Ammunition in Support of Current and Future Operations

Presented By:
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Deputy Program Executive Officer
PEO Ammo Main Objective

- Unify & Integrate Ammunition Management Under One Single Chain of Command…by Consolidating Responsibility and Resource Management in the PEO
- Develop a Unified Munitions Acquisition Strategy
  - Integrate Requirements…Training, War Reserve, & Modernization
  - Include SMCA Mission
  - By Munition Family
- Identify and Optimize Key Business Processes
- Develop an Industrial Base Strategy (Organic and Commercial)

Authority and Accountability…
For Meeting Full Military Requirement For all Ammo Families
PM Combat Ammunition Systems
- Artillery Ammunition
- Artillery Fuze
- Mortar

PM Joint Services
- Industrial Base/Facilities
- Demil
- ARMS

PM Close Combat Systems
- Mines, Countermines & Demolition

PM Maneuver Ammunition Systems
- Large Caliber
- Medium Caliber
- Small Caliber

PEO Ammo

Source: FY05 PB

Total: $1,799.6M
Single Manager for Conventional Ammunition (SMCA)

- **SMCA Mission:** Manage DoD conventional ammunition, and personnel and training functions

- **Objectives:** Achieve the highest possible degree of efficiency and effectiveness in the DoD operations required to acquire top quality conventional ammunition for U.S. Forces

- **SMCA Total:** $1.3B for FY04, 166 items All Services
PEO Ammo
Management Philosophy

- Promote Best Value Acquisitions
- Reinforce Success
- Utilize Disciplined Processes
- Promote Six Sigma and Lean Design/Production
- Promote Continuous Process Improvement and Technology Insertion
- Promote Commonality and Interoperability
- Spiral or Evolutionary System Development

*Put Eyeballs On – “Trust, but Verify”*
Support to Current Operations
Close Battle Feedback

**Shoulder Launched Munitions**

“An Awesome Weapon! My Only Regret Is That We Could Not Carry Enough Of Them!”

– NCO 10th Mountain Division, Oct 03

**Non Lethal Capabilities Sets**

“Using the NL claymores at a rate of 1 every two days at the POW camps to prevent escapes and riots.”

-800th MP Bde, 13 Feb 04

**Countermeasure Flares**

“The M211/M212 flares saved my life while deployed. Thank you and everyone on your team.”

BG Clay L Newman, Commanding Officer, ARDEC 19 Dec 03

**Hand Grenades**

“Bottom Line is that our new equipment works well and the NLM kept us from having to kill someone as well.”

LTC Brown, Battalion Commander, Bn 709th (Task Force Falcon Provost Marshall)

“Used to clear bunkers and rooms, and to destroy equipment and ammunition. Performed as expected”
“A squad got stuck in a minefield just over a month ago. We got the call to go out and do an extraction for them. I took two of my best guys. They swept their way out to the vehicle. We just marked and bypassed our way through. Clayton found at least 4 mines with the HSTAMIDS, marked them and continued his way around them towards the vehicle. Once we got everyone safely out of the truck, we brought in an MCAP dozer to clear around the truck. Every mark on the ground was a mine. Everyone was extremely impressed.”

— SFC Bantin, B/41E, Bagram, Afghanistan, 3 Dec 03

Last night B/41 was asked to extract a 3 people from a mine lane. B/41 used the new Buffalo to extract the personnel from the hazard area. No one was hurt during the incident or during the extraction.

Richard Radar, ManTech

BUFFALO (MPV)

HSTAMIDS

MEDIUM-MPV

MEDIUM FLAIL

IVMMD

BERM SIFTER
Mortars in Battle

60mm: Illum, Smoke, WP Smoke, HE
81mm: Illum, RP, HE
120mm: Smoke, Illum, IR Illum, HE

“On several occasions my mortar platoon was called upon to shoot missions two to three thousand meters beyond our max range. Most of these mission were in support of dismounts in a MOUT fight”

SSG Charles Weaver Jr. 4th BN, 64th Armored Regiment, 3ID Operation Iraqi Freedom, 2003

“120mm Mortar – A good system for pounding targets up in the mountains. Had to push out 120mm Mortar due to combat patrols moving out side the 7200m range”

SFC McLaughlin, 75th Ranger Regiment in support Operations In Afghanistan, 2002
Sense and Destroy Armor (SADARM) in Operation Iraqi Freedom (OIF)

**M898, 155mm SADARM**
- 121 SADARMs fired
- 48 pieces of enemy equipment destroyed

"SADARM exceeded expectations and became the preferred [smart] precision munition for the field artillery battalions and their supported maneuver commanders“

*3rd Infantry Division (ID)(Mech) After Action Report (AAR): OIF*

“…Very effective against Tanks/BMPs,
3 rounds will kill at least one tank…never missed…”

*LTC Doug Harding- Former 3BCT FSCOORD/1-10 FA CDR*
"Shock Effect …"

"Much more effective against armor than effects tables say…"

"HE very effective against the Enemy we encountered"

"Ammo of choice because of low dud rate & VT/TD"

Source: 3ID Briefing, “Fires in Close Fight: OIF Lessons Learned”
LTC Doug Harding- Former 3BCT FSCOORD/1-10 FA CDR

105mm: Smoke, WP Smoke, HE, HERA
155mm: SADARM, Copperhead, Illum, Smoke, HE, HERA Fuzes, Prop Charges, Primers …
120mm Tank Ammunition

- **BLUF:** Performed as advertised or better in the eyes of the armor community
  - “Pretty much anything we fired killed whatever target we shot.” SFC Cornell 4-64 AR Master Gunner

