SUBJECT: Dissemination of Combat Information

TO: See distribution

1. In accordance with SR 525-85-5, Processing of Combat Information, the inclosed EXTRACTS are forwarded for evaluation and necessary action. It may be appropriate, in certain cases, to take action upon a single extracted item; in others, it may be desirable to develop a cross-section of accumulated extracts on a particular subject before initiating action; and, often, the extracted item serves to reaffirm our doctrines and techniques.

2. Copies are furnished to other military agencies to keep them informed concerning theater problems from the front line through the logistical command.

3. These EXTRACTS are derived from reports which are classified SECRET. For the greater convenience of the user, this Office assigns each extracted item the lowest classification compatible with security. No effort is made to paraphrase or delete any portion of the extracted remarks, so that none of the original intent is lost.

4. Combat information EXTRACTS which are applicable to training at the company-battery level appear in Army Field Forces TRAINING BULLETINS.
### DISTRIBUTION:

<table>
<thead>
<tr>
<th>Copies</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>ACOFS, G-1, DA</td>
</tr>
<tr>
<td>3</td>
<td>ACOFS, G-2, DA</td>
</tr>
<tr>
<td>15</td>
<td>ACOFS, G-3, DA</td>
</tr>
<tr>
<td>20</td>
<td>ACOFS, G-4, DA</td>
</tr>
<tr>
<td>2</td>
<td>The Adjutant General</td>
</tr>
<tr>
<td>2</td>
<td>Chief of Chaplains</td>
</tr>
<tr>
<td>10</td>
<td>Chief Chemical Officer</td>
</tr>
<tr>
<td>10</td>
<td>Chief of Engineers</td>
</tr>
<tr>
<td>2</td>
<td>Chief of Finance</td>
</tr>
<tr>
<td>2</td>
<td>Chief of Information</td>
</tr>
<tr>
<td>2</td>
<td>The Inspector General</td>
</tr>
<tr>
<td>2</td>
<td>The Judge Advocate</td>
</tr>
<tr>
<td>2</td>
<td>The Provost Marshal General</td>
</tr>
<tr>
<td>10</td>
<td>Chief of Ordnance</td>
</tr>
<tr>
<td>10</td>
<td>The Quartermaster General</td>
</tr>
<tr>
<td>2</td>
<td>Executive for Reserve and ROTC Affairs</td>
</tr>
<tr>
<td>10</td>
<td>Chief Signal Officer</td>
</tr>
<tr>
<td>10</td>
<td>The Surgeon General</td>
</tr>
<tr>
<td>4</td>
<td>Chief of Transportation</td>
</tr>
</tbody>
</table>

Copies furnished:

134 TAG (40 CG, US Army Forces, Far East (Main); 44 CINC, US Army, Europe; 10 ea CG's, other major overseas commands)

CG's

<table>
<thead>
<tr>
<th>Copies</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>First Army</td>
</tr>
<tr>
<td>2</td>
<td>Second Army</td>
</tr>
<tr>
<td>2</td>
<td>Third Army</td>
</tr>
<tr>
<td>10</td>
<td>Fourth Army</td>
</tr>
<tr>
<td>2</td>
<td>Fifth Army</td>
</tr>
<tr>
<td>2</td>
<td>Sixth Army</td>
</tr>
<tr>
<td>4</td>
<td>Army AA Command</td>
</tr>
<tr>
<td>2</td>
<td>Military District of Washington</td>
</tr>
<tr>
<td>2</td>
<td>Tactical Air Command</td>
</tr>
<tr>
<td>2</td>
<td>The Armored Center</td>
</tr>
<tr>
<td>2</td>
<td>The Artillery Center</td>
</tr>
<tr>
<td>2</td>
<td>The,Infantry Center</td>
</tr>
<tr>
<td>1</td>
<td>Mountain &amp; Cold Weather Tng Command</td>
</tr>
<tr>
<td>1</td>
<td>Chairman, Joint Chiefs of Staff</td>
</tr>
<tr>
<td>1</td>
<td>Chief of Staff, DA</td>
</tr>
<tr>
<td>2</td>
<td>Chief of Naval Operations, Dept of the Navy</td>
</tr>
<tr>
<td>2</td>
<td>Chief, Army Advisory Gp, Air Command and Staff School, Air University</td>
</tr>
<tr>
<td>2</td>
<td>Comdt of Cadets, US Military Academy</td>
</tr>
<tr>
<td>1</td>
<td>Comdt</td>
</tr>
<tr>
<td>1</td>
<td>Armed Forces Staff College, NOB</td>
</tr>
<tr>
<td>2</td>
<td>Marine Corps School</td>
</tr>
<tr>
<td>2</td>
<td>USAF Air-Ground Operations School</td>
</tr>
</tbody>
</table>

