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DEPARTMENT OF THE ARMY
Office of the Deputy Chief of Staff
For
RESEARCH, DEVELOPMENT AND ACQUISITION



28 January 1980

DEPARTMENT OF THE ARMY
PROCUREMENT APPROPRIATIONS

Justification of Estimates for Fiscal Year 1981, 82 (Auth only)

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Department of the Army
Procurement of Ammunition, Army

Justification of Estimates for Fiscal Year 1981

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PROCUREMENT OF AMMUNITION, ARMY

Section 1

Budget Appendix Extract

Language

Program and Financing Schedule

Object Classification Schedule

APPROPRIATION LANGUAGE

For construction, procurement, production, and modification of ammunition, and accessories therefor; specialized equipment and training devices; expansion of public and private plants, including ammunition facilities authorized in military construction authorization Acts or authorized by section 2673, title 10, United States Code, and the land necessary therefor, without regard to section 4774, title 10, United States Code, for the foregoing purposes, and such lands and interests therein, may be acquired, and construction prosecuted thereon prior to approval of title as required by section 355, Revised Statutes, as amended; and procurement and installation of equipment, appliances, and machine tools in public and private plants; reserve plant and Government and contractor-owned equipment layaway; and other expenses necessary for the foregoing purposes; [\$1,232,800,000] \$1,513,500,000 to remain available for obligation(1) until September 30, [1982] 1983. (2)

(10 U.S.C. 2353, 3012, 4531, 4532; 31 U.S.C. 649c; Department of Defense Appropriation Act, 1979; additional authorizing legislation to be proposed.)

EXPLANATION OF LANGUAGE CHANGES

- (1) To change the amount of the appropriation requested for FY 1981.
- (2) To change the obligation expiration date for the FY 1981 program.

Program and Financing (in thousands of dollars)

Identification code 21-2034-0-1-001

Obligations

Budget plan (amounts for procurement actions programmed)

	1979 actual	1980 est.	1981 est.	1979 actual	1980 est.	1981 est.
Program by activities:						
Direct:						
1. Ammunition	954,500	679,000	1,169,200	666,039	673,806	1,103,677
2. Ammunition production base support	240,100	353,800	324,300	240,460	322,566	356,600
Total direct	1,194,600	1,232,800	1,513,500	1,126,499	1,196,392	1,462,477
Reimbursable program	446,608	400,000	450,000	379,080	376,608	444,523
Total	1,641,208	1,632,800	1,963,500	1,501,579	1,573,000	1,907,000

Financing:

Offsetting collections from:

11.00 Federal funds	-355,823	-257,000	-300,000	-341,294	-244,000	-300,000
13.00 Trust funds	-90,663	-143,000	-150,000	-38,629	-137,000	-150,000
14.00 Non-federal sources	-122			-138		
21.40 Unobligated balance available, start of year:						
For completion of prior year budget plans						
Reprogramming from or to prior year budget plans	-45,248					
24.40 Unobligated balance available, end of year:						
For completion of prior year budget plans	45,248			479,382	520,182	576,682
25.00 Unobligated balance lapsing						
Budget authority	1,194,600	1,232,800	1,513,500	1,194,600	1,232,800	1,513,500

Budget authority:

40.00 Appropriation	1,216,100	1,232,800	1,519,500	1,216,100	1,232,800	1,513,500
41.00 Transferred to other accounts	-53,500			-53,500		
43.00 Appropriation (adjusted)	1,164,600	1,232,800	1,519,500	1,164,600	1,232,800	1,513,500
50.01 Reappropriation	30,000			30,000		

Relation of obligations to outlays:

71.00 Obligations incurred, net	1,121,518			1,121,518	1,192,000	1,457,000
72.40 Obligated balance, start of year	1,290,556			1,290,556	1,473,332	1,666,332
74.40 Obligated balance, end of year	-1,473,332			-1,473,332	-1,666,332	-1,985,332
77.00 Adjustments in expired accounts	19,343			19,343		
90.00 Outlays	956,085			956,085	999,000	1,136,000

Army

Procurement of Ammunition, Army

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Object Classification (in thousands of dollars)

dentification code	21-2034-0-1-051	1979 actual	1980 est.	1981 est.
Direct obligations:				
22.0 Transportation of things		2,195		
25.0 Other services:				
Contracts		379,176	453,990	584,960
Supplies and materials		744,809	722,863	863,936
Equipment		2,319	19,539	13,561
Total direct obligations		1,126,499	1,196,392	1,462,477
Reimbursable obligations:				
25.0 Other services:				
Contracts		125,355	183,210	195,570
Supplies and materials		246,233	191,729	246,884
Equipment		1,492	1,669	2,069
Total reimbursable obligations		373,080	376,608	444,523
99.0 Total obligations		1,501,579	1,573,000	1,907,000

Identification code 21-2034-0-1-051
 Program and Financing (in thousands of dollars)
 1977 Fiscal year program
 Budget plan (amounts for
 procurement actions programmed)
 1979 actual 1980 est. 1981 est. 1979 actual 1980 est. 1981 est.

Program by activities:

	1979 actual	1980 est.	1981 est.	1979 actual	1980 est.	1981 est.
Direct:						
1. Ammunition	36,658					
2. Ammunition production base support	12,140					
Total direct	48,798					
Reimbursable program	3,225					
Total	52,023					

Financing:

Offsetting collections from:						
Federal funds	5,722					
Trust funds	3,390					
Non-federal sources	-1					
Unobligated balance available, start of year:						
For completion of prior year budget plans	-106,381					
Reprogramming from or to prior year budget plans						
Unobligated balance lapsing	45,248					
Budget authority						

Program and Financing (in thousands of dollars)
 1978 Fiscal year program
 Identification code 21-2034-0-1-051
 Budget plan (amounts for
 procurement actions programmed)
 1979 actual 1980 est. 1981 est. 1979 actual 1980 est. 1981 est.

