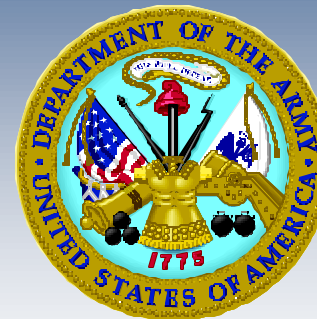


# PEO Ammunition Appropriation Update



**April 2003**

**Kevin M. Fahey**  
Deputy Program Executive Officer, Ammunition



# FY2004/FY2005 Ammunition Budget

***(Current TOA \$ in Millions)***

	<u>FY02</u>	<u>FY03</u>	<u>FY04</u>	<u>FY05</u>
<b><i>Hardware</i></b>	978.8	1109.6	1171.4	982.1
<b><i>Prod Base</i></b>	172.7	124.5	138.5	152.5
<b><i>Total</i></b>	1151.5	1234.1	1309.9	1134.6

## ***Funds:***

- \* Training Ammo at C-2 Level of Readiness (90% of the executable rqmt)
- \* Seventeen Modern Munitions (Armor Piercing 5.56MM, 7.62mm and .50 CAL, Mortars - M934, XM983, M929A1, XM930, Tank M829E3, XM1028, 105MM HEP-T, 155mm M864, MACS, MOFA, NSD-APL, APOBS, LVOS, FPE, BDM, ESMB)
- \* Conventional Ammo Demil
- \* ARMS at Minimal Level
- \* Limited Ammo Prod Base

