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SUBJECT: Operational Report - Lessons Learned, Headquarters, 5th Battalion, 2d Artillery, Period Ending 30 April 1970 (U)

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CP THE ARMY
HEADQUARrZ&, 5TH BATTALION (AW)(SP), 2D ARTILLERY
APO San Francisco 96266

AVFB-FAG-C

1 May 1970

SUBJECT: Operational Report of the 5th Battalion (AW)(SP), 2d Artillery
for the Period Ending 30 April 1970, RCS CSFOR-65 (R2) (U)

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1. (C) Section 1, Operations: Significant Activities

a. Administration/Personnel:

(1) During the reporting period replacements were received in sufficient numbers to fulfill operational requirements. However, during the first week of April the enlisted strength dropped to 85% of the authorized figure. During the second week of April the strength dropped to 32%. At this point consideration was given to administratively deadlining a small number of combat vehicles. However, sufficient replacements were received during the following week to bring the battalion strength up to 90% of its authorized figure. The majority of these replacements carried infantry and field artillery MOS's, and required intensified Air Defense training at Battalion Headquarters prior to assignment to the Batteries.

(2) During the reporting period the following awards were presented to assigned and attached personnel:

<table>
<thead>
<tr>
<th>AWARDS</th>
<th>PERSONNEL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Silver Star</td>
<td>1</td>
</tr>
<tr>
<td>Soldier's Medal</td>
<td>1</td>
</tr>
<tr>
<td>Bronze Star (Valor)</td>
<td>10</td>
</tr>
<tr>
<td>Bronze Star (Meritorious Service and Achievement)</td>
<td>40</td>
</tr>
<tr>
<td>Air Medal</td>
<td>12</td>
</tr>
<tr>
<td>Army Commendation Medal (Valor)</td>
<td>29</td>
</tr>
<tr>
<td>Army Commendation Medal (Meritorious Service and Achievement)</td>
<td>92</td>
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<tr>
<td>Purple Heart</td>
<td>4</td>
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DEPARTMENT OF THE ARMY
HEADQUARTERS, 5TH BATTALION (AW)(SP), 2D ARTILLERY
APO San Francisco 96266
1 May 1970


(3) The battalion headquarters was engaged in normal operations during the reporting period with emphasis placed on strengthening the perimeter defense of the headquarters compound. Of particular importance was the installation of a salvaged searchlight in a tower on the southwestern portion of the perimeter. This searchlight provides the compound with a rapid, dependable, illumination capability.

(4) There was one administrative move of a battery headquarters during the reporting period. (See b(2) below).

(5) Battalion Personnel statistics as of 30 April 1970:

(a) Current Strength:

<table>
<thead>
<tr>
<th>Battalion</th>
<th>Authorized</th>
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<tbody>
<tr>
<td>OFF</td>
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<td>M</td>
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<tr>
<td>5th BN (AW)(5P) 2d Arty</td>
<td>37 2</td>
<td>520</td>
</tr>
<tr>
<td>6th BN (MLT) 29th Arty</td>
<td>8 0</td>
<td>137</td>
</tr>
<tr>
<td>5th BN (MLT) 71st Arty</td>
<td>2 0</td>
<td>291</td>
</tr>
<tr>
<td>71st Arty (HQ)</td>
<td>47</td>
<td>379</td>
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(b) Gains and Losses 1 February 1970 - 30 April 1970:

<table>
<thead>
<tr>
<th>Gains</th>
<th>Losses</th>
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<tbody>
<tr>
<td>270</td>
<td>96</td>
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<tr>
<td>32</td>
<td>33</td>
</tr>
<tr>
<td>53</td>
<td>42</td>
</tr>
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(c) Casualties 1 February 1970 - 30 April 1970:

<table>
<thead>
<tr>
<th>Type</th>
<th>Number</th>
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<tbody>
<tr>
<td>Died of Battle Wounds</td>
<td>0</td>
</tr>
<tr>
<td>Killed in Action</td>
<td>0</td>
</tr>
<tr>
<td>Wounded in Action</td>
<td>8</td>
</tr>
<tr>
<td>Missing in Action</td>
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<tr>
<td>Non-Battle Deaths</td>
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(d) R & R Experience:

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<th>APR</th>
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<td>20</td>
<td>21</td>
<td>13</td>
</tr>
<tr>
<td>Bangkok</td>
<td>8</td>
<td>6</td>
<td>11</td>
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<tr>
<td>Hawaii</td>
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<td>14</td>
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<tr>
<td>Hong Kong</td>
<td>3</td>
<td>2</td>
<td>4</td>
</tr>
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<td>Manila</td>
<td>5</td>
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<td>Singapore</td>
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</tr>
<tr>
<td>In-Country</td>
<td>13</td>
<td>13</td>
<td>13</td>
</tr>
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</table>

*Program terminated 15 April 1970.

(6) Current organizational structure of the 5th Battalion (A&W)(3F), 2d Artillery and attached units is at Inclosure 1.

b. Operations:

(1) General: The reporting period was characterized by a significant increase in the number of positions occupied by automatic weapons and searchlights. Deployment to remote areas was more common during this reporting period than at any similar period of time within the preceding year. Both of these facts are indicative of the relatively fluid nature of operations throughout III Corps. Tactical Zone during the past three months. In particular, the frequent deployment of II Field Force Vietnam Artillery weapons to remote fire bases usually resulted in deployment of automatic weapons and searchlights to secure these weapons. Due to the redeployment of the 1st Infantry Division, the mission of Battery A was changed from General Support 1st Infantry Division to General Support 1st Cavalry Division. As an entire battery is now supporting the 1st Cavalry Division, the provisional task force (Task Force North) is no longer required and therefore was disbanded on 20 March 1970.

(2) Unit Missions:

(a) On 5 February 1970, the battalion (and attached units) was reassigned from United States Army Vietnam to II Field Force Vietnam, with operational control exercised by II Field Force Vietnam Artillery.

(b) Battery A was released from its mission of General Support 1st Infantry Division and placed in General Support 1st Cavalry Division (Air-mobile) effective 20 March 1970. The battery headquarters remains at

Phu Loi with a reinforced platoon headquarters at Phuoc Vinh. The primary mission of the platoon headquarters is to coordinate the activities of the battery with Headquarters, 1st Cavalry Division.

(c) Battery B remained in General Support of the 25th Infantry Division. The battery headquarters remained at Cu Chi.

(d) Battery C remained in General Support of II Field Force Vietnam. Four M42A1 Dusters from Battery C support the 3d Brigade, 9th Infantry Division and two Dusters support the Australian Task Force (ATF). The 10 remaining Dusters support elements of II Field Force Vietnam Artillery. The battery headquarters remained at Camp Price (YT Q2115).

(e) Battery D remained in General Support of II Field Force Vietnam. On 22 March 1970 six Dusters were placed in support of the 5th ARVN Division. These tracks were deployed along highway 13 ("Thunder Road") to partially fulfill the commitment that was Battery A's when the 1st Infantry Division was responsible for securing highway 13 north of Lai Khe. Two Dusters remained in support of the Royal Thai Army Volunteer Force (RTAVF) and two Dusters were placed in support of the 2d Brigade, 25th Infantry Division, operating in a special area of operations south of Bearcat. The brigade is OPCUN directly to II Field Force Vietnam. The remaining six Dusters support elements of II Field Force Vietnam Artillery. Due to the availability of a compound with greatly improved facilities, the battery headquarters was moved from FSB Concord to Husky Compound in Xuan Loc. The move commenced on 15 April 1970 and was completed on 16 April 1970.