	1979 actual	1980 est.	1981 est.	1979 actual	1980 est.	1981 est.
Program by activities:						
Direct:						
1. Ammunition	78,206			56,041		
2. Ammunition production base support	4,424			21,062		
Total direct	82,630			77,123		
Reimbursable program	44,912			64,065		
Total	127,542			141,188		
Financing:						
Offsetting collections from:						
Federal funds	8,607			13,000		
Trust funds	48,644			6,000		
Non-federal sources	-16					
Unobligated balance available, start of year:						
For completion of prior year budget plans	-345,166			-160,188		
Unobligated balance available, end of year:						
For completion of prior year budget plans	160,188					
Budget authority						

Army

Procurement of Ammunition, Army

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Program and Financing (in thousands of dollars)

1979 Fiscal year program Obligations

Identification code	21-2034-0-1-051	Budget plan (amounts for procurement actions programmed)		1979 actual		1981 est.		1980 est.		1981 est.	
		1979 actual	1980 est.	1981 est.	1980 est.	1981 est.	1980 est.	1981 est.			

Program by activities:

Direct:											
1. Ammunition		954,500							773,175		94,584
2. Ammunition production base support		240,100							223,696		6,900
Total direct		1,194,600							997,071		101,484
Reimbursable program		446,608							324,943		88,439
Total		1,641,208							1,322,014		189,923

Financing:

Offsetting collections from:

11.00 Federal funds		-355,823							-355,823		
13.00 Trust funds		-90,663							-90,663		
14.00 Non-federal sources		-122							-122		
21.40 Unobligated balance available, start of year:											
For completion of prior year budget plans											
24.40 Unobligated balance available, end of year:											
For completion of prior year budget plans											
Budget authority		1,194,600							319,194		189,923

Budget authority:

40.00 Appropriation		1,218,100							1,218,100		
41.00 Transferred to other accounts		-53,500							-53,500		
43.00 Appropriation (adjusted)		1,164,600							1,164,600		
50.01 Reappropriation		30,000							30,000		

Procurement of Ammunition, Army

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Program and Financing (in thousands of dollars)

1980 Fiscal year program

Procurement actions programmed

Obligations

1979 actual 1980 est. 1981 est. 1979 actual 1980 est. 1981 est.

Activity	Budget plan (amounts for procurement actions programmed)			Obligations		
	1979 actual	1980 est.	1981 est.	1979 actual	1980 est.	1981 est.
1. Ammunition	679,000	353,800		731,024	73,088	31,700
2. Ammunition production base support					292,200	
Total direct	1,232,800	400,000		1,023,224	104,788	41,084
Reimbursable program				279,317		
Total	1,232,800	400,000		1,302,541	145,672	

Financing:

Offsetting collections from:

Federal funds

Trust funds

Unobligated balance available, start of year:

for completion of prior year budget plans

Unobligated balance available, end of year:

for completion of prior year budget plans

Budget authority

Federal funds	-257,000			-257,000		
Trust funds	-143,000			-143,000		
Unobligated balance available, start of year:						-330,259
for completion of prior year budget plans						
Unobligated balance available, end of year:						184,967
for completion of prior year budget plans						
Budget authority	1,232,800			1,232,800		

Procurement of Ammunition, Army

Program and Financing (in thousands of dollars)

21-2034-0-1-051

1981 Fiscal year program obligations

1979 actual 1980 est. 1981 est. 1979 actual 1980 est. 1981 est.

Budget plan (amounts for procurement actions programmed)

	1979 actual	1980 est.	1981 est.	1979 actual	1980 est.	1981 est.
Program by activities:						
1. Ammunition
2. Ammunition production base support
Total direct
Reimbursable program
Total
Financing:						
Offsetting collections from:						
Federal funds
Trust funds
Unobligated balance available, end of year:						
for completion of prior year budget plans
Budget authority

PROCUREMENT OF AMMUNITION, ARMY

Section 2

Introductory Statement

4-10 - 1/21/80

DEPARTMENT OF THE ARMY
ANNUAL BUDGET ESTIMATES

Appropriation:

PROCUREMENT OF AMMUNITION, ARMY

FY 1981
Budget

Section 2 - INTRODUCTORY STATEMENT

This appropriation finances the acquisition of ammunition, modification of inservice stock, and related production base support including the maintenance, expansion, and modernization of industrial facilities and equipment.

The 1981 program provides for worldwide training consumption and losses from inventory through the 1981 funded delivery period; procurement of modern hardware; and buildup of war reserve stocks to meet authorized acquisition objectives. This year's program includes funds for over 50 different types of ammunition and provides the 13th increment of a multi-year effort to rehabilitate and improve the Army's industrial base.

PROCUREMENT OF AMMUNITION, ARMY

Section 3

Summary of Requirements

4-12 - 1/21/80

SUMMARY OF REQUIREMENTS (In Thousands of Dollars)

Appropriation	FY 1979 Actual	FY 1980 Estimate	FY 1981 Estimate
PROCUREMENT OF AMMUNITION, ARMY			
Ammunition	954,500	879,000	1,189,200
Ammunition Production Base Support	240,100	353,800	324,300
Total Direct Program	1,194,600	1,232,800	1,513,500
Reimbursable Program	446,608	400,000	450,000
TOTAL PROGRAM REQUIREMENTS	1,641,208	1,632,800	1,963,500
Less: Portion of program to be obligated in subsequent fiscal years	319,194	330,259	392,295
Plus: Obligations incurred against prior year program funds	179,565	270,459	335,795
TOTAL OBLIGATIONS	1,501,579	1,573,000	1,907,000