(See next page)
ATTNG-26 350.05/5(DOCI)(C)(27 Apr 53) 27 April 1953
Subject: Dissemination of Combat Information

Copies furnished: (Cont)

Comdt
2 Counter Intelligence Corps School
2 The Provost Marshal General's School
2 Army War College
2 CGSC
2 Army General School
2 The Armored School
2 The Artillery School
2 The Infantry School
2 Asst Comdt, The Artillery School, AA&GM Branch

Chief, Army Security Agency
1 Officer in Charge, Atlantic Fleet Intelligence Cen,
  Attn: Ground Forces Officer

Director, Weapons Systems Evaluation Group, Secy of
  Defense, Attn: Col Train

Pres
1 AFF Bd No 1
1 AFF Bd No 2
1 AFF Bd No 3
1 AFF Bd No 4
1 CO, Arctic Test Branch, AFF

Chiefs
1 AFF HRU No 1
1 AFF HRU No 2
1 Dir of Special Weapons Developments, AFF
OVERHEAD COVER FOR FIELD ARTILLERY. - Operations in Korea have clearly demonstrated that the enemy has the capability of effectively massing fires on our artillery positions. In order to continue effective counterbattery fire, both materiel and personnel must be afforded some degree of protection. Two types of overhead cover for the 155-mm howitzer, which provide this protection, have been constructed.

The first type utilized primarily sawed timbers, augmented to a lesser amount with logs. This construction required a complete renovation of the existing howitzer emplacement but did combine into one integral structure, protection for personnel, ammunition, and howitzer.

The second type utilized logs throughout with the exception of long spans. The existing parapet walls of the howitzer pit and ammunition bunkers were used as they presently existed. The overhead cover was tied into the parapet with a minimum of change. This construction utilizes the existing howitzer position and native materials to the maximum, decreases construction time, and affords the same amount of protection. Personnel bunkers for the crew may be located adjacent to the howitzer position, thereby consolidating the entire installation.

Recommend that overhead cover for various types of artillery weapons be adopted as standard field fortification.
company with room for storage of food and ammunition. Mortars and artillery are well dug-in and camouflaged. The enemy often keeps his mortars in caves except when firing. He will set up the mortar, fire a few rounds, and then return the mortar to its cave, leaving the base plate in position if necessary.

Enemy light artillery pieces are often placed in bunkers which open out on the forward slope of hill masses and ridge lines. The artillery piece is moved to a position where it can fire out of the bunker. After firing, the piece is moved to the back of the bunker or cave for protection from our counterbattery fire. Friendly direct fire weapons have been used to good advantage to destroy such positions.

SOURCE: Command Report - 1st FA Obsn Bn
DATE: November 1952 Source No 708

(RESTRICTED)

ENEMY ARTILLERY TECHNIQUE. - The analysis of the trajectory of a CCF howitzer located by the AN/MPQ-10 radar set is of both technical and tactical interest. The gun-target range of the CCF howitzer is 10,300 yards. The approximate muzzle velocity of 1155 feet per second gave a time of flight of 60.05 seconds. Maximum ordinate of the trajectory was 14,550 feet, using a quadrant elevation of 1095 mils. The quadrant elevation of 1095 mils is of particular significance because it indicates the use of high angle fire by the CCF artillery.