(f) Battery I (SLT), 2d Battalion, 29th Artillery remained attached to 5th Battalion (A)(JP), 2d Artillery. The battery's mission remained General Support II Field Force Vietnam. Searchlights were deployed to support the following organizations: 1st Cavalry Division; 25th Infantry Division; 3d Brigade, 9th Infantry Division; Capital Military Assistance Team (formerly the Capital Military Assistance Command); the Royal Thai Army Volunteer Force; the Australian Task Force; the 5th ARVN Division; and elements of II Field Force Vietnam Artillery.

(g) Battery D (MG), 71st Artillery remained in General Support of II Field Force Vietnam and attached to 5th Battalion (A)(JP), 2d Artillery. Firing elements were deployed to support the following organizations: six Quads to the 1st Cavalry Division; four Quads to the 25th Infantry Division; two Quads to the 3d Brigade, 9th Infantry Division; two Quads to the 5th ARVN Division; and ten Quads to elements of II Field Force Vietnam Artillery.
(h) Current deployment and individual unit missions of 5th Battalion (A/W)(SP), 2d Artillery (to include attached units) are listed at Inclosure 2.

(3) Automatic weapons and searchlight deployment positions occupied during the reporting period are portrayed at Inclosure 3.

(4) Briefing of ARVN Artillery Commanders: On 10 April 1970 the battalion commander presented a briefing to members of the ARVN Artillery Command. The meeting, which was held at the 61st ARVN Artillery headquarters in Saigon, was attended by all ARVN commanders of division artillery and higher and their American advisors and was held in conjunction with the semi-annual Artillery Branch Festival. The battalion commander presented a 35 minute briefing designed to inform the commanders of the missions, organization, and employment of the 5th Battalion (A/W)(SP), 2d Artillery. Also mentioned were the considerations affecting employment of a like battalion in the air defense role. After the briefing, equipment was available for inspection by attendees. This static display consisted of one M42A1 Duster, one M35 Quad mounted on a five-ton truck, and one AN/AES-3 Searchlight system. Considerable interest was shown in both the briefing and the equipment display.


(6) Deployment of Quad Caliber .50 Machine Guns in the Air Defense Role: As a result of numerous radar sightings in the vicinity of the "Angel's Wing" (an area along the Cambodian border approximately 56 kilometers northwest of Saigon), two Quads were deployed to the Civilian Irregular Defense Group camp at Duc Hue on 13 March 1970. Two additional Quads were deployed to Phuoc Luu on the same date. The purpose of this deployment of Quads was to deny use of the airspace along the border by what was believed to be enemy resupply helicopters. Since all of the radar sightings were obtained at night, the counter-mortar radars at Duc Hue and Phuoc Luu were to be used to provide the Quads with the azimuth and range to the sightings. By using indirect fire procedures, the Quad crews would then fire on the aircraft. The use of a counter-mortar radar as an acquisition radar is unique, and although it could not have provided data accurate enough to insure hits by the Quads, it could have provided the Quads with data that could have been used effectively as a basis for harassing fire. The difficulty in obtaining clearances to fire and the need for employment of the Quads elsewhere resulted in the cessation of the mission on 17 March 1970.
(7) Significant Operations:

(a) 1 February 1970, Dau Tieng Bridge - At 0100CH February 1970, as the result of a ground surveillance radar sighting approximately 1750 meters from the Dau Tieng Bridge, a Cobra gunship was summoned to search out two to four persons. Upon arrival of the gunship, the crew of searchlight 152 of Battery A, 2d Battalion, 29th Artillery flashed visible light in the area of suspected movement. The light prevented the enemy from evading the engagement by the Cobra. A sweep of the area resulted in the discovery of two VC/NVA KIA credited to the Cobra with the searchlight receiving credit for assisting in the kills.

(b) 1 February 1970, Hobo Woods - At 0115CH February 1970, while on a search and destroy mission at coordinates XT 51247 with Company A, 1st Battalion, 5th Infantry (Mech), the crewmen of Duster 141 of Battery B, 5th Battalion (AVP), 2d Artillery observed movement at an azimuth of 2300 mils and a range of 500 meters. The enemy was engaged with 120 rounds of 40-mm fire. A subsequent sweep of the area resulted in the discovery of one VC/NVA KIA credited to Duster 141 by the infantry commander.

(c) 3 February 1970, Hobo Woods - At 0318CH February 1970, while on a search and destroy mission at coordinates XT 63282 with Company A, 1st Battalion, 5th Infantry (Mech), the crew of Duster 141 of Battery B, 5th Battalion (AVP), 2d Artillery engaged a ground surveillance target at an azimuth of 4800 mils and a range of 800 meters. Forty rounds of 40-mm ammunition were expended against the target. A sweep of the area resulted in the discovery of two VC/NVA KIA credited to Duster 141 by the infantry commander.

(d) 3 February 1970, Dau Tieng Bridge - At 032135H February 1970, as a result of a ground surveillance radar sighting 1150 meters from the Dau Tieng Bridge, a Cobra gunship was summoned to search out two persons. Upon arrival of the Cobra, the crew of searchlight 152 of Battery A, 2d Battalion, 29th Artillery flashed visible light in the area of suspected movement. The light prevented the enemy from evading the gunship and both VC/NVA were killed by fire from the Cobra. The searchlight crew was credited with assisting in the kills.

(e) 26 February 1970, two kilometers north of FSB Cindy - At 261425H February 1970, while providing security for a convoy from FSB Cindy (XT 382815) to a water point five (5) kilometers to the north, the convoy's second vehicle, an APC, detonated a 30 pound mine. Approximately 15 minutes later, while awaiting the arrival of a recovery vehicle, the convoy came under enemy fire. Two to three mortar rounds and several 57-mm
recoilless rifle rounds impacted 25 meters from the convoy. The crews of Dusters 141 and 142 of Battery C, 5th Battalion (AW)(SF), 2d Artillery enaged the enemy positions. The Dusters fired for 20 to 25 minutes, providing enough time for the evacuation of the other vehicles and the men from the destroyed APC. During this time the two Dusters expended approximately 600 rounds of 40mm ammunition. A later search of the area resulted in the discovery of several 57-mm canisters. The supported commander credited the Dusters with thwarting the ambush.

(f) 2 March 1970, strong point (XT 788335) vicinity of FSB Attleboro - At 021530H March 1970, a Vietnamese female, age 26, and a Vietnamese male, age 26, surrendered to the crewmen of Dusters 211 and 212 of Battery A, 5th Battalion (AW)(SP), 2d Artillery. The female appeared first. She loitered for a short period of time and then departed the area on a borrowed bicycle. A few minutes later she returned with the male who was later determined to be her brother. At this time they surrendered to the Duster crewmen, stating that they were Viet Cong. They were searched and placed under guard. Elements of the 1st Infantry Division at FSB Attleboro (XT 888368) were notified and the two Viet Cong were taken to that location. It was later discovered that the male was a major in a local Viet Cong Force.

(g) 13 March 1970, Lei Khe Base Camp - At 132345H March 1970, while performing security duty on the Lei Khe perimeter, the crew of searchlight 151 of Battery I, 2d Battalion, 29th Artillery, by the use of visible light, detected movement of one VC/KVA approximately 150 meters in front of the searchlight position. The searchlight crew immediately engaged the enemy with five rounds of K-79 fire. An M-48 tank on the perimeter also engaged the enemy with 90-mm fire. Enemy losses as a result of this action are unknown.