PROCUREMENT OF AMMUNITION, ARMY

Section 4

Budget Activity Justification

Activity 1 - Ammunition

Activity 2 - Ammunition Production Base Support

4-14 - 1/21/80

Department of the Army Annual Budget Estimates JUSTIFICATION	Appropriation PROCUREMENT OF AMMUNITION, ARMY		FY 1981 Budget
	(In Thousands of Dollars)		
	Actual Fiscal Year 1979	Estimate Fiscal Year 1980	Fiscal Year 1981
Budget Program or Budget Project Account ACTIVITY 1 - AMMUNITION Direct Obligations or Direct Budget Plan	\$ 954,500	\$ 879,000	\$ 1,189,200

Section 1 - PURPOSE AND SCOPE

Ammunition. This request provides for annual peacetime training needs and the acquisition of U.S. war reserve stocks for use during war time. Family of munitions included in the request are artillery, mortar and small arms ammunition, fuzes, mines, and demolitions, grenades, pyrotechnic signals, and other ammunition items. The major portion of the funds being requested are identified to newly developed tank rounds, artillery dual purpose improved conventional munitions, and artillery delivered mine systems.

Section 2 - JUSTIFICATION OF FUNDS REQUESTED

The fiscal year 1981 program provides for worldwide training consumption and losses to inventory through the FY81 funded delivery period; increases US Army readiness in support of the FY85 authorized acquisition objective and maintains an active ammunition production base in FY81 for modernization and training type munitions. The FY81 program includes over 50 different types of ammunition with the following category breakout: tank ammunition, \$156.4 million; fuzes, \$138.3 million; artillery ammunition, \$400.8 million; propelling charges, \$168.1 million; small arms ammunition, \$141.4 million; mortar ammunition, \$62.4 million; atomic materiel, \$30.8 million; rockets, \$17.6 million; and other ammunition, spares and components for tests, renovation and proveout, \$73.4 million. Of the \$1189.2 million total, \$863.6 million is allocated to tank gun and artillery munitions with related fuzes and propelling charges.

Department of the Army Annual Budget Estimates JUSTIFICATION Budget Program or Budget Project Account	Appropriation Procurement of Ammunition, Army (In Thousands of Dollars)	FY 1981 Budget	
		Estimate	
		Fiscal Year 1980	Fiscal Year 1981
Activity 2 - Production Base Support	Actual Fiscal Year 1979	\$ 240,100	\$ 324,300
Direct Obligations or Direct Budget Plan		\$ 353,800	\$ 324,300

Section 1 - PURPOSE AND SCOPE

Provides for the support of plants in active production and the modernization and expansion of the Army's production capability for ammunition; layaway of industrial plants and equipment; and the manufacturing technology to facilitate and improve the production of ammunition.

Section 2 - JUSTIFICATION OF FUNDS REQUESTED

The major effort for the ammunition production base in FY 1981 is the modernization and expansion program. The modernization and expansion program seeks to modernize existing World War II facilities which are deteriorated, obsolete, and inefficient, and to expand the base, where required, to provide the production capability to produce the new modernized ammunition items. The FY 1981 modernization and expansion program of \$251.2 million (including construction) is the thirteenth year increment of a long range, multi-billion capital investment program. The principal thrust of the program in FY 1981 is the establishment of the production base capability to produce the new and more effective modernized ammunition items. New production capability is being established or expanded for: a new 155mm propelling charge (\$4.9 million); 25mm Bushmaster ammunition (\$11.6 million); and metal parts for 105mm tank training projectile \$13.7 million).

These projects are needed to permit the introduction of these modernized ammunition items into the Army's inventory with the resultant increase in the readiness and effectiveness of our combat forces. A detailed breakout of individual projects is provided in Section 6.

The principal thrust of the FY81 program is continuation of and balance with prior year initiatives. A total of \$185.8 million is requested for the Mississippi Army Ammunition Plant, Bay St Louis, MS. This is the final phase and provides for completion of construction and the acquisition of equipment required for production. The Mississippi AAP when complete will be capable of producing 120,000 rounds per month of 155mm, M483 Improved Conventional Munition (ICM). The 25mm Bushmaster projects at \$11.6 million provides load, assemble and pack capability at Lake City AAP and augments fuze and metal parts capability in the private sector. The remaining expansion projects are a \$4.9 million IPF at Indiana AAP for 155mm propelling charge production at Indiana AAP and metal parts facility to be installed in the private sector for the metal parts production of the 105mm tank training projectile. These projects are required to meet planned out-year procurements for the items. Other major projects included are a \$2.6 million project

Department of the Army
Annual Budget Justification
JUSTIFICATION

FY 1981

Budget

Appropriation

Budget Program or Budget Project Account

Procurement of Ammunition, Army

Activity 2 - Production Base Support

to restore nitrocellulose Line C at Radford AAP; two projects at \$1.0 million and \$1.6 million respectively at Pine Bluff Arsenal to automate the grenade facility and modernize the smoke facility; a \$4.2 million project at Radford AAP to convert 155mm rocket grain production from the cast to extrusion process; a \$2.4 million project at Indiana AAP to modernize the powder preparation process for 81mm mortar, 105mm, 155mm and 8 inch charges and a project at \$2.5 million for a new radar system at Jefferson Proving Grounds for ballistic acceptance testing for ammunition and ammunition components. Finally a \$2.3 million project for a containerization facility at our Iowa plant, the third of twelve scheduled for ammunition plants, is included for containerized shipment of ammunition and a 17.4 million omnibus design effort.

