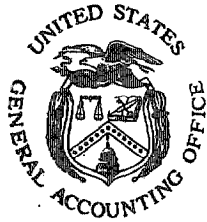


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REPORT TO THE COMMITTEE
ON APPROPRIATIONS
HOUSE OF REPRESENTATIVES



BY THE COMPTROLLER GENERAL
OF THE UNITED STATES

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Army's Programs For
Procuring Ammunition
And Modernizing
Ammunition Plants

7-22-75
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COMPTROLLER GENERAL OF THE UNITED STATES
WASHINGTON, D.C. 20548

B-172707

clrk
1/25/76

The Honorable George H. Mahon
Chairman, Committee on Appropriations
House of Representatives

Dear Mr. Chairman:

On February 7, 1975, you asked us to analyze and review the justifications supporting major ammunition items and to review and evaluate major modernization and expansion projects in the Army's fiscal year 1976 and transition quarter (July 1 to September 30, 1976) appropriation requests.

Our review showed that the Army's appropriation requests for ammunition hardware should be reduced by \$109.9 million which was requested for stockpiling war reserves for foreign countries.

We also found that \$127.9 million requested for modernization and expansion projects could be deferred from the Army's ammunition production base-support appropriation requests for fiscal year 1976 and the transition quarter.

We also found that the ammunition hardware requests were overstated \$28.3 million for fiscal year 1976 and \$19.5 million for the transition quarter, because of changes in ammunition hardware requirements after the appropriation requests were submitted to the Congress and because of price adjustments based on recent purchases.

There are additional requirements for ammunition items of \$116.8 and \$13.6 million for fiscal year 1976 and the transition quarter, respectively, which were not included in the requests submitted to the Congress. These changes have the net effect of increasing the funds needed for ammunition hardware for fiscal year 1976 and the transition quarter by \$82.6 million.

As your Committee staff requested, we briefed them on the results of our review on July 2 and 3, 1975. The following appendixes contain details which we presented to your Committee staff during the briefing.

LCD-75-441

B-172707

We discussed this report with Department of Defense and Department of the Army officials, but as your office directed, we did not obtain their formal comments.

Sincerely yours,

A handwritten signature in cursive script that reads "Luther A. Streats".

Comptroller General
of the United States

INTRODUCTION

The Army's request for \$750.9 million in fiscal year 1976 and \$269.3 million in the transition quarter (July 1 to September 30, 1976) for procuring ammunition was divided as follows:

	Fiscal year <u>1976</u>	Transition <u>quarter</u>
	(millions)	
Ammunition hardware	\$444.2	\$100.1
Ammunition production base support	<u>306.7</u>	<u>169.2</u>
	<u>\$750.9</u>	<u>\$269.3</u>

The ammunition hardware requests were for ammunition items required for training Active and Reserve Forces and for building war reserve stocks. The program includes over 40 different types of ammunition items ranging from various types of artillery, tank, mortar, and small arms ammunition to fuzes, mines, pyrotechnic signals, and rockets.

The ammunition production base-support program provides for production facilities and related industrial production equipment needed in the procurement and production of ammunition. The program contains the following elements.

	Fiscal year <u>1976</u>	Transition <u>quarter</u>
	(millions)	
Modernization and expansion of the ammunition production base	\$218.0	\$153.9
Annual support of ammunition plants	37.9	3.5
Layaway of industrial facilities	15.8	5.0
Production engineering measures	<u>35.0</u>	<u>6.8</u>
Total	<u>\$306.7</u>	<u>\$169.2</u>

The funds requested for modernizing and expanding the ammunition production base are the seventh increment of a multiyear plan which was started in fiscal year 1970. The plan was extensively revised during the past year to meet the currently projected mobilization requirements as well as planned peacetime ammunition procurement.