## ***Does Not Fund:***

- \* Restock War Reserve
- \* Build-up of Modern Munitions

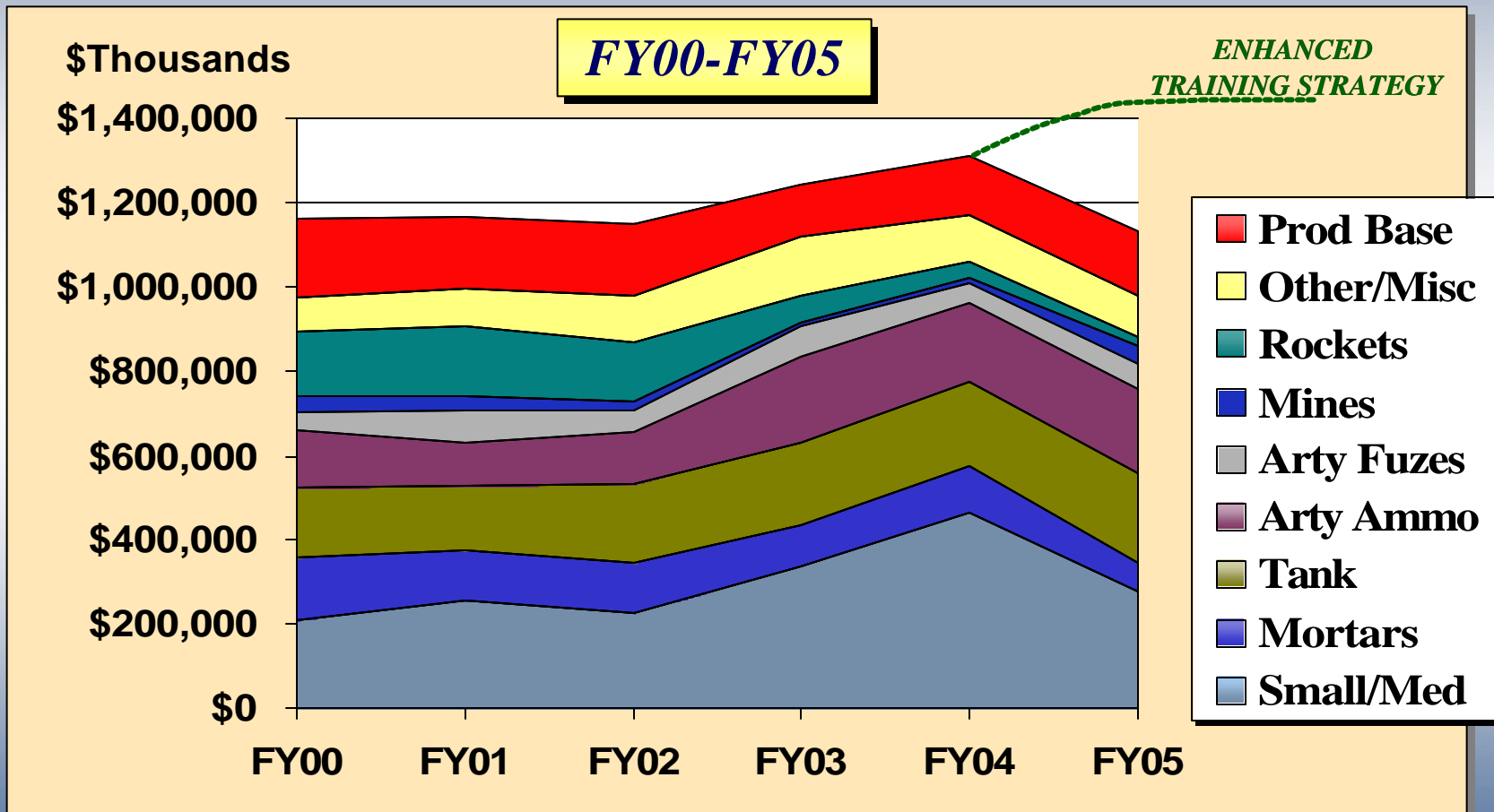


# Detailed Funding Breakout Procurement

<i>Procurement (\$M)</i>	<i>FY02</i>	<i>FY03</i>	<i>FY04</i>	<i>FY05</i>
<b>Hardware</b>	<b>978.8</b>	<b>1109.6</b>	<b>1171.4</b>	<b>982.1</b>
Training	(876.5)	(955.6)	(1032.2)	(834.1)
War Reserves	(92.3)	(144.0)	(129.2)	(138.0)
Non-Hardware/Miscellaneous	(10.0)	(10.0)	(10.0)	(10.0)
<b>Production Base Support</b>	<b>172.6</b>	<b>124.5</b>	<b>138.5</b>	<b>152.5</b>
Industrial Facilities	65.5	43.0	33.6	33.3
Layaway	13.6	6.9	13.0	9.5
Maint of Inactive Fac	14.1	8.9	9.7	9.6
Demil	57.7	54.2	77.6	95.4
ARMS	21.7	11.5	4.6	4.7
<b>Total Funding</b>	<b>1151.4</b>	<b>1234.1</b>	<b>1309.9</b>	<b>1134.6</b>



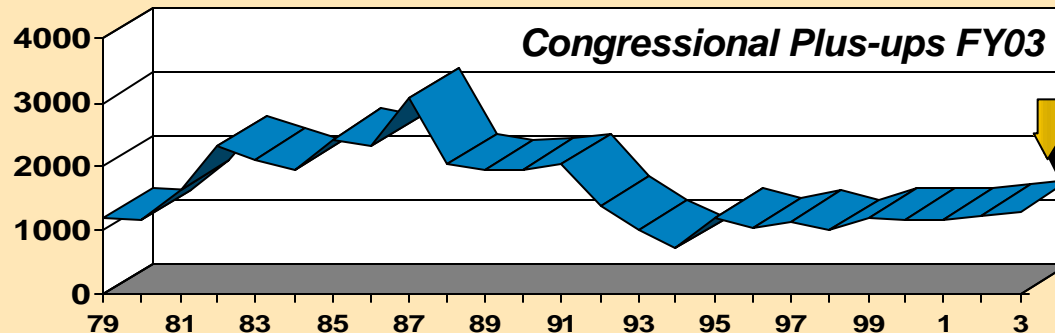
# Ammunition Procurement Projection by Categories