Also included in the FY 1981 request for funds are the necessary production support and equipment replacement for plants in active production (\$32.0 million); the layaway of industrial plant equipment and facilities needed to meet mobilization requirements (\$13.3 million); and a manufacturing technology program to incorporate the latest state-of-the-art in technology into the production of ammunition (\$21.5 million). It is expected that sixteen ammunition plants will require FY 81 production support and equipment replacement funds. These facilities include the three former Navy facilities transferred to the Army under the Single Manager for Conventional Ammunition role on 1 October 1977, plus three production-related facilities. The \$13.3 million requested for layaway is for the protection and preservation of equipment and facilities no longer required for active production but which must be retained for future peacetime or mobilization production. This request coupled with the additional funds provided by Congress in FY 80 will permit the Army to satisfy current requirements and eliminate the prior layaway requirements backlog. The \$21.5 million for manufacturing methods and technology (MM&T) is associated with the modernization and expansion program. This program improves on-going production processes to achieve cost reductions and enhanced health, safety, and energy conservation characteristics. Additionally, this program develops production processes incorporating the latest state-of-the-art technology from private industry to mass produce the new, more sophisticated munitions. A breakout of associated costs for the total production base program is reflected on the next page.

The separate budget line item for the construction effort in support of the ammunition production base was deleted from the Pl procurement exhibit beginning with the President's FY80 Budget. This action eliminated the confusion that was caused by splitting projects with both equipment and construction between two budget lines. A detailed breakout of the projects with construction is contained on page 4-19. The construction portions of the individual projects are shown in parenthesis in Section 6, pages 4-28 to 4-36. Included in this year's ammunition procurement request is \$13.66 million of construction which will require authorization in this year's Military Construction Authorization Bill. This authorization total does not contain any authorization for the new Mississippi Army Ammunition Plant since construction of this plant was authorized by Congress in FY 78.

Included for the second time is a budget line item for Depot Maintenance Plant Equipment requesting \$6.0 million. Depot Maintenance Plant Equipment provides for the procurement of capital equipment required in support of maintenance, renovation and demilitarization of ammunition in depots world-wide. This effort was funded previously by the Operations and Maintenance, Army account, however, Congress provided \$8.9 million in FY 80 for this effort in Procurement of Ammunition, Army.

4-17 - 1/21/80

Department of the Army
 Annual Budget Justification
 JUSTIFICATION

FY 1981

Appropriation	Budget		
	FY 79 (Millions)	FY 80 (Millions)	FY 81 (Millions)
Procurement of Ammunition, Army			
<u>Provision of Industrial Facilities - Construction-Related</u>	(40.7)*		
<u>Provision of Industrial Facilities (PIF)</u>	209.4 *	292.8	283.2
Production Support and Equipment Replacement (PS&ER)	(26.0)*	(30.0)	(32.0)
Initial Production Facilities (IPF)	(33.5)	(19.1)	(17.3)
Modernization (MOD)	(46.9)	(0)	(16.6)
Expansion (EXP)	(101.0)	(243.7)	(217.3)
<u>Layaway of Industrial Facilities</u>	4.5	24.7	13.3
<u>Quick Return on Investment Program</u>	-	-	-
<u>Manufacturing Methods & Technology</u>	28.2	27.4	21.5
<u>Military Adaptation of Commercial Items</u>	-	-	.3
<u>Depot Maintenance Plant Equipment</u>	-	8.9	6.0
TOTAL PBS AMMUNITION	\$240.1	\$353.8	\$324.3

*The total of \$40.7 million includes \$22.0 of construction for the Mississippi Army Ammunition Plant and \$18.7 million appropriated which required military construction authorization.

FY 1981

Department of the Army
Annual Budget Justification
JUSTIFICATION

FOR

Appropriation

Budget Program or Budget Project Account
Budget
Activity 2 - Production Base Support

Procurement of Ammunition, Army

Authorization of construction required to support ammunition production base projects in the FY 1981 program is valued at \$13.7 million. Starting in FY 77 this military construction is authorized in the Military Construction Authorization Bill and appropriated in the Ammunition Procurement Appropriation. The Congress authorized \$23.6 million of military construction in FY 79 and \$83.0 million in FY 80. Military Construction Project Data (DD Form 1391), which provide detailed project information, is published under separate cover. A listing of FY 1981 construction projects is as follows:

Army Ammunition Plants (AAP)	Project No.	Project Title	PIF Const Cost		PIF Equipment Cost		Total Project Cost (Millions)
			Estimate (Millions)	PS&ER MOD/EXP	(Millions)		
Louisiana AAP, Louisiana	5815314	Install Central Air Conditioning and Heating System	.38				.38
Lone Star AAP, Texas	5815316	Replace Fire & Security Facilities	.54				.54
Milan AAP, Tennessee	5815317	Replace General Purpose Building	.21				.21
Radford AAP, Virginia	5815326	Replace Barricades	2.25				2.25
	5815326	Improve Electrical Service	.24				.24
	5815326	Refrigeration System	1.10				1.10
	5812160	Restore Nitrocellulose Line C		.68	1.90		2.60
	5812049	155mm RAP Extruded Grain Facility		1.62	2.60		4.20
Longhorn AAP, Texas	5815327	Flammable Liquid Storage Facility	.26				.26
Holston AAP, Tennessee	5815328	Fire Protection Sprinkler System	.30				.30
Indiana AAP, Indiana	5815330	Deluge System for Load Line 3	.91		1.75		.91
	5810045	155mm/XM211 Propelling Charge			3.10		4.90
	5812117	Prop Charge Igniter Preparation		.91	1.50		2.40
Iowa AAP, Iowa	5813108	Container Distrib Facility		2.30			2.30
Lake City AAP, Missouri	5815332	Relocate Natural Gas Control Stations	.22				.22
		Construction Subtotal	6.41		7.26		

4-19 - 1/21/80

FY 1981

Department of the Army
Annual Budget Justification
JUSTIFICATION

Budget
Budget Program or Budget Project Account
Activity 2 - Production Base Support

Appropriation

Procurement of Ammunition, Army

GRAND TOTAL \$13.67 million
(CONSTRUCTION)

End Item Capability: In order to produce an ammunition end item, the individual components have to be produced and have to be balanced with the desired end item capability. These components include metal parts, fuzes, propellants, explosives, detonators, etc. These components are loaded with explosives, assembled, and packed (LAP) into the final end item. The principal end item capabilities, which will be established with the FY 81 projects, are as follows:

<u>Project Number</u>	<u>Item</u>	<u>Individual Projects</u> (\$ in Millions)	<u>Production Capability</u>
5810045	155mm XM211 Propelling Charge	\$ 4.9	190,000 propelling charges per month.
5812855	25mm Bushmaster	11.6	500,000 rounds per month.
5183175	105mm/120mm APFSDS-TP	13.7	15,000 projectiles per month.