(h) 15-17 March 1970, vicinity of Nui Ba Den Mountain - At 150000H March 1970, Dusters 221 and 222 of Battery B, 5th Battalion (AW)(SP), 2d Artillery departed FSB Buell (XT 216534) with Company A, 4th Battalion, 29th Infantry (Mech) enroute to coordinates XT 285608 on a Search and Destroy operation in the vicinity of Nui Ba Den Mountain. At 1100H the force moved to the base of the mountain where the Dusters supported the infantry by fire for approximately one and one-half hours. Before returning to FSB Buell the Dusters retrieved an armored personnel carrier from a bomb crater in which it had become stuck when the driver was killed by sniper fire. Throughout the day the Dusters received automatic weapons, RPG, and rifle fire from enemy troops on the mountain. The operation of 15 March was repeated on 16 March 1970. Again the Dusters supported the infantry with fire. The Dusters also retrieved another armored personnel carrier from a bomb crater. The Dusters supported the infantry again on the last day of the operation, 17 March 1970, closing Tay Ninh at 1230H. Total rounds of ammunition expended by the two Duster crews were 5100 rounds of 40mm, several thousand rounds of K-40, and approximately 700 rounds of K-79.
SUBJECT: Operational Report of the 5th Battalion (AV)(SP), 2d Artillery for the Period Ending 30 April, RCJ CSFOR-65 (ii2) (U)

While body count credit was impossible to establish, the supported unit expressed admiration and appreciation to the Duster crews. As a result of this action several crewmen have been recommended for awards.

(i) 25 March 1970, vicinity of FSPB Grey - At 250900H March 1970, two Dusters from Battery D, 5th Battalion (AV)(SP), 2d Artillery were in support of an infantry company and an engineer company from the Royal Thai Army Volunteer Force. The Thais were sweeping the area in the vicinity of coordinates YS 220930. Proceeding with the Thais, the Dusters established road security in the area. The sweep resulted in two VC/NVA KIA and the destruction of a bunker complex. The Dusters were credited with capturing four RPG rounds.

(j) 26 March 1970, FSB St. Barbara - At approximately 261445H March 1970, a detail of six men was laying concertina wire approximately fifty meters from the berm. Two men in the detail were from the 5th Battalion (AV)(SP), 2d Artillery (one from Battery D, 71st Artillery and one from Battery C, 5th Battalion (AV)(SP), 2d Artillery). When the sergeant in charge of the detail detonated an anti-personnel mine, PVT Roxbury of Battery C and FFC Kenning of Battery D, 71st Artillery, along with a medic, immediately ran to his aid. PVT Roxbury then picked his way through the mine field and over two rows of concertina wire in order to make a path over which to carry the wounded man. Following the path made by PVT Roxbury, FFC Kenning helped carry the injured man through the mine field and over the wire to a helicopter. PVT Roxbury and FFC Kenning have each been recommended for the Soldier's Medal.

(k) 27 March 1970, FSB Gettysburg (XJ 358875) - At 272150H March 1970, while firing a harassing and interdiction mission, the crew of Duster 242 from Battery C, 5th Battalion (AV)(SP), 2d Artillery observed a secondary explosion at coordinates XJ 360891. The Duster fired a total of 87 rounds of 40-mm ammunition into the area and was credited with the destruction of an unknown amount of enemy munitions.

(l) 1 April 1970, FSB Illingsworth (XJ 039793) - At approximately 010210H April 1970 FSB Illingsworth came under an intense attack by fire followed by a ground attack at 0300H. The crew of Quad 52 of Battery D, 71st Artillery, located on the south side of the perimeter, observed the initial rocket/mortar flashes and immediately returned fire, firing the Quad until all four guns became inoperable due to overheating. At that time the four crewmen took up positions on the berm and continued the fight with K-16 rifles. Meanwhile, the two crewmen of searchlight 241 from Battery I, 2d Battalion, 29th Artillery, took up firing positions on the berm between the searchlight vehicle and the Quad. Firing their M-60 machine gun and K-16's, they (along with the Quad crewmen) remained on the berm until an ammunition bunker to their immediate right caught fire and exploded. As a result of this explosion, the two searchlight crewmen and
Operational Report of the 5th Battalion (A.P)(S.P), 2d Artillery for the Period Ending 30 April 1970, RC3 C3FOR-65 (U2) (V)

May 1970

Operational Report of the 5th Battalion (A.P)(S.P), 2d Artillery for the Period Ending 30 April 1970, RC3 C3FOR-65 (U2) (V)

one Quad crewman were wounded and later dusted-off. The searchlight and Quad truck were destroyed. Total ammunition expended by the Quad and searchlight personnel was 9000 rounds of caliber .50, approximately 1000 rounds of M-60, and approximately 800 rounds of M-16. Due to the intensity of the attack and the large expenditure of ammunition by friendly forces, it was impossible to determine body count credit. However, four VC/NVA were killed directly in front of the Quad and searchlight positions. Another seven bodies were found approximately 150 meters to the front of the Quad. It is safe to assume that the Quad and/or searchlight crews accounted for at least eleven VC/NVA KIA. A total of 64 VC/NVA bodies were found.

Friendly losses were 24 U.S. KIA and 64 WIA. Of the six crewmen from this battalion, one received the Silver Star and five received the Bronze Star with "V" Device. Three men also received the Purple Heart. As a result of the combat losses and the expected additional enemy activity in the vicinity of FSB Illingsworth, it was decided to deploy four Quads and one searchlight to that location immediately. The four Quads were rigged for helilift at Duster Compound while a searchlight at Phuoc Vinh was also being rigged for helilift. A total of five CH-47 sorties were flown to FSB Illingsworth, the last arriving at 1600H. Additionally, two Dusters from Battery B, 5th Battalion (A.P)(S.P), 2d Artillery closed FSB Illingsworth on 2 April 1970. Ammunition for the Dusters was helilifted to FSB Illingsworth from Tay Ninh. Ammunition for the Quads was helilifted with the weapons from Duster Compound.

8 April 1970, FSB Ft. Defiance (XT 502833) - At approximately 082315H April 1970 FSB Ft. Defiance came under an intense attack by fire consisting of 7C-100 82-mm mortar rounds, 8-10 122-mm rockets, and an unknown number of RPG's. Dusters 142 and 212 of Battery A, 5th Battalion (A.P)(S.P), 2d Artillery were located on the eastern side of the perimeter approximately 10C meters apart. The first two rounds (82-mm) of the attack apparently were aimed at the Dusters. One round hit in front of track 142 and another round hit directly behind track 212, each round wounding one man. The two men, even though wounded, immediately began to return fire with M-60 machine-guns. As the other crew members arrived at their weapons they returned fire with 40-mm, M16, and M-79. The attack continued for approximately 15 minutes. The Duster crewmen returned fire into the treeline, 75-100 meters distant, for approximately 45 minutes. Results of the attack were three personnel from Battery A, 5th Battalion (A.P)(S.P), 2d Artillery WIA. The Duster crewmen expended approximately 1000 rounds of 40-mm ammunition as well as an unknown number of rounds of M-60, M-16, and M-79 ammunition. A sweep of the area conducted the following day by elements of the 11th Armored Cavalry Regiment resulted in the discovery of five 122-mm rocket launchers, eight AK-47 rifles, eight SKS carbines, ten RPG's, and an unknown number of .51 caliber rounds. Additionally, numerous blood trails were found. The bodies of three VC/NVA were later discovered in shallow graves. These bodies had satchel charges attached to
them, indicating that a sapper attack had been planned. It is quite probable that the sapper attack was aborted due to the devastating fire of the Dusters and other weapons located on the perimeter.

(a) 13 April 1970, FSPB White (XT 235305) - At 1300 Omark 13 April 1970, FSPB White came under attack by sniper fire. Shortly thereafter, a ground surveillance radar detected 25-30 persons at a range of 750 meters. Dusters 241 and 242 of Battery B, 5th Battalion (AW)(CP), 2d Artillery, along with a 105-mm howitzer of 2d Battalion, 77th Artillery, fired at the target. The Dusters expended 180 rounds of 40-mm ammunition during the period 2301 hours to 0200 hours. No sweep of the area was conducted, however; the radar personnel informed the Duster crewmen that their rounds were on target and that the probability of kills by the Dusters was very good. The large number of personnel detected by the radar indicates that a ground attack may have been planned. If so, the intense firepower from the base probably caused the enemy to abort his plan.