# PAA - Funding Profile

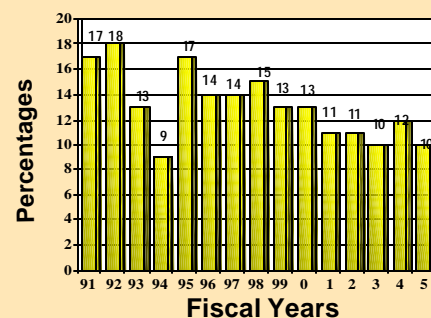
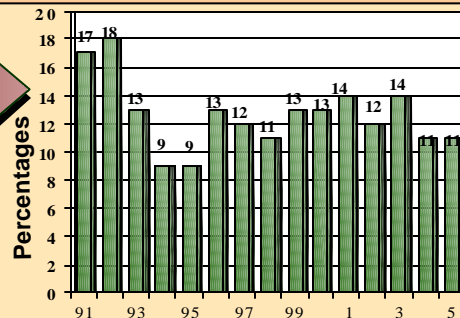
PAA Historical Trend (\$M)



*Legacy to  
Objective  
Path*

Procurement as a Percentage of Army's FY04/FY05 Budget

Army Budget (\$ in Millions)		
APPROPRIATION	FY04	FY05
FAMILY HOUSING	1,402	1,792
MIL PERSONNEL	37,389	39,316
RDTE	9,123	9,539
MCA	1,770	2,356
OMA	31,132	32,374
<b>PROCUREMENT</b>	<b>10,755</b>	<b>11,051</b>
ERA	396	402
BRAC	67	56
CHEM DEMIL	1,650	1,457
AWCF	219	33
<b>TOTAL</b>	<b>93,903</b>	<b>98,376</b>



Procurement Appropriation  
(\$ in Millions)

APPROPRIATION	FY04	FY05
AIRCRAFT	2,128	1,870
MISSILES	1,459	1,408
WTCV	1,641	2,016
<b>AMMUNITION</b>	<b>1,310</b>	<b>1,135</b>
OTHER PROCUREMENT	4,217	4,622
<b>TOTAL</b>	<b>10,755</b>	<b>11,051</b>

Ammunition as a Percentage of The Army's FY04/FY05 Procurement Budget

As of 02/05/03



# Description Training

- **Army – High-priority program designed to provide sufficient training ammunition to train all Army units and support training base**
- **Mission - Support Army readiness by resourcing 100% of training ammunition requirement**
- **Training Ammunition Acquisition Strategy -**
  - ✓ **Fund training at C-2 level of readiness**
  - ✓ **Support all Army Components and Reserves**
  - ✓ **Does not fund other critical unprogrammed requirements (eg., RC MOB TNG, mission rehearsals and other CONOPs-related TNG)**
- **Critical Training Shortfalls --**
  - ✓ **Small caliber (5.56mm, 7.62mm, .50-cal, 40mm). Particular impact on:**
    - **Individual weapons qualifications**
    - **Special skills TNG (night firing, National Training Center (NTC) firing)**
    - **TRADOC “Schoolhouse” TNG (eg., currently sourcing INF tactical TNG at 85% of 5.56mm blank RQMT and all others, i.e., basic training, at 60% of RQMT)**
    - **FY03 vs. FY05 40mm RQMT – MK-19: FY03 – 3.18M; FY05 – 5.75M) (M203: FY03 – 2.75M; FY05 – 4.5M). Constrained training partly due to budget cuts**
  - ✓ **Grenades. Currently sourcing only TRADOC Schoolhouse TNG. In FY02/03, TRADOC received only one-half the POI standard for live grenade TNG and used reduced QTYs of the practice round for the Grenade Qualification Course**
  - ✓ **Simulators and Signals – Impacts collective TNG at all levels**