Initial production capability for 25mm Bushmaster ammunition.

Metal parts production facility to produce 105mm tank training projectiles. Convertible to 120mm tank training projectile.

4-20 - 1/21/80

PROCUREMENT OF AMMUNITION, ARMY

Section 5

Comparison of Program Requirements and Financing

Comparison of FY1980 program requirements as reflected in FY1980 budget with FY1980 program requirements as shown in FY1981 budget.

Comparison of FY1980 financing as reflected in FY1980 budget with FY1980 financing as shown in FY1981 budget.

Comparison of FY1979 program requirements as reflected in FY1980 budget with FY1979 program requirements as shown in FY1981 budget.

Comparison of FY1979 financing as reflected in FY1980 budget with FY1979 financing as shown in FY1981 budget.

COMPARISON OF FY 1980 PROGRAM REQUIREMENTS
AS REFLECTED IN FY 1980 BUDGET WITH
FY 1980 PROGRAM REQUIREMENTS AS SHOWN IN FY 1981 BUDGET

Appropriation:	SUMMARY OF REQUIREMENTS (In Thousands of Dollars)		Increase (+) or Decrease (-)
	Total Program Requirements Per FY 80 Budget	Program Requirements Per FY 1981 Budget	
Procurement of Ammunition, Army			
Activity 1 - Ammunition	1,000,200	879,000	-121,200
Activity 2 - Ammunition Production	<u>343,200</u>	<u>353,800</u>	<u>+ 10,600</u>
Base Support	1,343,400	1,232,800	-110,600
Total			

Explanation by Activity

Activity 1 - Ammunition. This program was reduced \$121.2 million by the Congress.

Activity 2 - Ammunition Production Base Support. The net change is the result of Congressional actions which reduced various Production Base Support initial production facility projects by \$8.3 million and increased facility layaway and Depot Maintenance equipment programs by \$18.9 million.

COMPARISON OF FY 1980 FINANCING AS REFLECTED
IN THE FY 1980 BUDGET WITH FY 1980 FINANCING
AS SHOWN IN FY 1981 BUDGET

Appropriation:	(In Thousands of Dollars)		Increase (+) or Decrease (-)
	Financing Per FY 1980 Budget	Financing Per FY 1981 Budget	
Procurement of Ammunition, Army			
Program Requirements, (Total)	1,837,000	1,632,800	-204,200
Program Requirements (Service Account)	(1,343,400)	(1,232,800)	(-110,600)
Program Requirements (Reimbursable)	(493,600)	(400,000)	(-93,600)
Less:			
Anticipated reimbursements	493,600	400,000	-93,600
Reprogramming from prior year budget plans	-0-	-0-	-0-
Unobligated balance available from prior year to finance new budget plans	-0-	-0-	-0-
Unobligated balance transferred from other accounts	-0-	-0-	-0-
Add:			
Unobligated balance transferred to other accounts	-0-	-0-	-0-
Unobligated balance available to finance subsequent year budget plans	-0-	-0-	-0-
BUDGET AUTHORITY	1,343,400	1,232,800	-110,600
BUDGET AUTHORITY	1,343,400	1,232,800	-110,600
Appropriation			

EXPLANATION OF CHANGES IN FINANCING

The fiscal year 1980 program has decreased by \$204,200 thousand since the FY1980 budget request was presented to the Congress. This decrease is due to the following:

EXPLANATION OF CHANGES IN FINANCING (Cont'd)

Anticipated Reimbursements: Estimated sales of ammunition to customers, including foreign countries, is decreased by \$93,600 thousand to reflect current program execution plans.

Budget Authority is decreased by \$110,600 thousand due to Congressional program reductions of a like amount.

COMPARISON OF FY 1979 PROGRAM REQUIREMENTS
AS REFLECTED IN FY 1980 BUDGET WITH
FY 1979 PROGRAM REQUIREMENTS AS SHOWN IN FY 1981 BUDGET

SUMMARY OF REQUIREMENTS (In Thousands of Dollars)

Appropriation:	Program Requirements		Increase (+) or Decrease (-)
	Per FY 80 Budget	Per FY 1981 Budget	
Procurement of Ammunition, Army			
Activity 1 - Ammunition	1,010,900	954,500	-56,400
Activity 2 - Ammunition Production Base Support	<u>237,200</u>	<u>240,100</u>	+ 2,900
Total	1,248,100	1,194,600	-53,500

EXPLANATION BY ACTIVITY

Activity 1 - Ammunition. The net change is the result of reprogramming of \$2.9 million to Activity 2, Ammunition Production Base Support; and transfers to other Department of Defense appropriation accounts of \$53.5 million as follows:

Operation and Maintenance, Army 1979	\$18.1 million
Missile Procurement, Army 1979/1981	25.0 million
Reserve Personnel, Army 1979	5.9 million
Retired Pay, Defense 1979	4.5 million

Activity 2 - Ammunition Production Base Support. This program was increased by \$2.9 million reprogrammed from Activity 1 to provide for a noise abatement project at Scranton Army Ammunition Plant to comply with OSHA requirements.

