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DEPARTMENT OF THE ARMY
JUSTIFICATION OF ESTIMATES FOR FISCAL YEAR 1986
SUBMITTED TO CONGRESS

FEBRUARY 1985



Part 5
AMMUNITION

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PROGRAMS

PROCUREMENT

AIRCRAFT	MISSILES
WEAPONS & TRACKED COMBAT VEHICLES	OTHER
AMMUNITION	

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13

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to Congress February 1985 for Fiscal Year 1986.

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, and one separate volume for
Construction Programs, provides backup data for the Army Budget submission for
FY 1986. Included are Summaries of Requirements, Program and Financing State-
ments and Selected Data Sheets. (These volumes are unclassified).

DEPARTMENT OF THE ARMY
PROCUREMENT OF AMMUNITION, ARMY

JUSTIFICATION OF ESTIMATES FOR FISCAL YEARS 1986, 1987

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4-i February 1985

PROCUREMENT OF AMMUNITION, ARMY

Section 1

Budget Appendix Extract

Language

Program and Financing Schedule

Object Classification Schedule

4-1 February, 1985

Procurement of Ammunition, Army

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; (\$2,646,300,000) \$2,635,000,000 to remain available for obligation until September 30, (1987) 1988.

(1)
(2)

(10 U.S.C. 2353, 2361, 3012, 4531, 4532; Department of Defense Appropriation Act, 1984; additional authorizing legislation to be proposed.)

EXPLANATION OF LANGUAGE CHANGES

- (1) To change the amount of the appropriation requested for FY 1986.
- (2) To change the obligation expiration date for the FY 1986 program.

4-2 February, 1985

Procurement of Ammunition, Army
 Program and Financing (in thousands of dollars)

04 Feb 85
 FISCAL YEAR 1983

Identification code	Budget Plan (amounts for PROCUREMENT actions programmed)		Obligations	
	1984 actual	1985 est.	1984 actual	1985 est.
Program by activities:				
Direct program:				
00.0101 Ammunition			255,089	37,267
00.0201 Ammunition production base support			65,642	20,896
00.9101 Total direct program			340,731	58,263
01.0101 Reimbursable program			23,371	33,802
10.0001 Total			384,102	91,665
Financing:				
Offsetting collections from:				
11.0001 Federal funds(-)			5,676	
13.0001 Trust funds(-)			19,652	
14.0001 Non-Federal sources(-)			60	
17.0001 Recovery of prior year obligations(-)			-157,660	
21.4002 Unobligated balance available, start of year:				
For completion of prior year budget plans				
24.4002 Unobligated balance available, end of year:				
For completion of prior year budget plans			-323,506	-91,665
39.0001 Budget authority			91,665	

Procurement of Ammunition, Army
 Program and Financing (in Thousands of dollars)

04 Feb 85
 FISCAL YEAR 1985

Identification code	21-2034-0-1-051	Budget Plan (amounts for PROCUREMENT actions programed)			Obligations		
		1984 actual	1985 est.	1986 est.	1984 actual	1985 est.	1986 est.
Program by activities:							
Direct program:							
00.0101	Ammunition		2,365,700		2,152,767		141,942
00.0201	Ammunition production base support		280,600		285,346		8,636
00.9101	Total direct program		2,646,300		2,408,133		150,778
01.0101	Reimbursable program		125,900		105,756		11,961
10.0001	Total		2,772,200		2,513,889		170,739
Financing:							
Offsetting collections from:							
11.0001	Federal funds(-)		-33,000		-33,000		
13.0001	Trust funds(-)		-92,900		-92,900		
21.4002	Unobligated balance available, start of year:						-258,311
24.4002	Unobligated balance available, end of year:						87,572
40.0001	Budget authority (Appropriation)		2,646,300		2,646,300		

04 Feb 85
FISCAL YEAR 1986

Procurement of Ammunition, Army
Program and Financing (in Thousands of dollars)

Identification code	Budget Plan (amounts for PROCUREMENT actions programmed)		Obligations	
	1984 actual	1985 est.	1984 actual	1985 est.
Program by activities:				
Direct program:				
00.0101 Ammunition		2,285,600		2,052,608
00.0201 Ammunition production base support		368,400		338,244
00.9101 Total direct program		2,655,000		2,397,850
01.0101 Reimbursable program		139,600		117,284
10.0001 Total		2,774,600		2,515,114
Financing:				
Offsetting collections from:				
11.0001 Federal funds(-)		-42,800		-42,800
13.0001 Trust funds(-)		-96,800		-96,800
24.4002 Unobligated balance available, end of year: For completion of prior year budget plans				259,488
40.0001 Budget authority (Appropriation)		2,635,000		2,638,000

Procurement of Ammunition, Army
 Program and Financing (in Thousands of dollars)

04 Feb 85

Identification code	21-2034-0-1-051	Budget Plan (amounts for PROCUREMENT actions programed)		Obligations	
		1984 actual	1985 est.	1984 actual	1985 est.
Program by activities:					
Direct program:					
00.0101	Ammunition	1,830,900	2,365,700	2,133,752	2,321,266
00.0201	Ammunition production base support	148,200	280,600	220,125	300,562
00.9101	Total direct programs	1,980,100	2,646,300	2,353,877	2,621,828
01.0101	Reimbursable program	258,464	125,900	226,979	174,883
10.0001	Total	2,238,564	2,772,200	2,580,856	2,796,711
Financing:					
Offsetting collections from:					
11.0001	Federal funds(-)	-177,264	-33,000	-169,712	-33,000
13.0001	Trust funds(-)	-80,434	-92,900	-59,666	-92,900
14.0001	Non-Federal sources(-)	-766		-706	
17.0001	Recovery of prior year obligations(-)			-347,424	
21.4002	Unobligated balance available, start of year:			-390,633	-350,546
21.4007	For completion of prior year budget plans				
24.4002	Reprograming from/to prior year budget plans	-16,835		350,546	326,015
25.0001	Unobligated balance available, end of year:			16,835	
40.0001	For completion of prior year budget plans	16,835			
40.0001	Unobligated balance lapsing				
40.0001	Budget authority (Appropriation)	1,980,100	2,646,300	1,980,100	2,646,300
Relation of obligations to outlays:					
71.0001	Obligations incurred, not			2,350,776	2,670,931
72.4001	Obligated balance, start of year			2,402,101	2,603,135
74.4001	Obligated balance, end of year			-2,603,135	-4,056,466
77.0001	Adjustments in expired accounts			23,246	
78.0001	Adjustments in unexpired accounts			-347,424	
90.0001	Outlays			1,825,562	1,217,600
					2,419,700

4-8 February 1985

04 Feb 85

Procurement of Ammunition, Army
Subject Classification (in thousands of dollars)

Identification code	21-2034-0-1-051	1984 actual	1985 est.	1986 est.
Direct obligations:				
Other services:				
12.5004		400,160	471,933	469,353
12.6001	Supplies and materials	1,953,721	2,149,915	2,138,183
19.9001	Total Direct obligations	2,353,881	2,621,848	2,607,536
Reimbursable obligations:				
Other services:				
22.5004		36,587	31,479	28,287
22.6001	Supplies and materials	189,392	143,404	118,754
29.9001	Total Reimbursable obligations	226,979	174,883	148,041
99.9901	Total obligations	2,580,860	2,796,731	2,753,587

4-9 February 1985

TRAINING ITEMS

	FY 1986		FY 1987	
	QUANTITY (THOUSANDS)	DOLLARS (MILLIONS)	QUANTITY (THOUSANDS)	QUANTITY (MILLIONS)
Cartridge, Caliber .50 w/M19 Link	184	0.2	141	0.2
Cartridge, Caliber .50 4 Ball/Tracer w/M19 Link	34124	44.4	34494	49.1
Cartridge, Caliber .50 Armor- Piercing-Incendiary-Tracer M20	534	1.4	1837	3.3
Cartridge, Caliber .50. Blank Linked f/M2	19582	15.0	19876	16.3
Cartridge, Caliber .50 Ball Linked	2160	2.4	2690	3.2
Cartridge, Caliber .50 Blank Linked f/M85	-	-	3931	4.1
Cartridge, Caliber .50 Tracer	2882	4.1	2954	4.5
Cartridge, 14.5mm with/Fuze, 3 Sec Delay	119	0.3	143	0.4
Cartridge, 14.5mm with/Fuze, Point Detonating	-	-	143	0.4
Cartridge, 20mm 4 Target-Practice Tracer M55/1	-	-	1738	6.0
Cartridge, 20mm Linked Target-Practice Tracer M20	5175	19.3	3834	15.3
Cartridge, 25mm Armor-Piercing Discarding-Sabot-Tracer	455	11.1	318	16.6
Cartridge, 25mm Target Practice- Tracer	2400	37.7	2165	34.3
Cartridge, 30mm Target Practice	360	3.8	600	6.1
Cartridge, Sub Caliber 22 Practice Change	157	1.1	772	5.8
Cartridge, 40mm, High-Explosive Dual-Purpose High Velocity	300	5.4	440	7.5
Cartridge, 40mm, Practice Low Velocity	2478	6.0	2258	5.2
Cartridge, 40mm, Target Practice for Division Air Defense System	144	11.3	380	27.1
Cartridge, 40mm Target Practice for/MK19	485	4.8	884	8.9

4-23 February 1985

WAR RESERVE AMMUNITION, TRAINING AMMUNITION AND NON-HARDWARE PROGRAMS, FY 1986 AND FY 1987
(\$ MILLIONS)

War Reserve Ammunition:	FY 1986	FY 1987
Training Ammunition:	\$1484.2	\$1582.5
Non-Hardware Programs:	719.2	911.7
	63.2	99.1
	<u>\$2266.6</u>	<u>\$2593.2</u>

In order to support worldwide training consumption, the following ammunition is being procured to increase U.S. Army readiness.