In our July 15, 1974, report on the "Army's Program to Modernize Ammunition Plants" (B-172707), we pointed out that the Army was revising its modernization and expansion plan. The Army's revised plan, dated January 20, 1975, extended the timetable for completion from 1981 to 1988 and increased the December 1972 estimated cost of \$4.1 billion to an estimated cost of \$6.4 billion. The net increase of \$2.3 billion was mostly from expanding the ammunition production base for certain explosives and Improved Conventional Munitions and from restating planned costs in 1975 dollars.

The revised plan corrects some major weaknesses in the previous plans. For example, modernization and expansion needs are based on long-term rather than the short-term needs, project priorities are based on the need to meet ammunition mobilization requirements, high priority and emphasis are placed on the development of new manufacturing processes, and mobilization production plans for noncontinuous processes are based on 120 to 132 scheduled production hours a week rather than 80 scheduled hours a week as in the past.

Scope of review

We made our review at the offices of the Departments of Defense and the Army in Washington, D.C.; the Army Materiel Command, Alexandria, Virginia; the Army Armament Command, Rock Island, Illinois; and the Army Office of the Project Manager for Munitions Production Base Modernization and Expansion, Dover, New Jersey. In addition, we visited the Iowa; Louisiana; St. Louis, Missouri; and Scranton, Pennsylvania, Army Ammunition Plants (AAPs) and a plant owned and operated by National Presto Industries, Inc., Eau Claire, Wisconsin.

AMMUNITION HARDWARE PROGRAM

For fiscal year 1976 and the transition quarter, the Army requested \$544.3 million to procure ammunition items to meet its training and war reserve needs. The request should be reduced by \$109.9 million for funds requested to stockpile reserves for foreign countries and should be increased by \$82.6 million to show changes in requirements and unit prices and to procure ammunition items with valid requirements which were not included in the budget submitted to the Congress.

Funds requested to stockpile war reserves for foreign countries

The War Reserve Stocks for Allies and Special Contingency Stocks programs are Defense programs for procuring and stockpiling war reserve materials for possible future delivery to foreign countries. In fiscal year 1975 and prior years, the War Reserve Stocks for Allies program was funded from Defense appropriations. Section 514 of the Foreign Assistance Act of 1961, as amended by Public Law 93-559 approved December 30, 1974, requires that, beginning with fiscal year 1976, war reserve material to be stockpiled for foreign countries be funded out of military assistance program appropriations. The Army's requests for funds for fiscal year 1976 and the transition quarter totaled \$109.9 million for ammunition items under the two programs. (See app. II.)

Army officials told us they were aware that recent legislation prohibited them from using Defense appropriations to stockpile ammunition for allies; however, Army officials included these ammunition items in the appropriation requests in accordance with Secretary of Defense guidance. They stated that the Secretary of Defense was seeking legislative relief to enable the military services to continue using Defense appropriations for stockpiling defense material in support of foreign countries. At the date of this letter, legislative relief had not been obtained.

Adjustments showing changes in requirements and unit prices

We examined the justifications supporting the major ammunition items included in the appropriation requests and found that the types and quantities of ammunition required for supporting U.S. Army forces had changed since the appropriation requests were prepared and submitted to the Congress. For example, the Army reduced the number of weapons that would fire the 105-mm. APERS-T round in the event of war. This reduction changed the authorized acquisition objective for the 105-mm. APERS-T round. The quantity of rounds on hand

was sufficient to meet the new demand; consequently the fiscal year 1976 requirement for the 105-mm. APERS-T round was eliminated. When these requirement changes and unit price increases, based on the most recent procurement experience, are shown in the appropriation requests, the fiscal year 1976 request would decrease by \$28.3 million and the transition quarter request would decrease by \$19.5 million. (See app. III.) We discussed these adjustments with Army officials and they agreed with us.

We also examined five ammunition items which Army officials stated represented additional requirements which did not appear on the appropriation requests and found that the justification documentation supported the need for these items. These items showed new or increased quantities, primarily because the requirements data had changed since the authorized acquisition objectives were computed and the appropriation requests were prepared. The total funds required for the five items amounted to \$130.4 million. (See app. III.)