COMPARISON OF FY 1979 FINANCING AS REFLECTED
IN THE FY 1980 BUDGET WITH FY 1979 FINANCING
AS SHOWN IN FY 1981 BUDGET

	(In Thousands of Dollars)		
	Financing Per FY 1980 Budget	Financing Per FY 1981 Budget	Increase (+) or Decrease (-)
Appropriation:			
Procurement of Ammunition, Army			
Program Requirements, (Total)	1,726,100	1,641,208	-84,892
Program Requirements (Service Account)	(1,248,100)	(1,194,600)	(-53,500)
Program Requirements (Reimbursable)	(478,000)	(446,608)	(-31,392)
Less:			
Anticipated reimbursements	478,000	446,608	-31,392
Reprogramming from prior year budget plans	-0-	-0-	-0-
Unobligated balance available from prior year to finance new budget plans	-0-	-0-	-0-
Unobligated balance transferred from other accounts	-0-	-0-	-0-
Add: Unobligated balance transferred to other accounts	-0-	-0-	-0-
Unobligated balance available to finance subsequent year budget plans	-0-	-0-	-0-
BUDGET AUTHORITY	1,248,100	1,194,600	-53,500

BUDGET AUTHORITY

Appropriation	1,218,100	1,218,100	-0-
Transfer to Other Accounts	-0-	-53,500	-53,500
Appropriation (adjusted)	1,218,100	1,164,600	-53,500
Reappropriation	30,000	30,000	-0-

EXPLANATION OF CHANGES IN FINANCING

The total program for fiscal year 1979 has decreased by \$84,892 thousand since the FY 1980 budget presentation to the Congress. This decrease is attributed to the following:

EXPLANATION OF CHANGES IN FINANCING (Cont'd)

Anticipated Reimbursements: \$31,392 thousand decrease reflects actual sales of munitions to foreign countries and other non-U.S. Army customers.

Budget Authority: The decrease in budget authority of \$53,500 thousand is due to transfers to other Defense appropriation accounts of a like amount.

PROCUREMENT OF AMMUNITION, ARMY

Section 6

Selected Data Sheets

4-28 - 1/21/80

PROCUREMENT OF AMMUNITION, ARMY
PRODUCTION BASE SUPPORT
(\$ in Millions)

Service: Army

P-1 Line Item:

Projects

	<u>FY 79</u>	<u>FY 80</u>	<u>FY 81</u>
	<u>240.1</u>	<u>353.8</u>	<u>324.3</u>
<u>Provision of Industrial Facilities - Construction Related</u>			
Construction Related to Annual Support/Modernization/Expansion Projects	(40.7)*		
<u>SUBTOTAL PROVISION OF INDUSTRIAL FACILITIES - Construction Related</u>	(40.7)*		
<u>Provision of Industrial Facilities</u>			
<u>Annual Support</u>	.9		
5791924 - Harry Diamond Lab: SPT - Pdn Spt & Equip Replacement			
5795315 - Twin Cities AAP: SPT - Pdn Spt & Equip Replacement	1.2		
5804806 - ARRADCOM: SPT - Pdn Spt & Equip Replacement		1.0	
5805345 - Crane AAA: SPT - Pdn Spt & Equip Replacement		1.0	
5810252 - Pine Bluff Ars: SPT - Pdn Spt & Equip Replacement	1.1	1.5	1.5
5815060 - Jefferson Prvg Grd: SPT - Pdn Spt & Equip Replacement	1.1	1.8	1.9
5815314 - Louisiana AAP: SPT - Pdn Spt & Equip Replacement	1.6	2.5(.7)	1.0(.4)

*Construction related costs included as part of project costs
() Indicates military construction and is included in project total

PROCUREMENT OF AMMUNITION, ARMY
PRODUCTION BASE SUPPORT
(\$ in Millions)

<u>Projects</u>	<u>FY 79</u>	<u>FY 80</u>	<u>FY 81</u>
<u>Provision of Industrial Facilities, Continued</u>			
5815316 - Lone Star AAP: SPT - Pdn Spt & Equip Replacement	1.8(.3)	2.3(1.0)	2.7(.5)
5815317 - Milan AAP: SPT - Pdn Spt & Equip Replacement	1.9(.4)	1.9(.4)	1.5(.2)
5815326 - Radford AAP: SPT - Pdn Spt & Equip Replacement	2.7(.6)	3.0(1.4)	6.0(3.5)
5815327 - Longhorn AAP: SPT - Pdn Spt & Equip Replacement	1.0	1.9(.2)	1.8(.3)
5815328 - Holston AAP: SPT - Pdn Spt & Equip Replacement	2.5	2.3(.8)	1.5(.3)
5815329 - Kansas AAP: SPT - Pdn Spt & Equip Replacement	1.0(.5)	1.8	1.8
5815330 - Indiana AAP: SPT - Pdn Spt & Equip Replacement	2.1(.7)	2.3(.6)	3.0(.9)
5815332 - Lake City AAP: SPT - Pdn Spt & Equip Replacement	1.4(.4)	1.7(.1)	2.0(.2)
5815333 - Iowa AAP: SPT - Pdn Spt & Equip Replacement	2.1(.8)	1.8	1.8
5815342 - Scranton AAP: SPT - Pdn Spt & Equip Replacement	2.1(1.9)	2.4(.7)	2.0
5815347 - McAlester AAP: SPT - Pdn Spt & Equip Replacement	4.0	2.6(.3)	1.1
PROJECTS UNDER \$900,000 EACH	26.0	30.0(6.2)	32.0(6.3)
SUBTOTAL PRODUCTION SPT & EQUIP REPLACEMENT			

PROCUREMENT OF AMMUNITION, ARMY
PRODUCTION BASE SUPPORT
(\$ in Millions)