TRAINING ITEMS	FY 1986		FY 1987	
	QUANTITY (THOUSANDS)	DOLLARS (MILLIONS)	QUANTITY (THOUSANDS)	QUANTITY (MILLIONS)
Cartridge, 5.56mm Ball	114883	16.9	217485	35.7
Cartridge, 5.56mm Blank	84807	12.0	112659	17.0
Cartridge, 5.56mm Blank for Squad Automatic Weapon	8637	2.2	9534	2.6
Cartridge, 5.56mm Linked for Squad Automatic Weapon	26634	9.5	26162	10.0
Cartridge, 5.56mm Ball M16/A2	35000	14.0	55000	22.0
Cartridge, 5.56mm Tracer M16A2	4448	1.2	4448	1.2
Cartridge, 7.62mm Linked 4 Ball/Tracer	82123	24.3	81521	25.8
Cartridge, 7.62mm Ball Linked	2428	0.7	10695	3.3
Cartridge, 7.62mm Match	1177	0.4	1649	5.6
Cartridge, 7.62mm Blank Linked	-	-	29781	7.7
Cartridge, 7.62mm Special Ball	6433	1.9	6227	2.0
Cartridge, 7.62mm Ball OHF	4007	1.4	8289	3.1
Cartridge, 7.62mm Tracer	1439	0.5	6182	2.3
Cartridge, Caliber .22 Ball	13679	2.7	141195	3.0
Cartridge, Caliber .22 Match	5205	0.5	5833	0.6
Cartridge, Caliber .22 Tracer	331	0.1	2673	0.2
Cartridge, Caliber .38 Special Ball Wadcutter	2393	0.2	2235	0.2
Cartridge, Caliber .38 Special Ball	-	-	1452	0.2
Cartridge, 9mm Ball	6960	1.2	9200	1.6
Cartridge, Caliber .45 Ball	14800	1.7	11949	1.5
Cartridge, Caliber .45 Ball WC	1697	0.2	2378	0.3
Cartridge, Caliber .45 Match	5120	0.8	5382	0.9
Cartridge, 10 Gage Blank	-	-	327	0.2
Cartridge, 12 Gage	-	-	901	0.2
Cartridge, Caliber .50 4 Ball/Tracer with/M15A2 Link	6560	9.6	5572	9.0

4-22 February 1985

<u>TYPE</u>	<u>\$ (Millions)</u>	<u>REMARKS</u>
Mine/Countermine	117.6	The FY 1986 request includes the Ground Emplaced Mine Scattering system (GEMSS), the Modular Pack Mine System (MORNS), and Volcano, which is a helicopter or ground dispersed mine system similar to GATOR. All are scatterable mine systems and contain both antipersonnel and antitank mines. Also included are the drill mines to support training on the GEMSS and Volcano dispensing systems. In addition, this FY 1986 request includes the Mine Clearing Line Charge (MCLIC) system, a rocket device designed to breach paths through enemy mine fields and obstacles.
Nitroguanidine	25.0	Nitroguanidine is a colorless, crystalline compound required in production of the triple-base propellant used in extended-range propelling charges for artillery and tank ammunition. The FY 1986 request is for an economical buy of this compound.
Ammunition Components/Support	21.3	The FY 1986 budget request includes funding for components for special tests, and renovation of field stock, weapons components in support of proof and acceptance testing, and malfunction investigations.
Explosives and Propellants	33.3*	The FY 1986 funding is requested to procure explosives and propellants in support of the Department's sustainability objectives. These products would be used primarily to meet mobilization requirements until production could be expanded to meet wartime requirements, but in the event of a catastrophic explosives/propellants plant failure, specific items could be used until production could be resumed.
Other	30.8**	Funding for marksmanship training, spares and repair parts, and other small ammunition programs are included in the FY 1986 budget request.

* Includes \$.6 million from items under \$900,000.

** Includes 1.2 million from items under \$900,000.

4-21 February 1985

<u>TYPE</u>	<u>\$ (Millions)</u>	<u>REMARKS</u>
<u>Other Ammunition (\$466.4 Million)</u>		
Hand Grenades, All Types	11.7*	The FY 1986 request includes practice, smoke, and fragmentation grenades. The FY 1986 request is for 3,053,000 hand grenades.
Signals	33.5	The FY 1986 budget request includes colored smoke signals and smoke pots for both war reserves and training.
Simulators	28.7	A number of different types of simulators is included in this request in support of training. These devices lend battlefield realism to training exercises without the associated cost, safety, and environmental impacts of live-fire training.
Rockets	145.0	This request includes funds for 36,000 Hydra 70 rockets and 156,000 Light Weight Multi-Purpose Weapon Systems plus trainers for both weapons. The Hydra 70 provides multipurpose lethality against personnel, materiel, and armored targets. The Light Weight Multi-Purpose Weapon System is a shoulder-fired, tactical rocket designed for multiple roles against materiel and lightly armored vehicles.
Demolition Munitions	16.5	The FY 1986 request includes demolition charges, cratering kits, blasting caps, igniters, and blasting time fuze.
* Total value of the FY 1986 hand grenade line is \$33.0 million. \$21.3 million of this amount is included in the tank ammunition category for the procurement of smoke screening grenades.		

4-70 February 1985

<u>TYPE</u>	<u>\$ (Millions)</u>	<u>REMARKS</u>
40mm Cartridge	101.9	<p>The FY 1986 budget request is for 144,000 Sergeant York (DIVAD) Target-Practice rounds in the amount of \$11.3 million, and 144,000 High-Explosive with proximity fuze rounds in the amount of \$31.0 million. It is also for the 40mm High-Explosive Dual-Purpose (HEDP) High-Velocity ammunition and the 40mm training rounds used in the M781 and M203 grenade launchers attached to the M16/M16A1 rifle. The FY 1986 request is for 2,047,000 40mm HEDP high velocity cartridges in the amount of \$48.8 million; 485,000 Target-Practice rounds in the amount of \$4.8 million; and 2,478,000 practice rounds in the amount of \$6.0 million.</p>
<u>Mortar Ammunition (\$142.8 Million)</u>		
81mm (Improved) Cartridge	63.3	<p>This FY 1986 procurement supports training and war reserve objectives. The FY 1986 request is for 375,000 cartridges including High-Explosive, Illuminating, Smoke, and 1/10 Range Training rounds. The FY 1986 request also provides funding for 157,000 subcaliber (Cal .22) practice rounds for training.</p>
4.2-Inch Cartridge	34.0	<p>The budget request is for smoke and illumination rounds to support training and war reserve requirements. The FY 1986 request is for 194,000 rounds.</p>
120mm Cartridge	45.5	<p>The 120mm system will be the new Army heavy mortar. The FY 1986 buy will support training and war reserve requirements. The FY 1986 request is for 132,000 rounds including High-Explosive with Multi-Option Fuze, Smoke, and Illumination.</p>
<u>Nuclear Materiel (\$5.2 Million)</u>		
Nuclear Materiel	5.2	<p>The FY 1986 budget request includes funding for support materiel only.</p>

4-19 February 1985

<u>TYPE</u>	<u>\$ (Millions)</u>	<u>REMARKS</u>
9mm Ball Cartridge	1.4	The FY 1986 request for 8,312,000 cartridges supports both war reserve and training requirements associated with the 9mm handgun.
Cal .50 Cartridge	77.1****	This FY 1986 request supports both war reserve and training requirements with the procurement of 65,326,000 rounds.
20mm Cartridge	19.3	The requested procurement supports training requirements. The FY 1986 request is for 5,175,000 Target-Practice-Tracer cartridges.
30mm Cartridge	29.8	The FY 1986 budget request includes the High-Explosive (HE) Dual-Purpose (DP) and Target-Practice (TP) rounds in support of war reserve and training requirements. The FY 1986 request is for 881,000 30mm HE-DP cartridges in the amount of \$26.0 million and 369,000 30mm TP cartridges in the amount of \$3.8 million.
25mm Cartridge	67.7	The FY 1986 request includes the Target-Practice (TP), High-Explosive-Incendiary (HEI) and the Armor-Piercing-Discarding-Sabot (APDS) rounds in support of war reserve and training requirements. The FY 1986 request is for 2,400,00 TPT cartridges in the amount of \$37.7 million; 648,000 25mm HEI-T cartridges in the amount of \$18.9 million; and 455,000 25mm APDS-T cartridges in the amount of \$11.1 million. This request for procurement of service rounds is to support annual training requirements and to increase war reserve assets, which are significantly below established sustainability levels. The current FY 1985 program will support three commercial producers and provides a mobilization base of qualified producers. Failure to support the FY 1986 request would preclude maintenance of this active-production base and may impact competitive procurement of these rounds.