SOURCE: Command Report - 73d Tank Bn (M)
DATE: October 1952 Source No 709

(CONFIDENTIAL)

EFFECTIVENESS OF TANK-MOUNTED 18" SEARCHLIGHTS. - Only three of six searchlights present actually worked when it was necessary to use them. Three of the lights had the filaments in the bulbs damaged by the concussion of heavy artillery shelling. Also, two other lights failed shortly after being turned on and the third was turned off because the smoke and dust caused by intense enemy artillery fire and the firing of 90-mm tank guns made it impossible for the tank crew to distinguish objects when the light was in operation.
FIRE SUPPORT COORDINATION.

The direct support battalion must have its command post governed by one factor control of the firing batteries. Fire support coordination at regimental level proved to be most effective during heavy action when the direct support battalion commander personally acted as coordinator in direct contact with the regimental commander. At infantry battalion level, the artillery liaison officer acting as a staff officer of the infantry battalion commander worked most effectively as fire support coordinator. Where an infantry officer acted as fire support coordinator the weight of heavy weapon support devolved too often on the artillery, many times on targets more suited to attack by infantry mortars and recoilless rifles. Heavier emphasis on role of the artilleryman as fire support coordinator is desirable at service schools and a much more comprehensive course in capabilities and limitations of all weapons would be desirable at The Artillery School.

FDC OPERATIONS.

It is highly desirable that the S3, and possibly his assistants in the direct support battalion, reconnoiter terrain in his sector. He should use his knowledge in assigning missions to most effectively attack targets indicated by the forward observer.

With all the artillery available, it was still necessary to have batteries firing on more than one mission at a time to try to halt the tide of enemy attacks. It was mandatory that each battery have data prepared for all prearranged fires so that S3's could merely designate the battery, or platoon within the battery, to shoot.

Artillery fires could be shifted most rapidly by use of the "hot loop" between division artillery and all artillery units having capabilities in the zone of action. Even in the case of battalions reinforcing the direct support battalion it was found to be much faster, when the required fires exceeded fire power available to the direct support battalion, to put all battalion fire direction centers on a single circuit. An incidental advantage accrued from a rapid relay of information to all interested agencies.
Battalion S3's must be extremely cautious in calling for close-in fires in hilly terrain. Elevations to clear friendly crests with VT and quick fuze must be computed. In the attack minimum elevations must be computed ahead of time for hills to be occupied. Dead space charts must be constructed both of the zone of action and in contingent zones.

(RESTRICTED)

OBSERVED FIRE PROCEDURES. - Observed fire procedures were not followed in many cases during heavy actions. To expedite delivery of fire and gain maximum effect from ammunition expended, it is necessary for the observers to give the complete fire mission as outlined in Department of the Army publications. Furthermore, piecemeal messages calling for fire denies the information that should be passed through intelligence channels.

Forward observers must act as advisors to their supported commanders. All too often the forward observer merely repeated the sentiments of the infantry commander when a few sound words from an artillery viewpoint might have suggested a much better tactical decision.

One of the important functions of a forward observer or liaison officer is to keep information moving back to his own battalion and higher friendly elements. Frequently this was done. The excuse of security restrictions is not valid. Operation codes were available.

Requests for countermortar and counterbattery fires must be accompanied by as much shell reporting information as possible. A request citing only a cardinal direction of the compass results in useless expenditure of ammunition and poor results. Shell reports should be obtained, including shell fragments.

