>
<th>NO OF ROUNDS FIRED</th>
<th>AMMO EXPENDED</th>
</tr>
</thead>
<tbody>
<tr>
<td>2/35 (see note 162)</td>
<td>2302</td>
<td>15269</td>
</tr>
</tbody>
</table>

NOTE 1: 2/35 Artillery fired their 10,000th round since arrival in RVN on 30 August 1966. 2/13 Artillery fired their 80,000th round on 30 August 1966.

NOTE 2: These are the figures of the 2/35 Artillery up to the time it was released from assignment to the 23rd Artillery Group on 20 October 1966.

i. The following gains and losses are noted:

1. The 2nd Battalion, 35th Artillery was released from assignment to the 23rd Artillery Group and assigned to the 5th Artillery Group on 20 October 1966.

2. The 2nd Battalion (155mm Towed), 11th Artillery, is estimated to arrive in-country in December 1966, with locations projected as follows:

   a. Headquarters and Headquarters Battery
   b. 1 Firing Battery
   c. 1 Firing Battery
   d. Service Battery
   e. Phu Loi (X78-0160)
   f. Bien Hoa (X705145)
   g. Cu Chi (X7650150)
   h. Phu Loi (X7850160)

5. (G) Logistics.

a. During the period 1 August 1966 to 31 October 1966, the general condition of supply has improved. This is especially true of class II and IV (general supplies). There are still some problem areas which remain, but they are in the process of being resolved.

b. Maintenance support for units has improved during this quarter. However, the assignment of additional units during the next quarter is expected to create some problems in this area.

c. Stockage levels of repair parts for M107 and M110 were greatly improved in the last quarter. The 185th Ordnance Battalion was able to support most of the requirements for repair parts, however, there were some repair parts that had to be ordered by Rod Ball to expedite.
their arrival in the theater. A major problem has been the lack of float sights to replace unserviceable sights on the M107 and M110. Modified sights that were expected from CONUS during the period of this report have not arrived in theater.

d. In relation to the last quarter, the down time for maintenance failure of M107/M110 has been reduced. One factor causing delay in repair is the lack of organic air transportation in maintenance support units for moving larger repair parts to areas where the weapons are deadlined. Organic Group aircraft have been used extensively to move smaller repair parts. Contact teams of the 185th Ordnance Battalion have been placed with the more isolated units of the group to expedite troubleshooting to determine requirements of repair parts at these remote locations. Tube replacement and breech assembly replacement continues to be a problem. Due to present restrictions placed on the M107 it is expected that the tubes will require replacement about every forty-one (41) days and breech block assemblies every three (3) to four (4) months. This will mean a continuing major supply as well as maintenance problem. ELR's are submitted on the M107/M110 on a continuing basis. Many replies to ELR's have been received by units already.

e. Maintenance of generators continues to be a problem within the group. Shortages of 2d and 3d echelon repair parts continue to be a repair operations. The time that generators are deadlined for repair operations continues to be high although there has been some improvement this quarter over last quarter. The primary reason for the improvement is the receipt and utilization of heavy generators to replace the smaller tactical generators as power sources in base camp areas. This should continue to decrease the down time for tactical generators.

f. Repair parts are still a problem with regard to the M211 trucks. The M211 trucks are continuing to fail and in a majority of cases the vehicle must be salvaged, causing tactical units to be short of critical vehicles. During this change-over from M211 to M35-2, the units have the additional burden of maintaining two (2) M211's. Requisitions have been submitted for the replacement of all M211 vehicles with M35-2 vehicles and 67% have now been replaced. Requisitions outstanding are: 2d Battalion, 32d Artillery - 14 each (req #6057-002 & 001); 2d Battalion, 13th Artillery - 17 each (req #6276-049 and #308-004).

g. Supply of Class V to isolated units from ASP's continues to strain the vehicle assets of the Group. There is a need for forward ASP's to be established to cut down the time/distance for the Service Batteries to move the high tonnages of Class V to the firing units over distances as high as 100 miles. All such convoys require security to aerial surveillance. Airlift of Class V is difficult to obtain and is the least economical means of transportation.

h. During this quarter, command emphasis was placed on the Materiel Readiness of the Group. A Materiel Readiness Inspection of all units down to battery level was conducted in two phases as follows:
SUBJECT: Operational Report on Lessons Learned

6 November 1966

(1) Phase I - Briefing by the unit Commander on his Material Readiness plan, and an inspection of the unit's maintenance facilities by the Group Material Readiness Officer (Executive Officer) and the S-4.