# Requirements Training

- **Army Training Requirement**
  - ✓ Total training requirement is funded at \$1B annually
  - ✓ Training standard is set by Standards in Training Commission (STRAC) and by TRADOC Programs of Instruction (POI) for schools
  - ✓ FY03 STRAC revision aligned TNG strategies with Army doctrine, resulting in major changes in requirements (e.g., 40mm). Also includes SBCT training strategies (large small-caliber requirements)
  - ✓ Revised STRAC resulted in \$243M annual increase in TNG ammunition costs
- **Budget program developed based on highest year of execution during a three-year period**
  - ✓ Army does not buy 100% of STRAC RQMT and, therefore, could not execute 100% STRAC RQMT if it suddenly decided to do so
  - ✓ Training ammunition shortfalls give false impression of under-execution – soldiers cannot fire bullets they do not have in the first place



# FY03 Budget Training

*President's Budget      FY02    FY03    FY04    FY05*

Training	(876)	(956)	(1032)	(834)
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*War Reserve*

War Reserves	(92.0)	(144)	(129)	(138)
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*Congressional Action FY03 (\$ in Millions)*

*REQUEST   HASC   SASC   AUTH   HAC   SAC   APPN   DELTA*

1159.0	1320.0	1205.5	1229.5	1207.6	1258.6	1253.1	+93.7
--------	--------	--------	--------	--------	--------	--------	-------

*Congressional Action in FY03*

<u>ITEM</u>	<u>+/- \$</u>	<u>REMARKS</u>
- 5.56mm	\$12.1M	Support Training
- .50 Cal	+8.0M	Support Training
- 25mm	+\$34.1M	Support Training & WR
- 40mm	+\$5.4M	Supports Training and WR
- 120mm Mortar	+\$6..5M	White Phosphorous Facility Equip
- WAM	-\$12.5M	Terminated by Congress
- Hydra 70	+\$30.0M	



# Description War Reserve

## LEGEND:

Underscored: In FY  
2004/FY2005  
President's Budget

- **Army** -- high priority program to modernize ammunition available to existing warfighting platforms
- **Mission** -- provide forces with modernized highly capable munitions to support new and existing weapon systems
- **System** -- includes army direct & indirect fire weapon systems that maintain overmatch capability
  - ✓ ***Small Arms Armor Piercing*** – Used to defeat light armor vehicles
  - ✓ ***105mm M393A2 HEP-T*** – Replacement for the aged stockpile of M393 tank rounds.
  - ✓ ***105mm Anti-Personnel-Tracer (APERS-T)*** Used to defeat infantry squads in the open
  - ✓ ***Bunker Defeating Munition (Tactical)*** – Used by infantry forces in attacking bunkers and enemy troops in urban areas
  - ✓ ***15MM Dual-Purpose Improved Conventional Munition (Re-capitalization)*** – Funds the remanufacture and retrofit of this extended range artillery projectile with a self-destruct capability
  - ✓ ***120mm Tank M829E3*** – 4th generation kinetic energy cartridge
  - ✓ ***120mm XM1028*** – Anti-personnel canister for the United State Forces Korea
  - ✓ ***120mm Mortar M934A1 HEMO, M983 IR Illum, M929A1 WP, M930 Illum*** – Supports requirements for the 120mm mortar in the Stryker Brigade Combat Teams (SBCT)
  - ✓ ***Modular Artillery Charge Systems (MACS)*** – Replace older canvas bag charges and provide enhanced firing and logistics capability improvements to the Army's inventory of 155mm cannon artillery
  - ✓ ***Anti-Personnel Obstacle Breaching System (APOBS)*** – Employed in combat operations to breach a lane through wire and anti-personnel mine obstacles
  - ✓ ***Non-Self Destruct (NSD) Anti-Personnel Landmine (APL)*** - This anti-personnel landmine system will replace the M14 and M16 alternative for Korea by 2006
  - ✓ ***Fighting Position Excavator (FPE)*** – Provides a rapid foxhole excavating capability to infantry forces
  - ✓ ***Light Vehicle Obscuration Smoke System (LVOSS)*** – Provides obscuration for tactical vehicles
  - ✓ ***Explosive Standoff Minefield Breacher (ESMB)*** Minefield clearing system for the SBCT
  - ✓ ***Multi-Option Fuze Artillery M782*** – Will replace five current fuzes in 155mm weapon system



