ARMAMENTS TECHNOLOGY
FIRE POWER FORUM

MARINE CORP
MUNITIONS OVERVIEW

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9 June, 2009
AGENDA

1. PM Ammunition Overview
2. Munitions Requirements
3. Funding
4. Quality & Reliability
5. Precision
6. The GWOT Environment
7. Summary
PM AMMUNITION MISSION

Conduct acquisition, life cycle management support, and limited research & development for all conventional ground ammunition (Class V(W)) required by Marine Corps Forces to train for and successfully conduct Expeditionary maneuver Warfare.

“sustaining the forces”
PM Ammunition Overview

Program Manager

Deputy Program Manager
LtCol 2340

AMMUNITION PROGRAMS & BUDGET DIVISION
(PMM 2041)

- Inf Wpns Ammo
- LgCal & Missiles
- Strategic Ammo Business Ops

INVENTORY MANAGEMENT & SYSTEMS DIVISION
(PMM 2042)

- Systems
- Inventory Mgt.
- Analysis & Eval

PLANS, OPERATIONS, & SAFETY DIVISION
(PMM 2043)

- Environmental & Explosives Safety
- Plans & Execution
- Operations

Conduct research, development, procurement planning, budgeting, acquisition, maintenance and surveillance, of ammunition in support of the operating forces.

Manage the ammunition stockpile, develop and maintain configuration control of Ordnance Information Systems, and conduct Class V(W) accountability oversight.

Enable Class V support in the functional areas of MAGTF planning, operations planning, explosives safety, and environmental Compliance.
PM Ammunition Overview

CLASS V(W) Conventional Ground Ammunition (300 + Items)

JP 1-02 munition — “A complete device charged with explosives, propellants, pyrotechnics, initiating composition, or nuclear, biological, or chemical material for use in military operations, including demolitions.”

- **Small Arms Ammunition** - 12 gauge, 9mm, .45 cal, 5.56mm, 7.62mm, .50 Caliber, Non-Lethal, SESAMS, tracer, sniper, frangible, green, paintball, AK47, REHA
- **Medium Caliber Ammunition** - 25mm, 30mm, 40mm
- **Mortar** - 60mm, 81mm, 120mm (HE, Smoke, Illum, Infrared)
- **Tank** - 120mm KE, HEAT-MP-T, MPHE, Training, Canister (APERS)
- **Artillery** - 155mm HE, DPICM, ADAMS, RAAMS, RAP, Smoke, Illum (VL/IR), Excalibur PGM, Propellant Chgs, MACS, fuzes, primers.
- **Pyrotechnics** - (Smoke, diversionary grenades, flares, obscurants, signaling devices)
- **Demolition** - (C4, TNT blocks, LDC, Initiators/igniters, Demo kits, APOBS)
- **Rockets/Missiles** - (LAAW, SMAW Family, TOW, Javelin, AT-4, STINGER)

**Supports** ALL Howitzers, Mortar Tubes, rifles, shotguns, tanks, 40mm grenade launchers, LAV, EFV, mine clearing capabilities, anti-armor, bunker busting, pistols, EFSS and, all self defense, hand emplaced items (hand grenades, demo blocks, signaling devices)

**Designed to Kill and Destroy** - Personnel & Materiel
PM Ammunition Overview

Explosives Safety

“Provide environmentally compliant, explosives safety support throughout the life cycle of ammunition”

- **HQMC (SD) Designates Cmdr, MCSC “lead” for Explosives Safety (ES)**
  (MCO 5100.29A Marine Corps Safety Manual 4.I.(3))

- **PM Ammo executes the Corps wide ES Program**
  - Develops & promulgates ammo management policies ISO Marine Forces
  - Ensures compliance with environmental & explosives safety regulations
  - Provides compliant munitions disposition instructions

- **Serves as Principle on the DOD Explosives Safety Safety Board**

- **Guiding Explosives Safety Policies:**
  - DoDD 6055.9 STD
  - OPNAVINST 8020.14/ MCO P8020.11 -DoN Explosives Safety Policy Manual
  - MCO P8020.10A - USMC A&E Safety Programs for Class V Materiel
  - MCO 8023.3A - USMC Qualification & Certification Program for Class V Materiel

- **Explosives Safety Site Plans/Waivers**
  - Incorporating ORM & SAFER
PM Ammunition Overview

Inventory Control Point (ICP)

- **Manage the stockpile ($6.0 Billion)**
  - Stratification/Cross-leveling (Right size the stockpile!)
  - Sourcing:
    - War Reserve Materiel: Preferred lots suitable for long term storage
    - Ensure assets that are showing degradation are resourced first
    - Identifies assets “excess/deficient in” the USMC Class V(W) stockpile
    - Quarterly Readiness Report to Congress (QRRC)
    - Quarterly Stockpile Valuation Report (DC P&R)

