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ANNUAL REPORT  
OF  
MAJOR ACTIVITIES  
(RC: CSHIS-6(R2))

US ARMY ARMAMENT COMMAND  
ROCK ISLAND, IL  
FY 1975  
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PREPARED BY  
HEADQUARTERS  
US ARMY ARMAMENT COMMAND  
ROCK ISLAND, IL



Revised Copy

ANNUAL REPORT OF MAJOR ACTIVITIES \*

US ARMY ARMAMENT COMMAND

Fiscal Year 1975  
1 July 1974 - 30 June 1975

(RCS: CSHIS-6(R2))

Prepared by  
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US Army Armament Command  
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\*Classified Chapters XVII, XXVIII, and a portion of XVII are contained in CLASSIFIED ANNEX to ARMCOM ANNUAL REPORT OF MAJOR ACTIVITIES, FY 1975.

## PREFACE

The US Army Armament Command (ARMCOM) was established on 1 July 1973 at Rock Island, IL, to bring together all weapons and munitions under one command for the management of armament from initial research and development, through testing, production and fielding, additional improvements and modifications, to eventual obsolescence and demilitarization. The management of a commodity from the beginning through the end of its life cycle is not a new idea, but implementing this idea for all Army armament was a new concept.

The first ARMCOM Annual Report of Major Activities for FY 1974 was a history of the formation of ARMCOM and told of the many problems encountered in centralizing the management of weapons and munitions under one command. This second ARMCOM Annual Report of Major Activities for FY 1975 attempts to explain how ARMCOM functioned and accomplished its mission after the problems of the reorganization were resolved.

The volume is divided into chapters by function and organization. The major source of information for most chapters came from quarterly historical feeder reports from the ARMCOM directorates, offices and project/program managers. These reports were supplemented by additional research, interviews, staff meeting participation, Commander's Analysis, letters, telephone calls and document collection. Within the US Army, organizational designations are

frequently changed, and acronyms and abbreviations are used extensively. Therefore, since this is a history, the organizational names and acronyms used in the text are those which were current during FY 1975. To assist the reader to readily understand the abbreviations and acronyms, a Glossary is located at the back of the volume.

The research and writing of this volume was a combined effort by the Historians in the ARMCOM Historical Office. Mrs. Brenda M. Clark, ARMCOM Historian, prepared the initial outline and volume plan and wrote the chapters on the Joint Conventional Ammunition Coordinating Group, Production at Army Ammunition Plants, Maintenance, and Research, Development and Engineering. Upon her departure in April 1976, Dr. Joseph P. Harahan, ARMCOM Historian, who arrived in April 1976, and Miss Elaine M. Pospishil, ARMCOM Command Historian, worked together to complete the research and writing of the balance of the volume.

The Chief, ARMCOM Historical Office, wishes to express her appreciation to Mrs. Clark and Dr. Harahan for their professionalism in writing this volume; and to Mrs. Arline M. Nixon, Mrs. W. Bea Musick, and Miss Nancy L. Hart for their editorial expertise and typing talent which brought this volume to publication.

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## CHAPTER XIII

# TRANSPORTATION AND TRAFFIC MANAGEMENT

### Mission and Organization

The mission of the Directorate for Transportation and Traffic Management is to develop, recommend, and supervise the implementation execution of transportation and traffic management policies, plans and programs for Headquarters (HQ), US Army Armament Command (ARMCOM), Rock Island, IL, and assigned installation activities; to provide transportation and traffic management advice, guidance, and assistance to Army Depots and other Department of the Army (DA) Agencies and activities in the transportation of armament; to provide technical guidance for the transportation phase of logistics relating to armament systems from research through delivery to the using unit; and to exercise staff and technical supervision over transportation and traffic management functions of ARMCOM to include transportability, personal property, passenger travel, commercial traffic, first destination freight, commercial line haul traffic, utility rail equipment, and interchange rail equipment.

The Directorate for Transportation and Traffic Management has two divisions in its organization. The Ammunition Armament Traffic Division provides transportation and traffic management support, programs, and procedures relative to ammunition armament distribution for storage, domestic and export movements of conventional, special

weapons, selected ammunition, and chemical warfare items. The General Traffic Division provides transportation and traffic management support, programs, and procedures relative to procurement and plant operations missions; reports on shipping, packaging, and handling discrepancies and deficiencies; the transportability program; Government-owned interchange rail equipment; provides guidance and assistance to subordinate installations in connection with commercial activities and for the movement of household goods and passenger traffic services; and provides technical advice, recommendations, and assistance to the ARMCOM Installations and Services Directorate regarding the administrative use of motor vehicles, utility rail equipment, aircraft, and watercraft.