- **M830A1** (MPAT) was tank round of choice in OIF and was used against T-72 MBT, buildings, light vehicles and troops
  - “I’d be happy with a full load of MPAT.” LTC Sanderson, 2-69 AR BN CDR

- **M830** (HEAT) was second choice and performed well against same variety of targets. Some tankers fired HEAT into pavement or into a concrete wall to create spall and shrapnel to engage dismounts
  - **TWOFER:** One story of an M1 engaging a T-72 stopped on the road at about 2000m broadside and popping the turret on it and an adjacent tank. SGT Coultry 3-69 AR
Medium Caliber Ammunition

- **25mm**: M919 provides **excellent penetration capability** versus APCs and trucks. 25MM chain link cannon provides accurate and rapid fire

- **25MM HE rounds and 7.62 coax machine gun rounds** were munitions of choice for most Bradley IFV many engagements

- **40mm**: Soldiers felt that the M203 Grenade Launcher is a lightweight, compact and simple to use system that provides the squad with excellent firepower

  - Soldiers that were experienced in using the M203GL had no difficulty engaging targets out to and beyond 400m
Small Caliber Ammunition

- **.50 Cal**: A large number of soldiers commented that the M2 machine gun is “…the best weapon in the Army”
  - Engaged and destroyed targets (light armor, buildings and personnel) between 50-2000 meters without experiencing any major malfunctions or breakages on the weapon system

- **7.62mm**: Coax machine gun and loader machine gun were most widely used weapons for tanks
  - Ammunition and weapon systems performed very well

- **5.56mm**: Most soldiers considered M16 weapon series to be very accurate regardless of the version or sighting system
Future of Ammunition
Ammunition in support Family of Combat Systems

120mm Line of Sight (LOS)/Beyond Line of Sight (BLOS) Mounted Combat System (MCS)
- Mid-Range Munition (MRM)
- Advanced Kinetic Energy (KE)
- Advanced Multi-Purpose Anti-Tank (MPAT)
- Lt Wt 120mm Cannon

120mm Non Line of Sight (NLOS) - Mortar
- Precision Guided Mortar Munition (PGMM)
- Mortar Fire Control

155mm Non Line of Sight (NLOS) - Cannon
- XM982 Excalibur
- Low Cost Course Correction
- Next Generation Scatterable Mines (NGSM)

Infantry Carrier Vehicle (ICV)
- Bursting Munitions
- Medium Caliber Program
- Ground Standoff Mine Detection System

Other
- Intelligent Munitions System (IMS)
- Air Standoff Mine Detection System (ASTAMIDS)
- Objective Crew Served Weapon (OCSW)
Integrated Concept Team (ICT) & Trade Studies results

- MGV Weight and Lethality Decisions made on weapon systems for ICV (30mm) and NLOS-M (120 turreted)
- Decisions made on secondary armaments (OCSW – XM307) – train in 50 cal and fight in 25mm
- NLOS-C Decision is 155mm
- MCS caliber decisions deferred
- Utilize ongoing SDD-24 (SoS optimization of MGV alternatives) to confirm or modify MGV concept decisions
- Complete key trade studies to support concept decisions by SFR...Sep 04
Army’s Direction for Precision

- SECDEF Lessons Learned from OIF: “Key lessons so far include the importance of precision & the ability to deliver devastating damage to enemy positions, while sparing civilian lives & the civilian infrastructure.”


- Unit of Action O&O: Precision fires… “allow small units in the UA to selectively destroy key enemy systems and forces.”

- FCS KPP #3: “…the UA must have the ability to create lethal and non-lethal overmatch at the time and place of its choosing. … to suppress and destroy enemy forces and systems with greater precision, at extended ranges and in close combat.”
Ammunition Enterprise
Strategic Planning

- **Vision**: Battlefield Dominance For The Warfighter Through Superior Munitions

We Transformed Strategic Issues Into an Initial Set of GOALS

Strawman Ammunition Enterprise Goals

✓ Grow World-Class People, Teams and Partnerships

✓ Leverage and integrate joint service activities

✓ Improve Integrated Life-Cycle Management
  • Technology Development
  • Industrial Base
  • Logistics
  • Best Value Enterprise Acquisition

✓ Communicate effectively with Stakeholders
On-going Initiatives

- Disciplined systems Engineering, Lean Six-Sigma focus
- Operating in a Joint Services environment
- Industrial Base, Demilitarization and Insensitive Munitions Strategic Planning
- Collaborative Systems Environment
- Establishment of an Ammunition Investment Strategy

Many Opportunities for More Collaboration
Summary – The Ammunition Enterprise is ...

- Supporting Current Operations/Planning Future
- Improving Ammunition Life-Cycle Practices
- Focused, Well-Trained Workforce
- Leveraging World Class Capabilities & Technologies
- Vital to the development of products for the Future Joint Force
Transformation - Mines, Countermines and Demolitions

Current Force
- Wide Area Munition (Basic Hornet)
- Non-Lethal Capability Set
- Interim Vehicle Mounted Mine Detector

Interim Force
- HSTAMIDS
- Interim Vehicle Mounted Mine Detector
- IMS
- Mongoose

Objective Force
- GSTAMIDS

Grenade, Smoke M18
- Grenade, Frag M221
- Fighting Position Excavator
- Selectable Lightweight Attack Munition
- Shoulder Fired Rocket
- Volcano
- Signal Kit, Personnel
- Modular Crowd Control Munition
- IR Ctr-measure Flare XM211
- Signal Illum WS Cluster
- AC Ctr-measure Flare (M206)
- Sympathetic Detonator

Transformation - Mines, Countermines and Demolitions