**** Includes \$.2 million from items under \$900,000.

4-18 February 1985

REMARKS

\$ (Millions)

Small Arms Ammunition (\$407.2 Million)

<u>TYPE</u>	<u>\$ (Millions)</u>	<u>REMARKS</u>
5.56mm Cartridge	73.4	The FY 1986 budget request includes funding for 5.56mm Ball, Tracer, and Blank ammunition for the M-16 rifle and Squad Automatic Weapon (SAW) in support of both war reserve and training requirements. The FY 1986 request is for 352,956,000 rounds of various types of 5.56mm cartridges.
7.62mm Cartridge	29.9*	The FY 1986 budget request includes Ball, Tracer and Match ammunition for war reserves and training requirements. The FY 1986 request is for 100,009,000 rounds of various types of 7.62mm cartridges.
Cal .22 Cartridge	3.3**	The requested procurement supports training requirements. The FY 1986 request is for 141,715,000 caliber .22 ball, match, and tracer cartridges.
Cal .38 Cartridge	.2***	The FY 1986 buy supports training requirements. The FY 1986 request is for 2,393,000 cartridges.
Cal .45 Cartridge	3.2****	This FY 1986 request supports war reserve and training requirements with the procurement of 25,576,000 cartridges.

* Includes \$.4 million from items under \$900,000.
** Includes \$.6 million from items under \$900,000.
*** Included in items under \$900,000.
**** Includes \$.2 million from items under \$900,000.

<u>TYPE</u>	\$ (Millions)	<u>REMARKS</u>
Cartridge, 14.5mm M181	.3*	The 14.5mm round is utilized in a subcaliber trainer. The trainer provides subcaliber live-fire training for 105mm, 155mm, and 8-Inch howitzers. The FY 1986 request is for 119,000 rounds.
155mm Chemical CB-2 Projectile	-	The FY 1986 budget request includes funding to support the initial 155mm binary chemical projectile procurement.
<u>Propelling Charges (\$125.5 Million)</u>		
155mm Propelling Charges	96.3	The 155mm propelling charges are procured to balance the number of 155mm projectiles procured in support of war reserve and training requirements. The FY 1986 request is for 1,044,000 155mm propelling charges. Upon completion of the FY 1986 Funded Delivery Period (FDP), the Army propelling charge stockpile will be approximately balanced with projectiles. This balance is projected to be maintained with the FY 1987 procurement. If not funded, achievement of a balanced projectile to propelling charge inventory will be delayed.
8-Inch Propelling Charges	29.2	The 8-Inch propelling charges are procured to balance with the number of 8-Inch projectiles procured in support of war reserve and training requirements. The FY 1986 request is for 129,000 propelling charges. Upon completion of the FY 1986 funded delivery period (FDP), the Army propelling charge stockpile will be approximately balanced with projectiles. By the end of the FY 1987 FDP the shortfall will be eliminated. If not funded, achievement of a balanced projectile to propelling charge inventory will be delayed.

* Funding is included in the items under \$900,000 line.

<u>TYPE</u>	\$ (Millions)	<u>REMARKS</u>
155mm Copperhead	235.0	The FY 1986 budget request in support of war reserve requirements is for 6,900 155mm Copperhead projectiles. The continued procurement of Copperhead is critical to improving the artillery's primary role, which is the delivery of timely, accurate, and lethal fire support for engaged maneuver units. Copperhead, the only precision guided projectile in production, provides the capability to destroy specific hard-point targets such as tanks, infantry fighting vehicles, and self-propelled artillery with a high probability of kill. There is no other artillery ammunition that can satisfy this requirement. The joint Army and Marine Corps procurement in FY 1986 is designed to operate the prime contractor's plant at a full one shift rate and to provide a more economical procurement at a reduced unit price.
155mm Smoke	16.3	The 155mm smoke round provides a smoke screening capability with the 155mm howitzer. The FY 1986 procurement of 38,000 projectiles is required to support war reserve objectives and training.
75mm Blank Cartridge	2.8	The 75mm blank cartridges are used for ceremonial requirements at posts, camps, and stations worldwide. The FY 1986 budget request is for 174,000 cartridges.
Primer, Percussion	2.9	The M82 percussion primer is used to initiate burning of 155mm and 8-inch propelling that which propel artillery projectiles to their targets. The FY 1986 request is for 1,491,000 primers. The FY 1986 and FY 1987 programs are required to balance the number of 155mm and 8-inch projectiles that support war reserve and training requirements.

4-15 February 1985

TYPE

\$ (Millions)

REMARKS

155mm ADAM/RAAMS

98.1

The Area Denial Artillery Munition (ADAM) and Remote Anti-Armor Mine Systems (RAAMS) projectiles are artillery delivered mines, which provide the field commander with a quick-reaction defensive or offensive mine system to oppose dismounted enemy forces or mounted armor attacks. The ADAM projectile contains 36 antipersonnel mines, while the RAAMS projectile contains nine antiarmor mines. After projectile firing, the mines are ejected over the target area. Upon reaching the ground, individual ADAM mines eject trip wires and function when disturbed. The RAAMS mines function when the presence of an armored vehicle is detected or when disturbed. Both mines incorporate a factory set self-destruct feature, which allows for movement of friendly troops through the mine area after a predetermined period. Both ADAM and RAAMS have two projectile model numbers to distinguish between available self-destruct time options. Funding is required to support war reserve objectives. The FY 1986 request is for 6,000 155 HE, ADAM M731 projectiles in the amount of \$26.5 million; and 41,000 155mm HE, RAAMS M741 projectiles in the amount of \$71.6 million. If not funded, achievement of sustainability objectives will be delayed.

4-14 February 1985

<u>TYPE</u>	<u>\$ (Millions)</u>	<u>REMARKS</u>
Grenade, Smoke Screening	21.3	Electrically initiated smoke screening grenades are used by armored vehicles to obscure themselves from enemy observation. The FY 1986 request is for 334,000 grenades.
<u>Fuzes (\$ 59.8 million)</u>		
Fuze, Mechanical Time, Super	59.8	The mechanical time, super quick fuzes, designated as the M577/M577A1 and the M582/M582A1, are used in the Quick 155mm and 8-Inch Improved Conventional Munition (ICM) high-explosive and rocket-assisted projectiles, as well as in the registration round for the 8-inch nuclear projectile. These fuzes are used when a choice of timed or super-quick action is required. The internal mechanism controls the detonation of the round or the expulsion of the projectile's cargo after the round is fired if the timing function is selected. If set for super-quick action, the projectile detonates upon impact. The FY 1986 request is for 912,000 fuzes. The FY 1986 and FY 1987 programs are required to correct the existing fuze to projectile imbalance and to support war reserve objectives. If this program is not funded the inventory will continue to contain projectiles for which required actuating fuzes are not available.
<u>Artillery Ammunition (\$655.2 million)</u>		
155mm HE, ICM (DP)	299.8	This High Explosive (HE), Improved Conventional Munition (ICM) projectile is a dual-purpose (DP) anti-armor/anti-personnel round. Funding is required to meet war reserve sustainability objectives. The FY 1986 request is for 689,000 projectiles. The projectile, containing 88 dual-purpose submunitions, is fired over an enemy target area. At the specified time, a mechanical-time fuze initiates the expulsion charge and ejects the submunitions to descend on the target area and detonate on impact. The FY 1986 buy is required to support war reserve sustainability objectives.