(o) 15 April 1970, FSPB Kramer (XT 030730) - At 1521 Omark 15 April 1970, FSPB Kramer came under an intense attack by fire and ground attack. The attack by fire consisted of 107-mm rockets, 60-mm mortars, 82-mm mortars, and RPG's. Crewmen of Dusters 141 and 142 of Battery C, 5th Battalion (AW)(CP), 2d Artillery, performing perimeter security, immediately returned 40-mm fire. During the engagement the two Dusters expended 1091 rounds of 40-mm ammunition. Results of the attack were three personnel WIA (two from the 5th Battalion (AW)(CP), 2d Artillery) and one cargo carrier destroyed by enemy fire. Enemy losses were 52 KIA (nine of whom were credited to the Dusters). In addition, the following items were captured: Three complete 60-mm mortars, 50 rounds of 60-mm mortar ammunition, several AK-47 rifles, and several JKS carbines. Most of the captured material was found in the areas fired upon by the Dusters.

(p) 17 April 1970, Vo Xu (YT 8183/8) - On 17 April 1970 at Fire Support Base Dinh II, near Vo Xu, Dusters 221 and 222 of Battery D, 5th Battalion (AW)(CP), 2d Artillery, were requested to fire an indirect fire mission into coordinates YT 8074.99. The target was an enemy rice cache. The mission was fired with the aid of an aerial observer and the two Dusters fired a total of 210 rounds of long range 40-mm ammunition. The result of the engagement was one rice cache destroyed.

to include .51 caliber machine gun fire. During the attack Dusters 221 and 222 fired a total of 495 rounds of 40-mm ammunition. The ground attack was a three-pronged attack, two of which were aimed at the two Dusters on the perimeter. The Dusters, along with other friendly forces, repelled the attack in their sectors. Specifically, the commanding officer of the 4th Battalion, 12th Infantry credited Duster 221 with preventing the enemy from overrunning a portion of the perimeter. A sweep of the area at first light resulted in the discovery of 32 NVA bodies, four of which were credited to the Dusters (one of these four was an officer). In addition, two enemy soldiers were captured. These prisoners identified the attacking unit as the 2d Battalion, 33rd NVA Regiment. Friendly casualties included one KIA and 23 WIA (one from the 5th Battalion (A/W)(SP), 2d Artillery) from II Field Force Vietnam Artillery units. One 155-mm self-propelled howitzer received a direct hit by an unknown type round and was a combat loss. A trailer from Battery D, 5th Battalion (A/W)(SP), 2d Artillery received moderate damage. From information obtained from the prisoners it was learned that the NVA soldiers were led to the area by local Viet Cong. Additionally, the sweep indicated that the attack had been meticulously planned, to include establishment of a communications system and a bunker complex in a woodline 200 meters from the fire support base.

(r) 21 April 1970, FSPB Burkett - At approximately 210245H April 1970, FSPB Burkett (XT 552845) came under an attack by fire. The attack consisted of approximately 100 rounds of mixed rocket, mortar, and 81mm fire impacting inside the perimeter. The crewmen of Duster 142 and 212 of Battery A, 5th Battalion (A/W)(SP), 2d Artillery observed flashes and immediately returned fire. The Duster crewmen fired for three hours, expending 155 40-mm rounds, 300 M-79 rounds, 720 60-mm rounds, and 224 flares. Results of the attack were one U.S. KIA, 40 U.S. WIA (one from Battery A, 5th Battalion (A/W)(SP), 2d Artillery) and three VC/NVA KIA, one of whom was in front of Duster 142.

(7) Ammunition Expenditures: During the reporting period the battalion expended a total of 260,408 rounds of 40-mm ammunition. Battery D, 7 Artillery, expended 700,600 rounds of caliber .50 machine gun ammunition. The 30 searchlights of Battery I, 2d Battalion, 29th Artillery operated for a total of 8,522 hours.

c. Logistics/Maintenance

(1) Maintenance Problems:

(a) The flow of replacement M42A1 Dusters continues at a rate which precludes an overmileage or range track problem. However, the maintenance problem presented high mileage traveled by the combat vehicles.
CONFIDENTIAL

AVFB-960-C

1 May 1970

SUBJ: Operational Report of the 5th Battalion (Artillery), 2d Artillery
for the Period Ending 30 April 1970, RCO CSFOR-65 (42) (c)

of the battalion still exists. During this reporting period the tactical
situation dictated a 26% increase in 142A1 mileage over the previous re-
porting period. This fact, coupled with the loss of several qualified
personnel in the maintenance sections, taxed the battalion's ability to
maintain the deadline rate at its normally low figure. However, as a
result of timely reporting and a greatly improved prescribed load list,
the deadline rate remained at an acceptable level throughout this reporting
period.

(b) The lack of replacement AK/142A3 Searchlights continues to be a
maintenance problem. Again, no replacement searchlight sets were received.
The loss of one set due to enemy action reduced the number in the battalion
to 29, seven below the number authorized. Although the down-time of these
sets has been extremely low, it is evident that down-time will increase
with additional use if replacement sets are not issued in the near future.

(2) Repair Parts Supply: The supply system continued to show improve-
ment during the reporting period. Continued emphasis was placed on proper
repair parts requisitioning procedures. The current percentage (2%) of
PLL lines at zero balance is the lowest percentage experienced by the
battalion since its deployment to Vietnam in November, 1966.

(3) Summary of Overall Maintenance Posture:

(a) Close surveillance of battery maintenance programs by the battalion
maintenance section and assistance visits by higher headquarters con-
tinued through the reporting period. Special emphasis was placed on shop
safety and correct maintenance management procedures.

(b) In summary, except for the AK/142A3 Searchlights, the maintenance
posture of the battalion continued to be very good. If replacement
searchlight sets are received, the maintenance posture of the searchlight
battery will be greatly improved.

(4) Total mileage traveled for the months of January, February, and
March for each battery:

<table>
<thead>
<tr>
<th>Battery</th>
<th>4 ton</th>
<th>3/4 ton</th>
<th>2 1/4 ton</th>
<th>5 ton</th>
<th>M42A1</th>
<th>VTR</th>
<th>HW</th>
</tr>
</thead>
<tbody>
<tr>
<td>January</td>
<td>9927</td>
<td>6295</td>
<td>4486</td>
<td>425</td>
<td></td>
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<td>368</td>
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<td>February</td>
<td>9410</td>
<td>6741</td>
<td>6023</td>
<td>353</td>
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<td></td>
<td>307</td>
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<tr>
<td>March</td>
<td>8641</td>
<td>6155</td>
<td>5603</td>
<td>514</td>
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<td></td>
<td>1150</td>
</tr>
<tr>
<td>TOTAL</td>
<td>27778</td>
<td>19191</td>
<td>15910</td>
<td>1322</td>
<td></td>
<td></td>
<td>1265</td>
</tr>
</tbody>
</table>

CONFIDENTIAL
Operational Report of the 5th Battalion (A'V), 2d Artillery

for the Period Ending 30 April 1970, RC3 C3FOR-65 (H2) (U)

of the battalion still exists. During this reporting period the tactical situation dictated a 26% increase in M42A1 mileage over the previous reporting period. This fact, coupled with the loss of several qualified personnel in the maintenance sections, taxed the battalion's ability to maintain the deadline rate at its normally low figure. However, as a result of timely reporting and a greatly improved prescribed load list, the deadline rate remained at an acceptable level throughout this reporting period.