- **Stockpile Reclassifications - Suspensions (NARs/AINS, etc.)**

- **Provides:**
  - Sourcing data & supportability to assist in building TPFDD
  - Retrograde destinations at completion of operation
  - Disposition instruction on unserviceable assets, assets not cost effective to renovate, and assets no longer required
  - An accurate inventory at the end of each fiscal year (30Sep), inventory and location as a basis for decisions on testing, and maintenance to move assets in support of projects.
PM Ammunition Overview

Ammunition Distribution

Wholesale Activities

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Retail, Prepo, and Misc.

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172,061 S/T
PM Ammunition Overview

Information Technology

“Provide Life Cycle Management support for all ammunition management systems used to account for Class V(W) assets”

- Wholesale Accounting
  - Ordnance Information System – Marine Corps (OIS-MC)
  - Class V(W) Wholesale Accounting System

- Significant IT effort; joint with USN; NLI Initiative and ONE NETWORK!

- Transition during Oct’08 with ONE NETWORK Functionality

- Retired MAARSII Legacy System

- Retail Ordnance Logistics Management System (ROLMS)
  - Retail-level accounting system for ASPs & Liaison Activities
  - Standard system for all Marine & Navy users
  - Capable of running stand-alone on a PC workstation or laptop for use during deployment.
PM Ammunition Overview

OIS-MC Overview

- **MAARS-II system modernization**
- **Key capabilities:**
  - Requisition management (create, receive, fill, track)
  - Inventory visibility and maintenance
  - Lot and serialized item tracking
  - Tech data management
  - Receipts from procurement*
  - LSA process* (allowance budgets)
  - Supported Unit Ammunition Module* (unit-level ammunition inventory management)
- **Extensible foundation for future efforts and business transformation**
PM Ammunition Overview

Munitions Readiness Reporting (MRR)
Munitions Requirements

Munitions Requirement Process

- **Total Munitions Requirement (TMR)**
  - **DIRECTED** by DoDI 3000.4/MCO 8000.8 - Munitions Requirements Process
  - **EXECUTED** by Logistics Integration Division, Capabilities Development Directorate, MCCDC
  - **MODELED** based on scenario durations and MCO end-states identified by the DPG, COCOM determined targets, and Marine Forces input.

- **WAR RESERVE MUNITIONS REQUIREMENT (WRMR)**
  - Combat Requirement (**CR**): The quantity of munitions required to equip a specified force structure to its designated military capability and to meet Combatant Commander’s objectives, including munitions needed for overlap.
  - Current Operations/Forward Presence Requirement (**CO/FPR**): The sum of munitions required to arm forces to conduct current operations and meet forward presence obligations in accordance with the DPG. Forward presence includes Global Naval Force Presence Policy and operations that the National Command Authority (NCA) directs.
  - Strategic Readiness Requirement (**SRR**): The quantity of munitions needed to arm forces not committed to support combat operations in the assigned MTW’s as well as those in the strategic reserve. It also includes any additional munitions requirements generated from treaties or statutory obligations to allies.

- **TESTING and TRAINING REQUIREMENT (TTR)**
  - Testing (**T**): Surveillance, acceptance testing and production losses of munition items are accounted for in this category.
  - Training (**TR**): Munitions required to train forces and support Service programs ensuring that weapons and platforms deliver the intended effectiveness (can be stated as an annual requirement, a Future Years Defense Program (FYDP) requirement, and/or projected life cycle of each munition)
Munitions Requirements

POM10 TMR - $5,025,052,348

$3,848,547,037 ,
77%

$1,176,505,311 ,
23%

War Reserve Munitions Requirement
Training and Testing Requirement
Testing & Training Requirement (TTR) - $1,176,505,311

- Testing Requirement: $299,232,446, 25%
- Training Pipeline: $12,898,564, 1%
- Training Requirement: $3,715,933, 0%
- Title 10 Training Requirement: $860,658,367, 74%
Munitions Requirements

- **Future Requirement Drivers:**
  - Cluster Munitions?
  - Landmines? (SPIDER, IMS)
  - 25mm Mk 2 SAPHEI-T
  - USMC Shift to OEF; Artillery, 120MM Mortar
  - 2 Additional Tank Companies (FY11) + 28 M1A1’s

- **Shoulder Fired Rockets:**
  - Increase M72 LAAW Procurements
    - 80% M72A9 ASM; 20% M72A7 AT
    - AT4 – War Reserve Only