(2) Phase II - Detailed inspection of records and equipment by a Maintenance Team from the 29th General Support Group, with special emphasis on equipment log books and prescribed load lists.

1. The following problem areas are noted:

(1) The short tube life of M107 weapons continues to be a problem. Present criteria is 400 EFC rounds. In addition, no more than 300 Zone 3 may be fired with a given tube. (see para 5d, above)

(2) A white phosphorous round is still not available for M107 and M110. This is particularly needed as a spotting round in dense jungle, but could also be used profitably as an incendiary round.

(3) PLL and higher echelon repair parts for the M107 and M110 remain in short supply even though the 185th Ordnance Battalion maintains close control of all spares available in order to keep them operational.

(4) Meteorological expendables are still in very short supply. The following meteorological items are in critical short supply and if not received will drastically curtail the effectiveness of artillery unobserved fires:

<table>
<thead>
<tr>
<th>FNS</th>
<th>Nomenclature</th>
</tr>
</thead>
<tbody>
<tr>
<td>6135 - 635 - 6370</td>
<td>Battery pack, BA-259/AM</td>
</tr>
<tr>
<td>6810 - 656 - 1036</td>
<td>Calcium Chloride, dehydrate</td>
</tr>
<tr>
<td>6660 - 408 - 4560</td>
<td>Calcium hydride Charge, ML-305</td>
</tr>
<tr>
<td>6660 - 663 - 8154</td>
<td>Balloon, ML 159A</td>
</tr>
<tr>
<td>6660 - 892 - 1718</td>
<td>Balloon, ML 537/UM</td>
</tr>
<tr>
<td>6660 - 606 - 8648</td>
<td>Chart, ML 574/UM</td>
</tr>
<tr>
<td>4020 - 297 - 1737</td>
<td>Twine, RP-15</td>
</tr>
<tr>
<td>6660 - 408 - 4698</td>
<td>Lighting unit, ML-338/AM</td>
</tr>
</tbody>
</table>
(5) The 2d Battalion, 35th Artillery arrived in Vietnam without the 100% PLL on thirty (30) day stockage level as specified by AR 735-35. This caused additional loads to be placed on the supply systems in an effort to provide the necessary parts.

(6) Building and maintaining gun pads (hardstands) at heavy artillery locations remains a problem. Those hardstands presently in artillery positions were constructed from laterite and have proven very unsatisfactory since they deteriorate rapidly and require constant maintenance during the rainy season. Heavy construction engineers are fabricating gun pads from large timbers and heavy boards. A wooden test pad designed by the 23rd Artillery Group has been tested and gives promise of holding up under all weather conditions. By 1 December 1966 all heavy artillery batteries will have the materials for these gun pads issued to them by supporting engineers. Construction will be done by the artillery battery personnel under engineer supervision.

(7) Wiring for the night lighting device of the M109 sight is subject to severe damage as a result of frequent firing of charge 7. EIR's have been submitted and during this quarter the sights were either modified or replaced.

(8) The hydraulic system which operates the traverse and elevation of the 155mm SP howitzer M109 is subject to leakage. Whenever such a failure occurs the mechanism has to be operated manually. The necessity of evacuating the weapon to support maintenance in the event of hydraulic systems failure increases the downtime drastically. EIR's have been submitted.