The net change in the appropriation requests for ammunition hardware, exclusive of the reduction for funds requested to stockpile reserves for foreign countries, is as shown below and in appendix III.

	<u>Fiscal year</u> <u>1976</u>	<u>Transition</u> <u>quarter</u>	<u>Total</u>
	(millions)		
Increase in funds requested resulting from new require- ments	\$116.8	\$13.6	\$130.4
Decrease in funds requested resulting from changes in requirements and unit prices	<u>28.3</u>	<u>19.5</u>	<u>47.8</u>
Net increase or de- crease (-)	<u>\$ 88.5</u>	<u>\$-5.9</u>	<u>\$ 82.6</u>

Recommendation and suggestion

In view of the legislative restrictions prohibiting the use of Defense appropriations for the War Reserve Stocks for Allies and the Special Contingency Stocks programs and the fact that legislative relief has not been obtained, we recommend that the Committee eliminate \$109.9 million from the fiscal year 1976 and the transition quarter appropriation requests for these programs.

Further, we suggest that the Committee consider a net increase of \$82.6 in the appropriation requests. This increase would provide sufficient funds to procure those ammunition items with valid requirements which were not included in the budget submitted to the Congress.

AMMUNITION PRODUCTION BASE SUPPORT

The Army requested \$371.9 million for 37 modernization and expansion projects for fiscal year 1976 and the transition quarter. On the basis of our review, the Committee may wish to defer five projects costing about \$127.9 million. These projects are listed below and discussed in the following sections and in appendixes IV and V.

	<u>Amount</u>
	(millions)
Lone Star AAP, Texarkana, Texas:	
Construct new facility to make 105-mm. projectiles	\$110.4
Pine Bluff Arsenal, Pine Bluff, Arkansas:	
Provide facility to make binary chemical ammunition	8.8
Other projects:	
Louisiana AAP, Sheveport, Louisiana	2.6
Iowa AAP, Burlington, Iowa	3.2
Riverbank AAP, Riverbank, California	<u>2.9</u>
	<u>\$127.9</u>

Construction of a facility to make
105-mm. projectiles at Lone Star AAP
(Project 5762532, \$110.4 million)

The Army requested \$21.7 million for fiscal year 1976 and \$88.7 million for the transition quarter, or a total of \$110.4 million, to build a new 105-mm. projectile facility at Lone Star AAP with a capacity of 1 million projectiles a month. The buildings are expected to cost \$60.3 million and equipment \$50.1 million. This AAP--rather than the St. Louis AAP, which has been in layaway since 1969--would be used to produce 105-mm. projectiles. The St. Louis AAP is capable of producing 800,000 105-mm. projectiles a month. The Army has also requested \$15.6 million (project 5762579) to fund the second part of a 3-year project to modernize and expand production equipment to make 1.3 million 105-mm. projectiles a month at National Presto Industries, Inc. In the past 105-mm. projectiles for the Army have been produced primarily by the St. Louis AAP and the National Presto Industries, Inc.

The Army justified building the new facility at Lone Star AAP on the basis that the mobilization requirements of 2.4 million 105-mm. projectiles a month exceeded existing production capacity. Since the budget submission, developments in Southeast Asia have reduced requirements about 1 million projectiles a month. Existing 105-mm. projectile production capacity at the St. Louis AAP and at the National Presto Industries, Inc., is more than enough to meet mobilization requirements.

The Army did not make a detailed engineering study of the feasibility of modernizing the St. Louis AAP. From the information available, the St. Louis AAP should be capable of producing 800,000 projectiles a month with its present equipment. If modernization is deemed necessary, pursuant to the Army's plan to update its ammunition facilities, the cost of modernizing the St. Louis AAP would be about half as much as constructing a new facility at Lone Star, according to informal Army estimates.