(RESTRICTED)

IMPROPER USE OF BARRAGES AND DEFENSIVE FIRES. - Barrages and defensive fires were not in all cases used properly.

a. Barrages should be called down only when attack is imminent and lifted as soon as the danger is past. Too often barrages are left on for hours at a time as a morale factor rather than a casualty producing agent.

b. Barrages should not be used as H and I fires. In some instances defensive barrages were fired with the rate reduced to one round every 60 to 120 seconds. This served no useful purpose, and tied up a fire unit that could have been used elsewhere.
c. Barrages must be shot in as soon as the objective is taken. Forward observers and company commanders must confer on location of defensive fires.

d. Infantry leaders must know locations of critical fires and how to call for them.

e. The artillery S3 should expedite the adjustment of barrages and defensive fires as soon as the action appears to be localized.

SOURCE: Command Report - I Corps

DATE: October 1952

TANK CHEVRON TRACK BLOCKS. - The 1st Marine Tank Battalion experimented with two-inch chevron track blocks in an attempt to increase the traction in the one-inch chevron tank track. The two-inch chevron blocks were spaced every fifth block on the one-inch chevron track. The resulting vibration set up in the tank, when moving along a road, was so severe that brackets and other small welded objects in the tank broke loose from their mountings. Continued vibration would have had a weakening effect on oil and gas lines. Because of this the two-inch chevron track block was considered an unsatisfactory method of increasing the track traction.

(RESTRICTED)

155-MM GUN MALFUNCTIONING. - Investigations were made to determine the cause of the malfunction of the 155-mm gun firing mechanism. Excessive chamber pressure was found to be the cause of the malfunction. Normal chamber pressure for the 155-mm gun is from 38,000 to 40,000 pounds per square inch. The investigations recorded chamber pressures up to 42,865 pounds per square inch which is 2,865 pounds per square inch in excess of the breech ring and tube design. To correct this malfunction, a deeper hole was drilled in the firing lock housing which prevented the transmission of shock waves to the firing mechanism safety latch pin.
(RESTRICTED)

REQUIREMENT FOR RECTIFIER RA83A IN FA BN. - A rectifier is essential to convert power from issued generators 3KW for dismounted radios. Radios issued field artillery units are dependent upon the operation of a vehicle and the subsequent source of power from the vehicle battery. Power Equipment PE210 is issued only to headquarters battery, while the battalion is required to operate four fire direction centers. Not only is this equipment inadequate in quantities issued, but is inferior in the necessary qualities of durability and ruggedness. By using the rectifier with issued generators, it is possible, with the use of banks of wet cell batteries, to maintain a charge adequate for the continued operation of dismounted radios.

SOURCE: Command Report - 2d Inf Div
DATE: November 1952

(RESTRICTED)

M4 TANK. - For this type warfare in rugged terrain, the M4A3E8 tank is an excellent weapon. The fire control and optical equipment in this tank are excellent, but since all the firing is at pin point targets and at long range, a better sight is needed. An excellent substitute is the 20-power scope used for observation and to assist in adjusting fire.

With the tanks of the tank battalion operating in direct support of infantry units and firing from prepared emplacements along the MLR, and because much of the tank firing is done at night using the range card, it is necessary and proper that the tanks be a part of the infantry battalion FSCC.
"HIGH HERMAN" MINE EXPLODER. - I Corps has conducted a number of tests and demonstrations with the T-1E6 Mine Exploder, which has acquired the name "High Herman." Primary objectives were to train the tank crews in operation of the vehicle and determine its utility against Soviet TMD-8 AT box mines on typical Korean roads.

Two roads were selected for the test, one with a thick rock base and the other dirt. Both were compacted by heavy tank traffic. The vehicle's roller detonated the mines laid to depths of 6 inches in the rock-base road, but failed to detonate mines at a depth of 4 inches in the dirt road. It was concluded that the "High Herman" will detonate about 75 per cent of mines laid 2 to 6 inches deep on compacted dirt or rock roads and will withstand the explosion of a single or two stacked Soviet mines of the type tested. The vehicle can negotiate most roads but bogs down easily in mud and requires a large open space or road junction in order to make a 180 degree turn.