6. (U) Aviation.

a. Aircraft assets remained constant during the period with five (5) OH-13's, nine (9) U-1's and one (1) U-6 assigned to Group Headquarters and its three battalions. One OH-13 is provided daily to the 54th Artillery Group as the organization was deployed without organic aircraft.

b. Numerous personnel changes occurred due to normal rotation, but the assigned strength remained relatively constant. A shortage of enlisted maintenance personnel exists. This shortage is not critical and is expected to be eliminated in the near future by normal personnel input.

c. Aviation support requirements increased steadily during this reporting period. This was due primarily to the relocation of subordinate units. The value of the utility aircraft (U-6) to a field Artillery Group was emphasized by the number of passengers and tonnage cargo, principally repair parts, which were lifted during this period.
SECRET

AVGE-C
SUBJECT: Operational Report on Lessons Learned (U)

6 November 1966

d. Dusty landing strips and hell-pads continued to cause maintenance problems and reduce engine life. These problems are specified in paras 3a and b, Section II.

e. The following aviation missions, listed by sorties, were flown during this quarter:

<table>
<thead>
<tr>
<th></th>
<th>Search &amp; Rescue</th>
<th>Cam &amp; Con</th>
<th>Recon</th>
<th>Arty Adl</th>
<th>Log</th>
<th>Pax</th>
<th>Cgo</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rotary Wing (OH-13)</td>
<td>23</td>
<td>989</td>
<td>570</td>
<td>98</td>
<td>958</td>
<td>10.8</td>
<td>684.1</td>
<td></td>
</tr>
<tr>
<td>Fixed Wing (O-1 and U-6)</td>
<td>39</td>
<td>916</td>
<td>361</td>
<td>86</td>
<td>402</td>
<td>11.7</td>
<td>2086.7</td>
<td></td>
</tr>
<tr>
<td><strong>TOTALS</strong></td>
<td><strong>62</strong></td>
<td><strong>1486</strong></td>
<td><strong>459</strong></td>
<td><strong>86</strong></td>
<td><strong>1366</strong></td>
<td><strong>22.5</strong></td>
<td><strong>2770.8</strong></td>
<td></td>
</tr>
</tbody>
</table>

7. (U) Civic Action.

a. The major civic action of the Group is project Gadsden Village which is progressing very successfully and fulfilling all the expectations with which it was initiated. The first major intermediate goal was achieved on 8 August 1966 when ten (10) refugee families were moved in the first ten (10) completed homes of Gadsden, Vietnam. A ceremony was conducted which was attended by Lieutenant Colonel Ba, Province Chief; USAID representatives; members of the 23rd Artillery Group and the grateful refugees.

b. On 17 September 1966, a ceremony was held in Gadsden for the purpose of laying the cornerstone for a new dispensary (see para 1q). The cornerstone was laid by Lieutenant General Seamen, Commanding General II Field Force, Vietnam and Colonel Sayes, 23rd Artillery Group Commander. The ceremony was also attended by Lieutenant Colonel Ba, Province Chief, Colonel Allin, Commanding Officer, II Field Force, Artillery, and Captain Phouc, District Chief. The building at this writing is seventy (70) percent completed. The plans were developed with the cooperation of the local government and a USAID representative. This is to be a model dispensary. It is ten (10) meters square and will house a waiting room, examination and delivery room, ward, two (2) bedrooms, and a living room. Water will be supplied from a tank on the back porch which will be convenient to the kitchen and the shower and latrine. The District Chief has selected a competent mid-wife who will be compensated by the Government RVN. The mid-wife and her family will reside in the dispensary.

c. At the present time thirty (30) houses have been completed and occupied by thirty (30) refugee families. The only remaining touches to these houses are the additions of latrines and kitchens. An additional 30 family unit will soon be started.
AVGE-C
6 November 1966

SUBJECT: Operational Report on Lessons Learned (U)

d. Plans have been developed with the Department of Education, Government of Vietnam, to construct a school complex of three (3) buildings. One (1) building will have office space for the teachers and principal, and a storage room. The other two (2) buildings will have two (2) classrooms each. The buildings will be arranged in a "U" shape around a playground. A latrine with water-sealed pits will be constructed for the students.

a. A skilled labor force is developing very rapidly from among the refugees under the active supervision provided by the 23rd Artillery Group. Engineer equipment has been donated by the ARVN Engineer School and the Engineer Battalion of the 5th ARVN Division.

