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AUTHORITY

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DEPARTMENT OF THE ARMY  
ARMY CONCEPT TEAM IN VIETNAM  
APO San Francisco 96243

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AVIB-LED

15 April 1967

SUBJECT: Final Report - Lightweight Jungle Hammocks (ACL-66/67I)

TO: Commanding General  
United States Army, Vietnam  
ATTN: AVHGC  
APO San Francisco 96307

1. REFERENCES

- a. Letter, Headquarters USARV, AVC-O&T, 7 June 1966, subject: Requirements for Grenade Bags and Jungle Hammocks.
- b. Message, MACV 19563, DTG 081147Z June 1966, subject: Lightweight "Netting," Hammock and Poncho Material.
- c. Message, DA 769659, DTG 151458Z June 1966, subject: Lightweight "Netting," Hammock and Lightweight Poncho Material.
- d. Message, MACV 21750, DTG 250240Z June 1966, subject: Lightweight "Netting," Hammock and Lightweight Poncho Material.
- e. Message, DA 774820, DTG 212229Z July 1966, subject: Requirements for Grenade Bags and Jungle Hammocks (ENSURE).
- f. Message, USARV, DTG 100215Z August 1966, subject: Grenade Bags and Jungle Hammocks.
- g. Report, US Army Natick Laboratory to AMC, 19 August 1966, subject: Status Report on Selected SEA Requirements, Item: Hammock, Jungle.
- h. Message, CG Natick Labs 2004, DTG 181454Z October 1966, subject: Requirements for Grenade Bags and Jungle Hammocks (ENSURE).
- i. Message, MACV 47129, DTG 260233Z October 1966, subject: Grenade Bags and Jungle Hammocks (ENSURE).

STATEMENT OF WORK

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## 2. PURPOSE

Determine the acceptability, suitability, and durability of two types of jungle hammock used in Vietnam by US troops and determine whether one is better than the other.

## 3. BACKGROUND

a. Two styles of lightweight hammocks were developed, procured, and fabricated by the US Army Natick Laboratories in response to ENSURE requirements submitted by the Army Concept Team in Vietnam (references b and d). DA included development of 50 lightweight hammocks in the system of Lightweight Individual Combat Clothing and Equipment (LINCOE) program (reference c). In July 1966, DA proposed to provide 100 each of 2 prototype designs of hammock for evaluation prior to completion of design and procurement of operational quantities (reference e). On 23 September 1966, Natick Laboratories shipped 100 of each of these two styles of hammocks (reference h) to ACTIV, which received them in the early part of October 1966.

b. ACTIV established a project in October 1966 to evaluate the usefulness of the US Army Natick Laboratory furnished hammocks. Equal quantities of each style of hammock were fielded for evaluation to the 1st Infantry Division, the 1st Cavalry Division (AM), and the 173rd Airborne Brigade during November and December 1966.

## 4. OBJECTIVES

### a. Objective 1 - Suitability

Determine whether the lightweight nylon hammocks fulfill all of their intended functions and whether they provide any advantages over other resting and sleeping accommodations used by US combat troops.

### b. Objective 2 Durability

Determine whether the lightweight hammocks are sufficiently durable to withstand field usage in Vietnam.

### c. Objective 3 Acceptability

(1) Determine desirability and acceptability of the prototype lightweight nylon hammocks for US troops in Vietnam.

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(2) Determine whether both prototypes of hammocks are necessary for troop issue or if one will adequately fulfill the various requirements.

## 5. DISCUSSION

a. Two styles of lightweight hammocks were fabricated for evaluation by US troops in the Republic of Vietnam (RVN). One style was constructed of water repellent treated nylon fabric. Its size was approximately 3 by 8 feet and each end was stitched with an overlap. Two 15-foot long,  $\frac{1}{4}$ -inch thick polyester drawcords were also provided for setting up each hammock. The other style was woven nylon net of  $\frac{1}{2}$ -inch mesh and measured approximately  $4\frac{1}{2}$  by 9 feet. To set up this hammock, two 15-foot long drawcords were also provided. In setting up the second style of hammock, it was necessary to weave the drawcords through the mesh at each end.

b. Distribution of 150 of the lightweight nylon hammocks was made to units of the 1st Infantry Division, 1st Cavalry Division (AM), and 173rd Airborne Brigade, which provided an adequate geographical spread throughout RVN. ACTIV furnished a user questionnaire with each hammock and requested that the questionnaire be completed after the hammock had been under field evaluation for  $1\frac{1}{2}$  to 2 months. Thirty-five questionnaires were returned.

c. Approximately 50 percent of the individuals responding to questionnaires were able to utilize both styles of hammock during the evaluation. Hammocks were used on combat operations (48 percent), base camp operations (32 percent), combat service support operations (12 percent), and patrolling (8 percent). Over three-fourths of the individuals responding to the questionnaire stated that they would carry a hammock on combat operations and that it was usable during combat about one-fourth of the time.

d. Only one user reported damage to a net hammock during the evaluation, and that was caused by the user's knife sheath. Users did not report any insect or termite damage, as have been reported on the lightweight groundcloths and ponchos. No negative comments were received from the users on the durability of the hammocks.

e. The hammocks were used preponderantly in hot-dry or hot-wet climate and in a jungle or wooded terrain. Daily temperature changes in the highlands of RVN varied from hot to cool. Approximately one-fifth of the users reported using the hammocks in a cool-dry or cool-wet climate.

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f. Many users commented on the light weight of the hammocks, and mentioned that sleeping in a hammock was better than sleeping in the mud or on wet ground. The hammocks dried quickly and kept leeches and crawling insects, such as red ants, off the user. One user stated that the hammock probably would cause casualties if used on combat operations. An individual would be more exposed to grenade and mortar fragments when sleeping in a hammock than if he were on the ground or in a foxhole.

g. In setting up their hammocks, some users inserted locally procured sticks or bamboo sections in the ends of the nylon fabric hammock. Some users liked the way the hammock molded to the body and the way it provided a better rest than sleeping on the ground.

h. Ninety-five percent of the users recommended that either the net or fabric hammock be issued to US troops in Vietnam, with greater numbers recommending the nylon fabric hammock for issue. In the comments about the hammock, users stated that buttons or other protrusions of their equipment tended to snag in the net hammock. Some responses from those who evaluated only the net hammock indicated that the net was used to pack and carry items of equipment.

i. There were no significant recommended changes to either style of lightweight hammock.

#### 6. FINDINGS

a. Both styles of lightweight nylon hammocks generally fulfilled all of their intended purposes.

b. Both styles of hammocks were durable and withstood usage in the RVN environment.

c. The dimensions and the design of both styles of hammock appeared to be satisfactory, but users generally preferred the nylon fabric hammock.

d. The hammocks provided better rest and protection against crawling insects and leeches than standard issue items, such as ponchos.

#### 7. CONCLUSIONS

a. The lightweight nylon fabric hammock is a desirable item for issue to US troops operating in the Republic of Vietnam.

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b. The nylon fabric hammock has adequate durability to justify issue in Vietnam.

c. The hammock keeps individual users off wet or muddy ground and protects them from crawling insects and leeches.

#### 8. RECOMMENDATIONS

It is recommended that the lightweight nylon fabric hammock be procured for issue to combat, combat support, and combat service support troops operating in the Republic of Vietnam.

*William G. Sullivan*  
COL. JCTIV DEPT  
for

WILLIAM G. SULLIVAN  
Colonel, Infantry  
Commanding

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