<u>Projects</u>	<u>FY 79</u>	<u>FY 80</u>	<u>FY 81</u>
<u>Provision of Industrial Facilities, Continued</u>			
<u>Initial Production Facilities</u>			
5790003 - Hawthorne AAP: IPF - SLUFAE Munitions Production Facilities	8.1		
5790012 - Crane AAA: IPF - 155mm/8 inch Center Core Prop Charge	1.0		
5793601 - Indiana AAP: IPF - 60/81mm Prop Charges	1.0		
5793904 - X-Facility: IPF - Precision Time Fuze for ICM	18.4		
5794877 - X-Facility: IPF - Manufacturing Fac for Pdn of APFSDS Staballoy Penetrators	5.0		
5803004 - X-Facility: Comm - M549/XM650 - RA Projectile Combined MPTS Production Line (Warhead and Motor Body)		19.1	
5810045 - Indiana AAP: IPF - 155mm XM211 Prop Charge LAP			4.9(1.8)
5812855 - X-Facility: Comm - 25mm Bushmaster Production Equipment			11.6
PROJECTS UNDER \$900,000 EACH			.8
SUBTOTAL INITIAL PRODUCTION FACILITIES (IPF)	33.5	19.1	17.3(1.8)

PROCUREMENT OF AMMUNITION, ARMY
PRODUCTION BASE SUPPORT
(\$ in Millions)

	<u>FY 79</u>	<u>FY 80</u>	<u>FY 81</u>
<u>Projects</u>			
<u>Provision of Industrial Facilities, Continued</u>			
<u>Modernization</u>			
5792419 - Volunteer AAP: MOD - Modifications to Industrial Liquid Waste Treatment Facility	2.0		
5792582 - Norris-Vernon: MOD - Manufacturing Facility f/Cart Cases, Phase 3 of 3	12.5		
5792720 - Milan AAP: MOD - Central X-Ray Facility	6.0(4.8)		
5792983 - Radford AAP: MOD - Fire Alarm System	2.4(2.4)		
5792995 - Sunflower AAP: MOD - Igloo Magazines	2.4(2.3)		
5793584 - Scranton AAP: MOD - Modification Major Caliber Shot Blast Operations	2.9		
5810280 - Pine Bluff Ars: MOD - Automate M18 Grenade Fill and Press Facility			1.0
5810283 - Pine Bluff Ars: MOD - Modernization of Smoke Mix Facility			1.6
5812049 - Radford AAP: MOD - 155mm RAP Extruded Grain Production Facility			4.2(1.6)
5812117 - Indiana AAP: MOD - Prop Charge Igniter Preparation			2.4(.9)
5812160 - Radford AAP: MOD - Restore "C" Line Nitrocellulose			2.6(.7)
5813180 - Iowa AAP: MOD/SPT - Container Distribution Facility			2.3(2.3)
5815093 - Jefferson Pvg Grd: MOD - Application of Radar to Ballistic Acceptance Testing of Ammunition (ARBAT)			2.5

PROCUREMENT OF AMMUNITION, ARMY
PRODUCTION BASE SUPPORT
(\$ in Millions)

<u>Projects</u>	<u>FY 79</u>	<u>FY 80</u>	<u>FY 81</u>
<u>Provision of Industrial Facilities, Continued</u>			
DRC: MOD - Equip Engineer and Design Costs	10.8		
COE: MOD - Constr Engineer and Design Costs	7.8		
PROJECTS UNDER \$900,000 EACH	.1		
SUBTOTAL MODERNIZATION	46.9(9.5)		16.6(5.5)
<u>Expansion</u>			
5793002 - X-Facility: EXP - Manufacturing Equip for Small Caliber Cartridge Case Cups	3.9		
5793109 - Milan AAP: EXP - Container Distribution Facility	2.1(2.0)		
5793558 - Milan AAP: EXP - Production Facility for Fuze, PD, M739	18.0(.8)		
5793562 - Milan AAP: EXP - LAP of Mortar Fuzes	2.4(1.2)		
5802003 - Longhorn AAP: SLUFAE Rocket Motor Facility		4.2	
5802007 - Milan AAP: LAP of 60/81mm Propellant Charge Assembly		2.0	
5802694 - Indiana AAP: 155mm/8 inch Center Core LAP Facility		21.4(9.9)	
5802875 - Radford AAP: Continuous Automated Multi Base Line (CAMBL)		98.8(66.0)	
5803106 - Lone Star AAP: Centralized Ammunition Container Facility		.9(.9)	
5813142 - Mississippi AAP: Fourth Phase Construction at 155mm ICM Complex	74.6(22.0)	102.3	185.8
5813175 - X-Facility-Comm: 105/120mm APFSDS-TP Production Facility			13.7

PROCUREMENT OF AMMUNITION, ARMY
PRODUCTION BASE SUPPORT
(\$ in Millions)

<u>Projects</u>	<u>FY 79</u>	<u>FY 80</u>	<u>FY 81</u>
<u>Provision of Industrial Facilities, Continued</u>			
Omnibus Engineer-Process Equipment Design		8.9	11.2
Construction Design		5.0	6.2
PROJECTS UNDER \$900,000 EACH			.4
SUBTOTAL EXPANSION	101.0	243.7(76.8)	217.3
<u>Layaway of Industrial Facilities</u>			
5788450 - ARRCOM: Layaway and/or Redistribution of Govt-owned Equip in Govt-owned Plants (Omnibus)	2.7	22.7	11.3
5789589 - ARRCOM: Layaway and/or Redistribution of Govt-owned Equip in Privately-owned Plants (Omnibus)	1.8	2.0	2.0
SUBTOTAL LAYAWAY OF INDUSTRIAL FACILITIES	4.5	24.7	13.3
<u>Manufacturing Methods and Technology</u>			
5794024 - MM&T: Auto Assembly Machine for M223 Fuze	1.1		
5794064 - MM&T: Auto LAP Operation for 105mm Tank Cartridge	1.2		
5794124 - MM&T: Fabrication of Control Actuation Systems Housings	1.6		
5794214 - MM&T: Pollution Engineering for 1983-85 Requirements	1.2		
5794281 - MM&T: Conservation of Energy at Army Ammo Plants	1.3		
5794444 - MM&T: Body for M42/M46 Grenade	1.0		
5794469 - MM&T: Automated Insertion of Grenade Layers	1.3		