ARTILLERY INTELLIGENCE TRAINING. - Target-getting assumes equal importance with the ability to shoot in a combat situation. There has been an acute lack of aggressive target-seeking on the part of the battalion S2's. While most personnel assigned to intelligence work appear to be professionally competent, they seem to flounder in confusion in their primary duty of finding targets for the artillery. For a battalion S2 to be effective, he must be aggressive from the first day of his assignment, and he must have a basic knowledge of intelligence principles. Training in locating targets (artillery intelligence) should be as thorough as that of field artillery gunnery. The artillery officer should come to combat equipped with these tools:
1. Ability to locate a target.

2. Ability to place the firepower of the artillery on the target.

Recommend that greater stress be placed on artillery intelligence in officer training courses so that officers charged with intelligence matters will be able to accomplish their missions effectively and quickly.

SOURCE: Command Report - 10th AAA Group
DATE: October 1952
Source No 716

(NONDIVISIONAL AAA ORGANIZATION IN KOREA.) - The efficiency of administrative and tactical supervision of the nine AAA battalions attached to this headquarters continues to be impaired by lack of an adequate command structure for nondivisional AAA in Korea. The expected arrival of one additional AAA battalion further emphasizes the need for activation of an AAA brigade headquarters and headquarters battery.

SOURCE: Command Report - IX Corps
DATE: October 1952
Source No 717

(SUPPLY DIFFICULTY & COMMUNICATIONS.) - While there were few instances of short supply, the supply platoon was hard pressed to meet the expanded gasoline and ammunition demands now required with the substitution of the heavier M46 tank for the M4A3E8 in the regimental tank company, and the extended employment of armor. The radio continued to be the communications mainstay, as wire frequently was broken by hostile artillery. Radio nets required numerous relay stations, however, and message traffic was slow.

(ENEMY CONSTRUCTION.) - Evidence of extended engineer activity was noted as descriptions of the hostile shelters and gun positions were received from prisoners and from friendly troops who assaulted these positions. Enemy positions were tunneled extensively; one type of shelter...
was designed for squad-size groups while another type accommodated platoon-size units. Hand tools, supplemented by small amounts of explosives, were used in the construction of these troop shelters which were connected by an elaborate communications trench system. While not designed as fighting bunkers, the floors and entrances were constructed so as to make it difficult to attack troops in the shelters with grenades; niches were cut into the walls to provide protection against small arms fire.

CCF artillery positions received the same attention in their construction; some gun pits were roofed with logs and said to be sufficiently strong to withstand at least one direct hit by an 8-inch shell; other positions consisted of caves with the entrances built up, allowing only room for elevating and traversing the gun tube. Still another position, requiring a great deal of effort but practically impregnable when completed, consisted of a tunnel through a spur or small hill with the gun at the entrance of the tunnel, an aperture of minimum size.

Road construction, according to a prisoner, was restricted to areas in rear of regimental headquarters and all supply forward of this area was by hand carry. However, communication trenches connected forward areas with company and sometimes to battalion; the trenches were said to be deep enough to afford concealment and cover.

**SOURCE:** Command Report - 2d Div Arty

**DATE:** November 1952

**Source No 718**

(RESTRICTED)

**TRAINING FA BATTERY OFFICERS.** - Two division artillery schools were initiated during the period, one for executive officers and another for battery commanders. Phase I of the first school, consisting of fifteen hours of instruction, was designed to refresh the executive officers on the fundamental techniques of firing battery work, e.g., measuring and reporting minimum elevation, laying and referring and accuracy measures. Phase II, also of fifteen hours duration, consisted of instruction in fire direction procedure. The courses of instruction proved of such benefit that four additional cycles were initiated. By the end of the month all firing battery commanders, executives, assistant executives and two chiefs of firing battery from each artillery firing battery in division artillery had attended.
The fifteen hour course of instruction for all battery commanders in division artillery was underway before the end of the period. This course included instruction in mess management, supply procedures, preventive motor maintenance and cold weather training.