ITPM BREAKOUT, FY 1986

<u>TYPE</u>	<u>\$ (Millions)</u>	<u>REMARKS</u>
<u>Tank Ammunition (\$404.5 million)</u>		
105mm Tank Ammunition	\$236.9	The budget request includes the Armor-Piercing Fin-Stabilized Discarding Sabot-Tracer (APFSDS-T) and High Explosive Anti-Tank (HEAT) rounds to support war reserve objectives, and Discarding Sabot-Target Practice (DS-TP) and Target Practice-Tracer (TP-T) cartridges for training requirements. The FY 1986 request is for 347,000 105mm TP-T cartridges in the amount of \$51.2 million; 433,000 105mm DS-TP in the amount of \$89.4 million; 76,000 105mm APFSDS-T in the amount of \$49.1 million, which includes \$2.3 million to support Total Risk Assessment Cost Estimate - Production (TRACE-P); and 130,000 105mm HEAT cartridges in the amount of \$47.2 million. Failure to fund this requirement would terminate programs designed to build war reserves of modern ammunition to support the 105mm tank fleet and would also degrade the capability to conduct tank gunnery training.
120mm Tank Ammunition	146.3	The budget request includes APFSDS-T and HEAT rounds to support war reserve objectives, and DS-TP and Target Practice Cone-Stabilized Discarding Sabot-Tracer (TPCSDS-T) rounds for training requirements. The FY 1986 request is for 45,000 120mm APFSDS-T cartridges in the amount of \$59.7 million; 31,000 120mm TP-T in the amount of \$29.6 million; 49,000 120mm TPCSDS-T in the amount of \$29.7 million; and 13,000 120mm HEAT in the amount of \$27.3 million. The requested program is required to support the fielding of the M1A1 tank with ammunition capable of defeating threat armor, and to provide tank gunnery training with the M1A1 tank.

Department of the Army Annual Budget Estimate Justification	Appropriation PROCUREMENT OF AMMUNITION, ARMY		FY 1986	
	Budget			
Budget Program	(Thousands of Dollars)			
	Actual	Estimate	Estimate	Estimate
Activity 1 - Ammunition	FY 1984	FY 1985	FY 1986	FY 1987
Direct Budget Plan	\$1,830,900	\$2,365,700	\$2,266,600	\$2,593,200

SECTION 1 - PURPOSE AND SCOPE

The FY 1986 request provides for worldwide training consumption, improvements in near-term readiness and combat sustainability, and the acquisition of war reserve stocks for use during wartime. Families of ammunition included in the request are artillery, mortar, tank, small arms, rockets, fuzes, demolitions, grenades, pyrotechnic signals, and other ammunition items. The major portion of the funds being requested are identified to recently developed tank rounds, artillery ammunition, and small arm ammunition.

SECTION 2 - JUSTIFICATION OF FUNDS REQUESTED

The fiscal year 1986 program provides for worldwide training consumption and losses to inventory through the FY 1986 funded delivery period, increases U.S. Army readiness in support of the FY 1990 authorized acquisition objective and maintains an active ammunition-production base in FY 1986 for modernization and training-type ammunition. The FY 1986 program includes over 50 different types of ammunition including \$404.5 million for tank ammunition, \$59.8 million for fuzes, \$655.2 million for artillery ammunition, \$125.5 million for propelling charges, \$407.2 million for small arms ammunition, \$142.8 million for mortar ammunition, \$5.2 million for nuclear materiel, and \$466.4 million for other ammunition, spares, and components for tests and renovation. The fiscal year 1987 program includes \$437.6 million for tank ammunition, \$67.8 million for fuzes, \$702.8 million for artillery ammunition, \$86.6 million for propelling charges, \$511.1 million for small arms ammunition, \$124.5 million for mortar ammunition, \$16.1 million for nuclear materiel, and \$646.7 million for other ammunition, spares, and components for tests and renovation. A category breakout of the FY 1986 program is as follows:

PROCUREMENT OF AMMUNITION, ARMY

Section 2

Budget Activity Justification

Activity 1 - Ammunition

Activity 2 - Ammunition Production Base Support

4-10 February 1985

TRAINING ITEMS	FY 1986		FY 1987	
	QUANTITY (THOUSANDS)	DOLLARS (MILLIONS)	QUANTITY (THOUSANDS)	QUANTITY (MILLIONS)
Projectile, 64mm Riot Control	22	.8	49	1.3
Riot Control Agent	-	-	310	0.1
Charge, Propelling, 155mm White Bag M114	3	0.4	3	0.3
Charge, Propelling, 155mm Green Bag M3	419	24.9	376	23.9
Charge, Propelling, 155mm White Bag M4	180	14.5	182	15.6
Primer, M82	635	1.2	635	1.3
Light Anti-Tank, Trainer	1645	3.1	3775	4.2
Hydra 70 Rocket, Practice	8	5.4	8	5.5
Grenade, Hand, Smoke	132	1.7	376	5.2
Grenade, Hand, Green Smoke	135	2.0	195	3.1
Grenade, Hand, Violet Smoke	117	1.6	117	1.7
Grenade, Hand, Yellow Smoke	109	1.7	109	1.8
Grenade, Hand, Red Smoke	120	1.8	120	1.9
Grenade, Hand Frag Delay	-	-	317	2.6
Grenade, Smoke Screening	164	7.8	164	8.4
Fuze, Hand Grenade, Practice	2389	2.2	3550	3.5
Smoke Pot, Hydrochlorothare M5	130	18.6	186	28.5
Smoke Pot, Floating	13	2.2	29	5.1
Signal Illuminating, Ground, Red Star	105	3.0	105	3.2
Signal Illuminating, Ground, White Star	51	1.4	78	2.3
Signal Illuminating, Ground, Red Star	14	0.4	26	0.8
Signal, Illuminating, Ground, Green Star	139	3.6	147	4.1
Signal Illuminating, Ground, White Star Parachute	146	4.0	252	7.4
Signal Smoke, Green Parachute M128	-	-	10	0.3
Signal, Illuminating, Green Star Parachute M195	-	-	22	0.7
Signal Kit Foliage Penetrating	2	0.1	2	0.1

4-24 February 1985

TRAINING ITEMS	FY 1986		FY 1987	
	QUANTITY (THOUSANDS)	DOLLARS (MILLIONS)	QUANTITY (THOUSANDS)	QUANTITY (MILLIONS)
Simulator, Projectile, Ground Burst	1809	15.1	996	8.9
Simulator, Artillery, Gun Flash	1089	8.8	1225	10.6
Simulator, Hand Grenade	290	2.7	401	4.0
Simulator, Anti-Tank Guided Missile Rocket M22	-	-	999	6.5
Simulator, Booby Trap, Flare	79	0.2	74	0.2
Simulator, Booby Trap, Whistling	100	0.2	93	0.2
Simulator, Projectile, Air Burst	131	1.7	158	2.2
Simulator, Projectile, Air Burst, Liquid	-	-	19	0.6
Charge, Demolition, 1/4lb	369	0.6	369	0.7
Charge, Demolition, 1lb TNT	88	0.4	31	0.1
Charge, Demolition, Shaped 2 lb	-	-	2	0.1
Charge, Demolition, Shaped	13	2.7	18	4.1
Cap Blasting M6 Special Electric	450	1.1	426	1.1
Demolition Kit, Cratering	800	3.1	800	3.3
Demolition Kit, Bangalore Torpedo	6	3.0	9	5.0
Igniter, Fuze, Blasting	264	0.7	300	0.8
Parachute Reefing Line Cutter with 2 Second Delay	6	0.2	5	0.2
Fuze, Mechanical, Time, Super Quick M582	152	10.4	150	10.9
Fuze, Mechanical, Time, Super Quick M577	66	4.3	65	4.5
Fuze, Blasting, Time	2011	0.2	2685	0.3
Ctg, 75mm Blank	174	2.8	-	-
Ctg, 155mm Illuminating	-	-	25	12.1
Projectile, 155mm, Smoke	23	9.9	23	10.3
Ctg, 165mm Target Practice	-	-	37	12.2
Cartridge, 105mm, Discarding Sabot-Target Practice	433	89.4	494	109.4
Cartridge, 105mm, Target Practice -Tracer	347	51.2	318	50.2
Cartridge, 120mm, High Explosive Anti-Tank, Multi-Purpose, Tracer	9	3.3	-	-

4-25 February 1985

TRAINING ITEMS	FY 1986		FY 1987	
	QUANTITY (THOUSANDS)	DOLLARS (MILLIONS)	QUANTITY (THOUSANDS)	QUANTITY (MILLIONS)
Cartridge, 120mm Target Practice -Tracer	31	29.6	32	30.5
Cartridge, 120mm Target Practice Cone-Stabilized-Discarding- Sabot-Tracer	49	29.7	54	32.6
Cartridge, 81mm Improved Illuminating	54	8.2	54	7.3
Cartridge, 81mm, Improved Smoke	29	5.4	23	4.0
Cartridge, 81mm, Improved 1/10 Range Training	36	2.4	97	5.9
Cartridge, 81mm, Improved High- Explosive	90	16.8	90	17.7
Cartridge, 4.2-Inch Smoke	51	6.7	59	8.3
Cartridge, 4.2-Inch Illuminating	143	27.3	177	36.2
Ground Emplaced Mine Scattering System Drill Mines	-	-	12	0.2
Practice, Modular- Packed-Mine System	-	-	319	0.8
Canister Mine, Practice	5	1.5	8	2.0
Line Charge, Inert M68	103	1.2	104	1.3
Mine-Clearing Line-Charge	326	3.9	326	4.2
Rocket Motor, Mine- Clearing-Line-Charge	476	1.8	926	3.8
Total		719.2		911.7