The lack of replacement AN/M63-3 Searchlights continues to be a maintenance problem. Again, no replacement searchlight sets were received. The loss of one set due to enemy action reduced the number in the battalion to 29, seven below the number authorized. Although the down time of these sets has been extremely low, it is evident that down time will increase with additional use if replacement sets are not issued in the near future.

(2) Repair Parts Supply: The supply system continued to show improvement during the reporting period. Continual emphasis was placed on proper repair parts requisitioning procedures. The current percentage (25%) of FLL lines at zero balance is the lowest percentage experienced by the battalion since its deployment to Vietnam in November, 1966.

(3) Summary of Overall Maintenance Posture:

(a) Close surveillance of battery maintenance programs by the battalion maintenance section and assistance visits by higher headquarters continued through the reporting period. Special emphasis was placed on shop safety and correct maintenance management procedures.

(b) In summary, except for the AN/M63-3 Searchlights, the maintenance posture of the battalion continued to be very good. If replacement searchlight sets are received, the maintenance posture of the searchlight battery will be greatly improved.

(4) Total mileage traveled for the months of January, February, and March for each battery:

<table>
<thead>
<tr>
<th>Headquarter Btry</th>
<th>4 ton</th>
<th>3/4 ton</th>
<th>2 1/2 ton</th>
<th>5 ton</th>
<th>M42A1</th>
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<tbody>
<tr>
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<td>4484</td>
<td>425</td>
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<td></td>
<td>308</td>
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<tr>
<td>February</td>
<td>9410</td>
<td>6741</td>
<td>6023</td>
<td>353</td>
<td>-----</td>
<td></td>
<td>207</td>
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<tr>
<td>March</td>
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<td>6155</td>
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<td>1322</td>
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<td></td>
<td>1665</td>
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CONFIDENTIAL
**Operational Report of the 5th Battalion (ARV) (3P), 2d Artillery for the Period Ending 30 April 1970, RCS CSFOR-65 (R2) (L)**

### Battery A

<table>
<thead>
<tr>
<th>Month</th>
<th>1/2 ton</th>
<th>3/4 ton</th>
<th>2 1/2 ton</th>
<th>5 ton</th>
<th>M2A1</th>
<th>VTR</th>
<th>WR</th>
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<td>5347</td>
<td>6833</td>
<td>590</td>
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<td>78</td>
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<td>February</td>
<td>2137</td>
<td>3470</td>
<td>3858</td>
<td>1997</td>
<td>6607</td>
<td>0</td>
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<td>March</td>
<td>2849</td>
<td>3706</td>
<td>3096</td>
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<td>6231</td>
<td>229</td>
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<td><strong>TOTAL</strong></td>
<td>8697</td>
<td>12521</td>
<td>13787</td>
<td>5425</td>
<td>19640</td>
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### Battery B

<table>
<thead>
<tr>
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<th>3/4 ton</th>
<th>2 1/2 ton</th>
<th>5 ton</th>
<th>M2A1</th>
<th>VTR</th>
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</thead>
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<td>14217</td>
<td>142</td>
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### Battery C

<table>
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<tr>
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<th>1/2 ton</th>
<th>3/4 ton</th>
<th>2 1/2 ton</th>
<th>5 ton</th>
<th>M2A1</th>
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<th>WR</th>
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<tr>
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<td>4380</td>
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<td>1741</td>
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<td>March</td>
<td>2587</td>
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<td>2755</td>
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<td><strong>TOTAL</strong></td>
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<td>1226</td>
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### Battery D

<table>
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<th>3/4 ton</th>
<th>2 1/2 ton</th>
<th>5 ton</th>
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<tr>
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<td>3270</td>
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<td>February</td>
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<td>45</td>
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<td>March</td>
<td>9670</td>
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<td>7065</td>
<td>499</td>
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<td><strong>TOTAL</strong></td>
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<td>15982</td>
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### Battery I 29th Arty

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<th>SLT</th>
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<tbody>
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<td>150</td>
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<tr>
<td>February</td>
<td>5918</td>
<td>2763</td>
<td>625</td>
<td>13565</td>
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<tr>
<td>March</td>
<td>5186</td>
<td>2325</td>
<td>418</td>
<td>12829</td>
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<tr>
<td><strong>TOTAL</strong></td>
<td>15557</td>
<td>10238</td>
<td>1193</td>
<td>36706</td>
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### Battery D 71st Arty

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<th>SLT</th>
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<tbody>
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<td>January</td>
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<td>732</td>
<td>772</td>
<td>13528</td>
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<td>February</td>
<td>1389</td>
<td>842</td>
<td>502</td>
<td>14966</td>
</tr>
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<td>March</td>
<td>2254</td>
<td>777</td>
<td>1223</td>
<td>19938</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>5559</td>
<td>2351</td>
<td>2497</td>
<td>48312</td>
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</tbody>
</table>

**CONFIDENTIAL**
Operational Report of the 5th Battalion (AVL), 2d Artillery
for the Period Ending 30 April 1970, RCO CFOR-55 (H2) (V)

3. Employment of 23" Xenon Searchlights In Cross-Country Operations

(a) OBSERVATION: The movement of searchlight vehicles is greatly limited in the Delta regions of Vietnam.

(b) EVALUATION: In areas consisting primarily of rice paddies, it has been practically impossible for searchlight vehicles to accompany infantry units on cross-country operations. However, by loading the searchlight vehicle onto the rear of an M548 Cargo Carrier, it has been found feasible to have the light deploy with the infantry on such operations. The mobility of the M548 allows for the use of searchlights on operations such as the mobile ambush and allows for the rapid transport of the light to areas of suspected enemy activity.

(c) RECOMMENDATION: That supported commanders be made aware of the advantages to be gained by use of the M548 as a prime mover for the searchlight vehicle. This battalion has effected such liaison with supported units.

d. Organization: None

e. Training: None

f. Logistics: Use of 2 Kw Generator Parts to Repair M55 Mounts

(a) OBSERVATION: Parts for Generator set, gasoline engine, 2 kW, 50, PSH6115-759-2768 have been found to be identical to those parts used on the power charger and power control set of the M55 Quad .50 caliber machine gun mount.

(b) EVALUATION: Due to the extreme difficulty encountered in obtaining parts for the M55 mount, the machine gun battery has been forced to obtain parts from salvaged 2 kW generator sets. It has been found that most parts of the 2 kW generator set are identical to those used on the M55 mount. This fact has resulted in the discovery of a valuable source of repair parts for the M55 mounts.

(c) RECOMMENDATION: That all machine gun units be advised of the availability of M55 mount repair parts from salvaged 2 kW generator sets.

g. Communications: Use of LS 459/PRC Auxiliary Speaker by Quad Crews

(a) OBSERVATION: The use of the LS 459/PRC Auxiliary Speaker by Quad squad leaders has proved beneficial.
CONFIDENTIAL

1 May 1970


(b) EVALUATION: The L3 459/PRC Auxiliary Speaker, which can be attached to the steel helmet, has been tested by several squad leaders from the machine gun battery. They have found that by using this speaker they can monitor the radio and still have both hands free to assist the other crew members. The long cord attached to this speaker allows the squad leader to move about the entire truck bed while monitoring the radio.