Army officials inspected the St. Louis AAP in May 1974 and reported that the plant was in a high state of readiness. They also reported that buildings and equipment were in good condition. During a visit to the St. Louis AAP, we confirmed the Army's observations and plant officials told us that space at the plant was adequate to meet the assigned mobilization production requirements. We also noted that new equipment, such as lathes and forges purchased since 1969 and valued at about \$19 million, was either installed or stored at the AAP.

Since existing capacity at the St. Louis AAP and the National Presto Industries, Inc., is sufficient to meet 105-mm. projectile mobilization needs and since the St. Louis AAP is in good condition, a serious question is raised as to the need for constructing a new 105-mm. projectile facility at Lone Star. In our opinion this project should be deferred until future mobilization requirements justify additional production capacity.

Provide facility to make binary chemical
ammunition (Project 5760317, \$8.8 million)

The Army requested \$8.8 million to establish a Government-owned facility at Pine Bluff Arsenal to manufacture binary chemical weapons and to load, assemble, and pack the 155-mm. XM687 binary projectile, a new design concept in chemical weaponry. Although it uses the same basic elements of the current system, the binary projectile provides a new method for delivering and disseminating chemical agents. It

permits two relatively harmless ingredients to be packed in separate compartments in an artillery shell. When the shell is fired, the ingredients are mixed to produce gas.

The Army included funds for this purpose in its 1975 budget program, but the House of Representatives deleted the funds after considerable debate. The Secretary of Defense indicated at that time that the project was not intended to produce binary munitions. It was to provide the capability for binary munitions production when and if the Congress would finance such production.

In view of past congressional opposition, we believe that this project should be deferred until the Army obtains approval for production.

Other projects (\$8.7 million)

The Army's modernization and expansion program for fiscal year 1976 and the transition quarter included three projects, costing a total of \$8.7 million, to improve support facilities at three AAPs. Since the improvements are not needed for current operations, they have a low priority. In addition, existing support facilities at the three AAPs are adequate to meet mobilization needs; therefore we recommend that these projects be deferred.

<u>Project</u>	<u>Location</u>	<u>Description</u>	<u>Amount</u> (millions)
5762683	Louisiana	Railroad overpass	\$2.6
5762728	Iowa	Truck access roads to munitions areas	3.2
5762346	Riverbank	Enclosure over a court- yard between two buildings	<u>2.9</u>
Total			<u>\$8.7</u>

Louisiana AAP (Project 5762683)

This project proposes to construct a railroad overpass, at an estimated cost of \$2.6 million, to replace an existing crossing. The existing crossing is not used because the AAP is served by another railroad company which has a railroad siding with unrestricted access to the AAP. The project was included in the fiscal year 1975 program for \$1 million; however, these funds were reprogrammed by the Army for other projects.

The Army justified this project on the basis that a second railroad would be needed to serve the AAP in the event of mobilization.

AAP officials stated that existing rail service was adequate for current production and that, in the event of a national emergency, the AAP could also be served by the second railroad company using the existing crossing. We believe this project should be deferred in favor of a project with a higher priority.

Iowa AAP (Project 5762728)

The Army requested funds in a 3-year project for gravel service roads to ammunition storage areas presently served by rail. In fiscal year 1976 the Army requested \$3.2 million for this project.

This project and two prior-year projects were justified on the basis that, if roads were provided, the need for train crews and railroad equipment, such as switch engines and box-cars, would be reduced. Officials claimed that, if roads were constructed, truck shipments arriving and departing would not have to be rehandled to get to and from the storage area. The cost difference between operating with and without the new roads is \$92,000. This is not a large annual savings when compared with a capital outlay of \$3.2 million.

Existing roads and rail service are adequate to service the ammunition storage areas for peacetime production needs.

Army officials said that this project did not have a high priority in the modernization and expansion program but was considered necessary for supporting mobilization production. We recommend that the Committee defer this project in favor of a project with a higher priority.