**Source:** Command Report - 25th Inf Div  
**Date:** September 1952  
**Source No:** 719

---

**Adding Depth to Defense.** - Successive defensive strong points must be organized to reinforce the MLR even though troops may not be available for continuous occupancy. There is always some depth in any defensive position, because of the manner in which infantry weapons are employed. However, the units that are not employed on the MLR, such as mortar platoons, kitchen and supply installations, aid stations and unit headquarters must be organized into a tactical unit, be properly equipped with close combat weapons and ammunition, and have a strongly fortified strong point in the immediate vicinity of the installation that can and will be automatically manned to assist in blocking any penetration of the MLR.

**Source:** Command Report - 223d Inf Regt  
**Date:** November 1952  
**Source No:** 720

---

**Counterfire Platoon Operation.** - Instead of channeling all operations through the S2 and S3 sections, the counterfire platoon worked directly with the direct support artillery. This method of operation has worked successfully and provided the platoon with a much closer liaison with the group which does most of the firing on plots picked up by the platoon. On the MLR, five outposts are used instead of four or six, with sound-powered lines between teams, and the fifth OP is an independent team that can work with any of the other four.

The success of this method of operation for the current tactical situation is borne out by the figures compiled during this month.

**Source:** Command Report - 223d Inf Regt  
**Date:** November 1952  
**Source No:** 720
platoon has picked up the plots of 167 enemy weapons that have fired on troops and installations on the MLR. Of these 167 plots, approximately 40% have been fired upon by the artillery.

SOURCE: Command Report - 27th Inf Regt
DATE: November 1952

(Restricted)

UNIT ROTATION. - A large loss of key personnel through rotation during this period out of the line has left the regiment with a substantial training problem on its hands before it can again reach the effectiveness it had obtained throughout the latter period of its service on line. The constant state of flux that an organization finds itself in because of individual rotation precludes its ever reaching a high state of effectiveness under present conditions. In a period of limited mobilization, unit rotation as opposed to individual rotation appears to have many desirable aspects.

Recommend that study and experimentation be initiated to determine the desirability of unit rotation in Korea.

SOURCE: Command Report - 187th Abn RCT
DATE: August 1952

(Restricted)

SECURITY DURING RELIEF. - The relief of units in line warrants considerable attention to insure that even the units in the adjacent sectors are not aware of the relief until notified through proper channels. Members of the unit being relieved were themselves unaware of the relief until preparations for on-the-spot relief were made. The success of the operation was primarily due to the application and maintenance of proper security measures. Prior to the closing of the RCT in the marshalling area, the reconnaissance company of the division to be relieved screened the area, and all intelligence agencies were alerted to detect any breach of security and to apprehend all unauthorized personnel on or near the area. No one except specially designated individuals were permitted to leave or enter the area.
(RESTRICTED)

COUNTERFIRE TECHNIQUES. - As a logical extension of the FSCC system, the regimental counterfire officer and counterfire plotting center were incorporated in the regimental FSCC. The battalion counterfire noncommissioned officers were similarly placed in the battalion FSCC's. The six counterfire OP's were co-located with six of the direct support artillery forward observer OP's to provide additional supervision for the counterfire squads on position, mutually strengthen communications, facilitate exchange of information, and minimize administrative support. A net was established connecting each pair of counterfire OP's to the regimental FSCC switchboard and lateral lines to each OP in addition to the normal wire lines between the regimental and battalion FSCC. Counterfire azimuths were received, evaluated, and plotted in the regimental FSCC. The usable data was then phoned by direct line to battalion FSCC's capable of taking action and simultaneously to the direct support artillery FDC. In addition to their primary duties the six counterfire forward observer OP's were instructed to act as regimental OP's and utilize the counterfire communication system to render reports.