Significant Accomplishments  
During FY 1975

Direct Shipments From Production

The long standing policy of shipping from the producing ARMCOM Army Ammunition Plant (AAP) directly to the customer continued during FY 1975. Of the total of 277,720 short tons shipped during

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<sup>1</sup>  
ARMCOMR 10-1, 2 Apr 73, w/changes, subj: Mission & Major Functions of the HQ, ARMCOM.

<sup>2</sup>  
A short ton is 2,000 lbs. A measurement ton is 40 cubic ft, which in the case of ammo, equals approx 2,000 lbs.

FY 1975, 222,235 short tons or 80 percent was moved directly to the customer, thereby avoiding materiel being moved through storage depots, resulting in a savings of \$6,139,000 in handling and storage costs. This policy also reduced the supply pipeline. This performance is compared to FY 1974 when \$9,747,174 was saved by moving 358,352 short tons or 79 percent direct to the customer.<sup>3</sup> The reduction in savings and tonnage shipped during FY 1975 was a direct result of reductions in production and the end of the Vietnam conflict. •

#### Railcar Demurrage Management

The management of railcar detention to assure effective handling and shipment of ammunition by direct unloading of incoming materiel to the production site and the direct loading of the completed end product from the production line can result in significant savings. However, fluctuating requirements and constant production inhibit attaining ultimate efficiency and requires demurrage or the holding of loaded railcars for periods of time to meet shipping schedules. The cost for demurrage when compared with the alternative of double handling and shipping can produce optimum savings.

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Except as otherwise noted, this chap is based on Trans & Tfc Mgt Anl Rept, 29 Jul and 7 Aug 75, Mr. Stringfellow.

The careful management of demurrage to produce the least overall cost resulted in the investment of \$123,090 in demurrage in FY 1975 and realized a savings of \$1,332,205. This compares favorably to the FY 1974 demurrage of \$251,708 and a savings of \$1,292,661, particularly when it is realized that only 30,232 railcars were handled in the AAPs in FY 1975 compared to the 44,259 railcars handled in FY 1974.

### Transportability

• All items produced by ARMCOM must be able to be transported from the producer to the consumer. However, the concept of transportability goes much further than a one-time delivery. It includes consideration of the various modes of transportation that the item will experience throughout its life-cycle. Within the Transportation and Traffic Management Directorate, the concept of transportability extends to a comparative analysis of various shipping costs, safety factors, security measures, and other factors in transportability considerations "*before the fact*". These transportability considerations in "*before the fact*" actions were thus enhanced by the Transportation and Traffic Management Directorate's development of life-cycle transportation costs and subsequent total system review as a member on the ARMCOM Configuration Control Board. Procedures implemented during FY 1975 include increased participation in review of Product Improvement Proposals which are evaluated to assess



the transportation impact of proposed changes in size, weight, configuration, packaging methods, etc. The "*before the fact*" actions provide improved product management and cost improvement; however, it cannot be measured in dollar savings.

The possibility of a transportation cost advantage lead to a decision in FY 1975 to include the use of a wirebound box for shipping 105mm high explosive (HE) ammunition. In order to assure full consideration of all factors, use of the wirebound box was authorized as optional and future bids will be solicited for both wirebound and nailed wood boxes. The bid evaluation includes not only transportation costs of empty boxes from the supplier to the AAP, but also plant processing and delivery of the packaged end item to the ultimate destination.

Other transportability actions in FY 1975 included evaluating the impact of changes in pallet load sizes necessary for the 60mm and 81mm mortar metal parts to be processed by automatic depalletizing equipment. It was determined that overall use of such equipment was in the best interest of the government when the pallets were dimensionally configured to best utilize the carrier's equipment. Through combined efforts of the HQ, ARMCOM elements, commodity arsenals, and the production plants, the project decision produces maximum cost and operational effectiveness.

During FY 1975, in conjunction with the Transportation Engineering Agency, ARMCOM developed loading, blocking and bracing specification for initial transportability testing of the 105mm Howitzer XM204 (soft recoil). This joint action will expedite development and distribution of loading procedures to assure transportation tie down, blocking and bracing consistent with stated capabilities encompassed into the product.