8. (C) Psychological Warfare. One hundred thousand (100,000) selected propaganda leaflets provided by the local JUSPAO representative have been dropped by the 23rd Artillery Group organic aircraft. When flight plans require flying over VC controlled areas as is normally the case, leaflets are taken along by the aircraft crew for dropping into these areas. The primary leaflet drop areas are War Zones C and D, and the Iron Triangle.

9. (C) Communications.

a. During the period 1 August 1966 to 31 October 1966, communications within the 23rd Artillery Group have greatly improved through the use of the new VRC-12 series of radios. The new FM series (VRC-12) have proven highly successful. Maintenance downtime has been minimal.

b. Lack of the new type FM radios on organic fixed wing aircraft has prevented full exploitation of this new communications media i.e., the mating of squelch circuits. The FM carrier omitted from the old series radios now being used in the 23rd Artillery Group O-1 aircraft will not trigger the new squelch circuits in the AN/VRC-12 series. Correspondence has been received that indicates that the present FM radios being used in our O-1 aircraft will receive a retrofit to make them compatible with the new series.

c. Slew user circuits have been installed between this headquarters and BEAR CAT, CU CHI, LAI KHE, and PHUOC VINH for fire direction data from the 23rd Artillery Group Operations Center to the various battalion fire direction centers and to two of the battery fire direction centers.

d. The units of the 23rd Artillery Group received a shipment of KY-8/TSEC equipment, less installation kits. Cables needed to make this equipment operational were not included as part of the installation kits. Supply sources state that there is a critical shortage of cables for the KY-8/TSEC in III CTZ and the expected date of arrival in-country is not known.
o. The M-170-16 radio set has proven unsatisfactory in this tropical environment. The transmitter, T-195, is subject to overheating when the set is in operation in the tropics. The humidity which causes deterioration of internal components and heavy fumes between stations which reduces microwave transmission have reduced the reliability of this equipment in Vietnam.

f. Interference has been experienced over two of the frequencies assigned to the 23rd Artillery Group during the month of October. The interference is suspected to be enemy jamming in the form of noise and voice signals. 23rd Artillery Group has experimented with the Navigational FM homing equipment installed in H-13 helicopters for the purpose of locating the source of the generated interference. Upon receipt of interference, the airborne helicopter is able to get a "Fix" on the location of the interference source. The "Fix" consists of an azimuth. After two or more "Fixes" have been taken from above known ground locations, an intersection is plotted giving the approximate location of the source, and fire is adjusted on likely areas in the vicinity. These areas were also used as NAP targets. This action caused a reduction in the jamming.
SECTION II
Part One, Observations (U)

1. (C) Communications.
   a. ITEM: Airborne FM Homing Equipment.
      (1) DISCUSSION: The use of aircraft navigational FM homing equipment, presently installed on light Army aircraft, to locate suspected enemy radio jamming devices has proven successful.
      (2) OBSERVATION: Additional equipment capabilities may become apparent through operational improvisions.
   b. ITEM: Retrofits for aircraft FM radio’s.
      (1) DISCUSSION: The use of the new squelch circuits on the AN/VRC-16 radio sets will eliminate much of the interference from local non-integrated circuits that is now being experienced within the group.
      (2) OBSERVATION: Background static and transmission from non-integrated radio systems will be eliminated.
   c. ITEM: Unserviceability of the AN/GRC-16.
      (1) DISCUSSION: Replacement of the AN/GRC-16 radio with the new AN/QRC-142 radio will eliminate most of the heat, humidity and foliage problems encountered with the AN/GRC-16.
      (2) OBSERVATION: The AN/GRC-142 is not as susceptible to these problems as is the AN/GRC-16.