# Requirements War Reserve

- **Army War Reserve Modernization Requirement**
  - ✓ **Army objective - maintain balanced approach to modernization**
  - ✓ **Support Army Transformation while maintaining combat capability**
  - ✓ **Requirements Documents That Identify the Army's Munitions Requirement**
  - ✓ **Quantitative War Reserve Requirements for Munitions (QWARRM) 07**
  - ✓ **QWARRM 09**

***Army Vision***  
***Interim Brigade  
Combat Team***  
***Future Combat  
System***



# Description

## Production Base

- **Army/DoD -- Provides ammunition production facilities to respond to current and replenishment requirements**
- **Mission -- Maintain an efficient, economical industrial base which integrates evolving technology processes to meet current demands, and be responsive to emergency and replenishment requirements. Incorporates acquisition reform initiatives**
- **Systems -- Multiple**
- **Contractors --**
  - ✓ **Active: Radford & Lake City AAP (Alliant Techsystems.), Iowa & Milan AAP (American Ordnance), Holston AAP (Royal Ordnance of North. America), Lone Star AAP (Day & Zimmermann, Inc.)**
  - ✓ **Reserve Facilities: Louisiana AAP (Valentec) Scranton AAP (Chamberlain Manufacturing, Co.), Mississippi AAP (Mason Technologies, Inc.), Riverbank AAP (NI Industries)**
- **Also 3 GOGO Facilities – Pine Bluff Arsenal, Crane AAA, McAlester AAP**
- **In Production-- Supports systems acquisition**
- **Deliveries-- Across all munition families**
- **Fielding: Modern/Preferred Munitions - as required; Training - continuous**
- **Foreign Military Sales -- Norm sell from stock; apply credits toward modern& preferred munitions**
- **Approved/Updated Cost Reduction Plan--**
  - ✓ **PNNL Production Base Assessment;**
  - ✓ **DoD Industrial Base Privatization Policy (RAND Study) Ammunition Industrial Policy 98-1;**
  - ARMS Program**



# FY03 Budget War Reserve

## *President's Budget*

*FY01*

*FY02*

*FY03*

**War Reserves**

**(136.6)**

**(180.1)**

**(201.8)**

## *Congressional Action FY02 (\$ in Millions)*

<i>APPN</i>	<i>PB</i>	<i>HASC</i>	<i>SASC</i>	<i>AUTH CONF</i>	<i>HAC</i>	<i>SAC</i>	<i>APPN CONF</i>
<b>Procurement</b>	<b>144.6</b>	<b>-6.4</b>	<b>-15.8</b>	<b>-13.9</b>	<b>+19.0</b>	<b>+25.0</b>	<b>+35.5</b>

## *Congressional Action in FY02 Budget*

<b><u>AMMO ITEM</u></b>	<b><u>+/- \$M</u></b>	<b><u>REMARKS</u></b>
- 25mm, M919	+24	Support WR Requirement
- 81mm	+11	Support WR Requirement
- RADAM	-25	Non-Program Support
- VOLCANO	+7	Support WR Requirement
- BDM	+3.5	Support Enduring Freedom Rqmt
- APOBS	+3.5	Support Enduring Freedom Rqmt
- M934	+4.0	Support WR Requirement
- M795	+2.5	Support WR Requirement
- MDI	+1.0	Support WR Requirement



# Fuze Base Concerns

## ➤ Concerns:

- ✓ Lack of funding across the board
- ✓ Financial viability of Fuze Base
- ✓ Currently no Self-Destruct Fuze
- ✓ Maintaining critical core competencies