### Passenger Travel

On 1 November 1974, the Transportation and Traffic Management Directorate assumed responsibility for passenger travel for HQ, ARMCOM, for processing travel orders, funding certification and orders authentication. This centralized the peripheral steps involved in the processing of travel orders. Essentially, this reduced the number of stops the traveler or supporting clerical personnel must make from six to two. During the last half of FY 1975, 413 Transportation Requests and 3,677 Travel Orders were issued.

### Security of Sensitive Items

The Department of the Army issued new policies on 11 April 1975 regarding the intransit security of sensitive items. Under the new procedures, all truckloads of sensitive items must have two drivers and all small shipments must be overpacked to the extent that the individual shipping configurations will weigh no less than 200 pounds.

While the dual driver requirement is not new, there were no provisions for waivers where the characteristics of the movement would make single drivers feasible. Waivers had been granted in the past where the security was not jeopardized or security was otherwise improved by the use of convoy systems.

### Special Projects

The inactivation of the US Army Air Defense Command (ARADCOM), Ent Air Force Base (AFB), Colorado Springs, CO, sites and the initial deployment of SAFEGUARD nuclear warheads involved ARMCOM in implementing the new defense policy which required air movement rather than over the road transportation.

The Transportation and Traffic Management Directorate developed plans for the deployment of these warheads under the new policy. Although the planning involved complex coordination with municipal and applicable military organizations, the plans were successfully carried through.

Project Red Scarf. This project involved the relocation of warheads from ARADCOM sites to US Army Materiel Command (AMC), Alexandria, VA, depots. It was particularly noteworthy as it was the first time helicopters were used in the logistical movement of warheads in the Continental United States (CONUS) .

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<sup>4</sup>  
For more info on the coordination and planning of this proj, see ARMCOM Anl Rept of Maj Actv, FY 74, pp. 119-120.

Except for the unfortunate incident of a loaded helicopter making a forced landing at Jones Beach, Long Island, NY, which caused a considerable flurry of publicity, the operation was carried out successfully and ahead of schedule. It began on 12 March 1974 and was completed on 11 July 1975, 15 days ahead of schedule.

Project Golden Shoes I. The US Army Forces Command (FORSCOM), Atlanta, GA, requested ARMCOM to implement the FY 1975 Allocation-Movement Plan of the Commander in Chief, Continental Air Defense Command (CINCONAD). The plan involved the movement of 18 warhead sections and 6 warheads. The movement was designated "*Project Golden Shoes I*".

The project was coordinated with FORSCOM; 31st Air Defense Artillery (ADA) Brigade, Homestead AFB, Homestead, FL; Military Airlift Command (MAC), Scott AFB, Belleville, IL; and the AMC depot. Items were not only moved to and from sites, but also between the sites to effect reallocation. Scheduling moves encountered some difficulty due to other commitments of the 31st ADA Brigade.

The 31st ADA Brigade used CH-47 Helicopters to move warhead sections among sites and to and from Homestead AFB, which was used as the intermediate airfield for the C-141 aircraft operation from and to the Seneca Army Depot, Romulus, NY. Four special assignment airlift missions (SAAM) were scheduled with the MAC.

The project began on 14 April 1975 and was completed on 2 May 1975. No incidents or delays occurred during "Project Golden Shoes I".

Project Golden Shoes II. Planning for the retrograde of ARMCOM controlled items from Homestead AFB was completed in FY 1975 for implementation and completion in early FY 1976.

Project Orbit Light. As part of the FY 1975 weapons allocations realignment, FORSCOM requested ARMCOM to direct, control, and monitor the relocation of 31 warhead sections from various sites to an AMC depot.

Coordination with MAC, Alaskan Continental Air Defense Command (CONAD) Region, and FORSCOM resulted in scheduling four C-141 aircraft missions. The first airlift began on 10 June 1975 and the final airlift was completed on 26 June 1975.

Project Green Mittens. The ARMCOM was tasked by AMC to develop and coordinate an airlift plan and to direct, control, and monitor each warhead section movement. The plan was written in coordination with the Ballistic Missile Defense Systems Command (BMDSCOM), Ent AFB, Colorado Springs, CO; FORSCOM; MAC; and AMC and was subsequently approved by DA.

The airlift required 115 CH-47 Helicopter and 12 C-141 aircraft missions to deploy 100 warhead sections from the AMC depot to SAFE-GUARD sites. Missions were scheduled with the use of CH-47 Helicopter airlifts to intermediate airfields where the exact number of warheads required were loaded on C-141 aircraft which were used for

airlift to a temporary storage area. There the warheads were held until the SAFEGUARD site contractor called for them. The CH-47 Helicopters were again used, with surface backup, for delivery to site.