(c) RECOMMENDATION: That all machine gun units be advised of the advantages to be realized by the use of the L3 459/PRC Auxiliary Speaker.

h. Material: None

i. Other: None

Gerald C. Childs

LTC, ADA
Commanding

DISTRIBUTION:
2 - U.S. ARMY PAC; ATTN: GPOD-OT, APO 96558
3 - U.S. ARMY; ATTN: AVHCC-OT, APO 96375
3 - II FFORCEx; ATTN: G-3, APO 96266
5 - II FFORCEx Arty; ATTN: 3-3, APO 96266
1 - In File
Incl 2 w/d HQ DA
AVFB-FAC (1 May 70) 1st Ind

SUBJECT: Operational Report of Headquarters, 5th Battalion (AW)(SP), 2d Artillery for Period Ending 30 April 70. RCS CSFOR-65 (R2) (U)

DA, HEADQUARTERS, II FIELD FORCE VIETNAM ARTILLERY, APO 96266

TO: Commanding General, II Field Force Vietnam, ATTN: AVFBC-RE, APO 96266

This headquarters has reviewed the quarterly report of the 5th Battalion (AW) (SP), 2d Artillery and concurs in operations and lessons learned as reported with the following exception: Para 2. g. All references to LS 459/PRC Auxiliary Speaker should read LS 549/PRC.

FOR THE COMMANDER:

[Signature]

R.G. PARRISH
LTC, FA
Adjutant
AVFBC-RE (1 May 1970)  2d Ind
SUBJECT: Operational Report of Headquarters, 5th Battalion (AW) (SP), 2d Artillery for Period Ending 30 April 1970, RCS CSFOR-65 (R2) (U)

DA, HQ, II FFORCEV, APO San Francisco 96266  2 JUN 1970

THRU: Commanding General, US Army Vietnam, ATTN: AVHGC(DST), APO 96375
Commander-In-Chief, US Army Pacific, ATTN: GPOP-DT, APO 96558

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

1. (U) This headquarters has reviewed and concurs with the Operational Report - Lessons Learned for the quarterly period ending 30 April 1970 from Headquarters, 5th Battalion (AW) (SP), 2d Artillery.

2. (C) The following additional comments are provided:

   a. Reference item concerning "Lack of Replacement A11/MSS-3 Search-lights"; page 12, paragraph 1c(1)(b); concur. Recommend action be taken by Headquarters, USARV to replace the loss of these major end items.

   b. Reference item concerning "Use of 2 KW Generator Parts to Repair M55 Mounts", page 15, paragraph 2f; concur. The following action is recommended:

      (1) That the Supply Division, ACofS, G4, Headquarters USARV, identify and publish a listing of parts that are common to the M55 power charger/power control set and the 2 KW generator set.

      (2) That Collection, Classification, and Salvage (CC&S) activities in the general support maintenance units remove the appropriate serviceable repair parts from the salvaged 2 KW generators, preserve, process, and return to the supply system to satisfy unit requirements.

      (3) That units possessing 2 KW generators be instructed to turn-in items to CC&S rather than local disposal or delivery to the Property Disposal Activity.

FOR THE COMMANDER:

[Signature]

W. C. BARTEL, JR.
CPT, AG
Asst AG

CF:
CO, II FFORCEV Arty
CO, 5th Bn (AW) (SP), 2d Arty
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 30 April 1970 from Headquarters, 5th Battalion (AW)(SP), 2d Artillery and concurs with comments of indorsing headquarters.

2. Comments follow:

   a. Reference item concerning "Use of 2 KW Generator Parts to Repair M55 Mounts", page 15, paragraph f: concur. The interchangeability of 2 KW (FSN 6115-759-2768) and M55 Quad .50 cal mount parts can be a source for the repair of either item. Recommend that this be brought to the attention of MECOM and WECOM for further evaluation.

   b. Reference item concerning "Lack of Replacement AN/MSS-3 Search-lights", page 12, paragraph 1c(1)(b): concur. The AN/MSS-3 is a DA Distribution/Allocation Committee controlled item, and has been allocated for distribution to USARV in September 1970. No action by USARPAC or DA is recommended.

FOR THE COMMANDER:

[Signature]

Capt. AGC
Assistant Adjutant General

Cy furn:
II FFORCEN
5th Bn, 2d Arty
GPOP-DT (1 May 70) 4th Ind (U)
SUBJECT: Operational Report of HQ, 5th Battalion (AW)(SP), 2d Artillery
for Period Ending 30 April 1970, RCS CSFOR-65 (R2)

HQ, US Army, Pacific, APO San Francisco 96558 17 JUL 70

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:

L.M. OZAI
CPT, AGC
Asst AG
SUMMARY OF POSITIONS OCCUPIED
DURING THE PERIOD 1 FEBRUARY 1970 - 30 APRIL 1970

1. Lai Khe XT 775376
2. FSPB Thunder I XT 788656
3. FSPB Thunder II XT 785555
4. FSPB Thunder III XT 768655
5. FSPB Thunder IV XT 763893
6. Phu Loi XT 865158
7. Duster Compound YT 128114
8. FSPB Jamie YT 480715
9. FSPB Burkett XT 552835
10. Cu Chi XT 650160
11. FSPB Hull XT 263380
12. FSPB Jarrett XT 418122
13. FSPB Houston XT 436073
14. Tay Ninh XT 165515
15. FSPB Harry XT 341040
16. FSPB Crook XT 055959
17. FSPB Rollins XT 296485
18. FSPB White XT 235305
19. FSPB Phillip XT 301288
20. FSPB Murray XT 091448
21. FSPB Buell XT 215233
22. Lai Tieng XT 494447
23. FSPB Hampton XT 417238
24. Camp Price YT 045116
25. North Dakota YT 265779
26. Tan An Air Field XS 565648
27. FSPB St. Barbara XT 279580
28. FSB Colorado XS 315805
29. FSB Linda XS 281935
30. Thu Thua City XS 543722
31. Hui Dat XS 448678
32. FSPB Concord YT 034174
33. FSB Michelle YT 285098
34. Quan Loi XT 816902
35. Phouc Vinh XT 972498
36. FSPB Grey XS 207933
37. LZ Buttons YT 138072
38. FSPB 'ubby YT 444288
39. NDP XT 491114
40. Nhon Trach YT 112832
41. FSPB Rhode Island VS 640780
42. FSB Verna YT 273103
43. FSB Elaine YU 562048
44. Song Be (Camp Martin) YU 143072
45. Xuan Loc YT 474095
46. LZ Ike XT 344713
47. Bearcat YS 160790
48. FSPB Hazel XT 442818
49. FSPB Beverly XT 335899
50. FSB Ann YT 088115
51. Ho Bo Woods XT 608302
52. FSPB Wood XT 438011
53. NDP XT 320530
54. FSPB Attleboro XT 868368
55. Rach Kien XS 740699
56. FSPB Bill XT 937844
57. Phu Cuong Bridge XT 808137
58. Nha Be XS 920820
59. Tan An Bridge XS 559047
60. FSPB Elaine XT 183068
61. Kui Ba Ra XS 616759
62. Ben Luc Bridge XS 358876
63. FSPB Gettysburg XT 507259
64. Kien XT 191558
65. FSPB Lee XT 610550
66. Binh Phouc XT 527540
67. FSPB Kitchen XT 371122
68. FSPB Hunter XT 583554
69. NDP XT 270892
70. FSPB Hunard XT 200345
71. FSPB Laurel XT 528383
72. Ft. Defiance YS 497622
73. Horseshoe Bend YS 454632
74. Tan Tru X5 554623
75. FSPB Pershing XT 517259
76. FSPB Renegade Woods XT 194346
77. FSPB South Dakota XS 271165
78. FSPB Bragg XT 342580
79. FSPB Kita XT 735252
80. FSPB Dan XT 583584
81. Michelin Woods XT 590530
82. NDP XT 088090
83. FSPB Wood III XT 442345
84. HQ, II FV YT 055133
KEY TO INCLOSURE 3
5TH BATTALION (K)(SP) 2D ARTILLERY
SUMMARY OF POSITIONS OCCUPIED

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AVFB-FAC-CO

6 April 1970

SUBJECT: Employment of Automatic Weapons (AW) and Searchlights in Vietnam

Commanding General
II FFORCEV Artillery
APO San Francisco 96266

1. General.
   a. Lessons learned in combat operations throughout the III Corps Tactical Zone during the previous three and one-half years have provided a firm basis for the effective employment of the twin 40-mm M42A1, the caliber .50 quadruple machine gun M-55, and the 23-inch xenon jeep-mounted searchlight AN/MSSS-3. Salient points and pertinent guidelines are summarized herein to assist commanders in the employment of automatic weapons and searchlights in combat operations.

   b. The mission of the 5th Battalion (AW)(SP) 2d Artillery is to provide automatic weapons and searchlight support to elements of II Field Force Vietnam. Automatic weapons are employed in the ground support role. Although the battalion currently has no air defense mission, such a mission could be assumed on short notice.

   c. Employment has been characterized by wide dispersion of tactical elements in support of every major unit in the II FFORCEV TAOR. The battalion normally occupies approximately 48 tactical positions on a continuous basis.

   d. Inclosure 1 provides characteristics and capabilities to assist in planning automatic weapons employment. Inclosure 2 shows the organizational chart of the battalion.