Riverbank AAP (Project 5762346)

The Army requested \$2.9 million to construct an enclosure over a courtyard between two buildings. This project was justified on the basis that the enclosure would save the employees time when going from the maintenance shop to the production lines. We did not see any documentation of savings through increased production or reduced personnel. Army officials agreed that the project should be fully supported and they said that they planned to do so. Until then, Army officials said that this project could be deferred to a future year without adverse effects. We recommend this project be deferred.

WAR RESERVE STOCKS FOR ALLIES
AND SPECIAL CONTINGENCY STOCKS
INCLUDED IN APPROPRIATION REQUESTS

	<u>Total</u> <u>amount</u>	<u>Fiscal year 1976</u>		<u>Transition quarter</u>	
		<u>Quantity</u>	<u>Amount</u>	<u>Quantity</u>	<u>Amount</u>
	(millions)	(thousands)	(millions)	(thousands)	(millions)
7.62-mm. cartridges, all types	\$ 4.9	34,300.0	\$ 4.9	-	\$ -
60-mm. smoke cartridges	7.1	300.0	7.1	-	-
60-mm. HE cartridges	20.8	1,670.0	20.8	-	-
105-mm. HE cartridges	7.3	200.0	7.3	-	-
105-mm. illuminating cartridges	7.0	91.0	7.0	-	-
105-mm. HEP-T cartridges	14.8	84.0	10.7	32.0	4.1
105-mm. APERS-T cartridges	0.3	0.6	0.3	-	-
155-mm. HE cartridges	9.2	140.0	9.2	-	-
AP directional mines	32.6	971.0	24.9	300.0	7.7
1-1/4-lb. demolition charges	1.2	382.0	0.9	150.0	0.3
First-destination transportation	<u>4.7</u>	-	<u>4.2</u>	-	<u>0.5</u>
	<u>\$109.9</u>		<u>\$97.3</u>		<u>\$12.6</u>

OTHER SUGGESTED ADJUSTMENTS TO THE APPROPRIATIONREQUESTS FOR AMMUNITION

	<u>Fiscal year 1976</u>			<u>Transition quarter</u>		
	<u>Re-</u> <u>quest</u>	<u>GAO</u> <u>adjust-</u> <u>ments</u>	<u>Request</u> <u>as</u> <u>adjusted</u>	<u>Re-</u> <u>quest</u>	<u>GAO</u> <u>adjust-</u> <u>ments</u>	<u>Request</u> <u>as</u> <u>adjusted</u>
	(millions)					
Changes in requirements and unit prices:						
5.56-mm. blank cartridges	\$ 3.8	\$-1.7	\$ 2.1	\$ -	\$ -	\$ -
14.5-mm. cartridges	5.9	-1.6	4.3	-	-	-
20-mm. cartridges	4.5	-4.5	-	-	-	-
105-mm. HE cartridges	2.6	-2.6	-	-	-	-
105-mm. TP-T cartridges	35.6	-18.0	17.6	15.7	-3.9	11.8
105-mm. APERS-T cartridges	18.1	-18.1	-	9.7	-9.7	-
PD fuzes	41.7	-11.9	29.8	-	-	-
.50-caliber cartridges	8.5	2.1	10.6	-	-	-
90-mm. TP-T cartridges	12.8	1.1	13.9	-	-	-
105-mm. HEP-TP cartridges	7.8	1.0	8.8	-	-	-
MTSQ fuzes	14.0	1.9	15.9	-	-	-
Handgrenade simulators	0.5	0.5	1.0	-	-	-
Ground-burst projectile simulators	0.6	0.1	0.7	-	-	-
Components for renova- tion	12.7	5.1	17.8	-	-	-
First-destination trans- portation	<u>14.4</u>	<u>18.3</u>	<u>32.7</u>	<u>11.7</u>	<u>-5.9</u>	<u>5.8</u>
	<u>183.5</u>	<u>- 28.3</u>	<u>155.2</u>	<u>37.1</u>	<u>19.5</u>	<u>17.6</u>
Additional requirements not included in appropriation request:						
105-mm. HEAT cartridges	-	54.0	54.0	-	-	-
155-mm. GB XM164 pro- pellant charges	-	10.6	10.6	-	3.0	3.0
155-mm. WB XM201 pro- pellant charges	-	19.1	19.1	-	7.2	7.2
8-inch WB XM188 pro- pellant charges	-	15.4	15.4	-	3.4	3.4
152-mm. TP-T cartridges	<u>8.5</u>	<u>17.7</u>	<u>26.2</u>	<u>-</u>	<u>-</u>	<u>-</u>
	<u>8.5</u>	<u>116.8</u>	<u>125.3</u>	<u>-</u>	<u>13.6</u>	<u>13.6</u>
Total	<u>\$192.0</u>	<u>\$ 88.5</u>	<u>\$280.5</u>	<u>\$37.1</u>	<u>-\$ 5.9</u>	<u>\$31.2</u>