## ➤ What I See:

- ✓ Communication is improving, people are starting to listen
- ✓ Collaboration between all services and Government and Industry will allow us to be successful
- ✓ Fuzing will be part of system contract

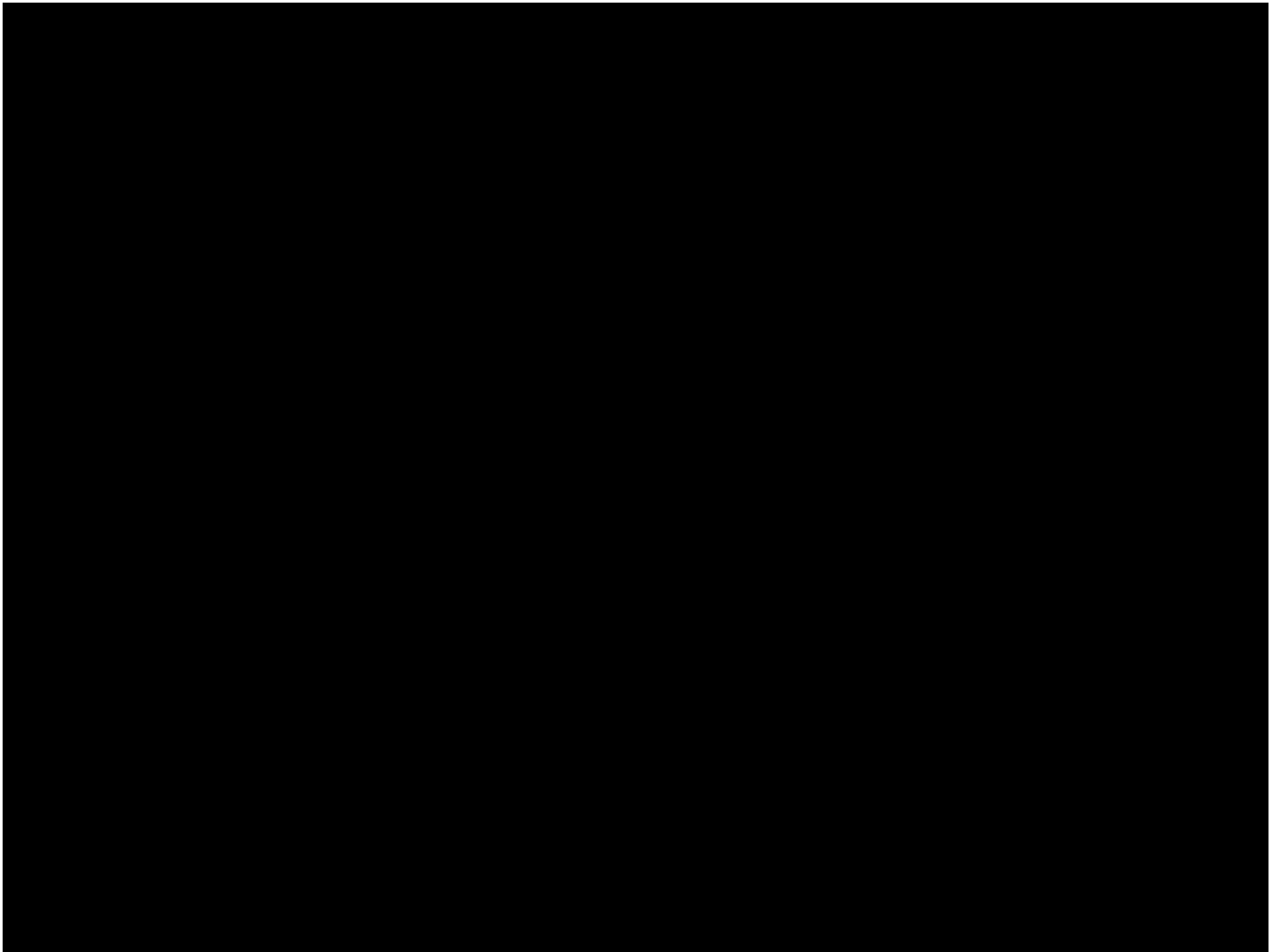


# Conclusions

- **Near term procurements relatively stable**
- **DoD IPT making good progress**
- **Fuze Industrial Base and critical core competencies a big concern**
- **Working hard on developing a good acquisition business model with industry input**