2. (U) Intelligence.
   a. ITEM: Map usage.
      (1) DISCUSSION: Aerial observers have learned through experience, that a 1/50,000 map of the III Corps Tactical Zone is necessary for each flight. By use of a special purpose slit and fold, a map of the III Corps Tactical Zone can easily be handled by the observer in the rear seat of the O-1 aircraft.
      (2) OBSERVATION: The special purpose slit and fold very effectively reduces a massive and cumbersome map to a flexible lap-size chart.

3. (U) Aviation.
   a. ITEM: Critical reduction of O-1 engine life due to ingestion of dust.
(1) DISCUSSION:  A minimum of three air filters must be on hand for each aircraft to allow filters to be changed twice daily. Carburetor heat control must be in the full COLD position during all ground operation to prevent unfiltered air entering the induction system.

(2) OBSERVATION: Three filters must be on hand to allow for adequate cleaning and to allow proper draining of the filters after oil treatment.

b. ITEM: Rapid deterioration of bearings on OH-13's.

(1) DISCUSSION: Prescribed lubrication orders do not adequately suffice because of the accumulation of dust and fine laterite particles.

(2) OBSERVATION: Daily lubrication of swash plate, hanger bearings and tail-rotor system is required.

c. ITEM: Use of Homing feature of AN/VRC-5U.

(1) DISCUSSION: During the latter part of the reporting period, increased jamming of the command frequencies was experienced. The homing feature provides a rapid means of obtaining a directional fix on the jammer.

(2) OBSERVATION: Two hostile jammers were located using the point intersection of fixes obtained with OH-13 utilizing the AN/VRC-5U. Artillery fire on these locations eliminated the jamming.

d. ITEM: Artillery battalions are being deployed to RVN minus aviation sections.

(1) DISCUSSION: Adequate aviation support for widely deployed artillery units is absolutely essential to mission accomplishment. Units are ineffective without readily available aviation support for target acquisition, daily registration, and command and control. An effective visual reconnaissance program in the densely vegetated environment dictates the assignment of observers to specific areas of responsibility to insure discernment of day to day changes in trail usage and construction of bridges, base camps, barriers, revetments and bunkers. The range capabilities of heavy artillery within this group encompass twenty three sectors of approximately ten by forty kilometers each. Each sector can be scanned in two hours utilizing an O-1 aircraft. The nine O-1 aircraft currently assigned the group and assigned battalions provide approximately a fifty percent capability of meeting daily surveillance requirements alone. Increased artillery unit density without increasing aircraft assets further diminishes the visual reconnaissance capability of the group. In addition, command and control and daily registration requirements of the widely dispersed firing batteries must be met if artillery is to accomplish the mission for which it was deployed.

(2) OBSERVATION: Artillery groups and battalions deployed to RVN should be provided as a minimum with aircraft as follows:

- **Groups**: 3
- **Battalions**: 2
- **OH-13 or OH-23**

Page 21 of 22 Pages
OPERATIONAL REPORT ON LESSONS LEARNED (W)

PART II, RECOMMENDATIONS (C)

1. The remaining M211 Trucks be replaced immediately by the M35/2 series.

2. Artillery Units alerted for deployment to Vietnam be instructed to report in-country with one-hundred percent PLL on hand.

3. Hydraulic systems in the 155mm SP howitzer (M109) be re-evaluated and redesigned to provide a more dependable system.

4. Cables for operation of the KY-8/TEC be shipped as part of the equipment rather than with the installation kits.

5. Use of airborne homing equipment be considered for possible inclusion in the electronic warfare doctrine.

6. Steps be taken to expedite shipment and installation of the retrofits on the old series FM aircraft radios in order to exploit the full capability of the AN/VRC-16 radio sets.

7. Tactical units using the AN/GRC-46 be issued replacement AN/GRC-112's as soon as possible.

8. All non-divisional artillery battalions be authorized to deploy an organic air section of two (2) O-1 aircraft and one (1) light helicopter and artillery groups with three (3) O-1 aircraft and two (2) light helicopters.

9. All dirt surfaced landing strips be treated with a soil stabilization substance as expeditiously as possible to decrease dust ingestion damage to aircraft engines.

[Signature]

THOMAS H. SAYES
Colonel Artillery
Commanding