MODERNIZATION AND EXPANSION PROJECTS INCLUDED
IN THE ARMY'S FISCAL YEAR 1976 APPROPRIATION REQUEST

<u>Project</u>	<u>Original request</u>	<u>Adjusted request</u>	<u>Amount questioned by GAO</u>
	----- (millions) -----		
Initial production facilities:			
5760317	\$ 8.8	\$ 8.8	\$ 8.8
5762584	1.4	1.3	-
5763096	10.2	10.2	-
5764860	4.6	4.6	-
Modernization:			
5760265	2.2	1.0	-
5762290	8.2	-	-
5762346	2.9	2.9	2.9
5762532	21.7	21.7	21.7
5762573	5.2	4.5	-
5762579	15.6	15.6	-
5762592	-	5.6	-
5762613	1.4	1.4	-
5762679	13.9	13.9	-
5762690	5.5	4.6	-
5762765	20.9	-	-
5762875	.2	-	-
5763145	-	2.2	-
5764832	.2	.2	-
5765902	-	6.0	-
Expansion:			
5762528	7.4	7.4	-
5762586	-	22.1	-
5762596	.2	.2	-
5763103	1.3	-	-
5763142	45.2	45.2	-
5763144	9.6	10.0	-
5765017	1.7	1.7	-
Omnibus engineering design (note a):			
Equipment	14.0	14.0	-
Construction	<u>12.9</u>	<u>12.9</u>	<u>-</u>
Total FY 1976	<u>\$215.2</u>	<u>\$218.0</u>	<u>\$33.4</u>
Total transition quarter (see app. V)	<u>152.6</u>	<u>153.9</u>	<u>94.5</u>
Total			<u>127.9</u>

a/ Not reviewed by GAO.

MODERNIZATION AND EXPANSION PROJECTS INCLUDED
IN THE ARMY'S TRANSITION QUARTER APPROPRIATION REQUEST

<u>Project</u>	<u>Original request</u>	<u>Adjusted request</u>	<u>Amount questioned by GAO</u>
	(millions)		
Initial production facilities:			
5760273	\$ 0.8	\$ 0.8	\$ -
5764861	3.2	-	-
Modernization:			
5762532	88.7	88.7	88.7
5762582	12.2	12.2	-
5762585	2.8	2.8	-
5762647 (note a)	19.4	18.7	-
5762664	2.9	2.9	-
5762683	2.6	2.6	2.6
5762728	3.2	3.2	3.2
5762981	1.3	1.7	-
5764850	-	4.8	-
Expansion:			
5764846	5.8	5.8	-
Omnibus engineering design (note b):			
Equipment	6.0	6.0	-
Construction	<u>3.7</u>	<u>3.7</u>	<u>-</u>
	<u>\$152.6</u>	<u>\$153.9</u>	<u>\$94.5</u>

a/Combined with project 5762671 after appropriation request was submitted.

b/Not reviewed by GAO.