Joint Lethality





# Back-ups



# Ammunition Production Base Support



## *Active Facilities*

- \* **Government-Owned, Government-Operated (GOGO)**
  - ↳ Crane Army Ammunition Activity
  - ↳ McAlester Army Ammunition Plant
  - ↳ Pine Bluff Arsenal
- \* **Government-Owned, Contractor-Operated (GOCO)**
  - ✓ Holston Army Ammunition Plant
  - ✓ Iowa Army Ammunition Plant
  - ✓ Lake City Army Ammunition Plant
  - ✓ Lone Star Army Ammunition Plant
  - ✓ Milan Army Ammunition Plant
  - ✓ Radford Army Ammunition Plant
  - Hawthorne (Depot) Army Ammunition Activity

## *Reserve Facilities*

- \* **GOCO**
  - ✓ Kansas (Partial) Army Ammunition Plant
  - ✓ Louisiana Army Ammunition Plant
  - ✓ Mississippi Army Ammunition Plant
  - ✓ Riverbank Army Ammunition Plant
  - ✓ Scranton Army Ammunition Plant

## *Excess Facilities*

- \* **GOCO**

➤ Badger AAP	➤ Alabama AAP
◆ Indiana AAP	➤ Cornhusker AAP
➤ Kansas (partial) AAP	◆ Joilet AAP
➤ Longhorn AAP	➤ PDW AAP
➤ Sunflower AAP	➤ Ravenna AAP
◆ Volunteer AAP	➤ Twin Cities AAP

◆ Special Legislation - Land Transfer



# Ammunition Production Base Support

## *Active GOCO Facilities*

**Full & Open  
Product Competition**

**Facility Offered**



<u><b>Facility</b></u>	<u><b>Contractor</b></u>	<u><b>Core Processes</b></u>	<u><b>Personnel</b></u>
<b>Holston</b>	<i>Ordnance Systems Inc., BAE North America</i>	Energetics – HMX.RDX, R&D	185
<b>Iowa</b>	American Ordnance	Load, Assemble, & Pack – Tank/Artillery	944
<b>Lake City</b>	Alliant Techsystems	Small Arms Manufacturing	1,101
<b>Lone Star</b>	Day & Zimmermann	Load, Assemble, & Pack – Grenades, Initiators/Detonator, Mines, Cargo Carry Munitions	450
<b>Milan</b>	American Ordnance	Load, Assemble, & Pack – Mortars, 40mm Cartridges, C-4	835
<b>Radford</b>	Alliant Techsystems	Propellant Manufacturing	1261



# Armament Retooling and Manufacturing Support (ARMS)

## ➤ Strategic Plan

### ✓ Vision

- Respond to National Needs
- Minimize Resources to Maintain and
- Creation of Economic Opportunities Benefits Public



## ➤ Goals

- ✓ Support Peacetime/Replenishment Requirements
- ✓ Produce Ammunition at Lowest Cost
- ✓ Reduce Facility/Equipment Cost - Capitalize Commercial Value
- ✓ Maximize Facility Value
- ✓ Maintain Labor Source
- ✓ Optimize Social/Economic Benefits Through Commercialization

**Facilities as  
Assets**

***Changing  
Environment***



# Armament Retooling and Manufacturing Support (ARMS)

## *Cost Avoidance*

- \* Overhead Operating Cost
  - ↳ Iowa AAP - 18%
  - ↳ Radford AAP - 28%
- \* Zero Maintenance
  - ↳ Achieved at 3 Facilities
  - ↳ Projected at 2 Facilities