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Department of the Army Annual Budget Estimates	Appropriation		FY 1986	
	JUSTIFICATION			
Program or Budget Project Account	Procurement of Ammunition, Army		Budget	
	(Thousands of Dollars)			
Activity 2 - Ammunition Production	Actual	Estimate	Estimate	Estimate
Base Support	FY 1984	FY 1985	FY 1986	FY 1987
Direct Obligation or Direct Budget Plan	\$149,200	\$280,600	\$368,400	\$457,900

Section 1 - PURPOSE AND SCOPE

The FY 1986 program provides for the support of plants in active production; the establishment of initial-production facilities, modernization, and expansion of production capability for ammunition; and layaway of industrial plants and equipment. Two new line items are included for the first time; these line items are components for prove-out, which was previously budgeted in budget activity 1, and, the Chemical Demilitarization program.

Section 2 - JUSTIFICATION OF FUNDS REQUESTED

Provision of Industrial Facilities

(\$ Thousands)

FY 1986	FY 1987
280,600	340,600

Funds requested for Provision of Industrial Facilities in FY 1986 and FY 1987 provide industrial capabilities for manufacturing new or existing ammunition. The major efforts are divided among initial-production capability for new items entering the inventory, expansion of existing capacity to meet either peacetime or mobilization requirements, and finally modernization of existing facilities to adjust to new technology and changing ammunition requirements. The majority of funds requested are concentrated in modernization and expansion efforts. In FY 1986 and FY 1987, \$241.9 and \$302.6 million (including construction), respectively, are requested for modernization and expansion. In addition, \$38.7 million in FY 1986 and \$38.0 million in FY 1987 are requested for production support and equipment replacement at active facilities.

The FY 1986 projects requested are for the following efforts:

4-27 February 1985

\$93.9 million is for projects in support of chemical warfare production facilities. \$45.9 million will provide for procurement of the Bigeye bomb metal parts production capability (at a commercial site) and load, assemble and pack (Pine Bluff Arsenal, Arkansas). \$48.0 million is to establish a facility for the production of the organo-phosphorus chemical QL (O-2-dissopropylaminoethyl o'-ethylmethyl phosphate) used in the BLU-80 Bigeye bomb. This effort is required to provide a credible chemical weapons retaliatory capability. The site of QL facility is pending and will be made upon completion of the supplemental environmental impact statement. The Newport Army Ammunition Plant (AAP) is the preferred site for QL based on an economic analysis.

\$55.2 million is to modernize and expand Research Department Explosive (RDX) and High Melt Explosive (HMX) facilities. \$20.0 million is requested to demonstrate a MUSALL pilot plant facility at Longhorn AAP, Marshall, Texas. \$4.1 million is for the modernization of an electrical power system and \$31.1 million is to modify, convert, and reactivate the RDX/HMX line at Holston AAP, Kingsport, Tennessee.

\$32.0 million is for the establishment of an initial 105mm XM900 cartridge production facility at a commercial plant, which is to be selected. These facilities are required to produce the Five Year Defense Program buys.

\$12.3 million is for three 5.56mm projects at Lake City Army Ammunition Plant, Independence, Missouri. One project is for conversion of two Small Caliber Ammunition Modernization Program (SCAMP) lines to produce 5.56mm Squad Automatic Weapons Systems (SAWS) ball ammunition. The second project provides for automatic packaging capability of two M8 bandoleer lines that are currently hand packed and required to meet Army Five Year Defense Program buys. The third 5.56mm project is required as a result of efforts to consolidate all 5.56mm production into one building to be cost effective and more efficient. In order to avoid product mixing the existing single product materiel handling system will be upgraded to a multi-product configuration. This will eliminate a costly, inefficient, and unsafe manual operation and also avoid the possibility of mixing products and components.

\$2.5 million is for an improved nitrocellulose purification facility at Radford Army Ammunition Plant, Virginia. This project will use the Conicell process that was successfully demonstrated by a prior year manufacturing methods and technology project. The steam required to purify nitrocellulose will be reduced by 70 percent.

\$16.7 million is required to expand existing combined effects munitions BLU-97B metal parts base at a commercial facility, which is to be determined. This project is required to assure sufficient capacity exists to meet Air Force procurements.

The final projects that make up the FY 1986 modernization and expansion program, include \$1.5 million for projects under \$900,000 and \$26.8 million is for engineering design effort for future (outyear) projects.

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Also included in the FY 1986 request are funds for the necessary production support and equipment replacement for plants in active production in the amount of \$38.7 million.

FY 1987 projects are as follows:

\$42.7 million is included for continuation of the Research Department Explosive (RDX) and High Melt Explosive (HMX) modernization and expansion effort

\$38.6 million is for chemical weapons production facilities. Of this amount \$18.6 is for establishment of a methylphosphonic dichloride (DC) facility used in production in 155mm M687, \$4.6 million is for expansion of the 155mm metal parts facility, and \$15.4 million is for the Bigeye bomb metal parts second source.

\$9.9 million is for a safety enhancement project at three government installations involved in processing pyrotechnic materials (Lone Star Army Ammunition Plant (AAP), Texarkana, Texas; Longhorn AAP, Marshall, Texas and Lake City AAP, Independence Missouri). This project will eliminate the danger and injuries suffered by operating personnel due to flash fires from pyrotechnic compositions during process operations.

\$19.9 million is to provide an initial production facility in support of the 120mm High Explosive Anti-Tank (HEAT) XM859 cartridge. The metal parts (MPTS) facility will be at a commercial facility that is to be established and the Load, Assemble and Pack (LAP) will be at Iowa Army Ammunition Plant, Middletown, Iowa. This program is required to support the initial procurement of the XM859 in FY 1988.

\$14.4 million is to provide the capability to assemble and test the XM762 Electronic Time (ET) fuze at Motorola. This is the second generation ET fuze, which will replace the M577 fuze starting in FY 1988.

\$34.0 million is for the establishment of an initial production facility in support of the 155mm XM864 Dual Purpose Improved Conventional Munition (DPICM) projectile. The facility is required to meet planned procurement in FY 1988. The location of the facility has not been determined.

\$10.0 million is to upgrade or build a new load, assemble, and pack facility and establish metal parts capability to balance the end item requirements for the Navy 16"/50 High Explosive (HE) projectile. The site of the facility has not been determined.

\$30.9 million is to establish an initial production facility for Low Vulnerability Ammunition (LOVA) propellant for use in 105mm tank ammunition.

\$8.3 million is to provide an initial production facility for the load, assemble, and pack of the Wide-Area Side-Penetrating Mine (WASPM). This project supports production procurement scheduled for FY 1988. The location of facility is to be determined.

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\$14.9 million is to provide state-of-the-art metal working equipment to manufacture 105/120mm tank ammunition metal parts. The facility will be at a commercial source to be selected.

\$7.0 million is to expand the production capability to load, assemble, and pack (LAP) the Volcano, a multiple delivery mine system. The project is required to support FY 1988-90 procurements at a facility to still be determined.

\$2.0 million is for the upgrade of the 155mm stick propellant cutting and takeaway system at Radford Army Ammunition Plant (AAP). The propellant requirements support the improved M203 propelling charge that uses stick propellant instead of granular propellant.

\$10.0 million is to provide a steam tie line from Powerhouse 1 to the Powerhouse 2 area at Radford AAP. This will correct a projected steam shortfall.

\$6.5 million is for replacement and modernization of government owned 155mm M483 metal parts production equipment located at Chamberlain, New Bedford, Massachusetts. The project will provide an air pollution control system to bring the forge area in compliance with state law and equipment to support Five Year Defense Program procurements.

\$9.8 million is to expand the production base for pressing Family of Scatterable Mine (FASCAM) main charges on a balanced one (1-8-5) shift basis at Iowa Army Ammunition Plant. The project will eliminate multiple handling and inefficient processing of explosives.

\$2.0 million is to modernize the existing central laboratory at Indiana AAP, Charlestown, Indiana. This effort is required to correct electrical wiring violations, correct fume exhaust system, and replace obsolete/inoperative equipment.

