UNITED STATES MARINE CORPS
CLASS V(W) GROUND AMMUNITION
Marine Corps Ammunition
Maintenance Program

CWO3 Anthony Liller
Mr. Ron Riley
Introduction

• MARCORSYSCOM – (PM-AMMO) is responsible for all aspects of Class V(W) ammunition

• Stockpile is driven by “Total Munitions Requirement”
  – Sustain Marines in combat
  – Provide adequate training ammunition

• Current inventory satisfies the TMR
  – Stockpile worth $4B and located at various locations around the world.
Management of the Stockpile

• Team concept
  – Surveillance
  – Maintenance
  – Acquisition

• Mission: ensure a ready supply of dependable ammunition is available to meet worldwide requirements for both training and contingencies
Ammunition Surveillance

• Periodic inspections
  – Identify problematic areas
  – Recommend courses of action
• Shortfalls to the TMR
• Two courses of action
  – Maintenance
  – Acquisition
Maintenance of the Stockpile

• MARCORSYSCOM (PM-AMMO) oversight

• Project management conducted by NSWC, Crane, Indiana.
Marine Corps’ Class V(W) Inventory

• 360 end item assemblies identified by a Department of Defense Identification Code (DODIC)
  – Thousands of lot and serial numbers

• Ammunition age range
  – New production
  – 60 years
Ammunition Expectations

• Must survive in storage
  – Long periods
  – Still function when employed

• For ammunition to be successful it must provide the desired effect when employed
  – Range
  – Accuracy
  – Destruction of the target
Ammunition Performance

• Age can effect ammunition negatively
  – Electrical components become defective
  – Energetics deteriorate
  – Metal corrodes

• Other situations for maintenance include
  – Factory defects
  – Malfunctions
  – Reclassifications
Ammunition Maintenance

- Discrepancies are categorized as either minor or major
  - Minor
    - Packaging discrepancies
    - Corrosion
    - No safety concerns or adverse effect on usage
  - Major
    - Critical safety concerns
    - Serious component malfunction
Maintenance Decisions

• Some ammunition items are easily procured at reasonable costs.
  – Small arms
  – Pyrotechnics

• FIFO policy
  – Timely expenditure
  – Minor defects reclassified to a priority status
Common Maintenance Items

• Rockets, missiles, mortars, and high cost and long shelf life munitions
  – Assembled units
  – Long shelf life
  – Possesses one or more bad or defective component

• Usually detected while monitoring usage data, malfunction data, or surveillance
Beginning the Maintenance Process

• Maintenance candidates are identified
• Required components are procured
• Labor estimates are solicited
  – Potential maintenance sites
  – Best value for the investment
• Factors considered for best value
  – Cost of transportation
  – Quality management
  – Cost per unit renovated
Project Manager’s (ISEA) Responsibilities

- Develops scope of work
- Evaluates potential maintenance sites
- Negotiates a contract
- Provides management oversight
- Provides close out reports
Prior Marine Corps Maintenance Projects
B542 - 40MM HEDP

- Fired from the MK-19 Machine gun
- Numerous malfunctions resulting in injuries.
- Projectiles became lodged in the barrel
- Next round collides
- Occasional explosions
B542 - 40MM HEDP

• Entire stockpile suspended
• All training ceased
• Joint service team assembled
• Insufficient propellant discovered
B542 – 40MM HEDP

• Maintenance project developed
• Radiographic inspection process
• Measured the density of propellant
• $84M cost avoidance related to procurement of new cartridges
C-4 Extrusion

- Initiated due to the 1991 Montreal Convention treaty
- Pilferable plastic explosives to be tagged by 2013
- C-4 from 451 LDCs used
- 14K M757 explosive kits required tagant
- $18M cost avoidance related to procurement of new cartridges
M913/ML25 Line Charge
M913/ML25 Line Charge

- 40+ years of service
- Several launching formats
- Slope nose containers 28% reliable
- New configuration 90+%  
- $40M cost avoidance related to procurement of new cartridges
Other Successful Maintenance Projects

- AT4 83 MM Rockets $26M
- J143 $24M
- TOW Missiles $94M
- C871 $1.4M
Summary

• The Marine Corps ammunition maintenance program is highly effective in providing a cost avoidance in procurements by returning unserviceable stocks to the useable stockpile.

• The program also provides the Marine Corps with the capability of providing a near term resolutions to ammunition reclassified as unserviceable.
Questions?

AMMO
you can’t live without it...
...AND the enemy won’t live with it!