SOURCE: Command Report - 7th Inf Div
DATE: December 1952

(RESTRICTED)

TANK-INFANTRY EMPLOYMENT. - As soon as the artillery preparations lifted the tanks opened fire from overwatching positions. Each assault platoon had one man with a large panel on his back. The tanks kept their fire just ahead of the infantry as they made their assault. At times tank fire was placed as close as 25 yards in front of lead elements. Having trained with tanks, the infantry was materially assisted in retaking the outpost.

Recommend that all infantry rifle units be taught to move under tank fire. Tanks providing "overwatching fire" is the least desirable method of tank-infantry employment; however, it is believed to be of sufficient importance to warrant additional training.
(RESTRICTED)

MODIFICATION OF M46 TANK OIL COOLER ASSEMBLY. - Ordnance has built a redesigned oil cooler assembly as a possible improvement and replacement for the present oil cooler assembly. The main modification is the substitution of the mechanical clutch from the engine fan tower for the magnetic clutch in the oil cooler assembly. In the past the magnetic clutch failed frequently. Four of the mechanical clutches have been mounted in oil cooler assemblies. Two were mounted in assemblies as received from the ZI and two were mounted in rebuilt assemblies.

BUNKER CONSTRUCTION. - Bunker construction deficiencies noted were primarily due to lack of:

a. Continuity of effort, and

b. A sound construction program.

Recommend that:

a. A standard type prefabricated living and fighting bunker be developed to meet the existing requirements.

b. Supporting units prefabricate these bunkers and deliver them as package units to infantry units on line. The saving in time resulting from cutting and fitting stock with power machinery in rear areas would be a tremendous saving in critical manpower and also very economical in eliminating the transportation of scrap which results from cutting and fitting on location.
COMBAT READINESS TRAINING. - The effect on the combat readiness of a unit committed to one specific task, such as a road project of magnitude for a long period of time is a cause for concern. The individual soldier and the unit tend to lose sight of the original mission a combat engineer battalion is organized to accomplish. Only by conducting a training program concurrently with assigned mission on such subjects as tactical bridging, mine warfare, rigging and small unit tactics will a combat battalion maintain combat readiness. The rotation of men further adds to the problem of maintaining such proficiency.

WIRE STAPLES. - In order to protect front-line tactical field wire from artillery and mortar fire, wire staples were fabricated from No 9 mechanical wire (stock number 1A609.6). The staple is approximately twenty-four inches in over-all length, and has an open loop at one end into which cabled WD-1/TT may be inserted. The staples are driven into the walls of communications trenches on the MLR and wire is thereby protected from almost everything but a direct artillery or mortar hit. Wire consumption by the front-line units will be greatly reduced because of the additional protection afforded the wire. The wire staples can be produced at the rate of 1,000 per day using four laborers. The staples are placed at six to eight foot intervals in the communications trenches approximately eighteen inches above the trench floor. Where this size staple is insufficient for heavier cable, ammunition box rods will furnish better support. Since this type rod is not easily bent into a loop, the cable is simply laid on and tied to the rod.
PHOSPHORESCENCE ON CLOTHING OF MEMBERS OF PATROLS.

Men on patrols operating forward of our MLR became conspicuous at night apparently as a result of their clothing becoming phosphorescent or luminous when passing through areas which had been shelled with white phosphorus.

This phosphorescence is normal, particularly in damp weather or when moisture is present in the air.

When the white phosphorus shell is exploded in the presence of moisture, the area upon which the resulting vapors are condensed may often be luminescent even though the phosphorus has apparently completely burned. Some of this material may easily adhere to the clothing of personnel moving through such an area.

In addition, white phosphorus is preserved under water, i.e., it does not burn when it is covered by water. Hence, troops should avoid occupying wet areas or depressions which have been recently shelled with WP.