The airlift was a complex logistical movement requiring continuing and extensive coordination with operational support elements of BMDSCOM, FORSCOM, MAC, AMC Depot, Wisconsin National Guard, Fort Sill (Lawton, OK), and Fort Carson (Colorado Springs, CO). Although the operation received extensive adverse publicity, considerable efforts were expended working with public officials to keep publicity down to a minimum and still accomplish the mission.

"*Project Green Mittens*" was implemented with the first airlift on 4 February 1975 and the last airlift was planned to be completed by 28 August 1975.

*Project Golden Gloves*. During FY 1975, planning was accomplished for the implementation of CONCISE which included as part of the overall plan, the phase-out of the Savanna Army Depot, Savanna, IL, during the First Quarter, FY 1976.

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See Chap XXVII, Proj Mgr for SAFEGUARD Munitions, for more info on the SAFEGUARD prog, the phase-out of Savanna Army Depot & the deployment of warheads and warhead sections.

## Ammunition Shipments to Europe, FY 1975

Ammunition shipments to Europe in FY 1975 amounted to 28,050 short tons as compared to 26,323 short tons in FY 1974.

### Summary of Ammunition Shipments to Southeast Asia 1965 - 1975

April 1975 marked the end of American involvement in the Southeast Asian conflict. Support had been rendered by the United States (US) of America at the request of the South Vietnamese Government; first in an advisor and training role, then as the conflict increased in a logistical support role, and finally by sending US forces to fight. The United States support to its allies in Vietnam, Laos, Cambodia, and Thailand lasted for over ten years, the longest period of conflict in United States history. The peak of United States involvement was reached in January, 1969, when United States military strength reached over one-half million men and women, and in munitions alone, the cost reached nearly 3 billion dollars.<sup>6</sup> The withdrawal of US forces began in 1969 and was completed in April 1975. The Vietnam experience will long be remembered. Following is a narrative on the last year's activities and a summary of shipping for the period 1965-1975.

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*Logistic Support* by LTG Joseph M. Heiser, Jr. in the DA Vietnam Study Series, 1974, Wash, DC, pp. 14 & 119.

Ammunition Shipments to Southeast Asia, FY 1975

During FY 1975, all of the ammunition shipped to Southeast Asia was sent by surface transportation. Between July 1974 and April 1975 when shipping ceased, 193,477 measurement tons were shipped as shown in *Table 18*.

TABLE 18

ARMCOM Ammunition Shipments to  
Southeast Asia

FY 1975

<u>Month</u>	<u>Measurement Ton</u>
July 1974	11,336
August 1974	30,785
September 1974	25,371
October 1974	24,252
November 1974	24,671
December 1974	22,910
January 1975	15,196
February 1975	19,317
March 1975	18,622
April 1975	1,017 (Operations ceased)
TOTAL	<u>193,477</u>

The total FY 1975 tonnage of 193,477 measurement tons represents a marked decline from FY 1974 when 461,115 measurement tons were shipped. During FY 1975, 47 percent of the shipments were sent through CONUS East Coast ports and 53 percent were sent through CONUS West Coast ports.

The average cost of shipping ammunition to Southeast Asia during FY 1975 was \$170.15 per ton. This is a 29 percent increase above



the FY 1974 level average cost of \$131.81 per ton and the highest per surface ton cost since the Southeast Asian operation began. The rise in shipping costs resulted from three major factors: (1) increased port handling and ocean sailing costs, (2) normal inflationary price increases in the costs of land transportation, and (3) increased movement and routing changes to less cost effective CONUS terminals due to the reduced number of ships being routed to Southeast Asia.

The average number of days that ammunition ships were in Southeast Asian terminals during FY 1975 is shown below:

Average Length of Time of Ammunition  
Ships in Southeast Asian Terminals  
FY 1974 versus FY 1975

<u>Terminal</u>	<u>FY 74 (Days)</u>	<u>FY 75 (Days)</u>
Cat Lai	3.3	4.8
Qui Nhon	4.3	-
Cam Ranh Bay	-	3.8
Danang	1.8	1.5
In port avg.	2.4	2.5

Summary of Ammunition Shipments to Southeast Asia, FY 1965-1975

The withdrawal of US forces in April 1975 marked the end of ammunition shipments to Southeast Asia. During the 11 year period, FY 1965 through FY 1975, over seven million measurement tons of ammunition were shipped to Southeast Asia.