\$10.1 million is to establish a second source, in the commercial sector, for production of 120mm combustible cartridge cases.

\$30.5 million is for engineering design effort for future (outyear) projects; \$1.1 million is for items less than \$900,000 make up the balance of the modernization and expansion program.

Also included in the FY 1987 request is funding in the amount of \$38.0 million for the necessary production support and equipment replacement for plants in active production.

It is estimated that approximately \$48.0 million of associated construction effort will require authorization in the FY 1987 Military Construction Authorization Bill.

Layaway of Industrial Facilities

(\$ in Thousands)	
FY 1986	FY 1987
<u>22,500</u>	<u>23,200</u>

The \$22.5 million requested for layaway in FY 1986 is for the protection and preservation of equipment and facilities no longer required for active production, which must be retained for future peacetime or mobilization production. In FY 1987 funds in the amount of \$23.2 million are included for a similar purpose.

Components for Prove-out

(\$ in Thousands)	
FY 1986	FY 1987
<u>14,000</u>	<u>17,100</u>

In an effort to consolidate funding for the prove-out of facilities in budget activity 2, all prove-out costs are to be funded in Ammunition Production Base Support, beginning in FY 1986. This line provides funds for checking out production facilities and confirming that the facility is ready to produce at the design rate.

The FY 1986 program includes, but is not limited to, prove-out of the following:

<u>Plant</u>	<u>Title of Prove-out</u>
Sunflower AAP	300 Acid Oxidation Plant (AOP) Plant
Commercial	105/120mm Kinetic Energy Projectile Metal Parts (XM829/XM865)
Rajford AAP	Continuous Nitroglycerin, Area 2 Restoration
Pine Bluff Arsenal	Binary - Bigeye Bomb
To be determined	QL Production Facility

The FY 1987 prove-out program includes the Holston Army Ammunition Plant (AAP) Composition C-4 facility, the 155mm M203 Combustible Cartridge Case at a commercial facility, the combined effects munitions production facility, and the DC production facility.

Jefferson Proving Ground Modernization

(\$ in Thousands)

FY 1986	FY 1987
<u>2,000</u>	<u>2,200</u>

This program is to modernize and upgrade existing test instrumentation required during the conduct of production acceptance testing of Army ammunition and ammunition components. This effort will replace existing obsolete, unreliable, or economically unrepairable test equipment and instrumentation currently in use. This will result in more accurate reliable data and faster turn around time for the production items being tested. This will also allow for earlier release of the product sooner, avoiding the requirement for additional storage facilities, and reduce waste and scrap by stopping faulty production sooner. This effort, to be done in independent increments, is expected to continue through FY 1989 at an estimated total cost of \$10 million.

Chemical Demilitarization Program

(\$ in Thousands)

FY 1986	FY 1987
<u>49,300</u>	<u>74,800</u>

The FY 1986 funds in the amount of \$49.3 million will be used to procure systems and equipment for the demilitarization of obsolete chemical munitions. Sophisticated, industrial-size, environmentally safe, incinerating facilities will be constructed to dispose of the incapacitant BZ at Pine Bluff Arsenal, Arkansas and nerve agent filled M55 rockets at Johnston Atoll in the Central Pacific. Specifically, the funds will procure incinerating, controlling, munition processing, pollution abating and monitoring equipment for these facilities. These are specialized equipments that must separate the lethal agent from the explosive component while containing the agent and any explosion, which may occur; incinerate the agent completely without release of harmful by-products into the atmosphere; remove and burn the explosive components; decontaminate all metal parts completely; and monitor the whole process.

In FY 1987 \$74.6 million is for procurement of equipment similar to that described in FY 1986 for the Johnston Atoll Chemical Agent Disposal System (JACADS) and for the M55 Rocket Disposal Program. M55 rockets stored at Anniston Army Depot, Alabama; Lexington-Blue Grass Depot Activity, Kentucky; and Umatilla Depot Activity, Oregon will either be demilitarized in facilities built on site, transported to one or more central disposal sites, or left in storage on site. The Environmental Impact Statement (EIS) decision will be made in January 1986. The equipment will process the munitions, destroy the agent and explosives, and contain all hazardous material within the system at the three sites or at central disposal site(s).

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

Appropriation of Ammunition, Army
 Procurement of Ammunition, Army
 Budget Program or Budget Project Account
 Activity 2 - Production Base Support

The authorization of associated construction effort required to support the ammunition production-base projects in the FY 1986 program is valued at \$46.9 million. The military construction effort is authorized in the Military Construction Authorization Bill, and authorized and appropriated in the Procurement of Ammunition, Army appropriation. The Congress authorized construction in the amount of \$10.2 million in FY 1984 and \$30.1 million in FY 1985 for this program. The Military Construction Project Data (DD Form 1391), that provide detailed project information, is published under separate cover. A listing of FY 1986 construction projects is as follows:

Army Ammunition Plants (AAP)	Project No.	Project Title	PIP* Construction Cost Estimate (Millions) PS&ER**	MOD/EXP***	PIF Equipment Cost (Millions)	Total Project Cost (Millions)
Holston AAP	5865328-15	Fire Protection Sprinkler System	.320		.063	.383
	5862439	Backup Electric Power		1.350	2.750	4.100
Indiana AAP	5865330-19	Convert Ship Houses to Explosive Storage	.210			.210
Iowa AAP	5865333-16	Storm Drainage Improvements - Yard L	.810			.810
Kansas AAP	5865329-20	Rehabilitate Raw Water Intake	.570			.570
Lake City AAP	5865332-16	Enclose Warehouse Loading Docks	.930			.930
Louisiana AAP	5865314-18	Replace Explosion Protection Barricade	.370			.370
	5865314-21	Herbicide/Pesticide Building	.270			.270

* Provision of Industrial Facilities
 ** Production Support & Equipment Replacement
 *** Modernization/Expansion

Army Ammunition Plants (AAP)	Project No.	Project Title	PIF* Construction		PIF Equipment Cost (Millions)	Total Project Cost (Millions)
			Cost Estimate Estimate (Millions) PS&ER**	MOD/EXP***		
Newport AAP	5860079	Binary Component Production Facility		39.000	9.000	48.000
Radford AAP	5865326-14	Replace Air Compressor Building 4333	.390		-	.390
	5865326-15	Replace Explosive Protection Barricades	2.000		-	2.000
	5865326-16	General Plant Improve- ments - Alter Building Nitrocellulose Weighing	.520		-	.520
Sunflower AAP	5860138	Guanidine Nitrate Shipout Facility	.210		.210	.420
	TOTAL		6.600	40.350	12.023	58.973
	CONSTRUCTION TOTAL		46.950 Million			

* Provision of Industrial Facilities
** Production Support & Equipment Replacement
*** Modernization/Expansion

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Department of the Army
FY 1986

Annual Budget Estimate
JUSTIFICATION

Appropriation	Budget Program or Budget Project Account			
	Activity 2 - Production Base Support			
Procurement of Ammunition, Army	FY 84 (Millions)	FY 85 (Millions)	FY 86 (Millions)	FY 87 (Millions)
<u>Provision of Industrial Facilities (PIF)</u>	130.5	260.6	280.6	340.6
Production Support and Equipment Replacement (PS&ER)	(30.9)	(31.8)	(38.7)	(38.0)
Productivity Investments	(.1)			
Initial Production Facilities (IPF)	(13.8)	(24.7)	(152.6)	(166.4)
Modernization (MOD)	(8.5)	(42.0)	(43.0)	(59.5)
Expansion (EXP)	(77.2)	(162.1)	(46.3)	(76.7)
<u>Jefferson Proving Ground Modernization</u>			2.0	2.2
<u>Layaway of Industrial Facilities</u>	17.0	20.0	22.5	23.2
<u>Manufacturing Technology Program</u>	1.7	-0-	-0-	
<u>Prove-out of Production Facilities</u>			14.0	17.1
<u>Chemical Demilitarization Program</u>			49.3	74.8
TOTAL PRODUCTION BASE SUPPORT AMMUNITION	<u>149.2</u>	<u>280.6</u>	<u>368.4</u>	<u>457.9</u>

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PROCUREMENT OF AMMUNITION, ARMY

Section 3

Comparison of Program Requirements and Financing

Comparison of FY 1985 program requirements as reflected in FY 1985 budget with FY 1985 program requirements as shown in FY 1986 budget.

Comparison of FY 1985 financing as reflected in FY 1985 budget with FY 1985 financing as shown in FY 1986 budget.

Comparison of FY 1984 program requirements as reflected in FY 1985 budget with FY 1984 program requirements as shown in FY 1986 budget.

Comparison of FY 1984 financing as reflected in FY 1985 Budget with FY 1984 financing as shown in FY 1986 budget.