2. Employment and Missions of Automatic Weapons
   a. When properly employed, automatic weapons have been extremely effective against enemy ground forces. Mobility, quick reaction, and a devastating volume of accurate direct fire have been a genuine deterrent to enemy attack and highly effective in destroying fixed enemy forces. However, when improperly employed, automatic weapons have been rendered ineffective, provided little fire support, and incurred a serious rate of maintenance deadlines. For example, extended reconnaissance in force operations in heavy jungle terrain cause excessive wear on hard to replace M42A1 engines, transmissions, and suspension parts. The age and system peculiarity of the M42A1 and M-55 automatic weapons systems dictate
close attention to proven employment considerations.

b. Missions effectively performed by automatic weapons.

(1) Perimeter security.

(a) Base Camps.

(b) Fire support patrol bases (FSPB) and night defensive positions (NDP).

(2) Route/road security.

(a) Convoy escort (M-55 is particularly well-suited).

(b) Road outposting.

(c) Engineer security (construction and mine sweep operations).

(3) Ready reaction force/mobile reserve.

(4) Direct support of infantry.

(5) Blocking forces.

(6) Direct fire support.

(a) Preparatory and covering fires.

(b) Reconnaissance by fire.

(c) Interdiction fire.

(d) Flat trajectory, pin point fire at designated targets.

(7) Indirect fire support.

(a) Interdiction fire (area).

(b) On call (observed or "nobserved).

(c) Missions ineffectively performed by automatic weapons.

(1) Reconnaissance in force in heavy jungle.

(2) Road runner operations where tracked vehicles are used to detonate mines.

(3) Escort of tracked vehicles cross-country by M-55.
Employment of Automatic Weapons (AW) and Searchlights in Vietnam

(4) Extensive escort of convoys over hard surfaced roads by M-42A1.

(5) Extensive screening and reconnaissance.

d. Special missions.

(1) Helilift (M-55 mount only)

(2) Riverine


a. Perimeter security (detection and identification using infrared and/or visible light).

b. Harassment and interdiction with visible light.

c. Battlefield illumination (area and pinpoint).

d. Beacon guide for friendly patrols and aircraft.


a. The M-55 mounted on its 5-ton truck prime mover is restricted to existing road networks. Where mobility and cross-country movement is a consideration the M-42A1 should be employed.

b. Where fields of fire and observation are limited (e.g., 100-200 meters), the M-55 can provide a heavy volume of close-in penetrating fire. The caliber .50 projectile has more penetrating ability than the point detonating 40-mm round, thus is generally preferred where fields of fire contain heavy brush and vegetation.

c. Although both weapons are capable of indirect area fire, the M-42A1 is preferred because of its speed, accuracy, and increased range. Additional accuracy of M-42A1 indirect fire may be obtained by use of fire data from colocated US artillery units, with their sophisticated fire direction centers.

d. In static locations where short range fire power is required and mobility is secondary, the M-55 should be employed. Where access to a tactical location by land means is limited, the M-55 can be effectively employed by air lifting into position. Consideration must be given to immediate extraction in retrograde. An example of such a location is an LZ located in dense jungle.

e. Ammunition for both weapons may ricochet up to maximum ranges. Point detonating (PD) self-destruct (SD) ammunition for 40-mm, though designed to self-destruct at 3,500 meters, occasionally ricochets up to a maximum range of 9,500 meters. This fact must be carefully considered prior to employment of Dusters in areas of heavy troop concentrations.

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5. Maintenance.

a. In order to maintain the highest possible level of combat readiness, constant detailed maintenance is imperative for automatic weapons and searchlights. This is particularly true of the M-42A1's, most of which are at least 18 years old. As with any track laying vehicle, the M-42A1 requires a considerable amount of preventative maintenance. Ideally, four of the 16 Dusters assigned to a Duster battery should be allowed to stand-down for maintenance at any given time. At least two of the 24 assigned M-55's should also be allowed to stand-down for maintenance. Of the 12 searchlights assigned to each of the three searchlight platoons, one should be allowed to stand-down for maintenance.

b. Prepare parts for automatic weapons and searchlight equipment are available only in limited quantities. Direct support of system peculiar items is accomplished on an area basis through non-divisional agencies. System common items are maintained through supported unit direct support agencies, whether divisional or non-divisional. A critical factor is the response and cooperation of all agencies effecting timely repair of tactical equipment.

c. Inherent in automatic weapons readiness is vehicle and gun exercise. Automatic weapons should be fired at least weekly and vehicles should be exercised at least 10 miles per week. However, excessive H & I firing should be avoided since it wastes ammunition and causes unnecessary wear on the guns.

6. Logistical Support: Normally automatic weapons and searchlights are placed under the operational control of the maneuver commander. The maneuver commander then assumes responsibility for the common logistical support of the force. This includes all required items other than those items which are peculiar to the M-42A1, the M-55, and the searchlight.

7. Selection and Occupation of Position.

a. Each AW and searchlight position must be selected to allow maximum fields of fire and observation. Mutual support between two or more Dusters, Quads, or searchlights should be achieved wherever possible. Once the position is selected, each of the following must be worked out in detail:

(1) Primary and alternate means of communication to supported unit.

(2) Rules of engagement including:

(a) Authority to return fire. (Maximum possible freedom to fire is necessary for effective employment).

(b) Location of friendly forces, villages, listening posts and observation posts on an up-to-the-minute basis.

(3) Detailed range cards with emphasis on range and direction to obstacles and likely targets.
SUBJECT: Employment of Automatic Weapons (AW) and Searchlights In Vietnam

(4) Fields of fire.

b. Field fortifications are needed to obscure AW and searchlight silhouettes and to protect mounts and crews from RPG and small arms fire. Infantry security, cleared enemy area of cover and concealment, and protective devices (claymores, trip flares, berm) must be used to keep RPG and recoilless rifle gunners out of effective range. The thin frontal armor and open turret of both the M-42A1 and the M-55 make them extremely vulnerable to rocket, grenade, and small arms attack.