- SMAW II FFE MP Warhead
• Future Requirement Drivers:

• Urgent Universal Needs Statements - Supported
  • 120MM Canister, M72A7 LAAW, SAA-AP,
    Foreign Wpns SAA, 155mm Excalibur, 155mm IR

• Urgent Universal Needs Statements - Working
  • 120MM MP-HE
    • capable of point- or delayed-detonation for anti-materiel
      application or air burst for anti-personnel (fragmentation)
Munitions Requirements

- Future Requirement Drivers:
  - USMC 202K Growth - all heavy shooters
Munitions Requirements

**Product/Service Enhancements**

**FCT:**
- Screening Colored Smoke Grenade (SCSG)
- 66mm Grenade Discharger, Visual and Infra-Red Screening Smoke (VIRSS)
- M72A7 LAAW Insensitive Munitions Effort
- 40MM Low/High Velocity Day/Night Marking

**SBIR**
- Red Phosphorus Fill - Mortars

**TTA (Technology Transition Agreement (ONR)**
- Linear Demo Charge Insensitive Munitions Effort; Supports ABV Survivability

**TITLE III - Polymer Cased Small Arms Ammunition**
- Two component design: Polymer Caselet & Brass Base
- Benefits (all calibers)
  - Weight savings: 23-25% demonstrated
  - 28-35% indicated (design goal)
- Same or lower cost in full production
- Calibers in development: 5.56mm, 7.62mm and .50cal
Funding

FY08-FY13 Procurement Breakout = $3.6B
(PRESBUD 09)
Funding

- Unstable, erratic profiles, bill payer, unknowns
- Product Cost
- Non-Product – Cost of doing business; FY10-FY15 = (-$300M)

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Maintenance & Renovation (O&MMC)

- Significant “RETURN ON INVESTMENT” (ROI) vice costlier, new production
  - Ammunition Maintenance Process Guide for Quality (AMPGQ)
  - Automated Data List
  - Missile Round Reset Procedures (RRP)
  - Letter of Instruction LOI
  - DMWR (e.g., 9-1375-M913-F50, REV B)

- Cumulative Return on Investment (ROI).
Quality & Reliability

Quality Assurance

• Service Life Accelerated Aging Test program (SLAAT) provides a process framework allowing the selection of an appropriate test method linked with an analytical technique to support service life prediction. SLAAT provides stockpile assessment data necessary to make informed management decisions concerning the state of the Marine Corps Ground Conventional Ammunition Stockpile.
Quality Assurance

40mm Audit Findings

“Continuous assessment of the Quality & Reliability of a multi-billion dollar stockpile”
Quality & Reliability

- Continuous and Sustained Improvement

PERCENTAGE OF CONTRACTS WITH SPC

ECP's, RFW's, RFD's
PROCESSED EACH MONTH

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## Precision

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<tr>
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<td>Precision Extended Range Munition</td>
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The GWOT Environment

• Annual Live-Fire Training growth
  • Pre 9/11: Average approx. $220M annual
  • Post 9/11: Average approx. $320M+ annual
  • Change in TTP and new Pre-deployment Training Packages (PTP)

• Combat Expenditures
• UUNNS
• USMC Special Operations Command (MARSOC) – 2,400 Marines
• Investment:
  • $2,468,000,000 - Baseline Corps Investment FY03-FY10
  • $2,484,000,000 - Supplemental Funds thru FY03-FY10

• Undefined GWOT Duration, End-Strength Growth, Live-fire Training, War Reserve Stockpile - Risk, Fluid Fiscal Environment, Production Lead-Times, Production Turbulence, PP&O Prioritization, MARCENT focus, new capabilities, Urgent Needs, Special Allowances, etc, etc., etc........
The wide range of responsibilities under one Program Manager is unique in that, it provides the Marine Corps with a single point of visibility to assess the quality, quantity, and the positioning of ammunition, and the ability as the occupational field sponsor, to effect supply of that ammunition to Marine Forces.
PM Ammo Strategic Plan:

“There are many classes of supply and ours, inherently unique by nature, is the last in terms of use by our Corps. That does not mean last in importance, priority, or criticality to the combat arm of this institution we support. Rather, despite any other commodity, the vehicles, weapons systems, the clothing and equipment, the deliberate planning; despite the mass movement of our Marines, the P-O-L, communication equipment, spare parts, subsistence, etc, ammunition IS the last stage in the war fight. It is that which directly destroys the enemy combatant. Thus it represents the finality of all the preceding events leading up to its use. “

Ammunition...that which makes the tip of the spear, pointy and lethal”

QUESTIONS?