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

<u>Projects</u>	<u>FY84</u>	<u>FY85</u>	<u>FY86</u>	<u>FY87</u>
<u>Expansion (EXP)</u>				
5873212 - Commercial: 120mm Combustible Cartridge Case, Second Source				10.1
5873277 - X-Facility: EXP - 155mm M687 Projectile Metal parts (MPTS)	4.6			
Projects Under \$900,000 Each	1.0	.5	.6	.6
Subtotal Expansion	<u>77.2</u>	<u>162.1</u>	<u>46.3</u>	<u>76.7</u>
Subtotal Provision of Industrial Facilities	130.5	260.6	280.6	340.6

FUNDAMENTAL OF AFFIDAVIT, MINTA
PRODUCTION BASE SUPPORT
(\$ in Millions)

Projects

Expansion (EXP)

	<u>FY84</u>	<u>FY85</u>	<u>FY86</u>	<u>FY87</u>
5840084 - Radford AAP: EXP - 155mm Stick Propellant	2.9			
5842041 - Lone Star AAP: EXP - Family of Scatterable Mines (FASCAM) (Gator/Modular Pack Mine System) Load, Assemble and Pack (LAP)	11.8			
5842207 - Commercial: EXP - 105/120mm Tank (Kinetic Energy) Projectile Metal Parts and Assembly	14.3			
5842632 - Sunflower AAP: EXP - Nitroguanidine Prove-Out	8.0			
XXXXXX - X-Facility: EXP - Classified Program	7.1	64.4		
5850050 - Commercial: EXP - Tactical Munitions Dispenser Metal Parts		17.2		
5852386 - Kansas AAP: EXP - Combined Effects Munitions Load Assemble & Pack		10.0		
5852391 - Iowa AAP: EXP - Mine - FASCAM - Gator - Load, Assemble and Pack (LAP)		3.9		
5852427 - Louisiana AAP: Research Department Explosive (RDX) Design		2.0		
5852550 - X-Facility: RDX Design		30.0		
5853195 - Commercial: EXP - Mortar - 81mm Increment Container		4.9		
5853199 - Commercial: EXP - FASCAM - Remote Anti-Armor Mine Metal Parts		1.9		
5853259 - X-Facility: 155mm M203E2 Combustible Cartridge Case		3.2		
5862195 - Lake City AAP: EXP - 5.56mm Bandoleer M8 Pack Equipment			2.2	
5863257 - Commercial: EXP - Bomb - Combined Effects Munitions CEM/BLU 97B Metal Parts			16.7	
58X3046 - Omnibus Engineering Design	32.1	24.1		
5872307 - Radford AAP: EXP - 155mm Projectile Stick Process Upgrade			26.8	30.5
5872343 - Iowa AAP: Family of Scatterable Mines, Presses and Igloos				2.0
5872430 - X-Facility: MUSALL Design, Phase I Research Department Explosive/High Melt Explosive (RDX/HMX)				9.8
5872483 - X-Facility: Volcano Mine, Load, Assemble and Pack (LAP)				12.1
				7.0

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PROCUREMENT OF AMMUNITION, ARMY
PRODUCTION BASE SUPPORT

(\$ in Millions)

<u>Projects</u>	<u>FY84</u>	<u>FY85</u>	<u>FY86</u>	<u>FY87</u>
<u>Modernization (MOD), Continued</u>			<u>31.1</u>	
5862447 - Holston AAP: MOD Conversion Research Department Explosive to High Melt Explosive (RDX to HMX)				10.0
5872134 - Radford AAP: Steam Tie Line Horseshoe Area				2.0
5872158 - Indiana AAP: Central Laboratory Modification				9.9
5872245 - Multiple Sites: Safety Enhancements				24.7
5873000 - Holston AAP: Modernization of Composition A Line (RDX and HMX)				6.5
5873244 - Commercial: 155mm M483 Metal Parts, Plant Equipment Package (PEP) 422	<u>2.1</u>	<u>1.3</u>	<u>.5</u>	<u>.5</u>
Projects under \$900,000 each	8.5	42.0	43.0	59.5
Subtotal Modernization				

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

Projects

Modernization (MOD)

	<u>FY84</u>	<u>FY85</u>	<u>FY86</u>	<u>FY87</u>
5843279 - Commercial: Rebuild Lathes for Navy 5-Inch Projectile	1.0			
5843906 - Holston AAP: MOD - Nitric Acid Support for Explosives Production Research Department	1.7			
5845712 - Explosive/High Melt Explosive (RDX/HMX)		2.4		
5850086 - Multiple Sites: MOD - Storm Damage	3.7			
5850086 - Lake City AAP: MOD - 5.56mm Tracer Charging Equipment				
5852054 - Holston AAP: MOD - Improve Composition C-4 Line (RDX and HMX)		12.0		
5852159 - Indiana AAP: MOD - Propelling Charge Qualifica- tion Building (155mm/8-Inch Propelling Charges)		2.2		
5852199 - Holston AAP: MOD - Coal Handling Equipment (RDX and HMX)		9.0		
5852232 - Lake City AAP: MOD - 5.56mm Blank Squad Automatic Weapon System (SAWS) Conversion		1.3		
5852359 - Scranton AAP: MOD - Water-Distribution Replacement System		2.1		
5852371 - 155mm/8-Inch Propelling Charge		.9		
5852507 - Louisiana AAP: MOD - Support Chemical Laboratory		1.6		
5853230 - X - Facility: MOD - 16-inch Projectile Metal Parts/Load, Assemble and Pack (LAP)		2.5		
5853233 - Commercial: MOD - XM763/XM764 Fuze Production Equipment		1.9		
5855160 - Jefferson Proving Ground: MOD - Jefferson Test Capability		1.8		
5862407 - Lake City AAP - 5.56mm Small Caliber Multiproduct Handling System			7.3	
5862439 - Holston AAP: MOD - Productivity Improvements (RDX and HMX)		3.0	4.1	5.9

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

<u>Initial Production Facilities (IPF)</u>	<u>FY84</u>	<u>FY85</u>	<u>FY86</u>	<u>FY87</u>
5870067 - Commercial: IPF - Fuze, XM762 Electrical Time (ET) Assembly/Test				14.4
5870089 - Multiple Sites: 120mm High Explosive Anti-Tank XM859 Projectile Metal Parts and Load, Assemble and Pack (LAP)				19.9
5870103 - Commercial: IPF - Binary - Methylphosphonic dichloride (DC)				18.6
5870115 - Multiple Sites: 155mm XM864 Dual Purpose Improved Conventional Munitions (DPICM) Projectile				34.0
5870125 - X-Facility: 16"/50 Navy High Explosive (HE) Projectile (LAP)				10.0
5870143 - X-Facility: Low Velocity (LOVA) Propellant Facility				30.9
5870287 - X-Facility: Wide Area Side Penetrating Mine (WASPM) XM84 LAP				8.3
5873278 - Commercial: 105/102mm Tank Projectile				14.9
Projects under \$900,000 each	<u>.4</u>	<u>—</u>	<u>.4</u>	<u>—</u>
Subtotal, Initial Production Facilities (IPF)	13.8	24.7	152.6	166.4

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

FY84 FY85 FY86 FY87

Productivity Investments
Projects under \$900,000 each .1
Subtotal Productivity Investments .1

Projects

Initial Production Facilities (IPF)

5840051 - Commercial: IPF - Combined Effects Munitions Metal Parts (MPTS)	13.4			
5850064 - Pine Bluff Arsenal: IPF - XM819 Red Phosphorous Mortar		3.1		
5850070 - Commercial: IPF - Nitramine Gun Propellant		3.0		
5850081 - X-Facility: IPF - Plastic Bonded Explosive (PBX)		13.2		
5850117 - Longhorn AAP: IPF - Musall Facility Research Department Explosive and High Melt Explosive (RDX and HMX)		4.0	20.0	
5852195 - Lake City AAP: IPF - 5.56mm Bandoleer M8 Pack Equipment		1.4	28.2	
5860063 - Pine Bluff Arsenal: IPF - Bigeye Bomb Load, Assemble & Pack (LAP)			17.6	15.4
5860074 - Commercial: IPF - Bigeye Bomb Metal Parts			48.0	
5860079 - X-Facility: IPF - O-(2-dissopropylaminoethyl) O'-ethylmethylphosphonite (QL) Production Facility for Bigeye Bomb				
5860127 - Commercial: IPF - 105mm XM900 MPTS and Core			32.0	
5860140 - Radford AAP - Improved Nitrocellulose Purification Facility			2.5	
5862208 - Lake City AAP: IPF - 5.56mm Squad Automatic Weapon System (SAWS) Ball Lines 4, 5 Conversion			3.8	

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

Service: Army

P-1 Line Item: Provision of Industrial Facilities

Projects:

Annual Support

	<u>FY84</u>	<u>FY85</u>	<u>FY86</u>	<u>FY87</u>
5865060 - Jefferson Proving Ground:	1.0	.5	1.4	2.2
Production Support and Equipment Replacement (PS&ER)				
5865314 - Louisiana Army Ammunition Plant (AAP): - Spt - PS&ER	1.1	1.1	1.8	3.0
5865316 - Lone Star AAP: Spt - PS&ER	1.9	2.9	3.0	2.8
5865317 - Milan AAP: Spt - PS&ER	2.0	1.4	2.6	2.3
5865326 - Radford AAP: Spt - PS&ER	4.1	5.4	6.2	4.4
5865327 - Longhorn AAP: Spt - PS&ER	2.3	2.3	2.3	2.5
5865328 - Holston AAP: Spt - PS&ER	2.1	2.6	2.9	2.0
5865329 - Kansas AAP: Spt - PS&ER	2.4	1.9	2.5	2.2
5865330 - Indiana AAP: Spt - PS&ER	3.6	3.2	3.8	2.7
5865332 - Lake City AAP: Spt - PS&ER	2.2	2.3	3.2	2.5
5865333 - Iowa AAP: Spt - PS&ER	4.3	2.9	2.9	2.2
5865342 - Scranton AAP: Spt - PS&ER	2.7	2.5	1.5	2.1
5865662 - All Plants: Omnibus Project for Purchase of Self-Amortizing Equipment	1.0	1.0	1.0	1.0
5865711 - Environmental Restoration Projects under \$900,000 each	.2	.5	1.0	3.9
		<u>1.3</u>	<u>2.6</u>	<u>2.2</u>
Subtotal Production Support & Equipment Replacement	30.9	31.8	38.7	38.0

PROCUREMENT OF AMMUNITION, ARMY

Section 4

Selected Data Sheets

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EXPLANATION OF CHANGES IN FINANCING

The total fiscal year 1984 program has increased by \$2,064 thousand since the FY 1985 budget request was presented to the Congress. This increase is due to the following:

Anticipated Reimbursements: The \$38,136 thousand decrease reflects actual sales of ammunition to foreign countries and other customers.

Budget Authority: The increase of \$40,200 thousand is the result of a reversal of a previous decision to transfer this amount to another account.

COMPARISON OF FY 1984 FINANCING AS REFLECTED
IN THE FY 1985 BUDGET WITH FY 1984 FINANCING
AS SHOWN IN FY 1986 BUDGET
(In Thousands of Dollars)

Appropriation:	Financing In FY 1985 Budget	Financing In FY 1986 Budget	Increase (+) or Decrease (-)
Procurement of Ammunition, Army			
Program Requirements, (Total)	2,236,500	2,238,564	+2,064
Program Requirements (Service Account)	(1,939,900)	(1,980,100)	(+40,200)
Program Requirements (Reimbursable)	(296,600)	(258,464)	(-38,136)
Less:			
Anticipated Reimbursements	296,600	258,464	-38,136
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	1,939,900	1,980,100	+40,200
Appropriation	1,980,100	1,980,100	-0-
Transferred to other accounts	-40,200	-0-	+40,200
Appropriation (Adjusted)	1,939,900	1,980,100	+40,200

COMPARISON OF FY 1984 PROGRAM REQUIREMENTS
AS REFLECTED IN FY 1985 BUDGET WITH
FY 1984 PROGRAM REQUIREMENTS AS SHOWN IN FY 1986 BUDGET

SUMMARY OF REQUIREMENTS (In Thousands of Dollars)			
Appropriation:	Total Program Requirements In FY 1985 Budget	Program Requirements In FY 1986 Budget	Increase (+) or Decrease (-)
Procurement of Ammunition, Army			
Activity 1 - Ammunition	1,775,100	1,830,900	+ 55,800
Activity 2 - Ammunition Production Base Support	164,800	149,200	- 15,600
	<u>1,939,900</u>	<u>1,980,100</u>	<u>+ 40,200</u>

Explanation by Activity

Activity 1 - Ammunition. The \$55,800 thousand increase is the net result of the denial of an anticipated reprogramming to Activity 2 (+\$14,700 thousand); cancellation of an anticipated transfer to other accounts (+\$40,200 thousand); and a transfer from Activity 2 (NM&T) (+\$900 thousand).

Activity 2 - Ammunition Production Base Support. The \$15,600 thousand decrease is the result of the denial of an anticipated reprogramming from Activity 1 (-\$14,700 thousand); and a transfer to Activity 1 (NM&T) (-\$900 thousand).

Anticipated reimbursements: Estimates of sales of ammunition to customers, including foreign countries, are decreased by \$191,800 thousand to reflect current program execution plans.

Budget Authority: The increase of \$152,300 is the result of congressional action on the FY 1985 Appropriation. The adjusted appropriation figure also reflects these changes.

COMPARISON OF FY 1985 FINANCING AS REFLECTED
IN THE FY 1985 BUDGET WITH FY 1985 FINANCING
AS SHOWN IN FY 1986 BUDGET

	(In Thousands of Dollars)		
	Financing In FY 1985 Budget	Financing In FY 1986 Budget	
Appropriation:			Increase (+) or Decrease (-)
Procurement of Ammunition, Army			
Program Requirements, (Total)	2,811,700	2,772,200	- 39,500
Program Requirements (Service Account)	(2,494,000)	(2,646,300)	(+152,300)
Program Requirements (Reimbursable)	(317,700)	(125,900)	(-191,800)
Less:			
Anticipated Reimbursements	317,700	125,900	-191,800
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	2,494,000	2,646,300	+152,300
Appropriation (Adjusted)	2,494,000	2,646,300	+152,300

EXPLANATION OF CHANGES IN FINANCING

The total program for fiscal year 1985 has decreased by \$39,500 thousand since the FY 1985 budget request was presented to the Congress. This decrease is attributed to the following:

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COMPARISON OF FY 1985 PROGRAM REQUIREMENTS
AS REFLECTED IN FY 1985 BUDGET WITH
FY 1985 PROGRAM REQUIREMENTS AS SHOWN IN FY 1986 BUDGET

	SUMMARY OF REQUIREMENTS (In Thousands of Dollars)		Increase (+) or Decrease (-)
	Program Requirements In FY 1985 Budget	Program Requirements In FY 1986 Budget	
Appropriation:			
Procurement of Ammunition, Army			
Activity 1 - Ammunition	2,191,800	2,365,700	+173,900
Activity 2 - Ammunition Production Base Support	<u>302,200</u> 2,494,000	<u>280,600</u> 2,646,300	<u>- 21,600</u> +152,300

EXPLANATION BY ACTIVITY

Activity 1 - Ammunition. The \$173,900 thousand increase is the net result of Congressional action on the FY 1985 Appropriation (+\$178,300 thousand); and a proposed FY 1985 transfer to Activity 2 (-\$4,400 thousand).

Activity 2 - Ammunition Production Base Support. The \$21,600 thousand decrease is the net result of Congressional action on the FY 1985 Appropriation (-\$26,000 thousand); and a proposed FY 1985 transfer from Activity 1 (+\$4,400 thousand).

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

<u>Projects</u>	<u>FY84</u>	<u>FY85</u>	<u>FY86</u>	<u>FY87</u>
<u>P-1 Line Item: Layaway of Industrial Facilities</u>				
<u>Projects</u>				
5868450 - Armament Munitions and Chemical Command (AMCCOM) Layaway and/or Redistribution of Government- Owned Equipment in Government-Owned Plants	12.0	15.9	17.9	19.1
5869589 - Armament Munitions and Chemical Command (AMCCOM) Layaway and/or Redistribution of Govern- ment-Owned Equipment	5.0	3.5	3.9	4.1
5865260 - Jefferson Proving Ground: Layaway Test Facility		.6	.7	
Subtotal Layaway of Industrial Facilities	<u>17.0</u>	<u>20.0</u>	<u>22.5</u>	<u>23.2</u>
<u>P-1 Line Item: Manufacturing Technology</u>				
5844563 - Manufacturing Methods and Technology: Process Improvement for Depleted Uranium Penetrators	1.7			
Projects Under \$900,000	<u>-0-</u>	<u>-0-</u>	<u>-0-</u>	<u>-0-</u>
Subtotal Manufacturing Technology	1.7	-0-	-0-	
<u>P-1 Line Item: Components for Prove-out</u>			14.0	17.1
<u>P-1 Line Item: Jefferson Proving Ground Modernization</u> 58X5160 - Jefferson Proving Ground Test Facility			2.0	2.2
<u>P-1 Line Item: Chemical Demilitarization</u>			<u>19.3</u>	<u>74.8</u>
Total Ammunition Production Base Support	149.2	280.6	368.4	457.9

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5-85

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