## *Investments*

- \* Army/Appropriated
  - ↳ FY93-02: \$273.9M
- \* Obligated/Awarded: \$223.2M
- \* Contractor/Tenants
  - ↳ FY93-00: \$167M+
- \* ROI @ \$35M/yr [Offsets]

**ROI = 5 Years**



Commercialization

**PwC @ \$2.1B**



## *Economic Benefits*

- \* 170 Commercial Tenants
- \* 3,399 Jobs
- \* Wages - \$95M
- \* Community Return - \$461M



# FY03 Budget Production Base Support

<i>President's Budget</i>	<i>FY02</i>	<i>FY03</i>	<i>FY04</i>	<i>FY05</i>
<b>Production Base Support</b>	<b>172.6</b>	<b>124.5</b>	<b>138.2</b>	<b>152.5</b>
Industrial Facilities	(65.5)	(42.9)	(33.6)	(33.3)
Layaway	(13.6)	(6.9)	(13.0)	(9.5)
Maint of Inactive Fac	(14.1)	(8.9)	(9.7)	(9.6)
ARMS	(21.7)	(11.5)	( 4.6)	(4.7)

## *DEMIL*

<i>Congressional Action FY02 (\$ in Millions)</i>							
<i>APPN</i>	<i>PB</i>	<i>HASC</i>	<i>SASC</i>	<i>AUTH</i>	<i>HAC</i>	<i>SAC</i>	<i>APPN</i>
<b>Procurement</b>	<b>159.8</b>	<b>+6.2</b>	<b>-1.4</b>	<b>CONF</b> <b>+5.0</b>	<b>+6.3</b>	<b>+18.6</b>	<b>CONF</b> <b>+11.5</b>

## *Congressional Action FY02*

- \* **Added - \$10.0M in ARMS; and \$1.5 in Maintenance**
- \* **Directed action on Riverbank funding from FY01**
- \* **Funding for Nitrocellulose**



# Conventional Ammunition Demilitarization



## *Funding:*

FY2001	FY2002	FY2003
\$75.7M	\$72.5M	\$50.0M

## *Tons Bought:*

FY2001	FY2002	FY2003
68K	54K	54K

## *Mission*

Conventional Ammunition Demilitarization funds the demilitarization and resource recovery and recycling of conventional ammunition for all the Services

## *Demilitarization Issues*

- \* Demilitarization goal is to reduce demilitarization stockpile to a manageable level by Fiscal Year 2010
- \* Demilitarization is accomplished at Army depots/plants, OCONUS and by private industry
- \* Approximately 68% of demilitarization is accomplished through resource recovery and recycling
- \* Since FY1985, the Army has--
  - Demilitarized 1.048M tons
  - Generated 1.664M tons
- \* New generations are moderately high but on a downward trend



# Conventional Ammunition Demilitarization

## ***Congressional Direction***

- ➔ **FY1994 - Increase use of private industry**
- ➔ **FY1995 - Reduce reliance on open burning/open detonation**
- ➔ **FY1994 - Develop plasma arc furnace**
- ➔ **FY1998 - Develop contained detonation chamber**
- ➔ **FY1999 - Continue efforts on contained detonation chamber and .50 caliber AP demilitarization**
- ➔ **FY2000 - Continue developing contained detonation chamber; GAO audit (assignment code 709433)**
- ➔ **FY2001 - Prepare report on feasibility and costs to eliminate open burning/open detonation as a demilitarization method (October 2001)**

## ***Congressional Issues***

- ➔ **Sale of .50 caliber AP ammunition by private industry - **RESOLVED****
- ➔ **Concerned about using private industry versus depots and plants -- GAO and DODIG have made queries concerning the workload split between private industry, depots and plants**
- ➔ **Concern about not providing private industry a fair share of the demilitarization program (i.e., protecting the industrial base)**
- ➔ **Concern about the continued use of open burn and open detonation**