8. Lessons Learned.

a. Specific employment of automatic weapons and searchlights will vary depending on terrain and mission. However, a few lessons learned have provided firm guidelines in certain situations.

b. Automatic weapons must always be employed in multiples of two. Two weapons are considered to be the smallest fire unit capable of working as an effective tactical force to maintain basic mutual support, command integrity, and provide for vehicle recovery.

c. In rectangular perimeters, automatic weapons and searchlights are most effective when deployed at the corners of the perimeter.

d. Searchlights employed in conjunction with automatic weapons in FSPB's and NDF's considerably enhance the defense posture. Searchlights can provide accurate direction for automatic weapons by laying their azimuth indicators parallel with the automatic weapons. Other night vision/detection devices used jointly with the automatic weapons defense also enhance the effectiveness of target engagements.

e. When used with infantry elements, M-42A1's should always be protected by infantry security elements and, due to their flat trajectory, should be employed to the flanks and/or high ground.

f. The M-55 may be used to support infantry elements, but only in special situations where secure overlooking terrain is available for the M-55 to occupy. In this instance the M-55 can bring effective fire power to bear on pin point targets.


a. Searchlights are used primarily in the infrared mode for detection without disclosure of the position. However, infrared detection is limited by terrain and weather conditions. Upon detecting and determining definite targets, the searchlight may be switched instantly to its visible light mode for target illumination and engagement.
b. Infrared reflections are encountered from even small obstacles in the searchlight's line of vision. Therefore, clear fields of vision are necessary for effective searchlight employment. In some positions, fields of vision are enhanced by emplacing the searchlight above surrounding obstacles.

c. Visible light may be reflected from clouds to enhance the vision of friendly patrols and friendly nearby positions utilizing starlight scopes.

d. The searchlight section (two lights) is the smallest element which should be allowed to operate for extended periods away from the battery.

(1) When a single light is employed (except on a tower) it does not provide 6400 mile coverage, therefore it is recommended that light sections (two lights) be employed as one element.

(2) Under normal operations a searchlight should be operated for a period of 2½ hours, it should then be shut down allowing the light blower system to cool to below 130°F. This takes approximately 15 minutes. Then the vehicle should be shut down for another 15 minutes to allow the engine to cool, giving the operator an opportunity to check the vehicle and engine compartment. If lights are employed in pairs, this shut down period can be staggered insuring that one light is always operating.

(3) When determining location of the searchlights, consideration should be given to integrating them with other 23-inch xenon lights when available.

10. Principles Covering the Use of Visible Light For Battlefield Illumination

b. Battlefield illumination in support of friendly forces will be provided wherever and whenever needed. The intensity of illumination required and throughout the period of time required.

b. Once illumination is provided to supported troops, it should be provided without interruption until the need for illumination is satisfied.

c. Battlefield illumination will be planned and coordinated with the use of infrared equipment in such a way that:

(1) No damage will be caused to the infrared equipment by exposure to direct intense visible light.

(2) Battlefield illumination will be avoided or reduced to an absolute minimum when infrared operations are being conducted.

(3) The most suitable means - visible or infrared light - will be used according to the situation.

(4) A rapid change from infrared to visible or vice versa can be performed.
d. Reflected illumination is available when the beam is directed against low lying clouds (150 to 500 meters). The area beneath this point of reflection receives a higher intensity of illumination than can be obtained from diffusion alone. If the conditions exist for reflected illumination, it enhances the capabilities of starlight scopes within the area.

e. With the addition of a pink filter the 23-inch jeep mounted searchlight is provided with a more effective source of infrared light for detection of enemy movement.

(1) Characteristics:

(a) The pink filter lens fits over the light source and allows an improved, higher frequency infrared light to be emitted.

(b) The lens provides a greater intensity of infrared light to the area than does the old infrared shield. This is true at all ranges.

(c) The pink filter lens emits a red glow, however this glow is only visible for approximately 60 meters from the searchlight.

(2) Tactical deployment:

(a) The pink filter should be used in conjunction with the starlight scopes of ambush patrols. The light should be directed to scan the ambush patrol's field of fire. Thus, the infrared light plus the moonlight greatly increase the effectiveness of the ambush patrol's starlight scopes, enabling them to detect every movement much more effectively.

(b) When possible, supported units should make starlight scopes available to searchlight crews. Starlight scopes used in conjunction with pink light provide magnification of elements on the battlefield and optimum available illumination.

11. Helilift Operations

a. The M-55 (mount only) and the AN/MSS-3 searchlight (with ¼-ton vehicle) can be moved by helicopter. The M-55 can be moved by Chinook (CH-47) or by Sky-crane (CH-54) while the searchlight should be moved by Chinook internally.

b. The M-55 mount weighs 3000 lbs; cal. .50 ammunition weighs 4000 lbs per 10,000 rounds crew weight, including personal weapons and equipment, is approximately 1000 lbs. Total weight is approximately 8000 lbs.

c. The AN/MSS-3 searchlight with ¼-ton vehicle weighs 3000 lbs. Crew weight, including personal weapons and equipment is approximately 500 lbs. Total weight is 3,500 lbs.
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6 April 1970

d. Certain items of special equipment are necessary to move the M-55 mount and ammunition. The following is a list of items needed for each mount:

(1) Four 16 foot slings.
(2) Two 20 foot slings.
(3) Four small clevis rings.
(4) One large clevis ring.
(5) One 10 inch "donut".
(6) One cargo bag.

NOTE: This list does not include items necessary to move bunker material.

12. Additional Assistance. For additional special employment techniques or assistance, commanders are encouraged to contact this headquarters by calling 928-5623.

[Signature]
GERALD CHILDESS
LTG, USA
Commanding
Automatic Weapons Data

M-42A1

1. Each firing battery is composed of two platoons, four sections per platoon, two M-42A1's per section. (Total: 16 M-42A1's)

2. Each M-42A1 is aimed with a dual 40-mm gun and one M-60 machine gun.

3. Rate of fire: Maximum 240 rds/min; sustained 100 rds/min.

4. Effective range: 3500 meters (point detonating self-destruct ammunition), 9,500 meters (point detonating non-self-destruct ammunition). Air defense role, 1650 meters.

5. Ammunition
   a. Type: 40-mm HE-T, or HEI-T, SD, Mk 11, w/Fuze, PD, Mk 27. 40-mm HEI-T, non SD, Mk 11 w/Fuze, PD, Mk 27.
   b. Basic load: 480 rounds on carriage (480 more rounds may be towed).

6. Vehicle:
   a. Full tracked, gasoline driven, air cooled engine.
   b. 140 gal. fuel gives an operating range of from 35 to 100 miles, depending on terrain conditions.
   c. Speed: Up to 45 mph on improved roads, 25 mph in cross-country operations.

7. Weight: 25 tons (airlift by C-124 or C-141).


M-55

1. The M-55 battery is composed of six sections, four squads per section, one M-55 per squad. (Total: 24 M-55's)

2. Each M-55 has four caliber .50 machine guns on the mount with one M-60 mounted on the prime mover.

3. Rate of fire: Maximum, 2000 rds/min; sustained 200 rds/min.

4. Effective range: Point targets, 1830 meters; area targets, 6750 meters. Air defense role, 725 meters.

5. Ammunition:

Inclosure 1
a. Type: .50 Cal.

b. Basic load: 10,000 rounds on the prime mover, 10,000 towed.


7. Weight.
   a. Mount only: 3,200 lbs.
   b. Mount, basic load, crew: 8,000 lbs. (Carried by one CH-47.)
   c. M-55 complete (5-ton truck w/armor kit; mount, basic load, crew w/equipment): 30,750 lbs. (Carried internally by C-124, C-130, C-141.)


AN/MSS-3

1. Each searchlight battery consists of three platoons with 12 lights per platoon. (Total: 36 searchlights.)

2. Maximum range:
   a. White light: 8,000 meters*
   b. Infrared: 800 meters*

3. Vehicle: 4-ton truck w/100 amp alternator.

4. Weight: 1.5 tons complete (carried by CH-47).


*Effective range of searchlights, in either mode of operation, is dependent on atmospheric conditions as well as terrain features. When considering employment of searchlights, effective range must be determined on an individual analysis of the particular area of operation and prevailing weather.
# Operational Report - Lessons Learned, HQ, 5th Battalion, 2d Artillery

Experiences of unit engaged in counterinsurgency operations.

**CO, 5th Battalion, 2d Artillery**

**REPORT DATE**
1. May 1970

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