PROCUREMENT OF AMMUNITION, ARMY
PRODUCTION BASE SUPPORT
(\$ in Millions)

<u>Projects</u>	<u>FY 79</u>	<u>FY 80</u>	<u>FY 81</u>
<u>Manufacturing Methods and Technology, Continued</u>			
5794498 - MM&T: Methods for Consolidation and Auto Assembly of Small Mines	1.1		
5796681 - MM&T: Process Parameters for Prod Forming of Projectiles	1.0		
5804137 - MM&T: Automated Loading of Center Core Igniters		1.0	
5804189 - MM&T: High Fragmentation Steel Production Process		1.5	
5804281 - MM&T: Conservation of Energy at Army Ammunition Plants		1.2	
5804341 - MM&T: Improved Nitrocellulose Purification Process		1.0	
5804454 - MM&T: Auto Insp Device Explos Charge Shell		1.3	
5814059 - MM&T: NQ Crystallization for Continuous Propellant Liner			.9
5814061 - MM&T: Nitroguanidine Process Optimization			.9
5814189 - MM&T: Hi-Frag Steel Prod Process			1.2
5814281 - MM&T: Energy Conservation			1.2
5814309 - MM&T: Process Development for 120mm Tank Ammo			3.9
5814454 - MM&T: Auto Insp Device Explosive Charge Shell (AIDECS)			1.8
PROJECTS UNDER \$900,000 EACH	15.8	21.5	11.6
SUBTOTAL MANUFACTURING METHODS AND TECHNOLOGY	28.2	27.4	21.5

PROCUREMENT OF AMMUNITION, ARMY
PRODUCTION BASE SUPPORT
(\$ in Millions)

	<u>FY 79</u>	<u>FY 80</u>	<u>FY 81</u>
<u>Projects</u>			
<u>Military Adaptation of Commercial Items</u>			
PROJECTS UNDER \$900,000 EACH			.3
SUBTOTAL MILITARY ADAPTATION OF COMMERCIAL ITEMS			.3
<u>Depot Maintenance' Plant Equipment</u>			
Ammunition Peculiar Equipment in Support of Worldwide Depot Ammunition Operations	8.9	8.9	6.0
SUBTOTAL DEPOT MAINTENANCE PLANT EQUIPMENT		8.9	6.0
TOTAL AMMUNITION PRODUCTION BASE	240.1	353.8	324.3

PROCUREMENT OF AMMUNITION, ARMY

Section 7

Analysis of Unobligated Balances

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PROCUREMENT OF AMMUNITION, ARMY

Analysis of Unobligated Balance - FY 1981 Program *

Summary by Category

<u>Category</u>	<u>Estimated Dollars (Millions)</u>	<u>Unobligated % of Total Unobligated</u>
1. Reserved to support contracts	392.2	68.0
2. Engineering changes	81.3	14.1
3. Other	103.2	17.9
Total Unobligated FY 1981	576.7	100.0%

Explanation by Category

It is predicted that the above amounts will remain unobligated at the end of FY 1981. Reasons for the unobligated balances here have been grouped into three general categories and are detailed below. These unobligated amounts will therefore be required in subsequent fiscal years to complete the procurement of the FY 1981 program.

1. Reserved to Support Contracts:

- a. Hold pending award of firm contracts as opposed to letter orders.
- b. Amounts reserved for incentive contract payments.
- c. Amounts held to support Product and Component Improvement programs; modification for retrofit during production; modifications ordered by customers.
- d. Contractor claims, reserves to cover potential liabilities for contracts containing escalation clauses for labor or material cost increases and price redeterminations.
- e. Contract close-out costs; packing, crating, handling and packaging and loading charges.
- f. Government-furnished equipment breakout procurements; federal excise tax and sales tax payments; preparation of manuals and technical data; and reserve for completion of construction elements of production base support facilities projects.
- g. Delay due to design or testing difficulties.
- h. Award protests.
- i. Insufficient procurement detail involving reimbursable orders.
- j. Develop adequate competitive procurement or technical data package.

PROCUREMENT OF AMMUNITION, ARMY (Continued)

- k. Items released to Army by other customers too late to permit obligation in FY 1981
- 2. Engineering Changes:
 - a. Engineering costs in support of production (obligated only as expenses are incurred).
 - b. Validated engineering change orders to be incorporated into the current manufacturing process.
 - c. Engineering changes as a result of acceptance testing, destructive and proving ground tests.
 - d. Amounts reserved to support engineering change proposals and value engineering proposals.
- 3. Other:
 - a. Changes to the previously planned method of procurement (i.e., competitive in lieu of sole source).
 - b. Extension to bid opening dates.
 - c. Additional time required to complete audits of cost data and to obtain contractor cost data.
 - d. Unfavorable pre-award surveys and extended negotiations.
 - e. Held pending validation of production capability of low bidder.
 - f. Attaining a satisfactory production rate prior to awarding additional work.

* Includes estimated FY1980 carry-over and other customer reimbursable programs.

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20. ABSTRACT (Continue on reverse side if necessary and identify by block number) In justification of programs requested, this document, in separate volume for each of the five Procurement Appropriations, provides backup data for the Army Budget submission for FY 1981. Included are Summaries of Requirements, Program and Financing Statements and Selected Data Sheets. (This document has been declassified for NTIS distribution). *ammunition		