In FY 1965, shipments were made to the US Army in Vietnam and to the South Vietnamese Army under a program known as VAMP. In FY 1967, ammunition shipments were begun to the Laotian Army under a program known as LAMP. In FY 1973, shipments were also being sent to the Forces Armee' National Kmer (FANK) in Cambodia. In November, 1973, the requisitioning for these two customers' requirements was assigned to US Army, Pacific (USARPAC) for dual stockage within Thailand under the designation VAYAMA. Subsequent shipments were identified only for movement to Thailand (VAYAMA) under US Army requisitioning procedures. Some small amounts of tonnage which had been previously requisitioned or delivery was specifically identified, continued to move for LAMP through August 1974, then all LAMP and FANK supplies went through VAYAMA.

*Table 19* shows the tonnage of all ammunition shipped to Southeast Asia between FY 1965 and FY 1975 from ARMCOM and predecessor Commands, the US Army Weapons Command (WECOM), Rock Island, IL; and the US Army Munitions Command (MUCOM), Dover, NJ.

In general, ammunition shipments to Southeast Asia rose at a rapid rate from FY 1965 to a peak of 1,143,680 MTONs in FY 1968; then remained fairly steady through FY 1970; and began a rapid decline from FY 1971 on. It is interesting to note that by far, the largest proportion of the shipments from FY 1966 through FY 1970 went to the US Army. In FY 1970, VAMP (South Vietnam Army) shipments began increasing rapidly and as shipments to the US Army

TABLE 19

ANNUAL AMMUNITION SHIPMENTS TO SOUTHEAST ASIA IN MTON  
FY 1965 - FY 1975

<u>FY</u>	<u>USARV</u>	<u>OFFSHORE</u>	<u>*LAMP</u>	<u>VAMP</u>	<u>*FANK</u>	<u>TOTAL</u>
65	11,196			37,731		48,927
66	243,650			138,914		382,564
67	667,413		997	34,783		703,193
68	1,000,194	2,958	5,840	130,688		1,143,680
69	720,371	100,444	9,140	261,481		1,091,436
70	779,290	84,331	10,545	333,268		1,207,434
71	332,693	16,365	12,547	341,727		703,332
72	103,598	31,109	39,701	586,552		760,960
73		26,279	30,093	580,661	39,460	676,493
	<u>*VAYAMA</u>					
74	127,722	120,833	89	190,877	21,469	460,990
75	97,169		117	96,191		193,477
TOTALS	<u>4,087,296</u>	<u>382,319</u>	<u>109,069</u>	<u>2,732,873</u>	<u>60,929</u>	<u>7,372,486</u>

Key: USARV and OFFSHORE apply to US forces - LAMP (Laos) - VAMP (South Vietnamese Army) -  
 FANK (Cambodia) - VAYAMA (Thailand)  
 \*In Nov 73, LAMP and FANK shipments were sent through VAYAMA.

Source: Annual Historical Report, Transportation and Traffic Management Directorate,  
 29 Jul 75.

decreased from FY 1971 on, the VAMP shipments went up to their highest level during FY 1972 and FY 1973 (the period of emphasis on the Vietnamization Program). In FY 1974 and FY 1975, all shipments decreased rapidly until they finally ceased in April 1975, with the close of hostilities and total withdrawal of all US forces from South Vietnam.

At the end of the conflict, two ammunition ships were enroute to South Vietnam and one was in port being unloaded. All three ships were then diverted to Korea and discharged their cargos there. Ammunition deemed beyond US Army and currently accepted International Logistics orders requirements was identified for subsequent movement to CONUS. Tonnage in Thailand beyond the requirements of the theater, 3,812 tons, was returned to CONUS. Other tonnage identified as required in theater, 38,188 tons, was planned for theater redistribution in FY 1976.

The number of ships used to transport ammunition from the United States to Southeast Asia, by calendar year, are depicted in *Table 20*.

During this 11 year period, 1965-1975, less than one-half of one percent of the tonnage moved to Southeast Asia was by air.

TABLE 20

NUMBER OF AMMUNITION SHIPS USED TO  
SUPPORT SOUTHEAST ASIA

1965 - 1975

<u>Calendar Year</u>	<u>Number of Ships</u>
1965	36
1966	83
1967	186
1968	234
1969	179
1970	164
1971	108
1972	109
1973	51
1974	41
1975	7
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TOTAL	<u><u>1,198</u></u>

Source: Annual Historical Report, Transportation and  
Traffic Management Directorate, 29 Jul 75.